### TROUBLE SHOOTING MANUAL

#### HIGHLIGHTS

REVISION NO. 54 May 01/08

Pages which have been revised are outlined below, together with the Highlights of the Revision

| CH/SE/SU C | REASON FOR CHANGE | EFFECTIVITY |
|------------|-------------------|-------------|
| PAGES      |                   |             |
|            |                   |             |

#### CHAPTER 21

| REVISED TO REFLECT THIS REVISION INDICATING NEW, REVISED, AND/OR DELETED PAGES REVISED TO REFLECT THIS REVISION                                    |   |
|--|---|
| CORRECTION/ADDITION/AMPLIFICATION NO DEFINITION WORDING UPDATED  | ALL   |
| SB 34-1312 INCORPORATED  NAVIGATION - T2CAS - INSTALL ACSS TRAFFIC AND  TERRAIN COLLISION AVOIDANCE SYSTEM (T2CAS) F  OR AIRCRAFT WITH EGPWS BASIS | 247-253,  |
| REPRINTED NO DEFINITION  | 247-253,  |
| CORRECTION/ADDITION/AMPLIFICATION MINOR CHANGE   | 201-225, 227-227, 229-299,<br>426-499, 503-549, 551-599,<br>701-749,  |
| EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)  | 201-225, 227-227, 229-250, 252-299, 426-456, 476-499, 503-549, 551-599, 701-749,  |
| EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)  | ALL   |
| EFFECTIVITY UPDATED CIRCUIT BREAKER(S) DATA UPDATED EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)  | 201-225, 227-227, 229-275,<br>426-475, 551-599, 701-749,<br>201-225, 227-227, 229-299,<br>426-480, 503-549, 551-599,<br>701-749,  |
| SIL21-0077 01 INCORPORATED AIR CONDITIONING - GROUND COOLING SYSTEM TROUBLESHOOTING ADVICE. NEW TOPIC/NEW CONFIGURATION                            | ALL   |
|  | NEW,REVISED, AND/OR DELETED PAGES REVISED TO REFLECT THIS REVISION  CORRECTION/ADDITION/AMPLIFICATION NO DEFINITION WORDING UPDATED  SB 34-1312 INCORPORATED NAVIGATION - T2CAS - INSTALL ACSS TRAFFIC AND TERRAIN COLLISION AVOIDANCE SYSTEM (T2CAS) F OR AIRCRAFT WITH EGPWS BASIS REPRINTED NO DEFINITION  CORRECTION/ADDITION/AMPLIFICATION MINOR CHANGE  EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)  EFFECTIVITY UPDATED CIRCUIT BREAKER(S) DATA UPDATED EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)  SIL21-0077 01 INCORPORATED AIR CONDITIONING - GROUND COOLING SYSTEM TROUBLESHOOTING ADVICE. |

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| CH/SE/SU C<br>PAGES   | REASON FOR CHANGE  | EFFECTIVITY  |
|---|--|--|
|   | EFFECTIVITY UPDATED EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)  | 201-225, 227-227, 229-299,<br>426-499, 503-549, 551-599,                               |
|   | EFFECTIVITY UPDATED EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)  | 201-225, 227-227, 229-299,<br>426-455, 476-499, 503-549,<br>551-599,                   |
| 21-31-00<br>258, 291  | EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)  | ALL  |
|   | EFFECTIVITY UPDATED EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)  | 201-225, 227-227, 229-245,<br>276-286, 426-428, 476-480,<br>503-549, 551-551, 701-749, |
|   | EFFECTIVITY UPDATED EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)  | 201-225, 227-227, 229-284,<br>426-478, 551-599, 701-749,                               |
| 215- 216,<br>221- 222,<br>243- 248,<br>250, 252,<br>258- 262, | EFFECTIVITY UPDATED CORRECTION/ADDITION/AMPLIFICATION REPLACEMENT PC (27HH) ADDED CIRCUIT BREAKER(S) DATA UPDATED  WARNING/NOTE/REASON FOR THE JOB AMENDED EFFECTIVITY UPDATED (THROUGHOUT THE TEXT) | ALL 201-208, 227-227, 229-245, 276-284, 426-428, 476-478, ALL ALL                      |
| 21-61-00<br>301- 303  | EFFECTIVITY UPDATED EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)  | 201-225, 227-227, 229-299,<br>426-455, 476-499, 503-549,<br>551-599, 701-749,          |
| 21-63-00  | EFFECTIVITY UPDATED  |  |
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| CH/SE/SU C<br>PAGES   | REASON FOR CHANGE   | EFFECTIVITY |
|---|---|-------------|
| 223- 226,<br>249- 250,<br>254, 258,<br>262- 269,<br>278- 282,<br>286- 288,<br>291-A200,<br>A209-A214,<br>A230 | EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)                     | ALL         |
|   | EFFECTIVITY UPDATED EFFECTIVITY UPDATED (THROUGHOUT THE TEXT) | ALL         |

### TROUBLE SHOOTING MANUAL

#### CHAPTER 21

#### AIR CONDITIONING

#### LIST OF EFFECTIVE PAGES

N, R or D indicates pages which are New, Revised or Deleted respectively Remove and insert the affected pages and complete the Record of Revisions and the Record of Temporary Revisions as necessary

| CH/SE/SU | С     | PAGE | DATE     | CH/SE/SU | С | PAGE | DATE        | CH/SE/SU | С | PAGE | DATE     |
|----------|-------|------|----------|----------|---|------|-------------|----------|---|------|----------|
| RECORD   |       |      |          | 21-LOCAL |   | 101  | Feb01/06    | 21-23-00 |   | 201  | Aug01/05 |
| OF TEMP. |       |      |          | ET LOOKE |   | .0.  | 1 000 17 00 | 21-23-00 |   |      | Aug01/05 |
| REVISION |       |      |          | 21-0BSV  |   | 101  | Feb01/08    | 21-23-00 |   |      | Aug01/94 |
|          |       |      |          | 21-0BSV  |   |      | Feb01/08    | 21-23-00 |   |      | Aug01/94 |
| L.E.P.   | R     | 1- 5 | May01/08 | 21-0BSV  |   |      | Feb01/08    |          |   |      |          |
| T. of C. | • • • | 1    | -        | 21-0BSV  |   |      | Feb01/08    | 21-26-00 |   | 201  | May01/07 |
| T. of C. |       |      | May01/07 | 21-0BSV  |   |      | Feb01/08    | 21-26-00 |   |      | May01/07 |
| T. of C. | R     |      | May01/08 | 21-0BSV  |   |      | Feb01/08    | 21-26-00 |   |      | May01/07 |
| T. of C. | R     |      | May01/08 | 21-0BSV  |   |      | Feb01/08    | 21-26-00 |   |      | May01/07 |
| T. of C. | R     |      | May01/08 |          |   |      |             | 21-26-00 |   |      | May01/07 |
| T. of C. | R     |      | May01/08 | 21-CFDS  |   | 101  | May01/07    | 21-26-00 |   |      | May01/07 |
| T. of C. | R     |      | May01/08 | 21-CFDS  |   |      | Aug01/07    | 21-26-00 |   |      | May01/07 |
| T. of C. | R     |      | May01/08 | 21-CFDS  |   |      | Aug01/07    | 21-26-00 |   |      | May01/07 |
| T. of C. | R     | 9    | May01/08 | 21-CFDS  |   | 104  | May01/07    | 21-26-00 |   | 209  | May01/07 |
| T. of C. | R     | 10   | May01/08 | 21-CFDS  |   | 105  | May01/07    | 21-26-00 |   | 210  | May01/07 |
| T. of C. | R     | 11   | May01/08 | 21-CFDS  |   | 106  | May01/07    | 21-26-00 | R | 211  | May01/08 |
|          |       |      | -        | 21-CFDS  |   | 107  | May01/07    | 21-26-00 |   | 212  | Feb01/08 |
| 21-ECAM  |       | 101  | Feb01/06 | 21-CFDS  | R | 108  | May01/08    | 21-26-00 |   | 213  | May01/07 |
| 21-ECAM  |       | 102  | May01/06 | 21-CFDS  | R | 109  | May01/08    | 21-26-00 |   | 214  | May01/07 |
| 21-ECAM  |       | 103  | Feb01/06 | 21-CFDS  | R | 110  | May01/08    | 21-26-00 |   | 215  | May01/07 |
| 21-ECAM  |       | 104  | Feb01/06 | 21-CFDS  | R | 111  | May01/08    | 21-26-00 |   | 216  | May01/07 |
| 21-ECAM  |       | 105  | May01/07 | 21-CFDS  | R | 112  | May01/08    | 21-26-00 |   | 217  | Feb01/08 |
| 21-ECAM  |       | 106  | Nov01/07 | 21-CFDS  | R | 113  | May01/08    | 21-26-00 |   | 218  | Feb01/08 |
| 21-ECAM  |       | 107  | Nov01/07 | 21-CFDS  | R | 114  | May01/08    | 21-26-00 |   | 219  | May01/07 |
| 21-ECAM  |       | 108  | Nov01/07 |          |   |      |             | 21-26-00 |   | 220  | May01/07 |
| 21-ECAM  |       |      | Nov01/07 | 21-00-00 | R | 201  | May01/08    | 21-26-00 |   | 221  | May01/07 |
| 21-ECAM  |       |      | Nov01/07 | 21-00-00 | R |      | May01/08    | 21-26-00 |   |      | May01/07 |
| 21-ECAM  | R     | 111  | •        | 21-00-00 | R |      | May01/08    | 21-26-00 |   |      | May01/07 |
| 21-ECAM  | R     |      | May01/08 | 21-00-00 |   | 204  | May01/05    | 21-26-00 |   |      | May01/07 |
| 21-ECAM  |       |      | Nov01/07 |          |   |      |             | 21-26-00 | R |      | May01/08 |
| 21-ECAM  |       |      | Nov01/07 | 21-21-00 |   |      | Aug01/05    | 21-26-00 |   |      | May01/07 |
| 21-ECAM  |       |      | Nov01/07 | 21-21-00 |   |      | Aug01/05    | 21-26-00 |   | 227  | •        |
| 21-ECAM  |       |      | May01/07 | 21-21-00 |   |      | Aug01/05    | 21-26-00 | R |      | May01/08 |
| 21-ECAM  | R     |      | May01/08 | 21-21-00 |   |      | Aug01/05    | 21-26-00 | R |      | May01/08 |
| 21-ECAM  | R     |      | May01/08 | 21-21-00 | R |      | May01/08    | 21-26-00 | R |      | May01/08 |
| 21-ECAM  | R     |      | May01/08 | 21-21-00 |   |      | Aug01/05    | 21-26-00 |   |      | May01/07 |
| 21-ECAM  | R     |      | May01/08 | 21-21-00 |   |      | Aug01/05    | 21-26-00 |   |      | May01/07 |
| 21-ECAM  | R     |      | May01/08 | 21-21-00 |   |      | Aug01/05    | 21-26-00 |   |      | May01/07 |
| 21-ECAM  | R     |      | May01/08 | 21-21-00 |   |      | Aug01/05    | 21-26-00 |   |      | May01/07 |
| 21-ECAM  | R     |      | May01/08 | 21-21-00 |   |      | Aug01/05    | 21-26-00 |   |      | May01/07 |
| 21-ECAM  | R     |      | May01/08 | 21-21-00 |   |      | Aug01/94    | 21-26-00 |   |      | Feb01/08 |
| 21-ECAM  | R     | 125  | May01/08 | 21-21-00 |   | 302  | Aug01/94    | 21-26-00 |   | 237  | May01/07 |

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|----------|----|------|-----------|----------|---|------|----------|----------|---|-------------|----------|
| 21-26-00 |    | 238  | May01/07  | 21-28-00 | R | 203  | May01/08 | 21-31-00 |   | 242         | Nov01/07 |
| 21-26-00 |    |      | May01/07  | 21-28-00 | R |      | May01/08 | 21-31-00 |   |             | Nov01/07 |
| 21-26-00 |    |      | May01/07  | 21-28-00 |   |      | Feb01/99 | 21-31-00 |   |             | Nov01/07 |
| 21-26-00 |    |      | May01/07  | 21-28-00 |   |      | Feb01/99 | 21-31-00 |   |             | Aug01/05 |
| 21-26-00 |    |      | May01/07  | 21-28-00 | R |      | May01/08 | 21-31-00 |   |             | Aug01/05 |
| 21-26-00 |    |      | May01/07  | 21-28-00 | R |      | May01/08 | 21-31-00 |   |             | Aug01/05 |
| 21-26-00 |    |      | May01/07  | 21-28-00 |   |      | Feb01/07 | 21-31-00 |   |             | Aug01/05 |
| 21-26-00 |    |      | May01/07  | 21-28-00 | R |      | May01/08 | 21-31-00 |   |             | Aug01/05 |
| 21-26-00 |    |      | May01/07  | 21-28-00 | R |      | May01/08 | 21-31-00 |   |             | Aug01/05 |
| 21-26-00 |    |      | May01/07  |          |   |      | ,        | 21-31-00 |   |             | Aug01/05 |
| 21-26-00 |    |      | May01/07  | 21-31-00 |   | 201  | Nov01/01 | 21-31-00 |   |             | Aug01/05 |
| 21-26-00 |    |      | May01/07  | 21-31-00 |   |      | May01/07 | 21-31-00 |   |             | Aug01/05 |
| 21-26-00 |    |      | May01/07  | 21-31-00 |   |      | May01/07 | 21-31-00 |   |             | Aug01/05 |
| 21-26-00 |    |      | May01/07  | 21-31-00 |   |      | Nov01/01 | 21-31-00 |   |             | Feb01/08 |
| 21-26-00 |    | 252  | May01/07  | 21-31-00 |   | 205  | May01/07 | 21-31-00 |   | 256         | Feb01/08 |
| 21-26-00 |    |      | May01/07  | 21-31-00 |   | 206  | May01/07 | 21-31-00 |   | 257         | Feb01/08 |
| 21-26-00 |    | 254  | May01/07  | 21-31-00 |   | 207  | May01/07 | 21-31-00 | R | 258         | May01/08 |
| 21-26-00 |    | 255  | May01/07  | 21-31-00 |   | 208  | Aug01/03 | 21-31-00 |   | 259         | Feb01/08 |
| 21-26-00 |    |      | May01/07  | 21-31-00 |   | 209  | Aug01/03 | 21-31-00 |   | 260         | Aug01/06 |
| 21-26-00 |    | 257  | May01/07  | 21-31-00 |   | 210  | Aug01/03 | 21-31-00 |   | 261         | Aug01/06 |
| 21-26-00 |    | 258  | May01/07  | 21-31-00 |   | 211  | Aug01/03 | 21-31-00 |   | 262         | Aug01/06 |
| 21-26-00 |    | 259  | May01/07  | 21-31-00 |   | 212  | Aug01/03 | 21-31-00 |   | 263         | Aug01/06 |
| 21-26-00 |    | 260  | May01/07  | 21-31-00 |   | 213  | May01/07 | 21-31-00 |   | 264         | Aug01/06 |
| 21-26-00 |    | 261  | May01/07  | 21-31-00 |   | 214  | May01/07 | 21-31-00 |   | 265         | Aug01/06 |
| 21-26-00 |    | 262  | May01/07  | 21-31-00 |   | 215  | May01/07 | 21-31-00 |   | 266         | Aug01/06 |
| 21-26-00 |    | 263  | May01/07  | 21-31-00 |   | 216  | Aug01/05 | 21-31-00 |   | 267         | Aug01/06 |
| 21-26-00 |    | 264  | May01/07  | 21-31-00 |   | 217  | Aug01/05 | 21-31-00 |   | 268         | Aug01/06 |
| 21-26-00 |    | 265  | May01/07  | 21-31-00 |   |      | Feb01/08 | 21-31-00 |   | 269         | Aug01/06 |
| 21-26-00 |    | 266  | May01/07  | 21-31-00 |   |      | Feb01/08 | 21-31-00 |   | 270         | Aug01/06 |
| 21-26-00 |    |      | May01/07  | 21-31-00 |   |      | Feb01/08 | 21-31-00 |   |             | Aug01/06 |
| 21-26-00 |    |      | May01/07  | 21-31-00 |   |      | Feb01/08 | 21-31-00 |   |             | Aug01/06 |
| 21-26-00 |    |      | May01/07  | 21-31-00 |   |      | Feb01/08 | 21-31-00 |   |             | Aug01/06 |
| 21-26-00 |    |      | May01/07  | 21-31-00 |   |      | Feb01/08 | 21-31-00 |   |             | Aug01/06 |
| 21-26-00 |    | 271  | ,         | 21-31-00 |   |      | Aug01/05 | 21-31-00 |   |             | Aug01/06 |
| 21-26-00 |    |      | May01/07  | 21-31-00 |   |      | Aug01/05 | 21-31-00 |   |             | Aug01/06 |
| 21-26-00 |    |      | May01/07  | 21-31-00 |   |      | Aug01/05 | 21-31-00 |   |             | Aug01/06 |
| 21-26-00 |    |      | Feb01/08  | 21-31-00 |   |      | Aug01/05 | 21-31-00 |   |             | Aug01/06 |
| 21-26-00 |    | 275  | Feb01/08  | 21-31-00 |   |      | Aug01/05 | 21-31-00 |   |             | Aug01/06 |
|          |    |      |           | 21-31-00 |   |      | Aug01/05 | 21-31-00 |   |             | Aug01/06 |
| 21-27-00 | N  |      | May01/08  | 21-31-00 |   |      | Aug01/05 | 21-31-00 |   |             | Aug01/06 |
| 21-27-00 | N  |      | May01/08  | 21-31-00 |   |      | Aug01/05 | 21-31-00 |   |             | Aug01/06 |
| 21-27-00 | N  |      | May01/08  | 21-31-00 |   |      | Aug01/05 | 21-31-00 |   |             | Aug01/06 |
| 21-27-00 | N  |      | May01/08  | 21-31-00 |   |      | Aug01/05 | 21-31-00 |   |             | Aug01/06 |
| 21-27-00 | N  |      | May01/08  | 21-31-00 |   |      | Aug01/05 | 21-31-00 |   |             | Aug01/06 |
| 21-27-00 | N  |      | May01/08  | 21-31-00 |   |      | Aug01/05 | 21-31-00 |   |             | Aug01/06 |
| 21-27-00 | N  |      | May01/08  | 21-31-00 |   |      | Aug01/05 | 21-31-00 |   |             | Aug01/06 |
| 21-27-00 | N  |      | May01/08  | 21-31-00 |   |      | Aug01/05 | 21-31-00 |   |             | Feb01/07 |
| 21-27-00 | N  | 209  | May01/08  | 21-31-00 |   |      | Aug01/05 | 21-31-00 |   |             | Feb01/07 |
| 21_20_00 | ь. | 204  | May/04/09 | 21-31-00 |   |      | Aug01/05 | 21-31-00 | ь |             | Feb01/08 |
| 21-28-00 | R  |      | May01/08  | 21-31-00 |   |      | Aug01/05 | 21-31-00 | R |             | May01/08 |
| 21-28-00 | R  | 202  | May01/08  | 21-31-00 |   | 241  | Aug01/05 | 21-31-00 | R | <b>3</b> 01 | May01/08 |

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|----------|---|------|----------|----------|-------|----------|----------|----------|---|------|----------|
| CH/SE/SU | С | PAGE | DATE     | CH/SE/SU | C     | PAGE     | DATE     | CH/SE/SU | С | PAGE | DATE     |
| 21-31-00 | R | 302  | May01/08 | 21-51-00 |       | 212      | Feb01/08 | 21-55-00 |   | 203  | Feb01/03 |
| 21-31-00 | R | 303  | May01/08 | 21-51-00 |       | 213      | Aug01/06 | 21-55-00 |   | 204  | Feb01/03 |
| 21-31-00 | R |      | May01/08 | 21-51-00 |       | 214      | May01/06 | 21-55-00 |   | 205  | Feb01/03 |
| 21-31-00 | R |      | May01/08 | 21-51-00 |       | 215      | May01/07 |          |   |      |          |
| 21-31-00 | R |      | May01/08 | 21-51-00 |       | 216      | May01/06 | 21-61-00 |   | 201  | Feb01/06 |
| 21-31-00 | R |      | May01/08 | 21-51-00 |       | 217      | May01/07 | 21-61-00 |   |      | Feb01/06 |
| 21-31-00 | R |      | May01/08 | 21-51-00 |       | 218      | •        | 21-61-00 |   |      | Aug01/05 |
| 21-31-00 | R |      | May01/08 | 21-51-00 |       | 219      | May01/06 | 21-61-00 |   |      | Aug01/05 |
| 21-31-00 |   |      | Feb01/08 | 21-51-00 | R     |          | May01/08 | 21-61-00 |   |      | Aug01/05 |
| 21-31-00 |   |      | Feb01/08 | 21-51-00 | R     |          | May01/08 | 21-61-00 |   |      | Aug01/05 |
| 21-31-00 |   |      | Feb01/08 | 21-51-00 |       |          | Nov01/05 | 21-61-00 |   |      | Feb01/06 |
| 21-31-00 |   |      | Feb01/08 | 21-51-00 |       | 223      |          | 21-61-00 |   |      | Feb01/06 |
| 21-31-00 |   |      | Feb01/08 | 21-51-00 |       |          | May01/06 | 21-61-00 |   |      | Feb01/07 |
| 21-31-00 |   |      | Feb01/08 | 21-51-00 | R     |          | May01/08 | 21-61-00 |   |      | Feb01/07 |
| 21-31-00 |   |      | Feb01/08 | 21-51-00 | R     |          | May01/08 | 21-61-00 |   |      | Feb01/07 |
| 21-31-00 |   |      | Feb01/08 | 21-51-00 | IX.   |          | Nov01/05 | 21-61-00 |   |      | Feb01/07 |
| 21-31-00 |   |      | Feb01/07 | 21-51-00 |       |          | Aug01/05 | 21-61-00 |   |      | Aug01/07 |
| 21-31-00 |   | 310  | 16001701 | 21-51-00 |       |          | Aug01/05 | 21-61-00 |   |      | Aug01/07 |
| 21-43-00 |   | 201  | May01/05 | 21-51-00 |       |          | Aug01/06 | 21-61-00 | R |      | May01/07 |
| 21-43-00 |   |      |          | 21-51-00 |       |          | _        |          |   |      | •        |
| 21-43-00 |   |      | May01/05 |          |       |          | Aug01/05 | 21-61-00 | R |      | May01/08 |
|          |   |      | May01/05 | 21-51-00 |       |          | Aug01/05 | 21-61-00 |   |      | Feb01/08 |
| 21-43-00 |   |      | May01/05 | 21-51-00 |       |          | Aug01/05 | 21-61-00 |   |      | Nov01/06 |
| 21-43-00 |   |      | May01/05 | 21-51-00 |       |          | May01/06 | 21-61-00 |   | 219  | _        |
| 21-43-00 |   |      | May01/05 | 21-51-00 | _     | 235      |          | 21-61-00 | _ |      | Aug01/07 |
| 21-43-00 |   |      | May01/05 | 21-51-00 | R     |          | May01/08 | 21-61-00 | R |      | May01/08 |
| 21-43-00 |   |      | May01/05 | 21-51-00 | R     | _        | •        | 21-61-00 | R |      | May01/08 |
| 21-43-00 |   |      | Aug01/06 | 21-51-00 | R     |          | May01/08 | 21-61-00 |   |      | Feb01/08 |
| 21-43-00 |   | 210  | •        | 21-51-00 | R     |          | May01/08 | 21-61-00 |   |      | Feb01/07 |
| 21-43-00 |   | 211  | •        | 21-51-00 |       | 240      | -        | 21-61-00 |   |      | Nov01/05 |
| 21-43-00 |   |      | May01/05 | 21-51-00 |       |          | Nov01/05 | 21-61-00 |   |      | Aug01/06 |
| 21-43-00 |   |      | May01/05 | 21-51-00 |       |          | Nov01/05 | 21-61-00 |   |      | Aug01/06 |
| 21-43-00 |   |      | May01/05 | 21-51-00 |       |          | Nov01/07 | 21-61-00 |   |      | Aug01/06 |
| 21-43-00 |   |      | May01/05 | 21-51-00 |       |          | Nov01/05 | 21-61-00 |   |      | Aug01/06 |
| 21-43-00 |   |      | May01/05 | 21-51-00 | R     |          | May01/08 | 21-61-00 |   |      | Aug01/06 |
| 21-43-00 |   |      | May01/05 | 21-51-00 | R     |          | May01/08 | 21-61-00 |   |      | Aug01/06 |
| 21-43-00 |   | 302  | May01/05 | 21-51-00 | R     |          | May01/08 | 21-61-00 |   |      | May01/06 |
|          |   |      |          | 21-51-00 | R     |          | May01/08 | 21-61-00 |   |      | Aug01/05 |
| 21-50-00 |   |      | May01/04 | 21-51-00 |       |          | Feb01/08 | 21-61-00 |   |      | Aug01/05 |
| 21-50-00 |   | 202  | May01/04 | 21-51-00 |       | 250      | Nov01/07 | 21-61-00 |   |      | Aug01/05 |
|          |   |      |          | 21-51-00 |       | 251      | Nov01/05 | 21-61-00 |   | 236  | Aug01/05 |
| 21-51-00 | R | 201  | May01/08 | 21-51-00 |       | 252      | Feb01/08 | 21-61-00 |   | 237  | Aug01/05 |
| 21-51-00 |   | 202  | Feb01/08 | 21-51-00 |       | 253      | Feb01/08 | 21-61-00 |   | 238  | Aug01/05 |
| 21-51-00 |   | 203  | Nov01/05 | 21-51-00 |       | 254      | Feb01/08 | 21-61-00 |   | 239  | Aug01/05 |
| 21-51-00 |   | 204  | Nov01/05 | 21-51-00 |       | 255      | Feb01/08 | 21-61-00 |   | 240  | Aug01/05 |
| 21-51-00 |   | 205  | May01/06 | 21-51-00 |       | 256      | Feb01/08 | 21-61-00 |   | 241  | Aug01/05 |
| 21-51-00 |   | 206  | May01/06 | 21-51-00 |       | 257      | Feb01/08 | 21-61-00 |   |      | Aug01/05 |
| 21-51-00 | R | 207  | May01/08 | 21-51-00 |       | 258      | Nov01/05 | 21-61-00 | R | 243  | May01/08 |
| 21-51-00 |   | 208  | Feb01/07 | 21-51-00 |       | 259      | Nov01/05 | 21-61-00 | R |      | May01/08 |
| 21-51-00 |   | 209  | Aug01/06 |          |       |          |          | 21-61-00 | R |      | May01/08 |
| 21-51-00 |   |      | Nov01/06 | 21-55-00 |       | 201      | Aug01/98 | 21-61-00 | R |      | May01/08 |
| 21-51-00 | R | 211  | May01/08 | 21-55-00 |       |          | Feb01/03 | 21-61-00 | R |      | May01/08 |

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| 21-61-00 | R | 248  | May01/08 | 21-61-00 | R | 299  | May01/08         | 21-61-00 |   | A25N | Aug01/05 |
| 21-61-00 |   |      | Nov01/05 | 21-61-00 |   |      | May01/08         | 21-61-00 |   |      | Aug01/05 |
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| 21-61-00 |   |      | Nov01/05 | 21-61-00 |   |      | May01/08         | 21-61-00 |   |      | Aug01/05 |
| 21-61-00 | R |      | May01/08 | 21-61-00 |   |      | May01/08         | 21-61-00 |   |      | Aug01/05 |
| 21-61-00 |   |      | Aug01/05 | 21-61-00 |   |      | May01/08         | 21-61-00 | R                                       |      | May01/08 |
| 21-61-00 |   |      | Aug01/05 | 21-61-00 |   |      | May01/08         | 21-61-00 | • |      | Feb01/08 |
| 21-61-00 |   |      | Aug01/05 | 21-61-00 |   |      | May01/08         | 21-61-00 |   |      | Aug01/05 |
| 21-61-00 |   |      | Aug01/05 | 21-61-00 |   |      | May01/08         | 21-61-00 |   |      | Aug01/05 |
| 21-61-00 |   |      | Feb01/06 | 21-61-00 |   |      | May01/08         | 21-61-00 |   |      | Aug01/05 |
| 21-61-00 | R |      | May01/08 | 21-61-00 |   |      | May01/08         | 21-61-00 |   |      | Aug01/05 |
| 21-61-00 | R |      | May01/08 | 21-61-00 |   |      | May01/08         | 21-61-00 |   |      | Aug01/05 |
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| 21-61-00 | R |      | May01/08 | 21-61-00 |   |      | May01/08         | 21-61-00 | R                                       |      | May01/08 |
| 21-61-00 | R |      | May01/08 | 21-61-00 |   |      | Feb01/08         | 21-61-00 |   |      | Feb01/08 |
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| 21-61-00 | R |      | May01/08 | 21-61-00 |   |      | May01/08         | 21-61-00 |   |      | Aug01/05 |
| 21-61-00 | R |      | May01/08 | 21-61-00 |   |      | May01/08         | 21-61-00 |   |      | Nov01/06 |
| 21-61-00 |   |      | Nov01/05 | 21-61-00 |   |      | May01/08         | 21-61-00 |   |      | Nov01/06 |
| 21-61-00 |   | 267  | Nov01/05 | 21-61-00 |   |      | May01/08         | 21-61-00 |   | A269 | Aug01/05 |
| 21-61-00 |   |      | Feb01/06 | 21-61-00 |   |      | May01/08         | 21-61-00 |   |      | Aug01/05 |
| 21-61-00 | R |      | May01/08 | 21-61-00 |   |      | May01/08         | 21-61-00 |   |      | Aug01/05 |
| 21-61-00 | R |      | May01/08 | 21-61-00 |   |      | Aug01/05         | 21-61-00 |   |      | Aug01/05 |
| 21-61-00 | R |      | May01/08 | 21-61-00 |   |      | Aug01/05         | 21-61-00 |   |      | Aug01/05 |
| 21-61-00 | R |      | May01/08 | 21-61-00 |   |      | Aug01/05         | 21-61-00 |   |      | Aug01/05 |
| 21-61-00 | R |      | May01/08 | 21-61-00 |   |      | Aug01/05         | 21-61-00 |   |      | Aug01/05 |
| 21-61-00 |   |      | Nov01/05 | 21-61-00 | R |      | May01/08         | 21-61-00 |   |      | Aug01/05 |
| 21-61-00 | R | 275  | May01/08 | 21-61-00 |   |      | Aug01/05         | 21-61-00 |   |      | Aug01/05 |
| 21-61-00 | R | 276  | May01/08 | 21-61-00 | R | A227 | May01/08         | 21-61-00 |   | A278 | Aug01/05 |
| 21-61-00 |   | 277  | Nov01/05 | 21-61-00 |   | A228 | Aug01/05         | 21-61-00 |   | A279 | Aug01/05 |
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| 21-61-00 |   | 279  | Aug01/05 | 21-61-00 | R | A230 | May01/08         | 21-61-00 | R                                       | 301  | May01/08 |
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| 21-61-00 |   | 281  | Aug01/05 | 21-61-00 | R | A232 | May01/08         | 21-61-00 | R                                       | 303  | May01/08 |
| 21-61-00 |   | 282  | Aug01/05 | 21-61-00 | R | A233 | May01/08         | 21-61-00 |   | 304  | Feb01/08 |
| 21-61-00 |   | 283  | Aug01/05 | 21-61-00 | R | A234 | May01/08         | 21-61-00 |   | 305  | Feb01/08 |
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| 21-61-00 |   | 286  | Aug01/05 | 21-61-00 |   | A237 | Aug01/05         | 21-61-00 |   | 308  | Nov01/05 |
| 21-61-00 | R | 287  | May01/08 | 21-61-00 |   | A238 | Aug01/05         | 21-61-00 |   | 309  | Nov01/05 |
| 21-61-00 | R | 288  | May01/08 | 21-61-00 | R | A239 | May01/08         |          |   |      |          |
| 21-61-00 | R | 289  | May01/08 | 21-61-00 | R | A240 | May01/08         | 21-63-00 |   | 201  | Feb01/05 |
| 21-61-00 | R | 290  | May01/08 | 21-61-00 | R | A241 | May01/08         | 21-63-00 |   | 202  | Feb01/05 |
| 21-61-00 |   |      | Aug01/05 | 21-61-00 | R |      | May01/08         | 21-63-00 |   |      | Aug01/05 |
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| 21-61-00 |   |      | Aug01/05 | 21-61-00 |   |      | Feb01/06         | 21-63-00 |   |      | Aug01/05 |
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| 21-63-00 |   |      | Aug01/05 | 21-63-00 | R  |      | May01/08 | 21-63-00 |   |      | May01/08 |
| 21-63-00 |   |      | Aug01/05 | 21-63-00 | R  |      | May01/08 | 21-63-00 |   |      | Nov01/05 |
| 21-63-00 |   |      | Aug01/05 | 21-63-00 | R  |      | May01/08 | 21-63-00 |   |      | Nov01/05 |
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| 21-63-00 |   |      | Aug01/05 | 21-63-00 | R  |      | May01/08 | 21-63-00 |   |      | Nov01/05 |
| 21-63-00 |   |      | Aug01/05 | 21-63-00 | R  |      | May01/08 | 21-63-00 |   |      | Nov01/05 |
| 21-63-00 |   |      | Aug01/05 | 21-63-00 | R  |      | May01/08 | 21-63-00 |   |      | Nov01/05 |
| 21-63-00 |   |      | Aug01/05 | 21-63-00 | ., |      | Nov01/05 | 21-63-00 |   |      | Nov01/05 |
| 21-63-00 |   |      | Aug01/05 | 21-63-00 |    |      | Nov01/05 | 21-63-00 |   |      | Nov01/05 |
| 21-63-00 |   |      | Aug01/05 | 21-63-00 |    |      | Nov01/05 | 21-63-00 |   |      | Nov01/05 |
| 21-63-00 |   |      | Aug01/05 | 21-63-00 |    |      | Nov01/05 | 21-63-00 |   |      | Nov01/05 |
| 21-63-00 | R |      | May01/08 | 21-63-00 |    |      | Nov01/05 | 21-63-00 |   |      | Nov01/05 |
| 21-63-00 | R |      | May01/08 | 21-63-00 |    |      | Nov01/05 | 21-63-00 |   |      | Nov01/05 |
| 21-63-00 | R |      | May01/08 | 21-63-00 |    |      | Nov01/05 | 21-63-00 |   |      | Nov01/05 |
| 21-63-00 | R |      | May01/08 | 21-63-00 |    |      | Nov01/05 | 21-63-00 |   |      | Nov01/05 |
| 21-63-00 |   |      | Nov01/05 | 21-63-00 | R  |      | May01/08 | 21-63-00 |   |      | Feb01/07 |
| 21-63-00 |   |      | Nov01/05 | 21-63-00 | R  |      | May01/08 | 21-63-00 | R |      | May01/08 |
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| 21-63-00 |   | 230  |          | 21-63-00 | R  |      | May01/08 | 21-63-00 |   |      | Nov01/05 |
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| 21-63-00 |   | 235  | Nov01/05 | 21-63-00 | R  |      | May01/08 | 21-63-00 |   |      | Aug01/07 |
| 21-63-00 |   | 236  | Nov01/05 | 21-63-00 | R  |      | May01/08 | 21-63-00 |   |      | Feb01/08 |
| 21-63-00 |   | 237  | Nov01/05 | 21-63-00 | R  |      | May01/08 | 21-63-00 |   |      | Feb01/08 |
| 21-63-00 |   | 238  | Nov01/05 | 21-63-00 |    |      | Feb01/08 | 21-63-00 |   | 303  | Feb01/08 |
| 21-63-00 |   | 239  | Nov01/05 | 21-63-00 |    | 290  | Nov01/05 | 21-63-00 |   | 304  | Feb01/08 |
| 21-63-00 |   | 240  | Nov01/05 | 21-63-00 | R  | 291  | May01/08 | 21-63-00 | R | 305  | May01/08 |
| 21-63-00 |   | 241  | Nov01/05 | 21-63-00 | R  | 292  | May01/08 | 21-63-00 | R | 306  | May01/08 |
| 21-63-00 |   | 242  | Nov01/05 | 21-63-00 | R  | 293  | May01/08 | 21-63-00 | R | 307  | May01/08 |
| 21-63-00 |   | 243  | Nov01/05 | 21-63-00 | R  | 294  | May01/08 | 21-63-00 | R | 308  | May01/08 |
| 21-63-00 |   | 244  | Nov01/05 | 21-63-00 | R  | 295  | May01/08 | 21-63-00 |   | 309  | Feb01/07 |
| 21-63-00 |   | 245  | Nov01/05 | 21-63-00 | R  | 296  | May01/08 | 21-63-00 |   | 310  | Feb01/07 |
| 21-63-00 |   | 246  | Nov01/05 | 21-63-00 | R  | 297  | May01/08 | 21-63-00 |   | 311  | Feb01/07 |
| 21-63-00 |   | 247  | Nov01/05 | 21-63-00 | R  | 298  | May01/08 | 21-63-00 |   | 312  | Feb01/07 |
| 21-63-00 |   | 248  | Nov01/05 | 21-63-00 | R  | 299  | May01/08 | 21-63-00 |   | 313  | Nov01/05 |
| 21-63-00 | R | 249  | May01/08 | 21-63-00 | R  | A200 | May01/08 | 21-63-00 |   | 314  | Nov01/05 |
| 21-63-00 | R | 250  | May01/08 | 21-63-00 |    | A201 | Nov01/05 | 21-63-00 |   | 315  | Nov01/05 |
| 21-63-00 |   | 251  | Nov01/05 | 21-63-00 |    | A202 | Nov01/05 | 21-63-00 | R | 316  | May01/08 |
| 21-63-00 |   | 252  | Nov01/05 | 21-63-00 |    | A203 | Nov01/05 | 21-63-00 | R | 317  | May01/08 |
| 21-63-00 |   | 253  | Nov01/05 | 21-63-00 |    | A204 | Nov01/05 | 21-63-00 | R | 318  | May01/08 |
| 21-63-00 | R | 254  | May01/08 | 21-63-00 |    | A205 | Nov01/05 | 21-63-00 | R | 319  | May01/08 |
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| 21-63-00 |   |      | Nov01/05 | 21-63-00 |    |      | Nov01/05 | 21-63-00 |   |      | Aug01/05 |
| 21-63-00 |   |      | Nov01/05 | 21-63-00 |    |      | Nov01/05 | 21-63-00 |   |      | Aug01/05 |
| 21-63-00 | R |      | May01/08 | 21-63-00 |    |      | May01/08 | 21-63-00 |   |      | Aug01/05 |
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| Zone Controller Fault   |          |          |              |                      |                  |
| Trim-Air Pressure Regulating Valve                                  |          |          | A222         | ALL                  |                  |
| or Pressure Switch Fault<br>Pack 1 Trim Air Check Valve Fault       |          |          | 4227         | A. I                 |                  |
| Pack 1 Trim Air Check Valve Fault Pack 2 Trim Air Check Valve Fault |          |          | A224<br>A225 |                      |                  |
| Trim Air System Fault with CKPT                                     |          |          | A225         |                      | /51 <u>-</u> /75 |
| Trim Air Valve position AMBER XX                                    |          |          | AZZU         | 551-599,             | 471-417          |
| Trim Air System Fault with FWD                                      |          |          | A227         | •                    | 451-475          |
| Trim Air Valve position AMBER XX                                    |          |          | ALLI         | 551-599,             | 751 715          |
| Trim Air System Fault with AFT                                      |          |          | A229         | -                    | 451-475          |
| Trim Air Valve position AMBER XX                                    |          |          |              | 551-599,             | _                |
| Cockpit Temperature uncontrollable                                  |          |          | A230         | ALL                  |                  |
| or too low with TAV AMBER XX  |          |          |              |                      |                  |
| FWD Cabin Temperature   |          |          | A232         | ALL                  |                  |
| uncontrollable or too low with TAV                                  |          |          |              |                      |                  |
| AMBER XX  |          |          | _            |                      |                  |
| AFT Cabin Temperature   |          |          | A233         | ALL                  |                  |
| uncontrollable or too low with TAV                                  |          |          |              |                      |                  |
| AMBER XX  |          |          |              |                      |                  |
| ECS receives no Data from CIDS                                      |          |          | A234         |                      |                  |
| CIDS receives no Data from the ZC                                   |          |          | A236         | ALL                  |                  |
|   |          |          |              |                      |                  |
| COCKPIT AND CABIN TEMPERATURE CONTROL                               | 21-63-00 |          |              |                      |                  |
| TASK SUPPORTING DATA  |          |          | 301          | ALL                  |                  |
| Zone Controller   |          |          | 301          | ALL                  |                  |
| CFDS Fault Information  |          |          | 301          | ALL                  |                  |
| Initiated ZC Test Data  |          |          | <b>3</b> 01  | ALL                  |                  |

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### TROUBLE SHOOTING MANUAL

### AIR CONDITIONING - FAULT SYMPTOMS

| WARNINGS/MALFUNCTIONS   |        | FAULT<br>ISOLATION |     |   |           |
|-------------------------|--------|--------------------|-----|---|-----------|
| WARNINGS/ MALI UNCTIONS | SOURCE | MESSAGE            | ATA | С | PROCEDURE |

### Upper ECAM DU Warnings

|   | AIR AFT CRG VENT FAULT | TEMPCTL | AFT CARGO FAN OR SPLY              | 212854 | 212800 P 207<br>T 810 805 |
|---|------------------------|---------|------------------------------------|--------|---------------------------|
|   | AIR FWD CRG VENT FAULT | TEMPCTL | FWD CARGO FAN OR SPLY              | 212853 | 212800 P 205<br>T 810 803 |
|   | AIR PACK 1 FAULT       |         |                                    |        | 216100 P 213<br>T 810 803 |
|   | AIR PACK 1 OFF         |         |                                    |        | 216100 P 235<br>T 810 808 |
|   | AIR PACK 1 OVHT        |         |                                    |        | 216100 P 201<br>T 810 801 |
| R | AIR PACK 1 OVHT        | ECAM 1  | SDAC1 : NO DATA FROM<br>ACSC1      | 216134 | 315400 PA207<br>T 810 905 |
| R | AIR PACK 1 OVHT        | ECAM 1  | SDAC1 : NO DATA FROM<br>PACK1 CONT | 216134 | 315400 PA207<br>T 810 905 |
| R | AIR PACK 1 OVHT        | ECAM 1  | SDAC2 : NO DATA FROM<br>ACSC2      | 216134 | 315400 PA213<br>T 810 908 |
| R | AIR PACK 1 OVHT        | ECAM 1  | SDAC2 : NO DATA FROM<br>PACK2 CONT | 216134 | 315400 PA213<br>T 810 908 |
| R | AIR PACK 1 OVHT        | ECAM 2  | SDAC1 : NO DATA FROM<br>ACSC1      | 216134 | 315400 PA207<br>T 810 905 |
| R | AIR PACK 1 OVHT        | ECAM 2  | SDAC1 : NO DATA FROM<br>PACK1 CONT | 216134 | 315400 PA207<br>T 810 905 |
| R | AIR PACK 1 OVHT        | ECAM 2  | SDAC2 : NO DATA FROM<br>ACSC2      | 216134 | 315400 PA213<br>T 810 908 |
| R | AIR PACK 1 OVHT        | ECAM 2  | SDAC2: NO DATA FROM<br>PACK2 CONT  | 216134 | 315400 PA213<br>T 810 908 |

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# **@A319/A320/A321**

### TROUBLE SHOOTING MANUAL

| WARNINGS/MALFUNCTIONS   |         | FAULT<br>- ISOLATION                     |        |   |                           |
|---|---------|--|--------|---|---------------------------|
| WARNINGS/MALFUNCTIONS   | SOURCE  | MESSAGE                                  | ATA    | С | PROCEDURE                 |
| AIR PACK 1 OVHT   | TEMPCTL | P1 AIR CYCLE MACH CHECK                  | 216100 | 1 | 216100 P 201<br>T 810 801 |
| AIR PACK 1 OVHT   | TEMPCTL | P1 RAM AIR IN ACTUATOR                   | 216151 | 1 | 216100 PA235<br>T 810 849 |
| AIR PACK 1 OVHT   | TEMPCTL | P1 RAM AIR OUT ACTUATOR                  | 216152 | 1 | 216100 PA239<br>T 810 851 |
| AIR PACK 1 REGUL FAULT  |         |  |        |   | 216100 P 257<br>T 810 820 |
| AIR PACK 1 REGUL FAULT associated with Lower ECAM DU Flags- BLEED AIR - PACK CONT PACK 1 - Bypass valve indication replaced by amber XX |         |  |        |   | 216100 PA273<br>T 810 903 |
| AIR PACK 1 REGUL FAULT  | ECAM 1  | SDAC1 : NO DATA FROM<br>ACSC1            | 216134 | 1 | 216100 P 257<br>T 810 820 |
| AIR PACK 1 REGUL FAULT  | ECAM 1  | SDAC1 : NO DATA FROM<br>PACK1 CONT       | 216134 | 1 | 216100 P 257<br>T 810 820 |
| AIR PACK 1 REGUL FAULT  | ECAM 2  | SDAC2 : NO DATA FROM<br>ACSC1            | 216134 | 1 | 216100 P 257<br>T 810 820 |
| AIR PACK 1 REGUL FAULT  | ECAM 2  | SDAC2 : NO DATA FROM<br>PACK1 CONT       | 216134 | 1 | 216100 P 257<br>T 810 820 |
| AIR PACK 1 REGUL FAULT  | TEMPCTL | NO TEST RESULT RECEPTION<br>FROM P1 CONT | 216100 | 3 | 216100 P 257<br>T 810 820 |
| AIR PACK 1 REGUL FAULT  | TEMPCTL | NO 28V ON PACK 1 MAIN                    | 216100 | 2 | 216100 P 226<br>T 810 805 |
| AIR PACK 1 REGUL FAULT  | TEMPCTL | P1 BYPASS VALVE                          | 216153 | 1 | 216100 P 249<br>T 810 816 |
| AIR PACK 1 REGUL FAULT  | TEMPCTL | P1 CONT                                  | 216134 | 1 | 216100 P 226<br>T 810 805 |
| AIR PACK 1 REGUL FAULT  | TEMPCTL | P1 CONT OR ANTI ICE<br>VALVE             | 216141 | 1 | 216100 P 253<br>T 810 818 |

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### TROUBLE SHOOTING MANUAL

| WARNINGS/MALFUNCTIONS  | <br> <br> | FAULT<br>ISOLATION                 |          |                           |
|--|-----------|------------------------------------|----------|---------------------------|
| WARNINGS/MALFUNCTIONS  | SOURCE    | MESSAGE                            | ATA C    | 1                         |
| AIR PACK 1 REGUL FAULT   | TEMPCTL   | P1 RAM AIR IN ACTUATOR             | 216151 1 | 216100 P 241<br>T 810 812 |
| AIR PACK 1 REGUL FAULT   | TEMPCTL   | P1 RAM AIR OUT ACTUATOR            | 216152 1 | 216100 P 245<br>T 810 814 |
| AIR PACK 1 REGUL FAULT   | TEMPCTL   | P1 WATER EX TEMP SENSOR            | 216113 1 | 216100 P 237<br>T 810 810 |
| AIR PACK 1 REGUL FAULT   | TEMPCTL   | P1 WATER EX TEMP SENSOR            | 216113 2 | 216100 P 237<br>T 810 810 |
| AIR PACK 1+2 FAULT associated with AIR - COOLING PACK 1 - FCV does not open after engine start |           |                                    |          | 215100 P 206<br>T 810 803 |
| AIR PACK 1+2 FAULT associated with AIR - COOLING PACK 2 - FCV does not open after engine start |           |                                    |          | 215100 P 210<br>T 810 804 |
| AIR PACK 1+2 FAULT   |           |                                    |          | 216100 P 233<br>T 810 807 |
| AIR PACK 2 FAULT   |           |                                    |          | 216100 P 219<br>T 810 804 |
| AIR PACK 2 OFF   |           |                                    |          | 216100 P 236<br>T 810 809 |
| AIR PACK 2 OVHT  |           |                                    |          | 216100 P 207<br>T 810 802 |
| AIR PACK 2 OVHT  | ECAM 1    | SDAC1 : NO DATA FROM<br>ACSC1      | 216134 1 | 315400 PA207<br>T 810 905 |
| AIR PACK 2 OVHT  | ECAM 1    | SDAC1 : NO DATA FROM<br>PACK1 CONT | 216134 1 | 315400 PA207<br>T 810 905 |
| AIR PACK 2 OVHT  | ECAM 1    | SDAC2 : NO DATA FROM<br>ACSC2      | 216134 1 | 315400 PA213<br>T 810 908 |

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|   | WARNINGS/MALFUNCTIONS  |         | CFDS FAULT MESSAGES                | CFDS FAULT MESSAGES |   |                           |  |
|---|--|---------|------------------------------------|---------------------|---|---------------------------|--|
|   | WARNINGS/ MALI ONC 110NS   | SOURCE  | MESSAGE                            | ATA                 | С | ISOLATION<br>PROCEDURE    |  |
| R | AIR PACK 2 OVHT  | ECAM 1  | SDAC2: NO DATA FROM<br>PACK2 CONT  | 216134              | 1 | 315400 PA213<br>T 810 908 |  |
| R | AIR PACK 2 OVHT  | ECAM 2  | SDAC1 : NO DATA FROM<br>ACSC1      | 216134              | 1 | 315400 PA207<br>T 810 905 |  |
| R | AIR PACK 2 OVHT  | ECAM 2  | SDAC1 : NO DATA FROM<br>PACK1 CONT | 216134              | 1 | 315400 PA207<br>T 810 905 |  |
| R | AIR PACK 2 OVHT  | ECAM 2  | SDAC2 : NO DATA FROM<br>ACSC2      | 216134              | 1 | 315400 PA213<br>T 810 908 |  |
| R | AIR PACK 2 OVHT  | ECAM 2  | SDAC2 : NO DATA FROM<br>PACK2 CONT | 216134              | 1 | 315400 PA213<br>T 810 908 |  |
|   | AIR PACK 2 OVHT  | TEMPCTL | P2 AIR CYCLE MACH CHECK            | 216100              | 1 | 216100 P 207<br>T 810 802 |  |
|   | AIR PACK 2 OVHT  | TEMPCTL | P2 RAM AIR IN ACTUATOR             | 216151              | 1 | 216100 PA237<br>T 810 850 |  |
|   | AIR PACK 2 OVHT  | TEMPCTL | P2 RAM AIR OUT ACTUATOR            | 216152              | 1 | 216100 PA241<br>T 810 852 |  |
|   | AIR PACK 2 REGUL FAULT   |         |                                    |                     |   | 216100 P 268<br>T 810 821 |  |
|   | AIR PACK 2 REGUL FAULT associated with Lower ECAM DU Flags-BLEED AIR - PACK CONT PACK 2 - Bypass valve indication replaced by amber XX |         |                                    |                     |   | 216100 PA274<br>T 810 904 |  |
|   | AIR PACK 2 REGUL FAULT   | ECAM 1  | SDAC1 : NO DATA FROM<br>ACSC2      | 216134              | 1 | 216100 P 268<br>T 810 821 |  |
|   | AIR PACK 2 REGUL FAULT   | ECAM 1  | SDAC1 : NO DATA FROM<br>PACK2 CONT | 216134              | 1 | 216100 P 268<br>T 810 821 |  |
|   | AIR PACK 2 REGUL FAULT   | ECAM 2  | SDAC2 : NO DATA FROM<br>ACSC2      | 216134              | 1 | 216100 P 268<br>T 810 821 |  |
|   | AIR PACK 2 REGUL FAULT   | ECAM 2  | SDAC2 : NO DATA FROM<br>PACK2 CONT | 216134              | 1 | 216100 P 268<br>T 810 821 |  |

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## TROUBLE SHOOTING MANUAL

| HADNINGS / MALEUNGITONS                                    | L       |                                       | FAULT<br>ISOLATION |   |                           |
|--|---------|---------------------------------------|--------------------|---|---------------------------|
| WARNINGS/MALFUNCTIONS                                      | SOURCE  | MESSAGE                               | ATA                | С | !!                        |
| AIR PACK 2 REGUL FAULT                                     | TEMPCTL | NO TEST RESULT RECEPTION FROM P2 CONT | 216100             | 3 | 216100 P 268<br>T 810 821 |
| AIR PACK 2 REGUL FAULT                                     | TEMPCTL | NO 28V ON PACK 2 MAIN                 | 216100             | 2 | 216100 P 229<br>T 810 806 |
| AIR PACK 2 REGUL FAULT                                     | TEMPCTL | P2 BYPASS VALVE                       | 216153             | 1 | 216100 P 251<br>T 810 817 |
| AIR PACK 2 REGUL FAULT                                     | TEMPCTL | P2 CONT                               | 216134             | 1 | 216100 P 229<br>T 810 806 |
| AIR PACK 2 REGUL FAULT                                     | TEMPCTL | P2 CONT OR ANTI ICE<br>VALVE          | 216141             | 1 | 216100 P 255<br>T 810 819 |
| AIR PACK 2 REGUL FAULT                                     | TEMPCTL | P2 RAM AIR IN ACTUATOR                | 216151             | 1 | 216100 P 243<br>T 810 813 |
| AIR PACK 2 REGUL FAULT                                     | TEMPCTL | P2 RAM AIR OUT ACTUATOR               | 216152             | 1 | 216100 P 247<br>T 810 815 |
| AIR PACK 2 REGUL FAULT                                     | TEMPCTL | P2 WATER EX TEMP SENSOR               | 216113             | 1 | 216100 P 239<br>T 810 811 |
| AIR PACK 2 REGUL FAULT                                     | TEMPCTL | P2 WATER EX TEMP SENSOR               | 216113             | 2 | 216100 P 239<br>T 810 811 |
| CAB PR EXCES RESIDUAL PR                                   |         |                                       |                    |   | 213100 P 290<br>T 810 845 |
| CAB PR EXCESS CAB ALT                                      |         |                                       |                    |   | 213100 P 221<br>T 810 809 |
| CAB PR EXCESS CAB ALT associated with CAB PR SYS 1 FAULT   |         |                                       |                    |   | 213100 P 256<br>T 810 827 |
| CAB PR EXCESS CAB ALT associated with CAB PR SYS 2 FAULT   |         |                                       |                    |   | 213100 P 256<br>T 810 827 |
| CAB PR EXCESS CAB ALT associated with CAB PR SYS 1+2 FAULT |         |                                       |                    |   | 213100 P 256<br>T 810 827 |

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## TROUBLE SHOOTING MANUAL

| HADNINGS /MALTHNOITONS   |        | CFDS FAULT MESSAGES                                |        |   |                           |  |  |
|--|--------|--|--------|---|---------------------------|--|--|
| WARNINGS/MALFUNCTIONS  | SOURCE | MESSAGE  | ATA    | С | ISOLATION PROCEDURE       |  |  |
| CAB PR LDG ELEV FAULT  | AFS    | AFS: FMGC1   | 228334 | 1 | 228300 PA224<br>T 810 893 |  |  |
|  | !      | ADF 1, EIS 1, EIS 2, EIS 3<br>ILS 1, ILS 2, RMP123 | 3,     |   | 1 810 873                 |  |  |
| CAB PR LDG ELEV FAULT associated with                                      | AFS    | AFS: FMGC1   | 228334 | 1 | 228300 PA224<br>T 810 893 |  |  |
| AUTO FLT AP OFF and AUTO FLT A/THR OFF                                     | !      | ADF 1, EIS 1, EIS 2, EIS 3<br>ILS 1, ILS 2, RMP123 | 3,     |   | 010 073                   |  |  |
| CAB PR LO DIFF PR  |        |  |        |   | 213100 P 227<br>T 810 810 |  |  |
| CAB PR OFV NOT OPEN associated with AIR - PRESS OFV - Fully open on ground |        |  |        |   | 213100 P 285<br>T 810 843 |  |  |
| CAB PR OFV NOT OPEN  | CPC 1  | OUTFL. VALVE AUTO MOTOR<br>1 (XX)                  | 213151 | 1 | 213100 P 201<br>T 810 803 |  |  |
| CAB PR OFV NOT OPEN  | CPC 1  | OUTFL. VALVE ELECTRONIC 1 (XX)                     | 213151 | 1 | 213100 P 201<br>T 810 803 |  |  |
| CAB PR OFV NOT OPEN  | CPC 1  | OUTFL.V AUTO MOTOR 1<br>(88)                       | 213151 | 1 | 213100 P 210<br>T 810 804 |  |  |
| CAB PR OFV NOT OPEN  | CPC 1  | OUTFL.VALVE FEEDB ASSY 1                           | 213151 | 1 | 213100 P 201<br>T 810 803 |  |  |
| CAB PR OFV NOT OPEN  | CPC 1  | OUTFLOW VALVE ELECTRONIC<br>1 (XX)                 | 213151 | 1 | 213100 P 201<br>T 810 803 |  |  |
| CAB PR OFV NOT OPEN  | CPC 1  | PRESS CONTR 1 (XX)                                 | 213134 | 1 | 213100 P 201<br>T 810 803 |  |  |
| CAB PR OFV NOT OPEN  | CPC 2  | OUTFL. VALVE AUTO MOTOR<br>2 (XX)                  | 213151 | 1 | 213100 P 201<br>T 810 803 |  |  |
| CAB PR OFV NOT OPEN  | CPC 2  | OUTFL. VALVE ELECTRONIC<br>2 (XX)                  | 213151 | 1 | 213100 P 201<br>T 810 803 |  |  |
| CAB PR OFV NOT OPEN  | CPC 2  | OUTFL.VALVE FEEDB ASSY 2<br>(XX)                   | 213151 | 1 | 213100 P 201<br>T 810 803 |  |  |

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| HADNINGS /MALEUNGTIONS   |        |                                    | FAULT<br>ISOLATION |   |                           |
|--|--------|------------------------------------|--------------------|---|---------------------------|
| WARNINGS/MALFUNCTIONS  | SOURCE | MESSAGE                            | ATA                | С | PROCEDURE                 |
| CAB PR OFV NOT OPEN  | CPC 2  | OUTFLOW VALVE ELECTRONIC<br>2 (XX) | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR OFV NOT OPEN  | CPC 2  | PRESS CONTR 2 (XX)                 | 213134             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR OUTFLOW VALVE NOT OPEN associated with AIR - PRESS OFV - Fully open on ground |        |                                    |                    |   | 213100 P 285<br>T 810 843 |
| CAB PR OUTFLOW VALVE NOT OPEN  | CPC 1  | OUTFL. VALVE AUTO MOTOR<br>1 (XX)  | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR OUTFLOW VALVE NOT OPEN  | CPC 1  | OUTFL. VALVE ELECTRONIC<br>1 (XX)  | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR OUTFLOW VALVE NOT OPEN  | CPC 1  | OUTFL.V AUTO MOTOR 1 (88)          | 213151             | 1 | 213100 P 210<br>T 810 804 |
| CAB PR OUTFLOW VALVE NOT OPEN  | CPC 1  | OUTFL.VALVE FEEDB ASSY 1           | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR OUTFLOW VALVE NOT OPEN  | CPC 1  | OUTFLOW VALVE ELECTRONIC<br>1 (XX) | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR OUTFLOW VALVE NOT OPEN  | CPC 1  | PRESS CONTR 1 (XX)                 | 213134             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR OUTFLOW VALVE NOT OPEN  | CPC 2  | OUTFL. VALVE AUTO MOTOR<br>2 (XX)  | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR OUTFLOW VALVE NOT OPEN  | CPC 2  | OUTFL. VALVE ELECTRONIC<br>2 (XX)  | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR OUTFLOW VALVE NOT OPEN  | CPC 2  | OUTFL.VALVE FEEDB ASSY 2           | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR OUTFLOW VALVE NOT OPEN  | CPC 2  | OUTFLOW VALVE ELECTRONIC<br>2 (XX) | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR OUTFLOW VALVE NOT OPEN  | CPC 2  | PRESS CONTR 2 (XX)                 | 213134             | 1 | 213100 P 201<br>T 810 803 |

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| HADNINGS / MALEUNCTIONS                                  |        |                                   | FAULT<br>- ISOLATION |   |                           |
|--|--------|-----------------------------------|----------------------|---|---------------------------|
| WARNINGS/MALFUNCTIONS                                    | SOURCE | MESSAGE                           | ATA                  | С | !                         |
| CAB PR SAFETY VALVE OPEN                                 |        |                                   |                      |   | 213100 P 218<br>T 810 808 |
| CAB PR SYS 1 FAULT associated with CAB PR EXCESS CAB ALT |        |                                   |                      |   | 213100 P 256<br>T 810 827 |
| CAB PR SYS 1 FAULT                                       | CFDS   | NO CPC1 DATA                      | 213134               | 2 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1 FAULT                                       | CPC 1  | OUTFL. VALVE AUTO MOTOR<br>1 (XX) | 213151               | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1 FAULT                                       | CPC 1  | OUTFL. VALVE ELECTRONIC 1 (XX)    | 213151               | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1 FAULT                                       | CPC 1  | OUTFL.V FEEDB ASSY 1<br>(78))     | 213151               | 1 | 213100 P 212<br>T 810 805 |
| CAB PR SYS 1 FAULT                                       | CPC 1  | OUTFL.VALVE FEEDB ASSY 1          | 213151               | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1 FAULT                                       | CPC 1  | OUTFLOW VALVE                     | 213151               | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1 FAULT                                       | CPC 1  | OUTFLOW VALVE (33)                | 213151               | 1 | 213100 P 258<br>T 810 828 |
| CAB PR SYS 1 FAULT                                       | CPC 1  | OUTFLOW VALVE (81)                | 213151               | 1 | 213100 P 258<br>T 810 828 |
| CAB PR SYS 1 FAULT                                       | CPC 1  | OUTFLOW VALVE BLOCKED (XX)        | 213151               |   | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1 FAULT                                       | CPC 1  | OUTFLOW VALVE ELEC 1              | 213151               | 1 | 213100 P 260<br>T 810 829 |
| CAB PR SYS 1 FAULT                                       | CPC 1  | OUTFLOW VALVE ELEC 1<br>(52)      | 213151               | 1 | 213100 P 265<br>T 810 831 |
| CAB PR SYS 1 FAULT                                       | CPC 1  | OUTFLOW VALVE ELEC 1              | 213151               | 1 | 213100 P 269<br>T 810 833 |
| CAB PR SYS 1 FAULT                                       | CPC 1  | OUTFLOW VALVE ELEC 1              | 213151               | 1 | 213100 P 271<br>T 810 835 |

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| WARNINGS/MALFUNCTIONS  |        |                                    | FAULT<br>ISOLATION |   |                           |
|--|--------|------------------------------------|--------------------|---|---------------------------|
| WARNINGS/MALFUNCTIONS  | SOURCE | MESSAGE                            | ATA                | С | ! :                       |
| CAB PR SYS 1 FAULT   | CPC 1  | OUTFLOW VALVE ELECTRONIC<br>1 (XX) | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1 FAULT   | CPC 1  | PRESS CONTR 1 (XX)                 | 213134             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1 FAULT   | CPC 1  | PRESS CONTR 1 (XX)                 | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1 FAULT   | CPC 2  | OUTFLOW VALVE BLOCKED (XX)         | 213151             | 3 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1+2 FAULT associated with CABIN PRESS Pnl (25VU) AIR - PRESS MODE SEL - P/bsw FAULT legend on |        |                                    |                    |   | 213100 P 208<br>T 810 802 |
| CAB PR SYS 1+2 FAULT associated with CAB PR EXCESS CAB ALT   |        |                                    |                    |   | 213100 P 256<br>T 810 827 |
| CAB PR SYS 1+2 FAULT   | CPC 1  | OUTFL. VALVE AUTO MOTOR<br>1 (XX)  | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1+2 FAULT   | CPC 1  | OUTFL. VALVE ELECTRONIC<br>1 (XX)  | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1+2 FAULT   | CPC 1  | OUTFL.VALVE FEEDB ASSY 1           | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1+2 FAULT   | CPC 1  | OUTFLOW VALVE ELECTRONIC<br>1 (XX) | 213151             |   | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1+2 FAULT   | CPC 1  | PRESS CONTR 1 (XX)                 | 213134             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1+2 FAULT   | CPC 2  | OUTFL. VALVE AUTO MOTOR<br>2 (XX)  | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1+2 FAULT   | CPC 2  | OUTFL. VALVE ELECTRONIC<br>2 (XX)  | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1+2 FAULT   | CPC 2  | OUTFL.VALVE FEEDB ASSY 2<br>(XX)   | 213151             | 1 | 213100 P 201<br>T 810 803 |

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| HADNINGS (MALIFINISTIONS                                 | <br> <br> |                                    | FAULT<br>ISOLATION |   |                           |
|--|-----------|------------------------------------|--------------------|---|---------------------------|
| WARNINGS/MALFUNCTIONS                                    | SOURCE    | MESSAGE                            | ATA                | С | PROCEDURE                 |
| CAB PR SYS 1+2 FAULT                                     | CPC 2     | OUTFLOW VALVE ELECTRONIC<br>2 (XX) | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 1+2 FAULT                                     | CPC 2     | PRESS CONTR 2 (XX)                 | 213134             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 2 FAULT associated with CAB PR EXCESS CAB ALT |           |                                    |                    |   | 213100 P 256<br>T 810 827 |
| CAB PR SYS 2 FAULT                                       | CFDS      | NO CPC2 DATA                       | 213134             | 2 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 2 FAULT                                       | CPC 2     | OUTFL. VALVE AUTO MOTOR<br>2 (XX)  | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 2 FAULT                                       | CPC 2     | OUTFL. VALVE ELECTRONIC 2 (XX)     | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 2 FAULT                                       | CPC 2     | OUTFL.V FEEDB ASSY 2<br>(78)       | 213151             | 1 | 213100 P 254<br>T 810 826 |
| CAB PR SYS 2 FAULT                                       | CPC 2     | OUTFL.VALVE FEEDB ASSY 2           | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 2 FAULT                                       | CPC 2     | OUTFLOW VALVE                      | 213151             | 1 | 213100 P 201<br>T 810 803 |
| CAB PR SYS 2 FAULT                                       | CPC 2     | OUTFLOW VALVE (33)                 | 213151             | 1 | 213100 P 258<br>T 810 828 |
| CAB PR SYS 2 FAULT                                       | CPC 2     | OUTFLOW VALVE (81)                 | 213151             | 1 | 213100 P 258<br>T 810 828 |
| CAB PR SYS 2 FAULT                                       | CPC 2     | OUTFLOW VALVE ELEC 2               | 213151             | 1 | 213100 P 263<br>T 810 830 |
| CAB PR SYS 2 FAULT                                       | CPC 2     | OUTFLOW VALVE ELEC 2<br>(52)       | 213151             | 1 | 213100 P 267<br>T 810 832 |
| CAB PR SYS 2 FAULT                                       | CPC 2     | OUTFLOW VALVE ELEC 2               | 213151             | 1 | 213100 P 270<br>T 810 834 |
| CAB PR SYS 2 FAULT                                       | CPC 2     | OUTFLOW VALVE ELEC 2               | 213151             | 1 | 213100 P 273<br>T 810 836 |

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|   | WARNINGS/MALFUNCTIONS    |         | CFDS FAULT MESSAGES                             | <br>S  |   | FAULT                     |  |
|---|--------------------------|---------|---|--------|---|---------------------------|--|
|   | WARNINGS/MALFONCTIONS    | SOURCE  | MESSAGE   | ATA    | С | !!!                       |  |
|   | CAB PR SYS 2 FAULT       | CPC 2   | OUTFLOW VALVE ELECTRONIC 2 (XX)                 | 213151 | 1 | 213100 P 201<br>T 810 803 |  |
|   | CAB PR SYS 2 FAULT       | CPC 2   | PRESS CONTR 2 (XX)                              | 213134 | 1 | 213100 P 201<br>T 810 803 |  |
|   | CAB PR SYS 2 FAULT       | CPC 2   | PRESS CONTR 2 (XX)                              | 213151 | 1 | 213100 P 201<br>T 810 803 |  |
| R | COND                     | TEMPCTL | GALY & TOIL FAN OR SPLY                         | 212351 | 1 | 212300 P 201<br>T 810 801 |  |
|   | COND AFT CAB DUCT OVHT   |         |   |        |   | 216300 P 257<br>T 810 825 |  |
|   | COND AFT CARGO DUCT OVHT | AFT CHC | AFT TRIM AIR VALVE                              | 214351 | 1 | 214300 P 206<br>T 810 808 |  |
|   | COND AFT CRG HEAT FAULT  |         |   |        |   | 214300 P 208<br>T 810 809 |  |
|   | COND AFT CRG HEAT FAULT  | AFT CHC | AFT CARGO HEAT CONT                             | 214334 | 1 | 214300 P 210<br>T 810 811 |  |
|   | COND AFT CRG HEAT FAULT  | AFT CHC | AFT COMP TEMP SENSOR                            | 214315 | 1 | 214300 P 203<br>T 810 804 |  |
|   | COND AFT CRG HEAT FAULT  | AFT CHC | AFT DUCT TEMP SENSOR                            | 214315 | 1 | 214300 P 201<br>T 810 802 |  |
|   | COND AFT CRG HEAT FAULT  | AFT CHC | AFT TRIM AIR VALVE                              | 214351 | 1 | 214300 P 206<br>T 810 808 |  |
|   | COND AFT CRG HEAT FAULT  | LGCIU 1 | AFT CARGO DOOR HANDLE<br>PROX SNSR 34WV         | 523215 | 1 | 323100 P 275<br>T 810 831 |  |
| R | COND AFT CRG HEAT FAULT  | LGCIU 1 | AFT CARGO DOOR HANDLE<br>PROX SNSR 34WV TGT POS | 523215 | 1 | 323100 PB211<br>T 810 886 |  |
|   | COND AFT CRG ISOL VALVE  |         |   |        |   | 212800 P 201<br>T 810 802 |  |
|   | COND CKPT DUCT OVHT      |         |   |        | L | 216300 P 248<br>T 810 823 |  |

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|   | WARNINGS/MALFUNCTIONS   |         | CFDS FAULT MESSAGES                             | <br>S  |   | FAULT<br>- ISOLATION      |  |  |
|---|---|---------|---|--------|---|---------------------------|--|--|
|   | WARNINGS/MALFUNCTIONS   | SOURCE  | MESSAGE   | ATA    | С | !!                        |  |  |
|   | COND FWD CAB DUCT OVHT  |         |   |        |   | 216300 P 253<br>T 810 824 |  |  |
|   | COND FWD CRG HEAT FAULT   | LGCIU 1 | FWD CARGO DOOR HANDLE<br>PROX SNSR 28WV         | 523115 | 1 | 323100 P 272<br>T 810 830 |  |  |
| R | COND FWD CRG HEAT FAULT   | LGCIU 1 | FWD CARGO DOOR HANDLE<br>PROX SNSR 28WV TGT POS | 523115 | 1 | 323100 PA294<br>T 810 877 |  |  |
|   | COND HOT AIR FAULT  |         |   |        |   | 216300 P 209<br>T 810 805 |  |  |
|   | <u>COND</u> HOT AIR FAULT   | TEMPCTL | NO 28V ON ZONE MAIN                             | 216300 | 2 | 216300 P 201<br>T 810 801 |  |  |
|   | <u>COND</u> HOT AIR FAULT   | TEMPCTL | TRIM AIR PRESS VALVE                            | 216352 | 1 | 216300 P 209<br>T 810 805 |  |  |
|   | <u>COND</u> HOT AIR FAULT   | TEMPCTL | TRIM AIR PRESS VALVE OR PRESS SWITCH            | 216352 | 2 | 216300 PA222<br>T 810 849 |  |  |
|   | COND L+R CAB FAN FAULT  |         |   |        |   | 212100 P 210<br>T 810 804 |  |  |
|   | COND L+R CAB FAN FAULT  | TEMPCTL | RECIRC FAN 1 AND 2 OR<br>SPLY                   | 212151 | 1 | 212100 P 204<br>T 810 802 |  |  |
|   | COND TRIM AIR SYS FAULT associated with Lower ECAM DU Flags-COND AIR - CAB TEMP CKPT - Zone TAV indication replaced by amber XX |         |   |        |   | 216300 PA226<br>T 810 852 |  |  |
|   | COND TRIM AIR SYS FAULT associated with Lower ECAM DU Flags-COND AIR - CAB TEMP FWD - Zone TAV indication replaced by amber XX  |         |   |        |   | 216300 PA227<br>T 810 853 |  |  |

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# **@A319/A320/A321**

## TROUBLE SHOOTING MANUAL

| WARNINGS/MALFUNCTIONS  | [<br>   | CFDS FAULT ME                       | SSAGES      |   | FAULT<br>ISOLATION        |
|--|---------|-------------------------------------|-------------|---|---------------------------|
| WARNINGS/MALFUNCTIONS  | SOURCE  | MESSAGE                             | ATA         | С | PROCEDURE                 |
| COND TRIM AIR SYS FAULT associated with Lower ECAM DU Flags-COND AIR - CAB TEMP AFT - Zone TAV indication replaced by amber XX   |         |                                     |             |   | 216300 PA229<br>T 810 854 |
| COND TRIM AIR SYS FAULT associated with Lower ECAM DU Flags-COND AIR - CAB TEMP CKPT - Zone TAV indication replaced by amber XX and AIR - CAB TEMP CKPT - Zone temp. too low or uncontrollable |         |                                     |             |   | 216300 PA230<br>T 810 855 |
| COND TRIM AIR SYS FAULT associated with Lower ECAM DU Flags-COND AIR - CAB TEMP FWD - Zone TAV indication replaced by amber XX and AIR - CAB TEMP FWD - Zone temp. too low or uncontrollable   |         |                                     |             |   | 216300 PA232<br>T 810 856 |
| COND TRIM AIR SYS FAULT associated with Lower ECAM DU Flags-COND AIR - CAB TEMP AFT - Zone TAV indication replaced by amber XX and AIR - CAB TEMP AFT - Zone temp. too low or uncontrollable   |         |                                     |             |   | 216300 PA233<br>T 810 857 |
| COND TRIM AIR SYS FAULT  | TEMPCTL | TRIM AIR PRESS VALV                 | E 216352    | 1 | 216300 P 209<br>T 810 805 |
| COND TRIM AIR SYS FAULT  | TEMPCTL | TRIM AIR PRESS VALV<br>PRESS SWITCH | E OR 216352 | 2 | 216300 PA222<br>T 810 849 |

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| WARNINGS/MALFUNCTIONS   | <br> <br>    | CFDS FAULT MESSAGES  | <br>S                      |   | FAULT<br>- ISOLATION      |
|---|--------------|--|----------------------------|---|---------------------------|
| WARNINGS/MALFUNCTIONS   | SOURCE       | MESSAGE  | ATA                        | С | PROCEDURE                 |
| COND TRIM AIR SYS FAULT   | TEMPCTL      | TRIM VALVE AFT CAB   | 216351                     | 1 | 216300 P 207<br>T 810 804 |
| COND TRIM AIR SYS FAULT   | TEMPCTL      | TRIM VALVE CKPT  | 216351                     | 1 | 216300 P 203<br>T 810 802 |
| COND TRIM AIR SYS FAULT   | TEMPCTL      | TRIM VALVE FWD CAB   | 216351                     | 1 | 216300 P 205<br>T 810 803 |
| COND TRIM AIR SYS FAULT   | TEMPCTL      | ZONE CONT  | 216334                     | 1 | 216300 P 201<br>T 810 801 |
| COND ZONE REGUL FAULT   |              |  |                            |   | 216300 P 261<br>T 810 827 |
| COND ZONE REGUL FAULT   | TEMPCTL      | ZONE CONT  | 216334                     | 1 | 216300 P 201<br>T 810 801 |
| COND ZONE REGUL FAULT   | TEMPCTL      | ZONE CONT OR SENSOR<br>SUPPLY SHORT  | 216334                     | 1 | 216300 P 290<br>T 810 844 |
| VENT AVNCS SYS FAULT  |              |  |                            |   | 212600 P 263<br>T 810 829 |
| VENT AVNCS SYS FAULT  | AEVC         | AEVC   | 212634                     | 1 | 212600 P 237<br>T 810 812 |
| VENT AVNCS SYS FAULT associated with VENT EXTRACT FAULT and VENT BLOWER FAULT | AEVC         | AEVC   | 212634                     | 1 | 212600 P 239<br>T 810 813 |
| VENT AVNCS SYS FAULT  | AEVC         | COND AIR INLET V 21HQ  | 212654                     | 1 | 212600 P 213<br>T 810 805 |
| VENT AVNCS SYS FAULT  | AEVC<br>AEVC | COND AIR INLET V 21HQ<br>associated with<br>INLET BYPASS V 16HQ<br>and<br>AEVC | 212654<br>212655<br>212634 | 1 | 212600 P 263<br>T 810 829 |
| VENT AVNCS SYS FAULT  | AEVC         | GND AEVC   | 212634                     | 1 | 212600 P 237<br>T 810 812 |

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| HADNINGS (MALIFINICITIONS |        |  | FAULT  |   |                           |
|---------------------------|--------|--|--------|---|---------------------------|
| WARNINGS/MALFUNCTIONS     | SOURCE | MESSAGE                                  | ATA    | С | ISOLATION PROCEDURE       |
| VENT AVNCS SYS FAULT      | AEVC   | INLET BYPASS V 16HQ                      | 212655 | 1 | 212600 P 215<br>T 810 806 |
| VENT AVNCS SYS FAULT      | AEVC   | INLET BYPASS V 16HQ associated with      | 212655 | 1 | 212600 P 263<br>T 810 829 |
|                           | AEVC   | OUTLET BYPASS V 23HQ                     | 212655 | 1 |                           |
|                           | AEVC   | ISOL V 24HQ                              | 212655 | 1 |                           |
|                           | AEVC   | and<br>  AEVC                            | 212634 | 1 |                           |
| VENT AVNCS SYS FAULT      | AEVC   | ISOL V 24HQ                              | 212655 | 1 | 212600 P 217<br>T 810 807 |
| VENT AVNCS SYS FAULT      | AEVC   | OUTLET BYPASS V 23HQ                     | 212655 | 1 | 212600 P 253<br>T 810 820 |
| VENT AVNCS SYS FAULT      | AEVC   | OUTLET BYPASS V 23HQ                     | 212655 | 1 | 212600 P 263<br>T 810 829 |
|                           | AEVC   | ISOL V 24HQ                              | 212655 | 1 | 1 610 627                 |
|                           | AEVC   | and<br>  AEVC                            | 212634 | 1 |                           |
| VENT AVNCS SYS FAULT      | AEVC   | SKIN AIR INLET V 15HQ                    | 212652 | 1 | 212600 P 209<br>T 810 803 |
| VENT AVNCS SYS FAULT      | AEVC   | SKIN AIR INLET V 15HQ associated with    | 212652 | 1 | 212600 P 263<br>T 810 829 |
|                           | AEVC   | SKIN AIR OUTLET V 22HQ                   | 212653 | 1 | 010 027                   |
|                           | AEVC   | COND AIR INLET V 21HQ                    | 212654 | 1 |                           |
|                           | AEVC   | INLET BYPASS V 16HQ                      | 212655 | 1 |                           |
|                           | AEVC   | OUTLET BYPASS V 23HQ                     | 212655 | 1 |                           |
|                           | AEVC   | ISOL V 24HQ                              | 212655 | 1 |                           |
|                           | AEVC   | AEVC<br>                                 | 212634 | 1 |                           |
| VENT AVNCS SYS FAULT      | AEVC   | SKIN AIR INLET V 15HQ<br>associated with | 212652 | 1 | 212600 P 263<br>T 810 829 |
|                           | AEVC   | SKIN AIR OUTLET V 22HQ                   | 212653 | 1 | 1 010 027                 |
|                           | AEVC   | and<br>  AEVC<br>                        | 212634 | 1 |                           |

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## TROUBLE SHOOTING MANUAL

|   | LIADNINGS /MALEUNCTIONS   | CFDS FAULT MESSAGES RNINGS/MALFUNCTIONS |                                       |        |   |                           |
|---|---|---|---------------------------------------|--------|---|---------------------------|
|   | WARNINGS/MALFUNCTIONS   | SOURCE                                  | MESSAGE                               | ATA    | С | ISOLATION<br>  PROCEDURE  |
| R | <u>VENT</u> AVNCS SYS FAULT   | AEVC                                    | SKIN AIR INLET V 15HQ associated with | 212652 | 1 | 212600 P 263<br>T 810 829 |
|   |   | AEVC                                    | SKIN AIR OUTLET V 22HQ                | 212653 | 1 | !!!!                      |
|   |   | AEVC                                    | COND AIR INLET V 21HQ                 | 212654 | 1 |                           |
|   |   | AEVC                                    | AEVC                                  | 212634 | 1 |                           |
| R | <u>VENT</u> AVNCS SYS FAULT   | AEVC                                    | SKIN AIR INLET V 15HQ associated with | 212652 | 1 | 212600 P 263<br>T 810 829 |
|   |   | AEVC                                    | SKIN AIR OUTLET V 22HQ                | 212653 | 1 | !!!!                      |
|   |   | AEVC                                    | COND AIR INLET V 21HQ                 | 212654 | 1 |                           |
|   |   | AEVC                                    | INLET BYPASS V 16HQ and               | 212655 | 1 |                           |
|   |   | AEVC                                    | ISOL V 24HQ<br>and                    | 212655 | 1 |                           |
|   |   | AEVC                                    | AEVC                                  | 212634 | 1 | <br>                      |
| R | <u>VENT</u> AVNCS SYS FAULT   | AEVC                                    | SKIN AIR OUTLET V 22HQ                | 212653 | 1 | 212600 P 211<br>T 810 804 |
|   | VENT BLOWER FAULT associated with VENT EXTRACT FAULT                          |   |                                       |        |   | 212600 P 201<br>T 810 801 |
| R | <u>VENT</u> BLOWER FAULT  |   |                                       |        |   | 212600 P 247<br>T 810 817 |
| R | VENT BLOWER FAULT associated with VENT EXTRACT FAULT and VENT AVNCS SYS FAULT | AEVC                                    | AEVC                                  | 212634 | 1 | 212600 P 239<br>T 810 813 |
| R | <u>VENT</u> BLOWER FAULT  | AEVC                                    | AEVC                                  | 212634 | 1 | 212600 P 239<br>T 810 813 |
| R | <u>VENT</u> BLOWER FAULT  | AEVC                                    | BLOWER FAN 20HQ                       | 212651 | 1 | 212600 P 219<br>T 810 809 |
| R | <u>VENT</u> BLOWER FAULT  | AEVC                                    | DUCT TEMP SENSOR 26HQ                 | 212612 | 1 | 212600 P 262<br>T 810 828 |

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| WARNINGS/MALFUNCTIONS   |        | CFDS FAULT MESSAGE    | s      |   | FAULT<br>ISOLATION<br>C PROCEDURE<br>1 212600 P 261<br>T 810 826<br>212600 P 201<br>T 810 801 |
|---|--------|-----------------------|--------|---|---|
| WARNINGS/MALFUNCTIONS   | SOURCE | MESSAGE               | ATA    | С | !   |
| VENT BLOWER FAULT associated with VENT EXTRACT FAULT                          | CFDS   | NO AEVC DATA          | 212634 | 1 |   |
| VENT EXTRACT FAULT associated with VENT BLOWER FAULT                          |        |                       |        |   | 212600 P 201<br>T 810 801   |
| VENT EXTRACT FAULT associated with VENT BLOWER FAULT and VENT AVNCS SYS FAULT | AEVC   | AEVC                  | 212634 | 1 | 212600 P 239<br>T 810 813   |
| VENT EXTRACT FAULT  | AEVC   | AEVC                  | 212634 | 1 | 212600 P 239<br>T 810 813   |
| VENT EXTRACT FAULT  | AEVC   | CHECK AEVC SUPPLY     | 212600 | 1 | 212600 P 202<br>T 810 802   |
| VENT EXTRACT FAULT  | AEVC   | EXTRACT FAN 18HQ      | 212651 | 1 | 212600 P 224<br>T 810 810   |
| VENT EXTRACT FAULT associated with VENT BLOWER FAULT                          | CFDS   | NO AEVC DATA          | 212634 | 1 | 212600 P 261<br>T 810 826   |
| VENT GND COOL FAULT   |        |                       |        |   | 212700 P 207<br>T 810 809   |
| VENT GND COOL FAULT   | AEVC   | GND COOL UNIT 12HD    | 212734 | 1 | 212700 P 201<br>T 810 801   |
| VENT GND COOL FAULT   | AEVC   | GROUPE FAN O8HD       | 212751 | 1 | 212700 P 204<br>T 810 803   |
| VENT SKIN VALVE FAULT   |        |                       |        |   | 212600 P 271<br>T 810 836   |
| VENT SKIN VALVE FAULT   | AEVC   | AEVC                  | 212634 | 1 | 212600 P 239<br>T 810 813   |
| VENT SKIN VALVE FAULT   | AEVC   | SKIN AIR INLET V 15HQ | 212652 | 1 | 212600 P 209<br>T 810 803   |

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| WARNINGS/MALFUNCTIONS     | CFDS FAULT MESSAGES |  |                  |   | FAULT<br>ISOLATION        |  |
|---------------------------|---------------------|--|------------------|---|---------------------------|--|
| WARNINGS/ MALI ONC I TONS | SOURCE              | MESSAGE  | ATA              | С | PROCEDURE                 |  |
| VENT SKIN VALVE FAULT     | AEVC                | SKIN AIR OUTLET V 22HQ   | 212653           | 1 | 212600 P 211<br>T 810 804 |  |
| VENT SKIN VALVE FAULT     | AEVC<br>AEVC        | SKIN AIR OUTLET V 22HQ<br>associated with<br>SKIN AIR INLET V 15HQ | 212653<br>212652 | 1 | 212600 P 265<br>T 810 830 |  |

#### STS-Inop System

| PACK 1 |         |                     |        |   | 216100 PA251<br>T 810 866 |
|--------|---------|---------------------|--------|---|---------------------------|
| PACK 1 | TEMPCTL | P1 FLOW SENSOR      | 215111 | 2 | 215100 P 214<br>T 810 805 |
| PACK 1 | TEMPCTL | P1 PRESS INL SENSOR | 216116 | 2 | 216100 P 279<br>T 810 822 |
| PACK 2 |         |                     |        |   | 216100 PA259<br>T 810 867 |
| PACK 2 | TEMPCTL | P2 FLOW SENSOR      | 215111 | 2 | 215100 P 216<br>T 810 806 |
| PACK 2 | TEMPCTL | P2 PRESS INL SENSOR | 216116 | 2 | 216100 P 281<br>T 810 823 |

#### STS-Maintenance

| AFT CRG HEAT | AFT CHC | AFT PRESSURE REG VALVE   | 214352 | 2 | 214300 P 208<br>T 810 809 |
|--------------|---------|--------------------------|--------|---|---------------------------|
| AFT CRG HEAT | AFT CHC | AFT TAPRV SHUT OFF RELAY | 214300 | 2 | 214300 P 216<br>T 810 820 |
| PACK 1       | TEMPCTL | P1 CONT                  | 216134 | 2 | 215100 P 206<br>T 810 803 |
| PACK 1       | TEMPCTL | P1 FLOW CTL VALVE        | 215151 | 2 | 215100 P 206<br>T 810 803 |

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#### TROUBLE SHOOTING MANUAL

| WARNINGS/MALFUNCTIONS  |         | CFDS FAULT MESSAGES                 |        |   |                            |
|------------------------|---------|-------------------------------------|--------|---|----------------------------|
| WARNINGS/ MALFUNCTIONS | SOURCE  | MESSAGE                             | ATA    | С | ISOLATION  <br>  PROCEDURE |
| PACK 2                 | TEMPCTL | P2 CONT                             | 216134 | 2 | 215100 P 210<br>T 810 804  |
| PACK 2                 | TEMPCTL | P2 FLOW CTL VALVE                   | 215151 | 2 | 215100 P 210<br>T 810 804  |
| ZONE CONT              |         |                                     |        |   | 216300 PA208<br>T 810 845  |
| ZONE CONT              | TEMPCTL | P1 FLOW SENSOR                      | 215111 | 2 | 215100 P 214<br>T 810 805  |
| ZONE CONT              | TEMPCTL | P1 PRESS INL SENSOR                 | 216116 | 2 | 216100 P 279<br>T 810 822  |
| ZONE CONT              | TEMPCTL | P2 FLOW SENSOR                      | 215111 | 2 | 215100 P 216<br>T 810 806  |
| ZONE CONT              | TEMPCTL | P2 PRESS INL SENSOR                 | 216116 | 2 | 216100 P 281<br>T 810 823  |
| ZONE CONT              | TEMPCTL | ZONE CONT                           | 216334 | 2 | 216300 P 201<br>T 810 801  |
| ZONE CONT              | TEMPCTL | ZONE CONT OR SENSOR<br>SUPPLY SHORT | 216334 | 2 | 216300 PA208<br>T 810 845  |

Lower ECAM DU Flags-BLEED

| AIR - COOLING EMERGENCY RAM AIR INLET - Symbol replaced by amber XX | 215500 P 201<br>T 810 801 |
|---|---------------------------|
| AIR - COOLING EMERGENCY RAM AIR INLET - Symbol shown amber and open | 215500 P 204<br>T 810 803 |
| AIR - COOLING PACK 1 - FCV symbol replaced by amber XX              | 215100 P 232<br>T 810 811 |

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| WARNINGS/MALFUNCTIONS  |         | CFDS FAULT MESSAGES              | <br>S  |   | FAULT<br>ISOLATION        |  |
|--|---------|----------------------------------|--------|---|---------------------------|--|
| WARNINGS/MALFUNCTIONS  | SOURCE  | MESSAGE                          | ATA    | С | !!!                       |  |
| AIR - COOLING PACK 1&2 -<br>Flow indication replaced<br>by amber XX  |         | SDAC1: NO CPC1 ANALOG<br>SIGNAL  | 213134 | 1 | 215100 P 228<br>T 810 809 |  |
| AIR - COOLING PACK 1&2 -<br>Flow indication replaced<br>by amber XX  | -       | SDAC2 : NO CPC1 ANALOG<br>SIGNAL | 213134 | 1 | 215100 P 228<br>T 810 809 |  |
| AIR - COOLING PACK 1&2 -<br>Flow indication replaced<br>by amber XX  |         | SDAC1 : NO CPC1 ANALOG<br>SIGNAL | 213134 | 1 | 215100 P 228<br>T 810 809 |  |
| AIR - COOLING PACK 1&2 -<br>Flow indication replaced<br>by amber XX  |         | SDAC2 : NO CPC1 ANALOG<br>SIGNAL | 213134 | 1 | 215100 P 228<br>T 810 809 |  |
| AIR - COOLING PACK 1&2 -<br>Flow indication replaced<br>by amber XX  | TEMPCTL | NO DATA FROM ADIRS               | 341234 | 3 | 215100 P 230<br>T 810 810 |  |
| AIR - COOLING PACK 2 -<br>FCV symbol replaced by<br>amber XX   |         |                                  |        |   | 215100 P 233<br>T 810 812 |  |
| AIR - PACK CONT PACK 1 -<br>Bypass valve indication<br>replaced by amber XX<br>associated with<br>Upper ECAM DU Warnings<br>AIR PACK 1 REGUL FAULT |         |                                  |        |   | 216100 PA273<br>T 810 903 |  |
| AIR - PACK CONT PACK 1 -<br>Bypass valve indication<br>replaced by amber XX  | TEMPCTL | P1 BYPASS VALVE                  | 216153 | 2 | 216100 P 249<br>T 810 816 |  |
| AIR - PACK CONT PACK 1 -<br>Comp outlet temp indic<br>replaced by amber XX   | TEMPCTL | P1 COMP OVHT SENSOR              | 216112 | 3 | 216100 P 291<br>T 810 828 |  |
| AIR - PACK CONT PACK 1 -<br>Comp outlet temp indic<br>replaced by amber XX   | TEMPCTL | P1 CONT                          | 216134 | 2 | 216100 PA243<br>T 810 853 |  |
| AIR - PACK CONT PACK 1 -<br>Outlet temp indication<br>replaced by amber XX   | TEMPCTL | P1 CONT                          | 216134 | 2 | 216100 PA243<br>T 810 853 |  |

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#### TROUBLE SHOOTING MANUAL

| WARNINGS/MALFUNCTIONS  |         | CFDS FAULT MESSAGES |        |                             |
|--|---------|---------------------|--------|-----------------------------|
| WARNINGS/ MALFUNCTIONS   | SOURCE  | MESSAGE             | ATA    | - ISOLATION<br>PROCEDURE    |
| AIR - PACK CONT PACK 1 -<br>Several ECAM indictns<br>replaced by amber XX  | TEMPCTL | P1 CONT             | 216134 | 2 216100 PA269<br>T 810 871 |
| AIR - PACK CONT PACK 2 -<br>Bypass valve indication<br>replaced by amber XX<br>associated with<br>Upper ECAM DU Warnings<br>AIR PACK 2 REGUL FAULT |         |                     |        | 216100 PA274<br>T 810 904   |
| AIR - PACK CONT PACK 2 -<br>Bypass valve indication<br>replaced by amber XX  | TEMPCTL | P2 BYPASS VALVE     | 216153 | 2 216100 P 251<br>T 810 817 |
| AIR - PACK CONT PACK 2 -<br>Comp outlet temp indic<br>replaced by amber XX   | TEMPCTL | P2 COMP OVHT SENSOR | 216112 | 3 216100 P 293<br>Т 810 829 |
| AIR - PACK CONT PACK 2 -<br>Comp outlet temp indic<br>replaced by amber XX   | TEMPCTL | P2 CONT             | 216134 | 2 216100 PA245<br>T 810 854 |
| AIR - PACK CONT PACK 2 -<br>Outlet temp indication<br>replaced by amber XX   | TEMPCTL | P2 CONT             | 216134 | 2 216100 PA245<br>T 810 854 |
| AIR - PACK CONT PACK 2 -<br>Several ECAM indictns<br>replaced by amber XX  | TEMPCTL | P2 CONT             | 216134 | 2 216100 PA271<br>T 810 872 |

# Lower ECAM DU Flags-CAB PRESS

| AIR - PRESS SAFETY VALVES - SAFETY shows |  |  | 213100 P 218<br>T 810 808 |
|--|--|--|---------------------------|
| amber                                    |  |  | 1 610 606                 |

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#### TROUBLE SHOOTING MANUAL

| WARNINGS/MALFUNCTIONS | CFDS FAULT MESSAGES |         |     | FAULT<br>ISOLATION |           |
|-----------------------|---------------------|---------|-----|--------------------|-----------|
| WARNINGS/MALFUNCTIONS | SOURCE              | MESSAGE | ATA | С                  | PROCEDURE |

#### Lower ECAM DU Flags-COND

| AIR - CAB TEMP AFT -<br>Duct temp. indication<br>replaced by amber XX  |         |                |            |        |   | 216300 P 221<br>T 810 811 |
|--|---------|----------------|------------|--------|---|---------------------------|
| AIR - CAB TEMP AFT - Duct temp. indication replaced by amber XX  | TEMPCTL | TEMP SENSOR AF | T CAB DUCT | 216315 | 3 | 216300 P 221<br>T 810 811 |
| AIR - CAB TEMP AFT -<br>Zone TAV indication<br>replaced by amber XX  |         |                |            |        |   | 216300 P 207<br>T 810 804 |
| AIR - CAB TEMP AFT - Zone TAV indication replaced by amber XX associated with Upper ECAM DU Warnings COND TRIM AIR SYS FAULT   |         |                |            |        |   | 216300 PA229<br>T 810 854 |
| AIR - CAB TEMP AFT - Zone TAV indication replaced by amber XX associated with Upper ECAM DU Warnings COND TRIM AIR SYS FAULT and AIR - CAB TEMP AFT - Zone temp. too low or uncontrollable |         |                |            |        |   | 216300 PA233<br>T 810 857 |
| AIR - CAB TEMP AFT -<br>Zone TAV indication<br>replaced by amber XX  | TEMPCTL | TRIM VALVE AFT | CAB        | 216351 | 2 | 216300 P 207<br>T 810 804 |
| AIR - CAB TEMP AFT -<br>Zone TAV indication<br>replaced by amber XX  | TEMPCTL | TRIM VALVE AFT | CAB        | 216351 | 3 | 216300 P 207<br>T 810 804 |
| AIR - CAB TEMP AFT -<br>Zone temp. indication<br>replaced by amber XX  |         |                |            |        |   | 216300 P 215<br>T 810 808 |

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### TROUBLE SHOOTING MANUAL

| WARNINGS/MALFUNCTIONS  | L       | FAULT<br>ISOLATION    |        |   |                           |
|--|---------|-----------------------|--------|---|---------------------------|
| WARNINGS/MALFUNCTIONS  | SOURCE  | MESSAGE               | ATA    | С | PROCEDURE                 |
| AIR - CAB TEMP AFT -<br>Zone temp. indication<br>replaced by amber XX  | TEMPCTL | TEMP SENSOR AFT CAB   | 216317 | 2 | 216300 P 215<br>T 810 808 |
| AIR - CAB TEMP AFT -<br>Zone temp. indication<br>replaced by amber XX  | TEMPCTL | TEMP SENSOR AFT CAB   | 216317 | 3 | 216300 P 215<br>T 810 808 |
| AIR - CAB TEMP CKPT - Duct temp. indication replaced by amber XX   |         |                       |        |   | 216300 P 217<br>T 810 809 |
| AIR - CAB TEMP CKPT - Duct temp. indication replaced by amber XX   | TEMPCTL | TEMP SENSOR CKPT DUCT | 216315 | 2 | 216300 P 217<br>T 810 809 |
| AIR - CAB TEMP CKPT -<br>Zone TAV indication<br>replaced by amber XX   |         |                       |        |   | 216300 P 203<br>T 810 802 |
| AIR - CAB TEMP CKPT - Zone TAV indication replaced by amber XX associated with Upper ECAM DU Warnings COND TRIM AIR SYS FAULT  |         |                       |        |   | 216300 PA226<br>T 810 852 |
| AIR - CAB TEMP CKPT - Zone TAV indication replaced by amber XX associated with Upper ECAM DU Warnings COND TRIM AIR SYS FAULT and AIR - CAB TEMP CKPT - Zone temp. too low or uncontrollable |         |                       |        |   | 216300 PA230<br>T 810 855 |
| AIR - CAB TEMP CKPT -<br>Zone TAV indication<br>replaced by amber XX   | TEMPCTL | TRIM VALVE CKPT       | 216351 | 2 | 216300 P 203<br>T 810 802 |
| AIR - CAB TEMP CKPT -<br>Zone TAV indication<br>replaced by amber XX   | TEMPCTL | TRIM VALVE CKPT       | 216351 | 3 | 216300 P 203<br>T 810 802 |

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| HADNINGS (MALIFINGTIONS  |         | CFDS FAULT MESSAGE       | <br>S  |   | FAULT<br>ISOLATION        |  |
|--|---------|--------------------------|--------|---|---------------------------|--|
| WARNINGS/MALFUNCTIONS  | SOURCE  | MESSAGE                  | ATA    | С | !!                        |  |
| AIR - CAB TEMP CKPT -<br>Zone temp. indication<br>replaced by amber XX   |         |                          |        |   | 216300 P 211<br>T 810 806 |  |
| AIR - CAB TEMP CKPT -<br>Zone temp. indication<br>replaced by amber XX   | TEMPCTL | TEMP SENSOR CKPT         | 216317 | 2 | 216300 P 211<br>T 810 806 |  |
| AIR - CAB TEMP CKPT -<br>Zone temp. indication<br>replaced by amber XX   | TEMPCTL | TEMP SENSOR CKPT         | 216317 | 3 | 216300 P 211<br>T 810 806 |  |
| AIR - CAB TEMP FWD - Duct temp. indication replaced by amber XX  |         |                          |        |   | 216300 P 219<br>T 810 810 |  |
| AIR - CAB TEMP FWD - Duct temp. indication replaced by amber XX  | TEMPCTL | TEMP SENSOR FWD CAB DUCT | 216315 | 3 | 216300 P 219<br>T 810 810 |  |
| AIR - CAB TEMP FWD -<br>Zone TAV indication<br>replaced by amber XX  |         |                          |        |   | 216300 P 205<br>T 810 803 |  |
| AIR - CAB TEMP FWD - Zone TAV indication replaced by amber XX associated with Upper ECAM DU Warnings COND TRIM AIR SYS FAULT   |         |                          |        |   | 216300 PA227<br>T 810 853 |  |
| AIR - CAB TEMP FWD - Zone TAV indication replaced by amber XX associated with Upper ECAM DU Warnings COND TRIM AIR SYS FAULT and AIR - CAB TEMP FWD - Zone temp. too low or uncontrollable |         |                          |        |   | 216300 PA232<br>T 810 856 |  |
| AIR - CAB TEMP FWD -<br>Zone TAV indication<br>replaced by amber XX  | TEMPCTL | TRIM VALVE FWD CAB       | 216351 | 2 | 216300 P 205<br>T 810 803 |  |

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#### TROUBLE SHOOTING MANUAL

| WARNINGS/MALFUNCTIONS  |         |                     | FAULT<br>ISOLATION |   |                           |
|--|---------|---------------------|--------------------|---|---------------------------|
| WARNINGS/MALFUNCTIONS  | SOURCE  | MESSAGE             | ATA                | С | !!                        |
| AIR - CAB TEMP FWD -<br>Zone TAV indication<br>replaced by amber XX          | TEMPCTL | TRIM VALVE FWD CAB  | 216351             | 3 | 216300 P 205<br>T 810 803 |
| AIR - CAB TEMP FWD -<br>Zone temp. indication<br>replaced by amber XX        |         |                     |                    |   | 216300 P 213<br>T 810 807 |
| AIR - CAB TEMP FWD -<br>Zone temp. indication<br>replaced by amber XX        | TEMPCTL | TEMP SENSOR FWD CAB | 216317             | 2 | 216300 P 213<br>T 810 807 |
| AIR - CAB TEMP FWD -<br>Zone temp. indication<br>replaced by amber XX        | TEMPCTL | TEMP SENSOR FWD CAB | 216317             | 3 | 216300 P 213<br>T 810 807 |
| AIR - CRG HTNG AFT -<br>TAPRV indictn clsd/green<br>if higher temp. selected | !       |                     |                    |   | 214300 P 212<br>T 810 812 |

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#### TROUBLE SHOOTING MANUAL

#### AIR CONDITIONING - FAULT SYMPTOMS

|   | WARNINGS/MALFUNCTIONS  |             | CFDS FAULT MESSAGES |              |              |                           |
|---|--|-------------|---------------------|--------------|--------------|---------------------------|
|   | WARNINGS/MALFUNCTIONS  | SOURCE      | MESSAGE             | ATA          | С            | ISOLATION PROCEDURE       |
|   | AIR COND Pol (30VU)  |             |                     |              |              |                           |
|   | AIR - PACK CONT PACK 1 -<br>P/bsw FAULT legend on  |             |                     |              | T            | 216100 P 213<br>T 810 803 |
| R | AIR - PACK CONT PACK 2 -<br>P/bsw FAULT legend on  |             |                     |              |              | 216100 P 219<br>T 810 804 |
|   | CABIN PRESS Pnl (25VU)   |             |                     |              |              |                           |
|   | AIR - PRESS MODE SEL -<br>P/bsw FAULT legend on<br>associated with<br>Upper ECAM DU Warnings<br>CAB PR SYS 1+2 FAULT |             |                     |              |              | 213100 P 208<br>T 810 802 |
|   | AIR - PRESS MODE SEL -<br>P/bsw FAULT legend on  |             |                     |              | <del> </del> | 213100 P 252<br>T 810 825 |
|   | CARGO HEAT Pol (22VU)  | <del></del> |                     | <del>-</del> | •            |                           |
|   | AIR - CRG HTNG HOT AIR -<br>P/bsw FAULT legend on  |             |                     |              | <u>T</u>     | 214300 P 214<br>T 810 819 |
|   | AIR - CRG VENT AFT -<br>P/bsw ISOL VALVES FAULT<br>light on  |             |                     |              | <del> </del> | 212800 P 201<br>T 810 802 |

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#### TROUBLE SHOOTING MANUAL

#### AIR CONDITIONING - FAULT SYMPTOMS

| WARNINGS/MALFUNCTIONS   |        |         | FAULT<br>ISOLATION |   |                           |
|---|--------|---------|--------------------|---|---------------------------|
| WARNINGS, HALT ONC LIONS  | SOURCE | MESSAGE | ATA                | С | PROCEDURE                 |
| AIR - CAB TEMP AFT - Zone temp. too low or uncontrollable associated with Upper ECAM DU Warnings COND TRIM AIR SYS FAULT and Lower ECAM DU Flags-COND AIR - CAB TEMP AFT - Zone TAV indication replaced by amber XX |        |         |                    |   | 216300 PA233<br>T 810 857 |
| AIR - CAB TEMP ALL -<br>Temperature control<br>problems in all zones  |        |         |                    |   | 216300 P 239<br>T 810 821 |
| AIR - CAB TEMP ALL -<br>Temperature control<br>problems in one zone   |        |         |                    |   | 216300 P 243<br>T 810 822 |
| AIR - CAB TEMP ALL -<br>Zone temp. above<br>selected (in flight)  |        |         |                    |   | 216300 P 288<br>T 810 842 |
| AIR - CAB TEMP CABIN -<br>Zone temp. above<br>selected  |        |         |                    |   | 216300 PA220<br>T 810 847 |
| AIR - CAB TEMP CABIN -<br>Zone temp. above<br>selected (in flight)  |        |         |                    |   | 216300 P 289<br>T 810 843 |
| AIR - CAB TEMP CKPT -<br>Zone temp. above<br>selected   |        |         |                    |   | 216300 PA219<br>T 810 846 |

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### TROUBLE SHOOTING MANUAL

| WARNINGS/MALFUNCTIONS   | <br> <br> |         | FAULT<br>ISOLATION |                          |                           |
|---|-----------|---------|--------------------|--------------------------|---------------------------|
| WARNINGS/ MALFUNCTIONS  | SOURCE    | MESSAGE | ATA                | С                        | ! !                       |
| AIR - CAB TEMP CKPT - Zone temp. too low or uncontrollable associated with Upper ECAM DU Warnings COND TRIM AIR SYS FAULT and Lower ECAM DU Flags-COND AIR - CAB TEMP CKPT - Zone TAV indication replaced by amber XX |           |         |                    |                          | 216300 PA230<br>T 810 855 |
| AIR - CAB TEMP FWD - Zone temp. too low or uncontrollable associated with Upper ECAM DU Warnings COND TRIM AIR SYS FAULT and Lower ECAM DU Flags-COND AIR - CAB TEMP FWD - Zone TAV indication replaced by amber XX   |           |         |                    |                          | 216300 PA232<br>T 810 856 |
| AIR - COOLING EMERGENCY<br>RAM AIR INLET - Does not<br>close in ditching config   |           |         |                    |                          | 215500 P 203<br>T 810 802 |
| AIR - COOLING PACK 1 -<br>FCV does not close<br>during engine start   |           |         |                    |                          | 215100 P 206<br>T 810 803 |
| AIR - COOLING PACK 1 - FCV does not open after engine start associated with Upper ECAM DU Warnings AIR PACK 1+2 FAULT   |           |         |                    |                          | 215100 P 206<br>T 810 803 |
| AIR - COOLING PACK 1 -<br>FCV fluctation or<br>inaccurate flow regul.   |           |         |                    |                          | 215100 P 218<br>T 810 807 |
| AIR - COOLING PACK 1 -<br> Flow indication always<br> shows in HI position  |           |         |                    | <br> <br> <br> <br> <br> | 215100 P 252<br>T 810 815 |

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| WARNINGS/MALFUNCTIONS   |        |         | FAULT<br>ISOLATION |                      |                           |
|---|--------|---------|--------------------|----------------------|---------------------------|
| WARNINGS/MALFUNCTIONS   | SOURCE | MESSAGE | ATA                | C                    | !!                        |
| AIR - COOLING PACK 1 -<br>Flow indication stuck in<br>high or low position  |        |         |                    |                      | 215100 P 234<br>T 810 813 |
| AIR - COOLING PACK 1/2 -<br>FCV opens during engine<br>start  |        |         | <br> <br> <br>     |                      | 215100 P 258<br>T 810 819 |
| AIR - COOLING PACK 2 -<br>FCV does not close<br>during engine start   |        |         |                    |                      | 215100 P 210<br>T 810 804 |
| AIR - COOLING PACK 2 - FCV does not open after engine start associated with Upper ECAM DU Warnings AIR PACK 1+2 FAULT |        |         |                    |                      | 215100 P 210<br>T 810 804 |
| AIR - COOLING PACK 2 - FCV fluctation or inaccurate flow regul.   |        |         | <br> <br> <br>     |                      | 215100 P 223<br>T 810 808 |
| AIR - COOLING PACK 2 -<br>Flow indication always<br>shows in HI position  |        |         |                    |                      | 215100 P 255<br>T 810 816 |
| AIR - COOLING PACK 2 -<br>Flow indication stuck in<br>high or low position  |        |         | †<br> <br> <br>    |                      | 215100 P 243<br>T 810 814 |
| AIR - CRG HTNG AFT -<br>ECAM temp. indication<br>lower than selected  |        |         |                    | †                    | 214300 P 213<br>T 810 817 |
| AIR - DIST CABIN -<br>Unsatisfactory cabin air<br>quality   |        |         |                    |                      | 210000 P 204<br>T 810 802 |
| AIR - DIST CABIN - Smell<br>of oil  |        |         |                    | †<br> <br> <br> <br> | 210000 P 201<br>T 810 801 |

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| WARNINGS/MALFUNCTIONS  |         | FAULT<br>- ISOLATION |               |                             |
|--|---------|----------------------|---------------|-----------------------------|
| WARNINGS/MALFUNCTIONS  | SOURCE  | MESSAGE              | ATA           | PROCEDURE                   |
| AIR - PACK CONT PACK 1 - Compressor outlet temp unusually low in flight associated with Upper ECAM DU Warnings AIR L WING LEAK |         |                      |               | 216100 PA267<br>T 810 870   |
| AIR - PACK CONT PACK 1 - Compressor outlet temp unusually low in flight associated with Upper ECAM DU Warnings AIR R WING LEAK |         |                      |               | 216100 PA267<br>T 810 870   |
| AIR - PACK CONT PACK 1 -<br>Compressor outlet temp<br>unusually low in flight  |         |                      |               | 216100 PA267<br>T 810 870   |
| AIR - PACK CONT PACK 1 -<br>Discharge temp high >10<br>Deg.C ground or flight  |         |                      |               | 216100 P 299<br>T 810 832   |
| AIR - PACK CONT PACK 1 -<br>Discharge temp high >10<br>Deg.C only in flight  |         |                      |               | 216100 P 299<br>T 810 832   |
| AIR - PACK CONT PACK 1 -<br>High pack dischrge temp<br>despite pack 1 sel. OFF   |         |                      |               | 216300 PA224<br>T 810 850   |
| AIR - PACK CONT PACK 1&2<br>- Big differences in<br>discharge temperatures   |         |                      |               | 216100 PA275<br>T 810 905   |
| AIR - PACK CONT PACK 1&2 - Big differences in discharge temperatures   | TEMPCTL | P1 WATER EX TEMP S   | SENSOR 216113 | 3 216100 PA249<br>T 810 865 |
| AIR - PACK CONT PACK 1&2 - Big differences in discharge temperatures   | TEMPCTL | P2 WATER EX TEMP S   | SENSOR 216113 | 3 216100 PA249<br>T 810 865 |

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### TROUBLE SHOOTING MANUAL

| HADNINGS /MALEUNGTIONS   | [<br>  |         | FAULT |   |                           |
|--|--------|---------|-------|---|---------------------------|
| WARNINGS/MALFUNCTIONS  | SOURCE | MESSAGE | ATA   | C | ISOLATION PROCEDURE       |
| AIR - PACK CONT PACK 2 - Compressor outlet temp unusually low in flight associated with Upper ECAM DU Warnings AIR L WING LEAK |        |         |       |   | 216100 PA267<br>T 810 870 |
| AIR - PACK CONT PACK 2 - Compressor outlet temp unusually low in flight associated with Upper ECAM DU Warnings AIR R WING LEAK |        |         |       |   | 216100 PA267<br>T 810 870 |
| AIR - PACK CONT PACK 2 -<br>Compressor outlet temp<br>unusually low in flight  |        |         |       |   | 216100 PA267<br>T 810 870 |
| AIR - PACK CONT PACK 2 -<br>Discharge temp high >10<br>Deg.C ground or flight  |        |         |       |   | 216100 PA210<br>T 810 833 |
| AIR - PACK CONT PACK 2 -<br>Discharge temp high >10<br>Deg.C only in flight  |        |         |       |   | 216100 PA210<br>T 810 833 |
| AIR - PACK CONT PACK 2 -<br>High pack dischrge temp<br>despite pack 2 sel. OFF   |        |         |       |   | 216300 PA225<br>T 810 851 |
| AIR - PRESS CAB ALT<br>Failure to pressurise<br>aircraft after takeoff   |        |         |       |   | 213100 P 221<br>T 810 809 |
| AIR - PRESS CPCS - MCDU<br>no access to CPC 1 menu<br>(on ground)  |        |         |       |   | 213100 P 283<br>T 810 841 |
| AIR - PRESS CPCS - MCDU<br>Test message LFES (50)<br>(no fault class) shown  |        |         |       |   | 213100 P 228<br>T 810 811 |
| AIR - PRESS OFV - DITCHING configuration valve does not close  |        |         |       |   | 213100 P 248<br>T 810 822 |

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| WARNINGS/MALFUNCTIONS   |        |         | FAULT<br>ISOLATION |    |                           |
|---|--------|---------|--------------------|----|---------------------------|
| WARNINGS/MALFUNCTIONS   | SOURCE | MESSAGE | ATA                | С  | : :                       |
| AIR - PRESS OFV -<br>Position not open on<br>ground   |        |         |                    |    | 213100 P 201<br>T 810 803 |
| AIR - PRESS OFV - Fully open on ground associated with Upper ECAM DU Warnings CAB PR OUTFLOW VALVE NOT OPEN |        |         |                    |    | 213100 P 285<br>T 810 843 |
| AIR - PRESS OFV - Fully open on ground associated with Upper ECAM DU Warnings CAB PR OFV NOT OPEN           |        |         |                    |    | 213100 P 285<br>T 810 843 |
| AIR - PRESS OFV - MAN<br>mode does not operate  |        |         |                    |    | 213100 P 250<br>T 810 824 |
| AIR - PRESS OFV - RAM<br>AIR configuration valve<br>does not operate  |        |         |                    |    | 213100 P 249<br>T 810 823 |
| AIR - PRESS SAFETY VALVE<br>- One valve open below<br>Delta P=8.5 psi (in flt)                              |        |         |                    |    | 213100 P 218<br>T 810 808 |
| AIR-COOLING-BELLY FAIRING-Blow out panel- In open position  |        |         |                    |    | 215000 P 201<br>T 810 801 |
| On GND Avionics Skin Air<br>Valves closed with OAT<br>more than 12 deg.C                                    |        |         |                    |    | 212600 P 266<br>T 810 831 |
| Rumbling noise in the cockpit.  |        |         |                    |    | 212600 P 273<br>T 810 837 |
| Skin Air Valves cycling on ground.  |        |         |                    | l' | 212600 P 274<br>T 810 838 |

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|                       | WARNINGS/MALFUNCTIONS  |        |         | CFDS | FAULT  | MESSAGES | <br>S  |          | FAULT<br>ISOLATION        |  |
|-----------------------|--|--------|---------|------|--------|----------|--------|----------|---------------------------|--|
|                       | WARNINGS/ MALFONCTIONS   | SOURCE |         | ME   | SSAGE  |          | ATA    | С        | PROCEDURE                 |  |
| R<br>R<br>R<br>R<br>R | VENT-Amber Skin Air Inlet Valve closed on the lower ECAM DU associated with VENT-Amber Skin Air Outlet Valve partially open on lower ECAM DU | AEVC   | SKIN    | TEMP | SENSOR | 28нQ     | 212613 | 3        | 212600 P 251<br>T 810 819 |  |
| R<br>R<br>R           | VENT-Amber Skin Air<br>Inlet Valve partially<br>open on lower ECAM DU<br>associated with   | AEVC   | SKIN    | TEMP | SENSOR | 28HQ     | 212613 | 3        | 212600 P 251<br>T 810 819 |  |
| R<br>R<br>R           | VENT-Amber Skin Air<br>Outlet Valve closed on<br>lower ECAM DU   |        |         |      |        |          |        | L        |                           |  |
| R<br>R<br>R           | VENT-Amber Skin Air<br>Outlet Valve closed on<br>lower ECAM DU<br>associated with<br>VENT-Amber Skin Air                                     | AEVC   | SKIN    | TEMP | SENSOR | 28нQ     | 212613 | 3        | 212600 P 251<br>T 810 819 |  |
| R<br>R                | Inlet Valve partially open on lower ECAM DU  |        | <u></u> |      |        |          |        | <u> </u> |                           |  |
| R<br>R<br>R<br>R<br>R | VENT-Amber Skin Air Outlet Valve partially open on lower ECAM DU associated with VENT-Amber Skin Air Inlet Valve closed on the lower ECAM DU | AEVC   | SKIN    | TEMP | SENSOR | 28НQ     | 212613 | 3        | 212600 P 251<br>T 810 819 |  |
| R<br>R<br>R           | VENT-Failure of horn<br>during smoke detection<br>in AVNCS COMPT on ground   |        |         |      |        |          |        |          | 212600 P 268<br>T 810 835 |  |

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#### TROUBLE SHOOTING MANUAL

#### AIR CONDITIONING - FAULT SYMPTOMS

|   | WARNINGS/MALFUNCTIONS |         | CFDS FAULT MESSAGES   |        |   |                           |  |  |
|---|-----------------------|---------|-----------------------|--------|---|---------------------------|--|--|
|   | WARNINGS/MALFORCTIONS | SOURCE  | MESSAGE               | ATA    | C | ISOLATION PROCEDURE       |  |  |
| R |                       | AEVC    | AEVC                  | 212634 | 3 | 212600 P 239<br>T 810 813 |  |  |
| R |                       | AEVC    | DUCT TEMP SENSOR 26HQ | 212612 | 3 | 212600 P 249<br>T 810 818 |  |  |
| R |                       | AEVC    | OUTLET BYPASS V 23HQ  | 212655 | 3 | 212600 P 253<br>T 810 820 |  |  |
| R |                       | AEVC    | PRESSURE SW 17HQ      | 212611 | 3 | 212600 P 243<br>T 810 815 |  |  |
| R |                       | AEVC    | PRESSURE SW 19HQ      | 212611 | 3 | 212600 P 241<br>T 810 814 |  |  |
| R |                       | AEVC    | PRESSURE SW 30HQ      | 212611 | 3 | 212600 P 245<br>T 810 816 |  |  |
| R |                       | AEVC    | SKIN TEMP SENSOR 28HQ | 212613 | 3 | 212600 P 251<br>T 810 819 |  |  |
|   |                       | AFT CHC | AFT CARGO HEAT CONT   | 214334 | 3 | 214300 P 210<br>T 810 811 |  |  |
|   |                       | AFT CHC | AFT COMP TEMP SENSOR  | 214315 | 1 | 214300 P 203<br>T 810 804 |  |  |
|   |                       | AFT CHC | AFT DUCT TEMP SENSOR  | 214315 | 1 | 214300 P 201<br>T 810 802 |  |  |
|   |                       | AFT CHC | AFT TEMP SELECTOR     | 214316 | 3 | 214300 P 205<br>T 810 806 |  |  |
|   |                       | AFT CHC | AFT TRIM AIR VALVE    | 214351 | 1 | 214300 P 206<br>T 810 808 |  |  |
|   |                       | APU     | NO DATA FROM ECS      | 216334 | 3 | 216300 P 280<br>T 810 830 |  |  |
|   |                       | APU     | NO PACK DATA FROM ECS | 216334 | 3 | 216300 P 280<br>T 810 830 |  |  |
|   |                       | CFDS    | NO AEVC DATA          | 212634 | 1 | 313200 PA230<br>T 810 893 |  |  |

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|        | WARNINGS/MALFUNCTIONS |        | CFDS FAULT MESSAGES                 |        |   |                           |  |  |
|--------|-----------------------|--------|-------------------------------------|--------|---|---------------------------|--|--|
|        | WARNINGS/MALFONCTIONS | SOURCE | MESSAGE                             | ATA    | С | ISOLATION PROCEDURE       |  |  |
|        |                       | CFDS   | NO AFT CHC DATA                     | 214334 | 2 | 313200 PA269<br>T 810 918 |  |  |
|        |                       | CFDS   | NO CPC1 DATA                        | 213134 | 2 | 313200 PA214<br>T 810 883 |  |  |
|        |                       | CFDS   | NO CPC2 DATA                        | 213134 | 2 | 313200 PA215<br>T 810 884 |  |  |
|        |                       | CFDS   | NO ZONE CTL DATA                    | 216334 | 2 | 313200 PA216<br>T 810 885 |  |  |
| R<br>R |                       | CIDS 1 | ZC(8HK)/SDAC1(1WV1)/DIR1<br>(101RH) | 216334 | 1 | 216300 PA236<br>T 810 859 |  |  |
|        |                       | CPC 1  | OUTFLOW VALVE BLOCKED (XX)          | 213151 | 3 | 213100 P 201<br>T 810 803 |  |  |
|        |                       | CPC 1  | OUTFLOW VALVE BLOCKED (29)          | 213151 | 3 | 213100 P 216<br>T 810 807 |  |  |
|        |                       | CPC 1  | PRESS CONTR 1 (XX)                  | 213134 | 3 | 213100 P 201<br>T 810 803 |  |  |
|        |                       | CPC 1  | PRESS CONTROLLER 1 (00)             | 213151 | 1 | 213100 P 206<br>T 810 801 |  |  |
|        |                       | CPC 1  | PRESS CONTROLLER 1 (51)             | 213151 | 1 | 213100 P 275<br>T 810 837 |  |  |
|        |                       | CPC 1  | PRESS CONTROLLER 1 (59)             | 213151 | 1 | 213100 P 279<br>T 810 839 |  |  |
|        |                       | CPC 2  | OUTFLOW VALVE BLOCKED (XX)          | 213151 | 3 | 213100 P 201<br>T 810 803 |  |  |
|        |                       | CPC 2  | OUTFLOW VALVE BLOCKED (29)          | 213151 | 3 | 213100 P 216<br>T 810 807 |  |  |
|        |                       | CPC 2  | PRESS CONTR 2 (XX)                  | 213134 | 3 | 213100 P 201<br>T 810 803 |  |  |
|        |                       | CPC 2  | PRESS CONTROLLER 2 (00)             | 213151 | 1 | 213100 P 214<br>T 810 806 |  |  |

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| WARNINGS/MALFUNCTIONS     | CFDS FAULT MESSAGES |   |        |   | FAULT<br>ISOLATION        |  |
|---------------------------|---------------------|---|--------|---|---------------------------|--|
| WANNINGS/ PIACT UNCI 10N3 | SOURCE              | MESSAGE   | ATA    | С | PROCEDURE                 |  |
|                           | CPC 2               | PRESS CONTROLLER 2 (51)                           | 213151 | 1 | 213100 P 277<br>T 810 838 |  |
|                           | CPC 2               | PRESS CONTROLLER 2 (59)                           | 213151 | 1 | 213100 P 281<br>T 810 840 |  |
|                           | DMU                 | ACSC 1 (57HH) / FDIMU<br>(10TV)                   | 216134 | 3 | 216100 PA221<br>T 810 834 |  |
|                           | DMU                 | ACSC2 (47HH) / FDIMU<br>(10TV)                    | 216134 | 3 | 216100 PA223<br>T 810 835 |  |
|                           | DMU                 | CPC1 (11HL) / DMU (1TV)                           | 213134 | 3 | 213100 P 246<br>T 810 818 |  |
|                           | DMU                 | CPC2 (12HL) / DMU (1TV)                           | 213134 | 3 | 213100 P 247<br>T 810 819 |  |
|                           | DMU                 | PACK (27HH) / DMU (1TV)                           | 216134 | 3 | 216100 PA223<br>T 810 835 |  |
|                           | DMU                 | PACK (27HH) / FDIMU<br>(10TV)                     | 216234 | 3 | 216100 PA223<br>T 810 835 |  |
|                           | DMU                 | PACK (7HH) / DMU (1TV)                            | 216134 | 3 | 216100 PA221<br>T 810 834 |  |
|                           | DMU                 | PACK (7HH) / FDIMU<br>(10TV)                      | 216134 | 3 | 216100 PA221<br>T 810 834 |  |
|                           | DMU                 | ZC (8HK) / DMU (1TV)                              | 216334 | 3 | 216300 P 276<br>T 810 828 |  |
|                           | DMU                 | ZC (8HK) / FDIMU (10TV)                           | 216334 | 3 | 216300 P 276<br>T 810 828 |  |
|                           | ECAM 1              | SDAC1 : NO CPC1 ANALOG   SIGNAL   associated with | 213134 | 1 | 315400 PA245<br>T 810 930 |  |
|                           | ECAM 2              | <u>.</u>  | 213134 | 1 |                           |  |
|                           | ECAM 1              | SDAC1 : NO CPC1 ANALOG<br>SIGNAL                  | 213134 | 1 | 315400 PA245<br>T 810 930 |  |
|                           | IDENT:              | ECAM 2  |        |   | <u> </u><br>              |  |

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| WARNINGS/MALFUNCTIONS     |        | FAULT ISOLATION                    |        |                            |  |  |
|---------------------------|--------|------------------------------------|--------|----------------------------|--|--|
| WARNINGS/ MALI ONC I TONS | SOURCE | MESSAGE                            | ATA    | C PROCEDURE                |  |  |
|                           | ECAM 1 | SDAC1 : NO DATA FROM               | 214334 | 1 315400 P 24<br>T 810 847 |  |  |
|                           | IDENT: | ECAM 2                             |        |                            |  |  |
|                           | ECAM 1 | SDAC1 : NO DATA FROM<br>ACSC1      | 216134 | 1 315400 PA20<br>T 810 905 |  |  |
|                           | IDENT: | ECAM 2                             |        |                            |  |  |
|                           | ECAM 1 | SDAC1 : NO DATA FROM<br> ACSC2     | 216134 | 1 315400 PA2<br>T 810 907  |  |  |
|                           | IDENT: | ECAM 2                             |        |                            |  |  |
|                           | ECAM 1 | SDAC1 : NO DATA FROM CPC1          | 213134 | 1 315400 PA24<br>T 810 932 |  |  |
|                           | IDENT: | ECAM 2                             |        |                            |  |  |
|                           | ECAM 1 | SDAC1 : NO DATA FROM CPC2          | 213134 | 1 315400 PA25<br>T 810 934 |  |  |
|                           | IDENT: | IDENT: ECAM 2                      |        |                            |  |  |
|                           | ECAM 1 | SDAC1 : NO DATA FROM<br>  ECS1     | 216334 | 3 315400 PA22<br>T 810 914 |  |  |
|                           | ECAM 1 | SDAC1 : NO DATA FROM<br>ECS1+2     | 216334 | 1 315400 PA25<br>T 810 936 |  |  |
|                           | IDENT: | ECAM 2                             |        |                            |  |  |
|                           | ECAM 1 | SDAC1 : NO DATA FROM<br>ECS2       | 216334 | 3 315400 PA22<br>T 810 915 |  |  |
|                           | ECAM 1 | SDAC1 : NO DATA FROM<br>PACK1 CONT | 216134 | 1 315400 PA20<br>T 810 905 |  |  |
|                           | IDENT: |                                    |        |                            |  |  |
|                           | ECAM 1 | SDAC1 : NO DATA FROM<br>PACK2 CONT | 216134 | 1 315400 PA2<br>T 810 907  |  |  |
|                           | IDENT: | ECAM 2                             |        |                            |  |  |

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| WARNINGS/MALFUNCTIONS  | CFDS FAULT MESSAGES |   |          |   | FAULT<br>ISOLATION        |  |
|------------------------|---------------------|---|----------|---|---------------------------|--|
| WARNINGS/ MALFUNCTIONS | SOURCE              | MESSAGE   | ATA      | С | PROCEDURE                 |  |
|                        | ECAM 1              | SDAC2 : NO CPC1 ANALOG   SIGNAL   associated with | 213134   | 1 | 315400 PA247<br>T 810 931 |  |
|                        | ECAM 2              | SDAC2: NO CPC1 ANALOG                             | 213134   | 1 |                           |  |
|                        | ECAM 1              | SDAC2 : NO CPC1 ANALOG<br>SIGNAL                  | 213134   | 1 | 315400 PA247<br>T 810 931 |  |
|                        | IDENT:              | ECAM 2  | <u> </u> |   |                           |  |
|                        | ECAM 1              | SDAC2 : NO DATA FROM<br>ACHC                      | 214334   | 1 | 315400 P 250<br>T 810 848 |  |
|                        | IDENT:              | ECAM 2  | <u> </u> |   |                           |  |
|                        | ECAM 1              | SDAC2 : NO DATA FROM<br>ACSC1                     | 216134   | 1 | 315400 PA209<br>T 810 906 |  |
|                        | IDENT:              | ECAM 2  |          |   |                           |  |
|                        | ECAM 1              | SDAC2 : NO DATA FROM<br> ACSC2                    | 216134   | 1 | 315400 PA213<br>T 810 908 |  |
|                        | IDENT:              | ECAM 2  |          |   |                           |  |
|                        | ECAM 1              | SDAC2 : NO DATA FROM CPC1                         | 213134   | 1 | 315400 PA250<br>T 810 933 |  |
|                        | IDENT:              | ECAM 2  | <u></u>  |   |                           |  |
|                        | ECAM 1              | SDAC2 : NO DATA FROM CPC2                         | 213134   | 1 | 315400 PA252<br>T 810 935 |  |
|                        | IDENT:              |   |          |   |                           |  |
|                        | ECAM 1              | SDAC2 : NO DATA FROM<br> ECS1                     | 216334   | 3 | 315400 PA223<br>T 810 916 |  |
|                        | ECAM 1              | SDAC2 : NO DATA FROM<br>ECS1+2                    | 216334   | 1 | 315400 PA254<br>T 810 937 |  |
|                        | IDENT:              | IDENT: ECAM 2                                     |          |   |                           |  |
|                        | ECAM 1              | SDAC2 : NO DATA FROM<br> ECS2                     | 216334   | 3 | 315400 PA224<br>T 810 917 |  |

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| WARNINGS/MALFUNCTIONS | CFDS FAULT MESSAGES |   |        |   | FAULT<br>ISOLATION        |
|-----------------------|---------------------|---|--------|---|---------------------------|
| WARNINGS/MALFUNCTIONS | SOURCE              | MESSAGE   | ATA    | С | PROCEDURE                 |
|                       | ECAM 1              | SDAC2: NO DATA FROM<br>PACK1 CONT                     | 216134 | 1 | 315400 PA209<br>T 810 906 |
|                       | IDENT:              | ECAM 2  |        |   |                           |
|                       | ECAM 1              | SDAC2: NO DATA FROM<br>PACK2 CONT                     | 216134 | 1 | 315400 PA213<br>T 810 908 |
|                       | IDENT:              | ECAM 2  |        |   | _                         |
|                       | ECAM 2              | SDAC1 : NO CPC1 ANALOG<br>SIGNAL                      | 213134 | 1 | 315400 PA245<br>T 810 930 |
|                       | ECAM 2              | SDAC1 : NO CPC1 ANALOG<br> SIGNAL<br> associated with | 213134 | 1 | 315400 PA245<br>T 810 930 |
|                       | ECAM 1              | SDAC1: NO CPC1 ANALOG                                 | 213134 | 1 |                           |
|                       | ECAM 2              | SDAC1 : NO DATA FROM<br>ACHC                          | 214334 | 1 | 315400 P 249<br>T 810 847 |
|                       | ECAM 2              | SDAC1 : NO DATA FROM<br>ACSC1                         | 216134 | 1 | 315400 PA207<br>T 810 905 |
|                       | ECAM 2              | SDAC1 : NO DATA FROM<br>ACSC2                         | 216134 | 1 | 315400 PA211<br>T 810 907 |
|                       | ECAM 2              | SDAC1 : NO DATA FROM                                  | 213134 | 1 | 315400 PA249<br>T 810 932 |
|                       | ECAM 2              | SDAC1 : NO DATA FROM CPC2                             | 213134 | 1 | 315400 PA251<br>T 810 934 |
|                       | ECAM 2              | SDAC1 : NO DATA FROM<br>ECS1                          | 216334 | 3 | 315400 PA221<br>T 810 914 |
|                       | ECAM 2              | SDAC1 : NO DATA FROM<br>ECS1+2                        | 216334 | 1 | 315400 PA253<br>T 810 936 |
|                       | ECAM 2              | SDAC1 : NO DATA FROM<br>ECS1+2                        | 216334 | 1 | 315400 PA253<br>T 810 936 |
|                       | IDENT:              | ECAM 1  |        |   | <u> </u>                  |

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| HADNINGS /MALEUNCTIONS | CFDS FAULT MESSAGES |   |        |   | FAULT<br>ISOLATION        |  |
|------------------------|---------------------|---|--------|---|---------------------------|--|
| WARNINGS/MALFUNCTIONS  | SOURCE              | MESSAGE   | АТА    | С | PROCEDURE                 |  |
|                        | ECAM 2              | SDAC1 : NO DATA FROM<br> ECS2                       | 216334 | 3 | 315400 PA222<br>T 810 915 |  |
|                        | ECAM 2              | SDAC1 : NO DATA FROM<br>PACK1 CONT                  | 216134 | 1 | 315400 PA207<br>T 810 905 |  |
|                        | ECAM 2              | SDAC1 : NO DATA FROM<br>PACK2 CONT                  | 216134 | 1 | 315400 PA211<br>T 810 907 |  |
|                        | ECAM 2              | SDAC2 : NO CPC1 ANALOG<br>SIGNAL                    | 213134 | 1 | 315400 PA247<br>T 810 931 |  |
|                        | ECAM 2              | SDAC2 : NO CPC1 ANALOG<br>SIGNAL<br>associated with | 213134 | 1 | 315400 PA247<br>T 810 931 |  |
|                        | ECAM 1              | SDAC2: NO CPC1 ANALOG                               | 213134 | 1 |                           |  |
|                        | ECAM 2              | SDAC2 : NO DATA FROM<br>ACHC                        | 214334 | 1 | 315400 P 250<br>T 810 848 |  |
|                        | ECAM 2              | SDAC2 : NO DATA FROM<br>ACSC1                       | 216134 | 1 | 315400 PA209<br>T 810 906 |  |
|                        | ECAM 2              | SDAC2 : NO DATA FROM<br>ACSC2                       | 216134 | 1 | 315400 PA213<br>T 810 908 |  |
|                        | ECAM 2              | SDAC2 : NO DATA FROM                                | 213134 | 1 | 315400 PA250<br>T 810 933 |  |
|                        | ECAM 2              | SDAC2 : NO DATA FROM<br>CPC2                        | 213134 | 1 | 315400 PA252<br>T 810 935 |  |
|                        | ECAM 2              | SDAC2 : NO DATA FROM<br>ECS1                        | 216334 | 3 | 315400 PA223<br>T 810 916 |  |
|                        | ECAM 2              | SDAC2 : NO DATA FROM<br> ECS1+2                     | 216334 | 1 | 315400 PA254<br>T 810 937 |  |
|                        | ECAM 2              | SDAC2 : NO DATA FROM<br>ECS1+2                      | 216334 | 1 | 315400 PA254<br>T 810 937 |  |
|                        | IDENT:              | <u> </u><br>  |        |   |                           |  |
|                        | ECAM 2              | SDAC2 : NO DATA FROM<br>ECS2                        | 216334 | 3 | 315400 PA224<br>T 810 917 |  |

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| LIADNINGS / MALEUNGITONS | CFDS FAULT MESSAGES |  |        |   | FAULT<br>ISOLATION        |  |
|--------------------------|---------------------|--|--------|---|---------------------------|--|
| WARNINGS/MALFUNCTIONS    | SOURCE              | MESSAGE  | ATA    | С | PROCEDURE                 |  |
|                          | ECAM 2              | SDAC2 : NO DATA FROM<br>PACK1 CONT               | 216134 | 1 | 315400 PA209<br>T 810 906 |  |
|                          | ECAM 2              | SDAC2: NO DATA FROM<br>PACK2 CONT                | 216134 | 1 | 315400 PA213<br>T 810 908 |  |
|                          | EIU1FAD             | EIU1 : NO ZONE CONT DATA                         | 216334 | 1 | 732500 P 244<br>T 810 873 |  |
|                          | EIU1FAD             | ZC, EIU(ECSD), J3 ENG1A                          | 216334 | S | 732500 PA210<br>T 810 924 |  |
|                          | EIU1FAD             | ZC, EIU(ECSD), J3 ENG1B                          | 216334 | S | 732500 PA210<br>T 810 924 |  |
|                          | EIU1FAD             | ZC, EIU(030), J3 ENG1A                           | 216334 | 1 | 732500 P 268<br>T 810 893 |  |
|                          | EIU1FAD             | ZC, EIU(030), J3 ENG1B                           | 216334 | 1 | 732500 P 268<br>T 810 893 |  |
|                          | EIU2FAD             | EIU2 : NO ZONE CONT DATA                         | 216334 | 1 | 732500 P 246<br>T 810 874 |  |
|                          | EIU2FAD             | ZC, EIU(ECSD), J3 ENG2A                          | 216334 | S | 732500 PA212<br>T 810 925 |  |
|                          | EIU2FAD             | ZC, EIU(ECSD), J3 ENG2B                          | 216334 | S | 732500 PA212<br>T 810 925 |  |
|                          | EIU2FAD             | ZC, EIU(030), J3 ENG2A                           | 216334 | 1 | 732500 P 271<br>T 810 894 |  |
|                          | EIU2FAD             | ZC, EIU(030), J3 ENG2B                           | 216334 | 1 | 732500 P 271<br>T 810 894 |  |
|                          | GPWC                | SFCC1(21CV)/GPWS FLP<br>MODE SW(7WZ)/GPWC(100SG) | 215134 | 1 | 344300 PA212<br>T 810 849 |  |
|                          | TEMPCTL             | AFT CAB DUCT OVHT SENSOR                         | 216318 | 3 | 216300 P 226<br>T 810 814 |  |
|                          | TEMPCTL             | AFT CAB TEMP SEL                                 | 216311 | 2 | 216300 P 235<br>T 810 819 |  |

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| WARNINGS/MALFUNCTIONS    | CFDS FAULT MESSAGES |  |        |   | FAULT<br>ISOLATION        |
|--------------------------|---------------------|--|--------|---|---------------------------|
| WARRINGS/ HALL ONG LIONS | SOURCE              | MESSAGE                                  | ATA    | С | PROCEDURE                 |
|                          | TEMPCTL             | AFT CAB TEMP SEL                         | 216311 | 3 | 216300 P 235<br>T 810 819 |
|                          | TEMPCTL             | CKPT DUCT OVHT SENSOR                    | 216318 | 3 | 216300 P 223<br>T 810 812 |
|                          | TEMPCTL             | CKPT TEMP SEL                            | 216311 | 2 | 216300 P 231<br>T 810 817 |
|                          | TEMPCTL             | CKPT TEMP SEL                            | 216311 | 3 | 216300 P 231<br>T 810 817 |
|                          | TEMPCTL             | FAILURE NOT CLEARLY IDENTIFIED           | 216334 | 3 | 216300 PA221<br>T 810 848 |
|                          | TEMPCTL             | FLOW SEL                                 | 215100 | 2 | 215100 P 201<br>T 810 801 |
|                          | TEMPCTL             | FLOW SEL                                 | 215100 | 3 | 215100 P 201<br>T 810 801 |
|                          | TEMPCTL             | FWD CAB DUCT OVHT SENSOR                 | 216318 | 3 | 216300 P 225<br>T 810 813 |
|                          | TEMPCTL             | FWD CAB TEMP SEL                         | 216311 | 2 | 216300 P 233<br>T 810 818 |
|                          | TEMPCTL             | FWD CAB TEMP SEL                         | 216311 | 3 | 216300 P 233<br>T 810 818 |
|                          | TEMPCTL             | MIXER FLAP DRIVE OR SPLY                 | 215152 | 3 | 215100 P 204<br>T 810 802 |
|                          | TEMPCTL             | NO TEST RESULT RECEPTION<br>FROM P1 CONT | 216100 | 3 | 216100 PA247<br>T 810 863 |
|                          | TEMPCTL             | NO TEST RESULT RECEPTION<br>FROM P2 CONT | 216100 | 3 | 216100 PA248<br>T 810 864 |
|                          | TEMPCTL             | NO 28V ON PACK 1 MAIN                    | 216100 | 3 | 216100 P 226<br>T 810 805 |
|                          | TEMPCTL             | NO 28V ON PACK 1 SECD                    | 216100 | 2 | 216100 P 226<br>T 810 805 |

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| WARNINGS/MALFUNCTIONS  |         | FAULT<br>- ISOLATION                 |        |                             |
|------------------------|---------|--------------------------------------|--------|-----------------------------|
| WARNINGS/ MALFONCTIONS | SOURCE  | MESSAGE                              | ATA    | C PROCEDURE                 |
|                        | TEMPCTL | NO 28V ON PACK 1 SECD                | 216100 | 3 216100 P 226<br>T 810 805 |
|                        | TEMPCTL | NO 28V ON PACK 2 MAIN                | 216100 | 3 216100 P 229<br>T 810 806 |
|                        | TEMPCTL | NO 28V ON PACK 2 SECD                | 216100 | 2 216100 P 229<br>T 810 806 |
|                        | TEMPCTL | NO 28V ON PACK 2 SECD                | 216100 | 216100 P 229<br>T 810 806   |
|                        | TEMPCTL | NO 28V ON ZONE MAIN                  | 216300 | 216300 P 201<br>T 810 801   |
|                        | TEMPCTL | NO 28V ON ZONE SECD                  | 216300 | 2 216300 P 201<br>T 810 801 |
|                        | TEMPCTL | NO 28V ON ZONE SECD                  | 216300 | 3 216300 P 201<br>T 810 801 |
|                        | TEMPCTL | P1 BLEED TEMP >280 C                 | 216100 | 3 216100 PA233<br>T 810 845 |
|                        | TEMPCTL | P1 BLEED TEMP >320 C                 | 216100 | 3 216100 PA233<br>T 810 845 |
|                        | TEMPCTL | P1 BLEED TEMP SENSOR                 | 216117 | 3 216100 P 287<br>T 810 826 |
|                        | TEMPCTL | P1 COMP OVHT SENSOR                  | 216112 | 2 216100 P 291<br>T 810 828 |
|                        | TEMPCTL | P1 COMP OVHT SENSOR                  | 216112 | 3 216100 P 291<br>T 810 828 |
|                        | TEMPCTL | P1 COMP TEMP SENSOR                  | 216111 | 2 216100 P 283<br>T 810 824 |
|                        | TEMPCTL | P1 COMP TEMP SENSOR                  | 216111 | 3 216100 P 283<br>T 810 824 |
|                        | TEMPCTL | P1 COMP TEMP/OVHT SENSOR<br>DISAGREE | 216111 | 2 216100 PA229<br>T 810 843 |

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| WARNINGS/MALFUNCTIONS  | CFDS FAULT MESSAGES |                              |        |   | FAULT<br>ISOLATION        |  |
|------------------------|---------------------|------------------------------|--------|---|---------------------------|--|
| WARNINGS/ MALFUNCTIONS | SOURCE              | MESSAGE                      | ATA    | С | PROCEDURE                 |  |
|                        | TEMPCTL             | P1 CONT                      | 216134 | 3 | 216100 P 226<br>T 810 805 |  |
|                        | TEMPCTL             | P1 CONT OR ANTI ICE<br>VALVE | 216141 | 3 | 216100 P 253<br>T 810 818 |  |
|                        | TEMPCTL             | P1 FLOW SENSOR               | 215111 | 3 | 215100 P 214<br>T 810 805 |  |
|                        | TEMPCTL             | P1 OUTLET TEMP SENSOR        | 216115 | 3 | 216100 P 295<br>T 810 830 |  |
|                        | TEMPCTL             | P1 PIN PROGRAM MISMATCH      | 216100 | 3 | 216100 PA225<br>T 810 838 |  |
|                        | TEMPCTL             | P1 PRESS INL SENSOR          | 216116 | 3 | 216100 P 279<br>T 810 822 |  |
|                        | TEMPCTL             | P1 RAM AIR IN ACTUATOR       | 216151 | 3 | 216100 P 241<br>T 810 812 |  |
|                        | TEMPCTL             | P1 RAM AIR OUT ACTUATOR      | 216152 | 1 | 216100 P 245<br>T 810 814 |  |
|                        | TEMPCTL             | P1 RAM AIR OUT ACTUATOR      | 216152 | 3 | 216100 P 245<br>T 810 814 |  |
|                        | TEMPCTL             | P1 WATER EX TEMP SENSOR      | 216113 | 3 | 216100 P 237<br>T 810 810 |  |
|                        | TEMPCTL             | P2 BLEED TEMP >280 C         | 216100 | 3 | 216100 PA234<br>T 810 846 |  |
|                        | TEMPCTL             | P2 BLEED TEMP >320 C         | 216100 | 3 | 216100 PA234<br>T 810 846 |  |
|                        | TEMPCTL             | P2 BLEED TEMP SENSOR         | 216117 | 3 | 216100 P 289<br>T 810 827 |  |
|                        | TEMPCTL             | P2 COMP OVHT SENSOR          | 216112 | 2 | 216100 P 293<br>T 810 829 |  |
|                        | TEMPCTL             | P2 COMP OVHT SENSOR          | 216112 | 3 | 216100 P 293<br>T 810 829 |  |

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### TROUBLE SHOOTING MANUAL

| WARNINGS/MALFUNCTIONS  |         | CFDS FAULT MESSAGES                  | <br>S  |   | FAULT<br>ISOLATION        |  |
|------------------------|---------|--------------------------------------|--------|---|---------------------------|--|
| WARNINGS/ MALFONCTIONS | SOURCE  | MESSAGE                              | ATA    | С | PROCEDURE                 |  |
|                        | TEMPCTL | P2 COMP TEMP SENSOR                  | 216111 | 2 | 216100 P 285<br>T 810 825 |  |
|                        | TEMPCTL | P2 COMP TEMP SENSOR                  | 216111 | 3 | 216100 P 285<br>T 810 825 |  |
|                        | TEMPCTL | P2 COMP TEMP/OVHT SENSOR<br>DISAGREE | 216111 | 2 | 216100 PA231<br>T 810 844 |  |
|                        | TEMPCTL | P2 CONT                              | 216134 | 3 | 216100 P 229<br>T 810 806 |  |
|                        | TEMPCTL | P2 CONT OR ANTI ICE<br>VALVE         | 216341 | 3 | 216100 P 255<br>T 810 819 |  |
|                        | TEMPCTL | P2 FLOW SENSOR                       | 215111 | 3 | 215100 P 216<br>T 810 806 |  |
|                        | TEMPCTL | P2 OUTLET TEMP SENSOR                | 216115 | 3 | 216100 P 297<br>T 810 831 |  |
|                        | TEMPCTL | P2 PIN PROGRAM MISMATCH              | 216100 | 3 | 216100 PA227<br>T 810 839 |  |
|                        | TEMPCTL | P2 PRESS INL SENSOR                  | 216116 | 3 | 216100 P 281<br>T 810 823 |  |
|                        | TEMPCTL | P2 RAM AIR IN ACTUATOR               | 216151 | 3 | 216100 P 243<br>T 810 813 |  |
|                        | TEMPCTL | P2 RAM AIR OUT ACTUATOR              | 216152 | 1 | 216100 P 247<br>T 810 815 |  |
|                        | TEMPCTL | P2 RAM AIR OUT ACTUATOR              | 216152 | 3 | 216100 P 247<br>T 810 815 |  |
|                        | TEMPCTL | P2 WATER EX TEMP SENSOR              | 216113 | 3 | 216100 P 239<br>T 810 811 |  |
|                        | TEMPCTL | RECIRC FAN 1 AND 2 OR<br>SPLY        | 212151 | 2 | 212100 P 204<br>T 810 802 |  |
|                        | TEMPCTL | RECIRC FAN 1 OR SPLY                 | 212151 | 3 | 212100 P 201<br>T 810 801 |  |

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## TROUBLE SHOOTING MANUAL

| WARNINGS/MALFUNCTIONS  |         | FAULT<br>- ISOLATION             |        |                             |
|------------------------|---------|----------------------------------|--------|-----------------------------|
| WARNINGS/ MALFONCTIONS | SOURCE  | MESSAGE                          | ATA    | C PROCEDURE                 |
|                        | TEMPCTL | RECIRC FAN 2 OR SPLY             | 212151 | 3 212100 P 208<br>T 810 803 |
|                        | TEMPCTL | TEMP SENSOR AFT CAB              | 216317 | 2 216300 P 215<br>T 810 808 |
|                        | TEMPCTL | TEMP SENSOR AFT CAB              | 216317 | 216300 P 215<br>T 810 808   |
|                        | TEMPCTL | TEMP SENSOR AFT CAB DUCT         | 216315 | 216300 P 221<br>T 810 811   |
|                        | TEMPCTL | TEMP SENSOR CKPT                 | 216317 | 2 216300 P 211<br>T 810 806 |
|                        | TEMPCTL | TEMP SENSOR CKPT                 | 216317 | 3 216300 P 211<br>T 810 806 |
|                        | TEMPCTL | TEMP SENSOR CKPT DUCT            | 216315 | 3 216300 P 217<br>T 810 809 |
|                        | TEMPCTL | TEMP SENSOR FWD CAB              | 216317 | 2 216300 P 213<br>T 810 807 |
|                        | TEMPCTL | TEMP SENSOR FWD CAB              | 216317 | 3 216300 P 213<br>T 810 807 |
|                        | TEMPCTL | TEMP SENSOR FWD CAB DUCT         | 216315 | 3 216300 P 219<br>T 810 810 |
|                        | TEMPCTL | TEMP SENSOR L/H AND R/H<br>MIXER | 216316 | 2 216300 P 286<br>T 810 835 |
|                        | TEMPCTL | TEMP SENSOR L/H MIXER            | 216316 | 3 216300 P 227<br>T 810 815 |
|                        | TEMPCTL | TEMP SENSOR R/H MIXER            | 216316 | 3 216300 P 229<br>T 810 816 |
|                        | TEMPCTL | TRIM AIR PRESS VALVE             | 216352 | 3 216300 P 209<br>T 810 805 |
|                        | TEMPCTL | TRIM VALVE AFT CAB               | 216351 | 3 216300 P 207<br>T 810 804 |

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#### TROUBLE SHOOTING MANUAL

| WARNINGS/MALFUNCTIONS | CFDS FAULT MESSAGES |                         |        |   | FAULT<br>ISOLATION        |
|-----------------------|---------------------|-------------------------|--------|---|---------------------------|
| WARNINGS/MALFUNCTIONS | SOURCE              | MESSAGE                 | АТА    | С | ! !                       |
|                       | TEMPCTL             | TRIM VALVE CKPT         | 216351 | 3 | 216300 P 203<br>T 810 802 |
|                       | TEMPCTL             | TRIM VALVE FWD CAB      | 216351 | 3 | 216300 P 205<br>T 810 803 |
|                       | TEMPCTL             | ZC PIN PROGRAM MISMATCH | 216300 | 3 | 216300 P 283<br>T 810 831 |
|                       | TEMPCTL             | ZONE CONT               | 216334 | 3 | 216300 P 201<br>T 810 801 |

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#### TROUBLE SHOOTING MANUAL

#### AIR CONDITIONING - GENERAL - FAULT ISOLATION PROCEDURES

TASK 21-00-00-810-801

Oil in the Air Conditioning System

- 1. Possible Causes
- external oil leakage
- APU
- engine(s)
  - 2. Job Set-up Information
    - A. Referenced Information

| REFERENCE            | DESIGNATION  |
|----------------------|--|
|                      |  |
| 49-00-00-810-846     | Fumes in the Cabin/Oil Smoke at the APU Exhaust (GTCF 36-300)  |
| 49-00-00-810-921     | Fumes in the Cabin/Oil Smoke at the APU Exhaust (APS 3200)   |
| 49-00-81-810-874     | APU - Oil Smoke in Cabin (131-9(A))  |
| 71-00-00-810-802     | Smoke and/or Oil Smell in the Cabin  |
| AMM 21-00-00-615-001 | Decontamination of the Environmental Control System (ECS) when the Temperature is below 24 deg.C (APU) |
| AMM 21-00-00-615-002 | Decontamination of the Environmental Control System (ECS) when the Temperature is above 24 deg.C (APU) |
| AMM 49-11-11-000-001 | Removal of the Auxiliary Power Unit (APU) - 4005KM (GTCP 36-300)                                       |
| AMM 49-11-11-000-003 | Removal of the Power Plant (APU) (APS 3200)  |
| AMM 49-11-11-000-004 | Removal of the Power Plant (APU) (131-9(A))  |
| AMM 49-11-11-400-001 | <pre>Installation of the Auxiliary Power Unit (APU) - 4005KM (GTCP 36-300)</pre>                       |
| AMM 49-11-11-400-003 | Installation of the Power Plant (APU) (APS 3200)   |
| AMM 49-11-11-400-004 | Installation of the Power Plant (APU) (131-9(A))   |

- 3. Fault Confirmation
- R \*\*ON A/C 201-225, 227-227, 229-250, 252-299, 426-456, 476-499, 503-549, R 551-599, 701-749,
  - A. If there was (is) a smell of oil in the cabin remove the APU bleed-air duct-elbow forward of the bleed control valve (Ref. AMM TASK 49-11-11-000-003).

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#### TROUBLE SHOOTING MANUAL

\*\*ON A/C 457-475,

A. If there was (is) a smell of oil in the cabin remove the APU bleed-air duct-elbow forward of the bleed control valve (Ref. AMM TASK 49-11-11-000-001).

\*\*ON A/C 247-253,

Post SB 49-1069 For A/C 247-250,252-253,

A. If there was (is) a smell of oil in the cabin remove the APU bleed-air duct-elbow forward of the bleed control valve (Ref. AMM TASK 49-11-11-000-004).

\*\*ON A/C ALL

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#### 4. Fault Isolation

R \*\*ON A/C 201-225, 227-227, 229-250, 252-299, 426-456, 476-499, 503-549, R 551-599, 701-749,

- A. If there is oil in the APU bleed-air duct-elbow:
   do a check for external oil leaks of the APU.
- R (1) If there is an external oil leakage:
  - do the necessary steps to stop the external oil leakage,
  - clean and install the APU bleed-air duct-elbow (Ref. AMM TASK 49-11-11-400-003).
  - do the trouble shooting of the APU (Ref. TASK 49-00-00-810-921) and the decontamination of the ECS (Ref. AMM TASK 21-00-00-615-001) or (Ref. AMM TASK 21-00-00-615-002).
  - (2) If there are no external oil leaks:
    - clean the APU bleed-air duct-elbow,
    - install the APU bleed-air duct elbow (Ref. AMM TASK 49-11-11-400-003),
    - do the trouble shooting of the APU (Ref. TASK 49-00-00-810-921) and the decontamination of the ECS (Ref. AMM TASK 21-00-00-615-001) or (Ref. AMM TASK 21-00-00-615-002).
    - do the trouble shooting of the engine(s) (Ref. TASK 71-00-00-810-802).

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#### TROUBLE SHOOTING MANUAL

\*\*ON A/C 457-475,

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- A. If there is oil in the APU bleed -air duct-elbow:
   do a check for external oil leaks of the APU.
- R (1) If there is an external oil leakage:
  - do the necessary steps to stop the external oil leakage,
  - clean and install the APU bleed-air duct-elbow (Ref. AMM TASK 49-11-11-400-001).
  - do the trouble shooting of the APU (Ref. TASK 49-00-00-810-846) and the decontamination of the ECS (Ref. AMM TASK 21-00-00-615-001) or (Ref. AMM TASK 21-00-00-615-002).
  - (2) If there are no external oil leaks:
    - clean the APU bleed-air duct-elbow,
    - install the APU bleed-air duct elbow (Ref. AMM TASK 49-11-11-400-001),
    - do the trouble shooting of the APU (Ref. TASK 49-00-00-810-846) and the decontamination of the ECS (Ref. AMM TASK 21-00-00-615-001) or (Ref. AMM TASK 21-00-00-615-002).
    - do the trouble shooting of the engine(s) (Ref. TASK 71-00-00-810-802).

\*\*ON A/C 247-253,

Post SB 49-1069 For A/C 247-250,252-253,

- A. If there is oil in the APU bleed-air duct-elbow:
  - do a check for external oil leaks of the APU.
- (1) If there is an external oil leakage:
  - do the necessary steps to stop the external oil leakage,
  - clean and install the APU bleed-air duct-elbow (Ref. AMM TASK 49-11-11-400-004).
  - do the trouble shooting of the APU (Ref. TASK 49-00-81-810-874) and the decontamination of the ECS (Ref. AMM TASK 21-00-00-615-001) or (Ref. AMM TASK 21-00-00-615-002).
  - (2) If there are no external oil leaks:
    - clean the APU bleed-air duct-elbow,
    - install the APU bleed-air duct elbow (Ref. AMM TASK 49-11-11-400-004),
    - do the trouble shooting of the APU (Ref. TASK 49-00-81-810-874) and the decontamination of the ECS (Ref. AMM TASK 21-00-00-615-001) or (Ref. AMM TASK 21-00-00-615-002).
    - do the trouble shooting of the engine(s) (Ref. TASK 71-00-00-810-802).

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\*\*ON A/C ALL

TASK 21-00-00-810-802

Unsatisfactory Cabin Air Quality

- 1. Possible Causes
- 2. Job Set-up Information
  - A. Referenced Information

-----

REFERENCE

**DESIGNATION** 

\_\_\_\_\_

21-00-00-810-801 SIL 21-132

21-00-00-810-801 Oil in the Air Conditioning System

- 3. Fault Confirmation
  - A. Not applicable
- 4. Fault Isolation
  - A. If the cabin has an unsatisfactory air quality (smell of oil): (Ref. TASK 21-00-00-810-801)

21-00-00

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#### TROUBLE SHOOTING MANUAL

#### AIR DISTRIBUTION AND RECIRCULATION - FAULT ISOLATION PROCEDURES

TASK 21-21-00-810-801

Cabin Recirculation Fault (Fan 1 / Supply)

#### 1. Possible Causes

- FILTER-RECIRCULATION (4012HM)
- FAN RECIRCULATION (15HG)

R

- PUSHBUTTON SWITCH-VENTILATION/CAB FANS (4HG)
- RELAY-FAN FAULT SUPPRESSION (16HG)
- RELAY-L FAN POWER (5HG)
- RELAY-L FAN CTL (7HG)
- RELAY-L FAN FAULT (10HG)
- wiring

#### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION   |  |
|-----------|------------------|---|--|
|           |                  | PL31GNA:10N   |  |
| AMM       | 21-21-00-710-001 | Operational Test of the Cabin Recirculation Fans 14HG and 15HG. |  |
| AMM       | 21-21-41-000-001 | Removal of the Recirculation Filter 4012HM (4013HM)             |  |
| AMM       | 21-21-41-400-001 | Installation of the Recirculation Filter 4012HM (4013HM)        |  |
| AMM       | 21-21-51-000-001 | Removal of the Cabin Recirculation Fans 15HG and 14HG           |  |
| AMM       | 21-21-51-400-001 | Installation of the Cabin Recirculation Fans 15HG and 14HG      |  |
| ASM       | 21-21/01         |   |  |
| ASM       | 21-21/01         |   |  |
| ASM       | 21-63/01         |   |  |

#### 3. Fault Confirmation

A. Do the operational test of the cabin recirculation fans 14HG and 15HG (Ref. AMM TASK 21-21-00-710-001).

#### 4. Fault Isolation

R

- A. If the test gives the maintenance message RECIRC FAN 1 OR SPLY:
  - make sure that the recirculation filter (4012HM) housing and the adjacent area is clean.
  - remove the FILTER-RECIRCULATION (4012HM) (Ref. AMM TASK 21-21-41-000-001).

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- (1) If the recirculation fan (15HG) operates correctly: - do a check of the recirculation filter (4012HM) for contamination.
  - (a) If the filter is clogged:
    - replace the FILTER-RECIRCULATION (4012HM) (Ref. AMM TASK 21-21-41-000-001) and (Ref. AMM TASK 21-21-41-400-001).
  - (b) If the filter is not clogged:
    - install the FILTER-RECIRCULATION (4012HM) (Ref. AMM TASK 21-21-41-400-001).
- (2) If the recirculation fan (15HG) does not operate:
  - do a check of the PUSHBUTTON SWITCH-VENTILATION/CAB FANS (4HG) and replace it if necessary (Ref. ASM 21-21/01).
  - (a) If the fault continues:
    - do a check of the RELAY-FAN FAULT SUPPRESSION (16HG) and replace it if necessary (Ref. ASM 21-21/01).
  - (b) If the fault continues:
    - do a check of the RELAY-L FAN POWER (5HG) and replace it if necessary (Ref. ASM 21-21/01).
  - (c) If the fault continues:
    - do a check of the RELAY-L FAN CTL (7HG) and replace it if necessary (Ref. ASM 21-21/01).
  - (d) If the fault continues:
    - do a check of the RELAY-L FAN FAULT (10HG) and replace it if necessary (Ref. ASM 21-21/01).
  - (e) If the fault continues:
    - replace the FAN RECIRCULATION (15HG) (referred to as FAN (15HG)) (Ref. AMM TASK 21-21-51-000-001) and (Ref. AMM TASK 21-21-51-400-001).
  - (f) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-21/01) and (Ref. ASM 21-63/01) from:
    - the FAN (15HG) to the CB (1HG),
    - the FAN (15HG) to the CB (2HG),
    - the FAN (15HG) to ground,
    - the RELAY (7HG) to the RELAY (5HG),
    - the RELAY (7HG) to ground,
    - the RELAY (10HG) to the RELAY (5HG),
    - the RELAY (10HG) to ground,
    - the RELAY (10HG) to the ZC (8HK),
    - the RELAY (16HG) to the SW (4HG) and,
    - the RELAY (16HG) to ground.

B. Do the test as given in the Para. 3.A.

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| _  | _ |      |     |
|----|---|------|-----|
| 5. | C | ose- | au. |

A. Put the aircraft back to its initial configuration.

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TASK 21-21-00-810-802

Cabin Recirculation Fault

### 1. Possible Causes

- FILTER-RECIRCULATION (4012HM)
- FILTER-RECIRCULATION (4013HM)

R

- FAN RECIRCULATION (15HG)
- FAN-RECIRCULATION (14HG)
- mixer unit ducts

R

- PUSHBUTTON SWITCH-VENTILATION/CAB FANS (4HG)
- RELAY-FAN FAULT SUPPRESSION (16HG)
- RELAY-L FAN POWER (5HG)
- RELAY-R FAN POWER (6HG)
- RELAY-L FAN CTL (7HG)
- RELAY-R FAN CTL (8HG)
- RELAY-L FAN FAULT (10HG)
- RELAY-R FAN FAULT (9HG)
- R wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION   |  |
|-----------|------------------|---|--|
|           |                  |   |  |
| AMM       | 21-21-00-710-001 | Operational Test of the Cabin Recirculation Fans 14HG and 15HG. |  |
| AMM       | 21-21-41-000-001 | Removal of the Recirculation Filter 4012HM (4013HM)             |  |
| AMM       | 21-21-41-400-001 | Installation of the Recirculation Filter 4012HM (4013HM)        |  |
| AMM       | 21-21-43-000-001 | Removal of the Mixer Unit                                       |  |
| AMM       | 21-21-43-400-002 | Installation of the Mixer Unit                                  |  |
| AMM       | 21-21-51-000-001 | Removal of the Cabin Recirculation Fans 15HG and 14HG           |  |
| AMM       | 21-21-51-400-001 | Installation of the Cabin Recirculation Fans 15HG and 14HG      |  |
| AMM       | 25-55-12-000-001 | Removal of the AFT Cargo Compartment Partition FR65             |  |
| ASM       | 21-21/01         | - ·   |  |
| ASM       | 21-63/01         |   |  |

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### 3. Fault Confirmation

\*\*ON A/C ALL

- R Post SB 21-1104 For A/C 227-227,229-237,276-281,476-478,
  - A. Do the operational test of the cabin recirculation fans 14HG and 15HG (Ref. AMM TASK 21-21-00-710-001).

\*\*ON A/C ALL

#### 4. Fault Isolation

\*\*ON A/C ALL

- R Post SB 21-1104 For A/C 227-227,229-237,276-281,476-478,
  - A. If the test gives the maintenance message RECIRC FAN 1 AND 2 OR SPLY:
    - remove the access panels 131PW, 131NW and 132PW (Ref. AMM TASK 25-55-12-000-001),
    - visually inspect the mixer unit ducts for damage (pay special attention to the lateral seams of the ducts).
    - (1) If you find damage then you must replace the mixer unit (Ref. AMM TASK 21-21-43-000-001) and (Ref. AMM TASK 21-21-43-400-002).
    - (2) If there is no damage,
      - make sure that the recirculation filter (4012HM, 4013HM) housings and the adjacent areas are clean,
      - remove the FILTER-RECIRCULATION (4012HM) (Ref. AMM TASK 21-21-41-000-001),
      - remove the FILTER-RECIRCULATION (4013HM) (Ref. AMM TASK 21-21-41-000-001).
    - (3) If the recirculation fans (14HG, 15HG) operate correctly:
      - do a check of the recirculation filters (4012HM, 4013HM) for contamination.
      - (a) If the filters are clogged:
        - replace the FILTER-RECIRCULATION (4012HM) (Ref. AMM TASK 21-21-41-000-001) and (Ref. AMM TASK 21-21-41-400-001),
        - replace the FILTER-RECIRCULATION (4013HM) (Ref. AMM TASK 21-21-41-000-001) and (Ref. AMM TASK 21-21-41-400-001).
      - (b) If the filters are not cloqued:
        - install the FILTER-RECIRCULATION (4012HM) (Ref. AMM TASK 21-21-41-400-001).
        - install the FILTER-RECIRCULATION (4013HM) (Ref. AMM TASK 21-21-41-400-001).

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- (4) If the recirculation fans (14HG, 15HG) do not operate:
  - do a check of the PUSHBUTTON SWITCH-VENTILATION/CAB FANS (4HG) and replace it if necessary (Ref. ASM 21-21/01).
  - (a) If the fault continues:
    - do a check of the RELAY-FAN FAULT SUPPRESSION (16HG) and replace it if necessary (Ref. ASM 21-21/01).
  - (b) If the fault continues:
    - do a check of the RELAY-L FAN POWER (5HG) and replace it if necessary (Ref. ASM 21-21/01),
    - do a check of the RELAY-R FAN POWER (6HG) and replace it if necessary (Ref. ASM 21-21/01).
  - (c) If the fault continues:
    - do a check of the RELAY-L FAN CTL (7HG) and replace it if necessary (Ref. ASM 21-21/01),
    - do a check of the RELAY-R FAN CTL (8HG) and replace it if necessary (Ref. ASM 21-21/01).
  - (d) If the fault continues:
    - do a check of the RELAY-L FAN FAULT (10HG) and replace it if necessary (Ref. ASM 21-21/01).
    - do a check of the RELAY-R FAN FAULT (9HG) and replace it if necessary (Ref. ASM 21-21/01).
  - (e) If the fault continues:
    - replace the FAN RECIRCULATION (15HG) (referred to as FAN (15HG)) (Ref. AMM TASK 21-21-51-000-001) and (Ref. AMM TASK 21-21-51-400-001),
    - replace the FAN-RECIRCULATION (14HG) (referred to as FAN (14HG)) (Ref. AMM TASK 21-21-51-000-001) and (Ref. AMM TASK 21-21-51-400-001).
  - (f) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-21/01) and (Ref. ASM 21-63/01) between the:
      - FAN (15HG) connector A/A and CB (1HG),
      - FAN (15HG) connector A/B and CB (1HG),
      - FAN (15HG) connector A/C and CB (1HG),
      - FAN (15HG) connector A/E and CB (2HG),
      - FAN (15HG) connector A/F and GND,
      - FAN (15HG) connector A/D and GND,
      - FAN (14HG) connector A/A and CB (3HG),
      - FAN (14HG) connector A/B and CB (3HG),
      - FAN (14HG) connector A/C and CB (3HG),
      - FAN (14HG) connector A/E and CB (11HG),
      - FAN (14HG) connector A/F and GND,
      - FAN (14HG) connector A/D and GND,
      - RELAY (7HG) connector A/X1 and RELAY (5HG) connector A/X1,
      - RELAY (7HG) connector A/X2 and GND,
      - RELAY (10HG) connector A/Z and RELAY (5HG) connector A/C1,

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RELAY (10HG) connector A/X and GND,
RELAY (10HG) connector A/1 and ZC (8HK) connector AB/1E,
RELAY (10HG) connector A/A and GND,
RELAY (16HG) connector A/X and SW (4HG) connector A/C2,
RELAY (16HG) connector A/Z and GND,
RELAY (8HG) connector A/X1 and RELAY (6HG) connector A/X1,
RELAY (8HG) connector A/X2 and GND,
RELAY (9HG) connector A/X and RELAY (6HG) connector A/C1,
RELAY (9HG) connector A/Z and GND,
RELAY (9HG) connector A/I and ZC (8HK) connector AB/1D,
RELAY (9HG) connector A/A and GND.
```

R

B. Do the test as given in the Para. 3.A.

EFF: ALL
SROS

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### TROUBLE SHOOTING MANUAL

\*\*ON A/C ALL

TASK 21-21-00-810-803

Cabin Recirculation Fault (Fan 2 / Supply)

### 1. Possible Causes

- FILTER-RECIRCULATION (4013HM)
- P/BSW-VENTILATION/CAB FANS (4HG)
- RELAY-FAN FAULT SUPPRESS (16HG)
- RELAY-R FAN POWER (6HG)
- RELAY-R FAN CONTROL (8HG)
- RELAY-R FAN FAULT (9HG)
- FAN-RECIRCULATION (14HG)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
|           |                  |   |
| AMM       | 21-21-00-710-001 | Operational Test of the Cabin Recirculation Fans 14HG and 15HG. |
| AMM       | 21-21-41-000-001 | Removal of the Recirculation Filter 4012HM (4013HM)             |
| AMM       | 21-21-41-400-001 | Installation of the Recirculation Filter 4012HM (4013HM)        |
| AMM       | 21-21-51-000-001 | Removal of the Cabin Recirculation Fans 15HG and 14HG           |
| AMM       | 21-21-51-400-001 | Installation of the Cabin Recirculation Fans 15HG and 14HG      |
| ASM       | 21-21/01         |   |
| ASM       | 21-63/01         |   |

#### 3. Fault Confirmation

A. Do the operational test of the cabin recirculation fans 14HG and 15HG (Ref. AMM TASK 21-21-00-710-001).

### 4. Fault Isolation

R

- A. If the test gives the maintenance message RECIRC FAN 2 OR SPLY:
  - make sure that the recirculation filter (4013HM) housing and the adjacent area is clean.
  - remove the FILTER-RECIRCULATION (4013HM) (Ref. AMM TASK 21-21-41-000-001).

EFF: ALL

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### TROUBLE SHOOTING MANUAL

- (1) If the recirculation fan (14HG) operates correctly:do a check of the recirculation filter (4013HM) for contamination.
  - (a) If the filter is clogged:
    - replace the FILTER-RECIRCULATION (4013HM) (Ref. AMM TASK 21-21-41-000-001) and (Ref. AMM TASK 21-21-41-400-001).
  - (b) If the filter is not clogged:
    - install the FILTER-RECIRCULATION (4013HM) (Ref. AMM TASK 21-21-41-400-001).
- (2) If the recirculation fan (14HG) does not operate:
  - do a check of the P/BSW-VENTILATION/CAB FANS (4HG) and replace it if necessary (Ref. ASM 21-21/01).
  - (a) If the fault continues:
    - do a check of the RELAY-FAN FAULT SUPPRESS (16HG) and replace it if necessary (Ref. ASM 21-21/01).
  - (b) If the fault continues:
    - do a check of the RELAY-R FAN POWER (6HG) and replace it if necessary (Ref. ASM 21-21/01).
  - (c) If the fault continues:
    - do a check of the RELAY-R FAN CONTROL (8HG) and replace it if necessary (Ref. ASM 21-21/01).
  - (d) If the fault continues:
    - do a check of the RELAY-R FAN FAULT (9HG) and replace it if necessary (Ref. ASM 21-21/01).
  - (e) If the fault continues:
    - replace the FAN-RECIRCULATION (14HG) (Ref. AMM TASK 21-21-51-000-001) and (Ref. AMM TASK 21-21-51-400-001).
  - (f) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-21/01) and (Ref. ASM 21-63/01) from:
    - the FAN (14HG) to the CB (3HG),
    - the FAN (14HG) to the CB (11HG),
    - the FAN (14HG) to ground,
    - the RELAY (8HG) to the RELAY (6HG),
    - the RELAY (8HG) to ground,
    - the RELAY (9HG) to the RELAY (6HG),
    - the RELAY (9HG) to ground,
    - the RELAY (9HG) to the ZC (8HK),
    - the RELAY (16HG) to the SW (4HG) and,
    - the RELAY (16HG) to ground.

R

B. Do the test as given in the Para. 3.A.

R EFF: ALL

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### TROUBLE SHOOTING MANUAL

TASK 21-21-00-810-804

Cabin Recirculation Fault (SDAC 1 / SDAC 2)

#### 1. Possible Causes

- SDAC-1 (1WV1)
- SDAC-2 (1WV2)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |  | DESIGNATION  |
|-----------|--|--|
| AMM       | 21-21-00-710-001                                 | Operational Test of the Cabin Recirculation Fans 14HG and 15HG.      |
| AMM       | 31-55-34-000-001<br>31-55-34-400-001<br>21-21/01 | Removal of the SDAC (1WV1,1WV2) Installation of the SDAC (1WV1,1WV2) |

### 3. Fault Confirmation

A. Do the operational test of the cabin recirculation fans 14HG and 15HG (Ref. AMM TASK 21-21-00-710-001).

### 4. Fault Isolation

- A. If the ECAM upper DU gives the warning COND L+R CAB FAN FAULT, but no maintenance message comes on:
  - (1) replace the SDAC-1 (1WV1) (Ref. AMM TASK 31-55-34-000-001) and (Ref. AMM TASK 31-55-34-400-001).
  - (2) If the fault continues:
    - replace the SDAC-2 (1WV2) (Ref. AMM TASK 31-55-34-000-001) and (Ref. AMM TASK 31-55-34-400-001).
  - (3) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-21/01) between:
    - the P/BSW-VENTILATION/CAB FANS (4HG)A pin B3 and SDAC-1 (1WV1)AA pin 10G and,
    - P/BSW-VENTILATION/CAB FANS (4HG)A pin B3 and SDAC-2 (1WV2)AA pin 10G.
- B. Do the test as given in the Para. 3.A.

EFF: ALL 21-00

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### TROUBLE SHOOTING MANUAL

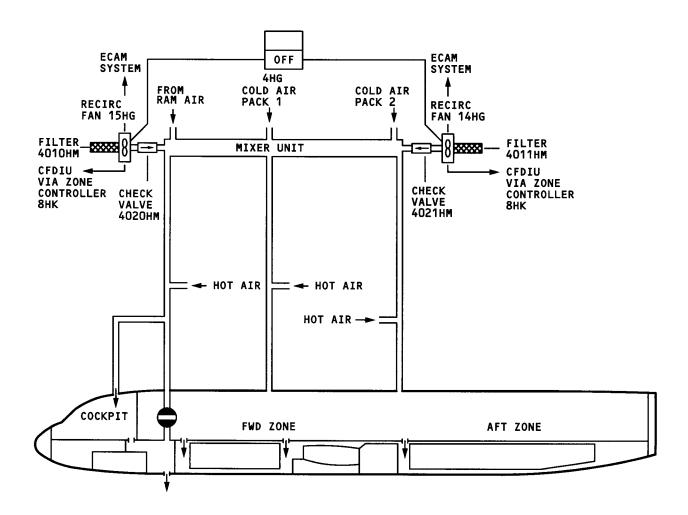
AIR DISTRIBUTION AND RECIRCULATION - TASK SUPPORTING DATA

EFF: ALL

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### TROUBLE SHOOTING MANUAL



Air Distribution and Recirculation - Block Diagram Figure 301

EFF: ALL
SROS

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### TROUBLE SHOOTING MANUAL

### LAVATORY/GALLEY VENTILATION - FAULT ISOLATION PROCEDURES

TASK 21-23-00-810-801

Galley and Lavatory Extraction Fault

- 1. Possible Causes
  - FAN-EXTRACTION (1HU)

R

- RELAY-FAN POWER (2HU)
- RELAY-FAN CONTROL (3HU)
- RELAY-FAN FAULT (4HU)
- wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE     |         | DESIGNATION   |
|---------------|---------|---|
| 24 27 74      | 222 224 |   |
| AMM 21-23-51- |         | Removal of the Lavatory and Galley Extract Fan (1HU)      |
| AMM 21-23-51- |         | Installation of the Lavatory and Galley Extract Fan (1HU) |
| AMM 21-61-00- |         | Operational Test of the Pack Temperature-Control System   |
| ASM 21-23/01  |         |   |
| ASM 21-63/01  |         |   |

- 3. Fault Confirmation
  - A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).
- 4. Fault Isolation

R

- A. If the test gives the maintenance message GALY & TOIL FAN OR SPLY:
  - replace the FAN-EXTRACTION (1HU) (referred to as FAN (1HU)) (Ref. AMM TASK 21-23-51-000-001) and (Ref. AMM TASK 21-23-51-400-001).
  - (1) If the fault continues:
    - do a check of the RELAY-FAN POWER (2HU) and replace it if necessary (Ref. ASM 21-23/01).
  - (2) If the fault continues:
    - do a check of the RELAY-FAN CONTROL (3HU) and replace it if necessary (Ref. ASM 21-23/01).

EFF: ALL

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- (3) If the fault continues:
  - do a check of the RELAY-FAN FAULT (4HU) and replace it if necessary (Ref. ASM 21-23/01).
- (4) If the fault continues:
  - do a check and repair the wiring between: FAN (1HU) connector A/A and CB (6HU), FAN (1HU) connector A/B and CB (6HU), FAN (1HU) connector A/C and CB (6HU), FAN (1HU) connector A/E and CB (5HU), FAN (1HU) connector A/D and GND, FAN (1HU) connector A/F and GND, RELAY (3HU) connector A/X1 and CB (5HU), RELAY (3HU) connector A/X2 and GND, RELAY (4HU) connector A/X and CB (6HU), RELAY (4HU) connector A/Z and GND, RELAY (4HU) connector A/1 and ZC (8HK) connector AB/1C,

RELAY (4HU) connector A/A and GND (Ref. ASM 21-23/01) and (Ref. ASM

R

B. Do the test as given in the Para. 3.A.

21-63/01).

- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

EFF: ALL **SROS** 

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### TROUBLE SHOOTING MANUAL

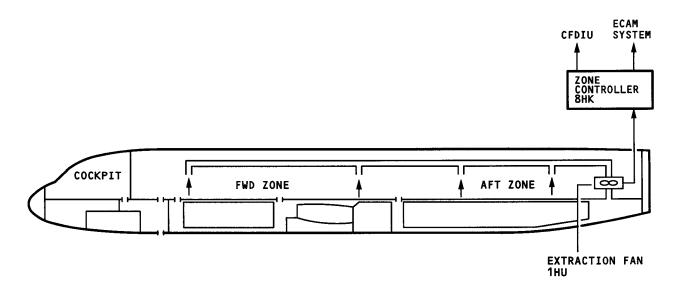
LAVATORY/GALLEY VENTILATION - TASK SUPPORTING DATA

EFF: ALL

21-23-00

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### TROUBLE SHOOTING MANUAL



Lavatory/Galley Ventilation - Block Diagram Figure 301

EFF: ALL
SROS

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### TROUBLE SHOOTING MANUAL

### AVIONICS EQUIPMENT VENTILATION - FAULT ISOLATION PROCEDURES

TASK 21-26-00-810-801

Loss of the Automatic Control and Monitoring of the Valves and Fans

1. Possible Causes

R

- CARTRIDGE-AVNCS VENT FILTER (2082HM)

R

- 2. Job Set-up Information
  - A. Referenced Information

\_\_\_\_\_\_ REFERENCE

**DESIGNATION** 

AMM 21-26-00-710-001

Operational Check of System via MCDU

AMM 21-26-43-920-001

Replacement of the Filter Cartridge

R

R

- 3. Fault Confirmation
  - A. Test
    - (1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).
- 4. Fault Isolation
  - A. Table of the circuit breakers used in this procedure:

PANEL DESIGNATION

IDENT. LOCATION \_\_\_\_\_\_

122VU AIR COND/AVNCS/VENT/MONG

3HQ

Y17

R

- B. If the test gives the maintenance message NO RESPONSE:
  - make sure that the avionics ventilation filter is not clogged. If necessary, replace the CARTRIDGE-AVNCS VENT FILTER (2082HM) (Ref. AMM TASK 21-26-43-920-001).

R

C. Do the operational test given in Para. 3.

EFF: ALL 21-26-00

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-802

Loss of Power Supply of the Valves and Fans

#### 1. Possible Causes

- AEVC (10HQ)
- wiring between the AEVC pin AA/1D and the ground terminal
- C/B-AIR COND AVNCS VENT/CTL (6HQ)
- wiring between the AEVC pin AA/1C and the circuit breaker (6HQ)
- P/BSW-VENTILATION/BLOWER (13HQ)
- wiring between the AEVC (10HQ) pin AA/7C and the pushbutton switch (13HQ) pin A D1
- wiring between the pushbutton switch (13HQ) pin A/D3 and the circuit breaker (5HQ)
- C/B-AIR COND AVNCS VENT/CTL (5HQ)
- wiring between the AEVC pin AA/1B and the circuit breaker (5HQ)
- the wiring between the AEVC pin AA/7C and the circuit breaker (5HQ)
- P/BSW-VENTILATION/EXTRACT (14HQ)
- wiring between the AEVC (10HQ) pin AA/2C and the pushbutton switch (14HQ) pin A/D1
- wiring between the pushbutton switch (14HQ) pin A/D3 and the circuit breaker (6HQ)
- wiring between the AEVC (10HQ) pin AA/3D and the pushbutton switch (13HQ) pin A /C1
- wiring between the pushbutton switch (13HQ) pin A/C3 and the pushbutton switch (14HQ) pin A/C2
- wiring between the AEVC (10HQ) pin AA/3D and the pushbutton switch (14HQ) pin A/C1
- wiring between the pushbutton switch (14HQ) pin A/C3 and the pushbutton switch (13HL) pin A/C2
- P/BSW-CABIN PRESS/DITCHING (13HL)
- wiring between the pushbutton switch (13HL) pin A/C3 and the circuit breaker (6HQ)

### 2. Job Set-up Information

#### A. Referenced Information

| KEFEK | ENCE             | DESIGNATION  |
|-------|------------------|--|
| AMM : | 21-26-00-710-001 | Operational Check of System via MCDU   |
| AMM   | 21-26-34-000-001 | Removal of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)                 |
| AMM : | 21-26-34-400-001 | <pre>Installation of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)</pre> |
| ASM   | 21-26/01         |  |
| ASM   | 21-26/02         |  |
| ASM   | 21-26/02         |  |
| ASM   | 21-26/03         |  |

EFF: ALL

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### TROUBLE SHOOTING MANUAL

### 3. Fault Confirmation

### A. Test

(1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).

#### 4. Fault Isolation

A. Table of the circuit breakers used in this procedure:

PANEL DESIGNATION IDENT. LOCATION

49VU AIR COND/AVNCS VENT/CTL 6HQ DO6
49VU AIR COND/AVNCS VENT/CTL 5HQ DO5

- B. If the test gives the maintenance message CHECK AEVC SUPPLY:do a check of the status of the circuit breaker (5HQ).
  - (1) If the circuit breaker (5HQ) is closed:
    - do a check for 28VDC at pin AA/7C and/or pin AA/1B of the AEVC (10HQ) (Ref. ASM 21-26/03) and (Ref. ASM 21-26/02)
    - (a) If there is 28VDC at pins AA/7C and/or AA/1B:
      - do a check of the status of the circuit breaker (6HQ).
      - 1 If the circuit breaker (6HQ) is closed:
        - do a check for 28VDC at pin AA/1C of the AEVC (10HQ) (Ref. ASM 21-26/03)
        - a If there is 28VDC:
          - do a check for a ground signal at pin AA/1D of the AEVC (10HQ) (Ref. ASM 21-26/01).
            - . If there is a ground signal:
            - \* replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).
            - . If there is no ground signal:
            - \* repair the wiring between the AEVC pin AA/1D and the ground terminal.
        - b If there is no 28VDC:
          - do a check of the wiring between the AEVC pin AA/1C and the circuit breaker (6HQ) (Ref. ASM 21-26/03).
            - . If there is no continuity:
            - \* repair the related wiring.
            - . If there is continuity:

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### TROUBLE SHOOTING MANUAL

- \* replace the circuit breaker C/B-AIR COND AVNCS VENT/CTL (6HQ).
- . If the fault continues:
- \* replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).
- 2 If the circuit breaker (6HQ) is open:
  - close the circuit breaker (6HQ).
  - a If the circuit breaker trips:
    - do a check for a short to ground at the wiring between the AEVC pin AA/1C and the circuit breaker (6HQ) (Ref. ASM 21-26/03).
      - . If there is a short to ground:
      - \* repair the related wiring.
      - . If there is no short to ground:
      - \* replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).
  - b If the fault continues:
    - replace the C/B-AIR COND AVNCS VENT/CTL (6HQ).
  - c If the circuit breaker stays closed and the fault continues:
    - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) (Ref. AMM TASK 21-26-34-400-001).
- (b) If there is no 28VDC at pin AA/7C:
  - do a check for 28VDC at pin A/D3 of the VENTILATION/BLOWER pushbutton switch (13HQ) (Ref. ASM 21-26/03).
  - 1 If there is 28VDC:
    - replace the P/BSW-VENTILATION/BLOWER (13HQ).
  - 2 If there is no 28VDC:
    - do a check of the wiring between the AEVC (10HQ) pin AA/7C and the pushbutton switch (13HQ) pin A D1 and wiring between the pushbutton switch (13HQ) pin A/D3 and the circuit breaker (5HQ).
    - $\underline{\mathbf{a}}$  If there is no continuity:
      - repair the related wiring.
    - b If there is continuity:
      - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).
        - . If the fault continues:

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### TROUBLE SHOOTING MANUAL

- \* replace the circuit breaker C/B-AIR COND AVNCS VENT/CTL (5HQ).
- (c) If there is no 28VDC at pin AA/1B:
  - do a check of the wiring between the AEVC pin AA/1B and the circuit breaker (5HQ).
  - 1 If there is no continuity:
    - repair the related wiring.
  - 2 If there is continuity:
    - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).
    - a If the fault continues:
      - replace the circuit breaker C/B-AIR COND AVNCS VENT/CTL (5HQ).
- (2) If the circuit breaker (5HQ) is open:
  - close the circuit breaker (5HQ).
  - (a) If the circuit breaker trips:
    - do a check for a short to ground at the wiring between the AEVC pin AA/1B and the circuit breaker (5HQ) and/or the wiring between the AEVC pin AA/7C and the circuit breaker (5HQ) (Ref. ASM 21-26/02).
    - $\underline{1}$  If there is a short to ground:
      - repair the related wiring.
    - 2 If there is no short to ground:
      - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).
      - a If the fault continues:
        - replace the circuit breaker C/B-AIR COND AVNCS VENT/CTL (5HQ).
  - (b) If the circuit breaker stays closed and the fault continues:
    - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).
- (3) Do a check of the status of the circuit breaker (6HQ).
  - (a) If the circuit breaker (6HQ) is open:
    - close the circuit breaker (6HQ).
    - 1 If the circuit breaker trips:
      - do a check for a short to ground at the wiring between the AEVC pin AA/1C and the circuit breaker (6HQ) (Ref. ASM 21-26/03).

EFF: ALL

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### TROUBLE SHOOTING MANUAL

- $\underline{a}$  If there is a short to ground:
  - repair the related wiring.
- b If there is no short to ground:
  - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).
- 2 If the fault continues: replace the C/B-AIR COND AVNCS VENT/CTL (6HQ).
- (b) If the circuit breaker (6HQ) is closed:
  - do a check for 28VDC at pin AA/2C and/or pin AA/3D of the AEVC (10HQ) (Ref. ASM 21-26/02)
  - 1 If there is 28VDC at pins AA/2C and/or AA/3D:
    - do a check for 28VDC at pin AA/1C of the AEVC (10HQ) (Ref. ASM 21-26/03).
    - a If there is 28VDC:
      - do a check for a ground signal at pin AA/1D of the AEVC (10HQ) (Ref. ASM 21-26/01).
        - . If there is a ground signal:
        - \* replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).
        - . If there is no ground signal:
        - \* repair the wiring between the AEVC pin AA/1D and the ground terminal.
    - b If there is no 28VDC:
      - do a check of the wiring between the AEVC pin AA/1C and the circuit breaker (6HQ) (Ref. ASM 21-26/03).
        - . If there is no continuity:
        - \* repair the related wiring.
        - . If there is continuity:
        - \* replace the circuit breaker C/B-AIR COND AVNCS VENT/CTL (6HQ).
        - . If the fault continues:
        - \* replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).
  - 2 If there is no 28VDC at pin AA/2C:
    - do a check for 28VDC at pin A/D3 of the VENTILATION/EXTRACT pushbutton switch (14HQ) (Ref. ASM 21-26/02).
    - a If there is 28VDC:
      - replace the P/BSW-VENTILATION/EXTRACT (14HQ).

EFF: ALL

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### TROUBLE SHOOTING MANUAL

- b If there is no 28VDC:
  - do a check of the wiring between the AEVC (10HQ) pin AA/2C and the pushbutton switch (14HQ) pin A/D1 and wiring between the pushbutton switch (14HQ) pin A/D3 and the circuit breaker (6HQ).
    - . If there is no continuity:
    - \* repair the related wiring.
    - . If there is continuity:
    - \* replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).
    - . If the fault continues:
    - \* replace the circuit breaker C/B-AIR COND AVNCS VENT/CTL (6HQ).
- 3 If there is no 28VDC at pin AA/3D:
  - do a check for 28VDC at pin A/C3 of the VENTILATION/BLOWER pushbutton switch (13HQ) (Ref. ASM 21-26/02).
  - a If there is 28VDC:
    - replace the P/BSW-VENTILATION/BLOWER (13HQ).
  - b If there is no 28VDC:
    - do a check of the wiring between the AEVC (10HQ) pin AA/3D and the pushbutton switch (13HQ) pin A /C1 and wiring between the pushbutton switch (13HQ) pin A/C3 and the pushbutton switch (14HQ) pin A/C2 and wiring between the AEVC (10HQ) pin AA/3D and the pushbutton switch (14HQ) pin A/C1.
      - . If there is no continuity:
      - \* repair the related wiring.
      - . If there is continuity:
      - \* do a check for 28VDC at pin A/C3 of the VENTILATION/EXTRACT pushbutton switch (14HQ) (Ref. ASM 21-26/02).

If there is 28VDC:

replace the P/BSW-VENTILATION/EXTRACT (14HQ).

If there is no 28VDC:

\*\* do a check of the wiring between the pushbutton switch (14HQ) pin A/C3 and the pushbutton switch (13HL) pin A/C2.

If there is no continuity:

repair the related wiring.

If there is continuity:

\*\*\* do a check for 28VDC at pin A/C3 of the CABIN PRESS/DITCHING pushbutton switch (13HL) (Ref. ASM 21-26/02).

If there is 28VDC:

replace the P/BSW-CABIN PRESS/DITCHING (13HL).

If there is no 28VDC:

\*\*\*\* do a check of the wiring between the pushbutton switch (13HL) pin A/C3 and the circuit breaker (6HQ).

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If there is no continuity:
repair the related wiring.

If there is continuity:
replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001)
and (Ref. AMM TASK 21-26-34-400-001).

\*\*\*\*\* If the fault continues:
replace the C/B-AIR COND AVNCS VENT/CTL (6HQ).

C. Do the operational test given in Para. 3.

EFF: ALL
SROS

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-803

Failure of the Skin Air-Inlet Valve

1. Possible Causes

R

- CARTRIDGE-AVNCS VENT FILTER (2082HM)
- R - AEVC (10HQ)
  - wiring between the AEVC (10HQ) and the skin air-inlet valve (15HQ)
  - VALVE-SKIN AIR INLET, AVNCS VENT (15HQ)

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |   | DESIGNATION  |  |
|-----------|---|--|--|
| 4 14 14   | 24 27 00 740 004                        | Out and 's and Ohard and Out and 's MODU           |  |
| AMM       | 21-26-00-710-001                        | Operational Check of System via MCDU               |  |
| AMM       | 21-26-34-000-001                        | Removal of the Avionics Equipment Ventilation      |  |
|           |   | Computer (AEVC) (10HQ)                             |  |
| AMM       | 21-26-34-400-001                        | Installation of the Avionics Equipment Ventilation |  |
|           |   | Computer (AEVC) (10HQ)                             |  |
| AMM       | 21-26-43-920-001                        | Replacement of the Filter Cartridge                |  |
| AMM       | 21-26-52-000-001                        | Removal of the Avionics Ventilation Skin Air Inlet |  |
|           | - · - · · · · · · · · · · · · · · · · · | Valve (15HQ)                                       |  |
| AMM       | 21-26-52-400-001                        | Installation of the Avionics Ventilation Skin Air  |  |
|           |   | Inlet Valve (15HQ)                                 |  |
| ASM       | 21-26/03                                |  |  |
| _         | •                                       |  |  |

### 3. Fault Confirmation

- A. Test
  - (1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).
- 4. Fault Isolation

R

- A. If the test gives the maintenance message SKIN AIR INLET V 15HQ:
  - make sure that the avionics ventilation filter is not clogged. If necessary, replace the CARTRIDGE-AVNCS VENT FILTER (2082HM) (Ref. AMM TASK 21-26-43-920-001).
  - do a check of the status of the skin air-inlet valve (15HQ) on the lower ECAM display unit.

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- (1) If the valve symbol is green:
  - do a check and repair the wiring between the AEVC (10HQ) and the skin air-inlet valve (15HQ), pin AA/4B and pin A/C and/or pin AA/4A and pin A/A (Ref. ASM 21-26/03).
- (2) If the valve symbol is amber:
  - do a check and repair the wiring between the AEVC (10HQ) and the skin air-inlet valve (15HQ), pin AB/4B and pin A/M and/or pin AB/4A and pin A/J (Ref. ASM 21-26/03).
- (3) If the fault continues:
  - replace the VALVE-SKIN AIR INLET, AVNCS VENT (15HQ) (Ref. AMM TASK 21-26-52-000-001) and (Ref. AMM TASK 21-26-52-400-001).
  - (a) If the fault continues:
    - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).

R

B. Do the operational test given in Para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-804

Failure of the Skin Air-Outlet Valve

#### 1. Possible Causes

- CARTRIDGE-AVNCS VENT FILTER (2082HM)
- AEVC (10HQ)
- wiring between the AEVC (10HQ) and the skin air-outlet valve (22HQ)
- VALVE-SKIN AIR OUTLET, AVNCS VENT (22HQ)

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
| AMM       | 21-26-00-710-001 | Operational Check of System wis MCDU   |
| AMM       |                  | Operational Check of System via MCDU Removal of the Avionics Equipment Ventilation   |
| AMM       | 21-20-34-000-001 | Computer (AEVC) (10HQ)   |
| AMM       | 21-26-34-400-001 | <pre>Installation of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)</pre> |
| AMM       | 21-26-43-920-001 | Replacement of the Filter Cartridge  |
| AMM       | 21-26-53-000-001 | Removal of the Skin Air Outlet-Valve (22HQ)  |
| AMM       | 21-26-53-000-002 | Removal of the Skin Air Outlet-Valve (22HQ)  |
| AMM       | 21-26-53-400-001 | Installation of the Skin Air Outlet-Valve (22HQ)                                     |
| ASM       | 21-26/02         |  |

#### 3. Fault Confirmation

#### A. Test

(1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).

### 4. Fault Isolation

- R \*\*ON A/C 201-208, 227-227, 229-245, 276-285, 426-428, 476-480,
  - A. If the test gives the maintenance message SKIN AIR OUTLET V 22HQ:
    - make sure that the avionics ventilation filter is not clogged. If necessary, replace the CARTRIDGE-AVNCS VENT FILTER (2082HM) (Ref. AMM TASK 21-26-43-920-001).
    - do a check of the status of the skin air-outlet valve (22HQ) on the lower ECAM display unit.

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- (1) If the valve symbol is green:
  - do a check and repair the wiring between the AEVC (10HQ) and the skin air-outlet valve (22HQ), pin AA/3A and pin A/A and/or pin AA/3B and pin A/C and/or pin AA/3C and pin A/E (Ref. ASM 21-26/02).
- (2) If the valve symbol is amber:
  - do a check and repair the wiring between the AEVC (10HQ) and the skin air-outlet valve (22HQ), pin AB/3A and pin A/J and/or pin AB/3B and pin A/M and/or pin AB/3C and pin A/R (Ref. ASM 21-26/02).
- (3) If the fault continues:
  - replace the VALVE-SKIN AIR OUTLET, AVNCS VENT (22HQ) (Ref. AMM TASK 21-26-53-000-001) and (Ref. AMM TASK 21-26-53-400-001).
  - (a) If the fault continues:
    - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).

R \*\*ON A/C 209-225, 247-275, 286-299, 429-475, 481-499, 503-549, 551-599, R 701-749,

- A. If the test gives the maintenance message SKIN AIR OUTLET V 22HQ:
  - make sure that the avionics ventilation filter is not clogged. If necessary, replace the CARTRIDGE-AVNCS VENT FILTER (2082HM) (Ref. AMM TASK 21-26-43-920-001).
  - do a check of the status of the skin air-outlet valve (22HQ) on the lower ECAM display unit.
  - (1) If the valve symbol is green:
    - do a check and repair the wiring between the AEVC (10HQ) and the skin air-outlet valve (22HQ), pin AA/3A and pin A/A and/or pin AA/3B and pin A/C and/or pin AA/3C and pin A/E (Ref. ASM 21-26/02).
  - (2) If the valve symbol is amber:
    - do a check and repair the wiring between the AEVC (10HQ) and the skin air-outlet valve (22HQ), pin AB/3A and pin A/J and/or pin AB/3B and pin A/M and/or pin AB/3C and pin A/R (Ref. ASM 21-26/02).
  - (3) If the fault continues:
    - replace the VALVE-SKIN AIR OUTLET, AVNCS VENT (22HQ) (Ref. AMM TASK 21-26-53-000-002) and (Ref. AMM TASK 21-26-53-400-001).
    - (a) If the fault continues:
      - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).

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B. Do the operational test given in Para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-805

Failure of the Conditioned Air-Inlet Valve

1. Possible Causes

R

- CARTRIDGE-AVNCS VENT FILTER (2082HM)
- R - AEVC (10HQ)
  - VALVE-COND AIR INLET, AVNCS VENT (21HQ)
  - wiring between the AEVC (10HQ) and the conditioned air-inlet valve (21HQ)

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| AMM       | 21-26-00-710-001 | Operational Check of System via MCDU               |
| AMM       | 21-26-34-000-001 | Removal of the Avionics Equipment Ventilation      |
|           |                  | Computer (AEVC) (10HQ)                             |
| AMM       | 21-26-34-400-001 | Installation of the Avionics Equipment Ventilation |
|           |                  | Computer (AEVC) (10HQ)                             |
| AMM       | 21-26-43-920-001 | Replacement of the Filter Cartridge                |
| AMM       | 21-26-54-000-001 | Removal of the Conditioned Air Inlet Valve (21HQ)  |
| AMM       | 21-26-54-400-001 | Installation of the Conditioned Air Inlet Valve    |
|           |                  | (21HQ)   |
| ASM       | 21-26/03         |  |

### 3. Fault Confirmation

#### A. Test

(1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).

### 4. Fault Isolation

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- A. If the test gives the maintenance message COND AIR INLET V 21HQ:
  - make sure that the avionics ventilation filter is not clogged. If necessary, replace the CARTRIDGE-AVNCS VENT FILTER (2082HM) (Ref. AMM TASK 21-26-43-920-001).
  - do a check of the status of the conditioned air-inlet valve (21HQ) microswitches, between pin A/J and pin A/G and between pin A/M and pin A/K (Ref. ASM 21-26/03).

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- (1) If the status of the microswitch between the pin A/J and the pin A/G is equivalent to the status of the microswitch between the pin A/M and the pin A/K:
  - replace the VALVE-COND AIR INLET, AVNCS VENT (21HQ) (Ref. AMM TASK 21-26-54-000-001) and (Ref. AMM TASK 21-26-54-400-001).
- (2) If the status of the microswitch between the pin A/J and the pin A/G is not equivalent to the status of the microswitch between the pin A/M and the pin A/K:
  - do a check for a ground signal at pin A/U, pin A/G, pin A/K of the conditionned air-inlet valve (21HQ) (Ref. ASM 21-26/03).
  - (a) If there is no ground signal:repair the related wiring.
  - (b) If there is a ground signal:
    - do a check and repair the wiring between the AEVC (10HQ) and the conditioned air-inlet valve (21HQ), pin AB/7A and pin A/J and/or pin AB/7B and pin A/M.
    - 1 If the fault continues:
      - do a check and repair the wiring between the AEVC (10HQ) and the conditioned air-inlet valve (21HQ), pin AA/7A and pin A/A and/or pin AA/7B and pin A/C.
      - a If the fault continues:
        - replace the VALVE-COND AIR INLET, AVNCS VENT (21HQ) (Ref. AMM TASK 21-26-54-000-001) and (Ref. AMM TASK 21-26-54-400-001).
          - . If the fault continues:
          - \* replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).

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B. Do the operational test given in Para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-806

Failure of the Skin Exchanger-Inlet Bypass Valve

1. Possible Causes

R

- CARTRIDGE-AVNCS VENT FILTER (2082HM)
- R AEVC (10HQ)
  - VALVE-SKIN EXCHANGER INLET BYPASS AVNCS VENT (16HQ)
  - wiring between the AEVC (10HQ) and the skin exchanger-inlet bypass valve (16HQ)
  - 2. Job Set-up Information
    - A. Referenced Information

| REFERENCE |                  | DESIGNATION   |  |
|-----------|------------------|---|--|
| AMM       | 21-26-00-710-001 | Operational Check of System via MCDU  |  |
| AMM       |                  | Removal of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)              |  |
| AMM       | 21-26-34-400-001 | Installation of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)         |  |
| AMM       | 21-26-43-920-001 | Replacement of the Filter Cartridge   |  |
| AMM       | 21-26-55-000-001 | Removal of the Avionics Ventilation Skin Exchanger Inlet Bypass Valve (16HQ)      |  |
| AMM       | 21-26-55-400-001 | Installation of the Avionics Ventilation Skin Exchanger Inlet Bypass Valve (16HQ) |  |
| ASM       | 21-26/02         |   |  |

### 3. Fault Confirmation

- A. Test
  - (1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).
- 4. Fault Isolation

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- A. If the test gives the maintenance message INLET BYPASS V 16HQ:
  - make sure that the avionics ventilation filter is not clogged. If necessary, replace the CARTRIDGE-AVNCS VENT FILTER (2082HM) (Ref. AMM TASK 21-26-43-920-001).
  - do a check of the status of the skin exchanger-inlet bypass valve (16HQ) microswitches, between pin A/J and pin A/G and between pin A/M and pin A/K (Ref. ASM 21-26/02).

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- (1) If the status of the microswitches between pin A/J and pin A/G is equivalent to the status of the microswitch between pin A/M and pin A/K:
  - replace the VALVE-SKIN EXCHANGER INLET BYPASS AVNCS VENT (16HQ) (Ref. AMM TASK 21-26-55-000-001) and (Ref. AMM TASK 21-26-55-400-001).
- (2) If the status of the microswitches between pin A/J and pin A/G is not equivalent to the status of the microswitch between pin A/M and pin A/K:
  - do a check for a ground signal at pin A/U, pin A/G, pin A/K of the skin exchanger-inlet bypass valve (16HQ) (Ref. ASM 21-26/02).
  - (a) If there is no ground signal:repair the related wiring.
  - (b) If there is a ground signal:
    - do a check and repair the wiring between the AEVC (10HQ) and the skin exchanger-inlet bypass valve (16HQ), pin AB/2A and pin A/J and/or pin AB/2B and pin A/M.
    - 1 If the fault continues:
      - do a check and repair the wiring between the AEVC (10HQ) and the skin exchanger-inlet bypass valve (16HQ), pin AA/2A and pin A/A and/or pin AA/2B and pin A/C (Ref. ASM 21-26/02).
      - a If the fault continues:
        - replace the VALVE-SKIN EXCHANGER INLET BYPASS AVNCS VENT (16HQ) (Ref. AMM TASK 21-26-55-000-001) and (Ref. AMM TASK 21-26-55-400-001).
          - . If the fault continues:
          - \* replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).

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B. Do the operational test given in Para. 3.

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TASK 21-26-00-810-807

Failure of the Skin Exchanger Isolation-Valve

#### 1. Possible Causes

- AEVC (10HQ)
- VALVE-SKIN EXCHANGER ISOLATION, AVNCS VENT (24HQ)
- wiring between the AEVC (10HQ) and the skin exchanger isolation-valve (24HQ)

### 2. Job Set-up Information

A. Referenced Information

|        | REFERENCE |                  | DESIGNATION   |  |
|--------|-----------|------------------|---|--|
|        | AMM       | 21-26-00-710-001 | Operational Check of System via MCDU  |  |
|        | AMM       | 21-26-55-000-001 | Removal of the Avionics Ventilation Skin Exchanger Inlet Bypass Valve (16HQ)      |  |
| R<br>R | AMM       | 21-26-55-000-002 | Removal of the Avionics Ventilation Skin Exchanger Isolation Valve (24HQ)         |  |
|        | AMM       | 21-26-55-400-001 | Installation of the Avionics Ventilation Skin Exchanger Inlet Bypass Valve (16HQ) |  |
| R<br>R | AMM       | 21-26-55-400-002 | Installation of the Avionics Ventilation Skin Exchanger Isolation Valve (24HQ)    |  |
|        | ASM       | 21-26/02         | -   |  |

#### 3. Fault Confirmation

#### A. Test

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(1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).

### 4. Fault Isolation

- A. If the test gives the maintenance message ISOL V 24HQ:
  - do a check of the status of the skin exchanger isolation-valve (24HQ) microswitches, between pin A/J and pin A/G and between pin A/M and pin A/K (Ref. ASM 21-26/02).
  - (1) If the status of the microswitch between the pin A/J and the pin A/G is equivalent to the status of the microswitch between the pin A/M and the pin A/K.
    - replace the VALVE-SKIN EXCHANGER ISOLATION, AVNCS VENT (24HQ) (Ref. AMM TASK 21-26-55-000-002) and (Ref. AMM TASK 21-26-55-400-002).

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- (2) If the status of the microswitch between the pin A/J and the pin A/G is not equivalent to the status of the microswitch between the pin A/M and the pin A/K.
  - do a check for a ground signal at pin A/U, pin A/G, pin A/K of the skin exchanger isolation-valve (24HQ) (Ref. ASM 21-26/02).
  - (a) If there is no ground signal:
     repair the related wiring.
  - (b) If there is a ground signal:
    - do a check and repair the wiring between the AEVC (10HQ) and the skin exchanger isolation-valve (24HQ), pin AB/5A and pin A/J and/or pin AB/5B and pin A/M (Ref. ASM 21-26/02).
    - 1 If the fault continues:
      - do a check and repair the wiring between the AEVC (10HQ) and the skin exchanger isolation-valve (24HQ), pin AA/5A and pin A/A and/or pin AA/5B and pin A/C (Ref. ASM 21-26/02).
      - a If the fault continues:
        - replace the VALVE-SKIN EXCHANGER ISOLATION, AVNCS VENT (24HQ) (Ref. AMM TASK 21-26-55-000-002) and (Ref. AMM TASK 21-26-55-400-002).
          - . If the fault continues:
          - \* replace the AEVC (10HQ) (Ref. AMM TASK 21-26-55-000-001) and (Ref. AMM TASK 21-26-55-400-001).
- B. Do the operational test given in Para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-809

Failure of the Blower Fan

#### 1. Possible Causes

R

- CARTRIDGE-AVNCS VENT FILTER (2082HM)
- R FAN-BLOWER, AVNCS VENT (20HQ)
- R AEVC (10HQ)
- D
- PRESS SW-BLOWER FAN, AVNCS VENT (17HQ)
- VALVE-SKIN AIR INLET, AVNCS VENT (15HQ)
- VALVE-SKIN EXCHANGER ISOLATION, AVNCS VENT (24HQ)
- SENSOR-DUCT TEMP, AVNCS VENT (26HQ)
- wiring between the blower fan control-contactor (8HQ) and the circuit breaker (1HQ)
- C/B-AVNCS BLOWER FAN (1HQ)
- C/B-AIR COND AVNCS VENT/MONG (3HQ)
- CNTOR-BLOWER FAN CTL, AVNCS VENT (8HQ)
- PRESS SW-BLOWER FAN, AVNCS VENT (19HQ)

R

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| 21-2      | 26-00-810-814    | Warning of the Blower-Fan Pressure Switch Inoperative                                |
| 21-2      | 26-00-810-815    | Warning of the Blower-Fan Pressure Switch Inoperative                                |
| 21-2      | 26-00-810-818    | Warning of the Duct Temperature Sensor Inoperative                                   |
| AMM       | 21-26-00-710-001 | Operational Check of System via MCDU   |
| AMM       | 21-26-00-710-008 | Operational Test to Read the CFDS for CLASS 3 Faults of the AEVC                     |
| AMM       | 21-26-00-710-009 | Operational Test to Read the CFDS for LAST LEG REPORT of the AEVC                    |
| AMM       | 21-26-11-000-001 | Removal of the Blower and Extract Fan Pressure Switches (17HQ, 19HQ, 30HQ)           |
| AMM       | 21-26-11-400-001 | Installation of the Blower and Extract Fan Pressure Switches (17HQ, 19HQ, 30HQ)      |
| AMM       | 21-26-34-000-001 | Removal of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)                 |
| AMM       | 21-26-34-400-001 | <pre>Installation of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)</pre> |
| AMM       | 21-26-43-000-003 | Removal of the Filter Assembly (2082HM,2083HM)                                       |
| AMM       | 21-26-43-400-003 | Installation of the Filter Assembly (2082HM,2083HM)                                  |
| AMM       | 21-26-43-920-001 | Replacement of the Filter Cartridge  |
| AMM       | 21-26-51-000-001 | Removal of the Blower and Extract Fans (18HQ,20HQ)                                   |

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| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
|           |                  |   |
| AMM       | 21-26-51-400-001 | Installation of the Blower and Extract Fans (18HQ, 20HQ)                          |
| AMM       | 21-26-52-000-001 | Removal of the Avionics Ventilation Skin Air Inlet Valve (15HQ)                   |
| AMM       | 21-26-52-400-001 | <pre>Installation of the Avionics Ventilation Skin Air Inlet Valve (15HQ)</pre>   |
| AMM       | 21-26-55-000-001 | Removal of the Avionics Ventilation Skin Exchanger Inlet Bypass Valve (16HQ)      |
| AMM       | 21-26-55-400-001 | Installation of the Avionics Ventilation Skin Exchanger Inlet Bypass Valve (16HQ) |
| ASM       | 21-26/03         | ,   |

### 3. Fault Confirmation

#### A. Test

- (1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).
- (2) Read the LAST LEG REPORT (Ref. AMM TASK 21-26-00-710-009).
- (3) Read the CLASS 3 message (Ref. AMM TASK 21-26-00-710-008).

### 4. Fault Isolation

A. Table of the circuit breakers used in this procedure:

| PANEL | DESIGNATION                                    | IDENT.     | LOCATION    |
|-------|--|------------|-------------|
|       | AIR COND/AVNCS/VENT/MONG AVNCS VENT/BLOWER/FAN | 3HQ<br>1HQ | Y17<br>AD10 |

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- B. Possible Maintenance Messages (one or more of these messages) SKIN AIR INLET V 15HQ ISOL V 24HQ BLOWER FAN 20HQ PRESSURE SWITCH 17HQ PRESSURE SWITCH 19HQ DUCT TEMP SENSOR 26HQ
  - (1) If the test gives the maintenance message SKIN AIR INLET V 15HQ, replace the VALVE-SKIN AIR INLET, AVNCS VENT (15HQ) (Ref. AMM TASK 21-26-52-000-001) and (Ref. AMM TASK 21-26-52-400-001).

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- (2) If the test gives the maintenance message ISOL V 24HQ, replace the VALVE-SKIN EXCHANGER ISOLATION, AVNCS VENT (24HQ) (Ref. AMM TASK 21-26-55-000-001) and (Ref. AMM TASK 21-26-55-400-001).
- (3) If the test gives the maintenance message DUCT TEMP SENSOR 26HQ, replace the SENSOR-DUCT TEMP, AVNCS VENT (26HQ) (Ref. TASK 21-26-00-810-818).
- (4) If the test gives the maintenance message BLOWER FAN 20HQ:
  - make sure that the avionics ventilation filter is not clogged. If necessary, replace the CARTRIDGE-AVNCS VENT FILTER (2082HM) (Ref. AMM TASK 21-26-43-920-001).
  - do a check of the status of the circuit breaker (1HQ).
- (5) If the test also gives the maintenance message PRESSURE SW 19HQ and/or PRESSURE SW 17HQ:
  - do the procedures (Ref. TASK 21-26-00-810-814) and (Ref. TASK 21-26-00-810-815).
- (6) If the circuit breaker (1HQ) is closed:
  - do a check for 115VAC at pins A/J, A/K, A/L of the blower fan (20HQ).
  - (a) If there is no 115VAC:
    - do a check for 115VAC at pins T1, T2, T3 of the blower fan control-contactor (8HQ).
    - 1 If there is no 115VAC:
      - do a check for a short to ground at the wiring between the blower fan control-contactor (8HQ) and the circuit breaker (1HQ), pins L1, L2, L3 and respectively pins A2, B2, C2 (Ref. ASM 21-26/03).
      - $\underline{\mathbf{a}}$  If there is a short to ground:
        - repair the related wiring.
      - <u>b</u> If there is no short to ground:
         replace the C/B-AVNCS BLOWER FAN (1HQ).
    - 2 If there is 115VAC:
      - do a check of the status of the circuit breaker (3HQ).
      - a If the circuit breaker (3HQ) is closed:
        - do a check for 28VDC at pin A/E of the blower fan (20HQ).
          - . If there is no 28VDC:
          - \* do a check for a short to ground at the wiring between the blower fan (20HQ) pin A/E and the circuit breaker (3HQ) (Ref. ASM 21-26/03).
          - \*\* If there is a short to ground:
          - \*\*\* repair the related wiring.

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- \*\* If there is no short to ground:

  \*\*\* replace the C/B-AIR COND AVNCS VENT/MONG (3HQ).
- If there is 28VDC, make sure that the warning light of the blower fan (20HQ) is off.
- \* If the warning light is on, push the RESET pushbutton switch on the blower fan (20HQ).

NOTE: The fan can operate immediately.

The warning light goes off.

- \*\* If the fault continues, replace the FAN-BLOWER, AVNCS VENT (20HQ).
- \* If the fault continues, do a check for 28VDC at pin AA/8A of the AEVC (10HQ).
- \*\* If there is 28VDC: \*\*\* replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).
- \*\* If there is no 28VDC:

  \*\*\* do a check and repair the wiring between the AEVC

  (10HQ), pin AA/8A and the blower fan control-contactor

  (8HQ), pin Z and between the blower fan control-contactor

  (8HQ), pin X and the blower fan (20HQ), pin A/D (Ref. ASM
  21-26/03).
- \*\* If the fault continues:

  \*\*\* replace the CNTOR-BLOWER FAN CTL, AVNCS VENT (8HQ).
- \*\*\*\* If the fault continues:

  \*\*\*\*\* replace the FAN-BLOWER, AVNCS VENT (20HQ) (Ref. AMM TASK 21-26-51-000-001) and (Ref. AMM TASK 21-26-51-400-001).
- <u>b</u> If the circuit breaker (3HQ) is open:- close the circuit breaker.
  - . If the circuit breaker trips:
  - \* do a check for a short to ground at the wiring between the blower fan (20HQ) pin A/E and the circuit breaker (3HQ) (Ref. ASM 21-26/03).
  - \*\* If there is a short to ground:
    \*\*\* repair the related wiring.
  - \*\* If there is no short to ground:

    \*\*\* replace the FAN-BLOWER, AVNCS VENT (20HQ) (Ref. AMM TASK 21-26-51-000-001) and (Ref. AMM TASK 21-26-51-400-001).

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\*\*\* If the fault continues: \*\*\*\* replace the C/B-AIR COND AVNCS VENT/MONG (3HQ).

- . If the circuit breaker stays closed and the fault continues:
- \* replace the FAN-BLOWER, AVNCS VENT (20HQ) (Ref. AMM TASK 21-26-51-000-001) and (Ref. AMM TASK 21-26-51-400-001).
- (7) If the circuit breaker (1HQ) is open:
  - close the circuit breaker.
  - (a) If the circuit breaker trips:
    - do a check for a short to ground at the wiring between the blower fan (20HQ), pins A/J, A/K, A/L and the blower fan control-contactor (8HQ), pins T1, T2, T3 (Ref. ASM 21-26/03).
    - If there is a short to ground: - repair the related wiring.
    - If there is no short to ground:
      - do a check for a short to ground at the wiring between the blower fan control-contactor (8HQ), pins L1, L2, L3, and the circuit breaker (1HQ) pins A2, B2, C2 (Ref. ASM 21-26/03).
      - a If there is a short to ground: - repair the related wiring.
      - b If there is no short to ground:
        - replace the FAN-BLOWER, AVNCS VENT (20HQ) (Ref. AMM TASK 21-26-51-000-001) and (Ref. AMM TASK 21-26-51-400-001).
      - c If the fault continues:
        - replace the CNTOR-BLOWER FAN CTL, AVNCS VENT (8HQ).
  - (b) If the fault continues:
    - replace the C/B-AVNCS BLOWER FAN (1HQ).
- (8) If the fault continues:

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- replace the PRESS SW-BLOWER FAN, AVNCS VENT (17HQ) (Ref. AMM TASK 21-26-11-000-001) and (Ref. AMM TASK 21-26-11-400-001).
- (a) If the fault continues:
  - replace the PRESS SW-BLOWER FAN, AVNCS VENT (19HQ) (Ref. AMM TASK 21-26-11-000-001) and (Ref. AMM TASK 21-26-11-400-001).
  - If the fault continues:
    - replace the filter assembly (Ref. AMM TASK 21-26-43-000-003) and (Ref. AMM TASK 21-26-43-400-003).

C. Do the operational test given in Para. 3.

EFF: ALL **SROS** 

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-810

Failure of the Extract Fan

### 1. Possible Causes

- FAN-EXTRACT, AVNCS VENT (18HQ)
- AEVC (10HQ)
- C/B-AVNCS EXTRACT FAN (2HQ)
- CNTOR-EXTRACT FAN CTL, AVNCS VENT (7HQ)
- FAN-EXTRACT, AVNCS VENT (18HQ)
- C/B-AIR COND AVNCS VENT/MONG (6HQ)
- PRESS SW-EXTRACT FAN, AVNCS VENT (30HQ)
- VALVE-SKIN AIR OUTLET, AVNCS VENT (22HQ)
- VALVE-SKIN EXCHANGER ISOLATION, AVNCS VENT (24HQ)

### 2. Job Set-up Information

### A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| 21-2      | 6-00-810-816     | Warning of the Extract-Fan Pressure Switch                       |
|           |                  | Inoperative  |
| AMM       | 21-26-00-710-001 | Operational Check of System via MCDU                             |
| AMM       | 21-26-00-710-008 | Operational Test to Read the CFDS for CLASS 3 Faults of the AEVC |
| AMM       | 21-26-00-710-009 | Operational Test to Read the CFDS for LAST LEG REPORT            |
| Aiiii     | 21 20 00 110 007 | of the AEVC  |
| AMM       | 21-26-11-000-001 | Removal of the Blower and Extract Fan Pressure                   |
|           |                  | Switches (17HQ, 19HQ, 30HQ)                                      |
| AMM       | 21-26-11-400-001 | Installation of the Blower and Extract Fan Pressure              |
|           |                  | Switches (17HQ, 19HQ, 30HQ)                                      |
| AMM       | 21-26-34-000-001 | Removal of the Avionics Equipment Ventilation                    |
|           |                  | Computer (AEVC) (10HQ)   |
| AMM       | 21-26-34-400-001 | Installation of the Avionics Equipment Ventilation               |
|           |                  | Computer (AEVC) (10HQ)   |
| AMM       | 21-26-42-200-006 | Check for Blockage of the Demister Filter with the               |
|           |                  | Pressure Ports   |
| AMM       | 21-26-42-200-007 | Check for Blockage of the Filter Cartridge with the              |
|           |                  | Pressure Ports   |
| AMM       | 21-26-43-600-016 | Discard Demister Filter  |
| AMM       | 21-26-43-600-017 | Discard Filter Cartridge   |
| AMM       | 21-26-51-000-001 | Removal of the Blower and Extract Fans (18HQ,20HQ)               |
| AMM       | 21-26-51-400-001 | Installation of the Blower and Extract Fans (18HQ,               |
|           |                  | 20HQ)  |
| AMM       | 21-26-53-000-001 | Removal of the Skin Air Outlet-Valve (22HQ)                      |
| AMM       | 21-26-53-400-001 | Installation of the Skin Air Outlet-Valve (22HQ)                 |
| AMM       | 21-26-55-000-001 | Removal of the Avionics Ventilation Skin Exchanger               |
|           |                  | Inlet Bypass Valve (16HQ)  |

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EFF:

ALL

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REFERENCE DESIGNATION

AMM 21-26-55-400-001

Installation of the Avionics Ventilation Skin Exchanger Inlet Bypass Valve (16HQ)

ASM 21-26/02

#### 3. Fault Confirmation

#### A. Test

- (1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).
- (2) Read the LAST LEG REPORT (Ref. AMM TASK 21-26-00-710-009).
- (3) Read the CLASS 3 messages (Ref. AMM TASK 21-26-00-710-008).

### 4. Fault Isolation

A. Table of the circuit breakers used in this procedure:

PANEL DESIGNATION IDENT. LOCATION

49VU AIR COND/AVNCS VENT/CTL 6HQ D06

R \*\*ON A/C 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,

123VU AVNCS VENT/EXTC/FAN

2HQ AE02

\*\*ON A/C 276-299, 476-499, 503-549,

123VU AVNCS VENT/EXTC/FAN

2HQ ACO4

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\*\*ON A/C ALL

- B. If the test gives the maintenance message EXTRACT FAN 18HQ:
   do a check of the status of the circuit breaker (2HQ).
  - (1) If the test also gives the maintenance message PRESSURE SW 30HQ:
     do the trouble shooting procedure (Ref. TASK 21-26-00-810-816).

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- (2) If the circuit breaker (2HQ) is closed:
  - do a check for 115VAC at pins A/J, A/K, A/L of the extract fan (18HQ).
    - (a) If there is no 115VAC:
      - do a check for 115VAC at pins T1, T2, T3 of the extract fan control-contactor (7HQ).
      - 1 If there is no 115VAC:
        - do a check for a short to ground at the wiring between the extract fan control-contactor (7HQ) pins L1, L2, L3 and the circuit breaker (2HQ) pins A2, B2, C2 (Ref. ASM 21-26/02).
        - <u>a</u> If there is a short to ground:
          - repair the related wiring.
        - <u>b</u> If there is no short to ground:replace the C/B-AVNCS EXTRACT FAN (2HQ).
      - 2 If there is 115VAC:
        - do a check of the status of the circuit breaker (6HQ).
        - a If the circuit breaker (6HQ) is closed:
          - do a check for 28VDC at pin A/E of the extract fan (18HQ).
            - . If there no 28VDC:
            - \* do a check for a short to ground at the wiring between the extract fan (18HQ) pin A/E and the circuit breaker (6HQ) (Ref. ASM 21-26/02).
            - \*\* If there is a short to ground:
              \*\*\* repair the related wiring.
            - \*\* If there is no short to ground:
              \*\*\* replace the C/B-AIR COND AVNCS VENT/MONG (6HQ).
            - . If there is 28VDC, make sure that the warning light of the extract fan (18HQ) is off.
            - \* If the warning light is on, push the RESET pushbutton switch on the extract fan (18HQ).

<u>NOTE</u>: The fan can operate immediately.

The warning light goes off.

- \*\* If the fault continues, replace the FAN-EXTRACT, AVNCS VENT (18HQ).
- \* If the fault continues, do a check for 28VDC at pin AA/9A of the AEVC (10HQ).
- \*\* If there is 28VDC:

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\*\*\* replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).

\*\* If there is no 28VDC:

\*\*\* do a check and repair the wiring between the AEVC (10HQ) pin AA/9A and the extract fan control-contactor (7HQ) pin Z and between the extract fan control-contactor (7HQ) pin X and the extract fan (18HQ) pin A/D (Ref. ASM 21-26/02).

\*\*\* If the fault continues:

\*\*\*\* replace the CNTOR-EXTRACT FAN CTL, AVNCS VENT (7HQ).

\*\*\*\*\* If the fault continues:

\*\*\*\*\* replace the FAN-EXTRACT, AVNCS VENT (18HQ) (Ref. AMM TASK 21-26-51-000-001) and (Ref. AMM TASK 21-26-51-400-001).

- <u>b</u> If the circuit breaker (6HQ) is open:- close the circuit breaker.
  - . If the circuit breaker trips:
  - \* do a check for a short to ground at the wiring between the extract fan (18HQ) pin A/E and the circuit breaker (6HQ) (Ref. ASM 21-26/02).
  - \*\* If there is a short to ground: \*\*\* repair the related wiring.
  - \*\* If there is no short to ground:

    \*\*\* replace the FAN-EXTRACT, AVNCS VENT (18HQ) (Ref. AMM TASK 21-26-51-000-001) and (Ref. AMM TASK 21-26-51-400-001).

\*\*\* If the fault continues:
\*\*\*\* replace the C/B-AIR COND AVNCS VENT/MONG (6HQ).

- . If the circuit breaker stays closed and the fault continues:
- \* replace the FAN-EXTRACT, AVNCS VENT (18HQ) (Ref. AMM TASK 21-26-51-000-001) and (Ref. AMM TASK 21-26-51-400-001).
- (3) If the circuit breaker (2HQ) is open: - close the circuit breaker.
  - (a) If the circuit breaker trips:
    - do a check for a short to ground at the wiring between the extract fan (18HQ) pins A/J, A/K, A/L and the extract fan control-contactor (7HQ) pins L1, L2, L3 and the circuit breaker (2HQ) pins A2, B2, C2 (Ref. ASM 21-26/02).

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- 1 If there is a short to ground: - repair the related wiring.
- (b) If the fault continues:
   replace the C/B-AVNCS EXTRACT FAN (2HQ).
- (4) If the fault continues:
  - replace the PRESS SW-EXTRACT FAN, AVNCS VENT (30HQ) (Ref. AMM TASK 21-26-11-000-001) AND (Ref. AMM TASK 21-26-11-400-001).
- R \*\*ON A/C 201-225, 227-227, 229-276, 278-299, 451-475, 503-549, 551-599, R 701-749,
  - B. Possible maintenance messages (one or more of these messages) EXTRACT FAN 18HQ PRESSURE SWITCH 30HQ SKIN AIR OUTLET V 22HQ ISOL V 24HQ
    - (1) If the test gives the maintenance message SKIN AIR OUTLET V 22HQ, replace the VALVE-SKIN AIR OUTLET, AVNCS VENT (22HQ) (Ref. AMM TASK 21-26-53-000-001) and (Ref. AMM TASK 21-26-53-400-001).
    - (2) If the test gives the maintenance message ISOL V 24HQ, replace the VALVE-SKIN EXCHANGER ISOLATION, AVNCS VENT (24HQ) (Ref. AMM TASK 21-26-55-000-001) and (Ref. AMM TASK 21-26-55-400-001).
    - (3) If the test gives the maintenance message EXTRACT FAN 18HQ:
       do a check of the status of the circuit breaker (2HQ).
    - (4) If the test also gives the maintenance message PRESSURE SW 30HQ:
       do the trouble shooting procedure (Ref. TASK 21-26-00-810-816).
    - (5) If the circuit breaker (2HQ) is closed:
      - do a check for 115VAC at pins A/J, A/K, A/L of the extract fan (18HQ).
      - (a) If there is no 115VAC:
        - do a check for 115VAC at pins T1, T2, T3 of the extract fan control-contactor (7HQ).
        - 1 If there is no 115VAC:
          - do a check for a short to ground at the wiring between the extract fan control-contactor (7HQ), pins L1, L2, L3 and the circuit breaker (2HQ), pins A2, B2, C2 (Ref. ASM 21-26/02).
          - <u>a</u> If there is a short to ground:repair the related wiring.

EFF: ALL

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- <u>b</u> If there is no short to ground:replace the C/B-AVNCS EXTRACT FAN (2HQ).
- 2 If there is 115VAC:
  - do a check of the status of the circuit breaker (6HQ).
  - a If the circuit breaker (6HQ) is closed:
    - do a check for 28VDC at pin A/E of the extract fan (18HQ).
      - . If there is no 28VDC:
      - \* do a check for a short to ground at the wiring between the extract fan (18HQ) pin A/E and the circuit breaker (6HQ) (Ref. ASM 21-26/02).
      - \*\* If there is a short to ground:
        \*\*\* repair the related wiring.
      - \*\* If there is no short to ground:
        \*\*\* replace the C/B-AIR COND AVNCS VENT/MONG (6HQ).
      - If there is 28VDC, make sure that the warning light of the extract fan (18HQ) is off.
      - \* If the warning light is on, push the RESET pushbutton switch on the extract fan (18HQ).
    - NOTE: The fan can operate immediately.

      The warning light goes off.
    - \*\* If the fault continues, replace the FAN-EXTRACT, AVNCS VENT (18HQ).
    - \* If the fault continues, do a check for 28VDC at pin AA/9A of the AEVC (10HQ).
    - \*\* If there is 28VDC:
    - \*\*\* replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).
    - \*\* If there is no 28VDC:
    - \*\*\* do a check and repair the wiring between the AEVC (10HQ), pin AA/9A and the extract fan control-contactor (7HQ), pin Z and between the extract fan control-contactor (7HQ), pin X and the extract fan (18HQ), pin A/D (Ref. ASM 21-26/02).
    - \*\*\* If the fault continues:

      \*\*\*\* replace the CNTOR-EXTRACT FAN CTL, AVNCS VENT (7HQ).
    - \*\*\*\*\* If the fault continues:

EFF: 201-225, 227-227, 229-276, 278-299, 451-475, 503-549, 551-599, 701-749,

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\*\*\*\*\* replace the FAN-EXTRACT, AVNCS VENT (18HQ) (Ref. AMM TASK 21-26-51-000-001) and (Ref. AMM TASK 21-26-51-400-001).

- <u>b</u> If the circuit breaker (6HQ) is open:- close the circuit breaker.
  - . If the circuit breaker trips:
  - \* do a check for a short to ground at the wiring between the extract fan (18HQ), pin A/E and the circuit breaker (6HQ) (Ref. ASM 21-26/02).
  - \*\* If there is a short to ground: \*\*\* repair the related wiring.
  - \*\* If there is no short to ground:

    \*\*\* replace the FAN-EXTRACT, AVNCS VENT (18HQ) (Ref. AMM TASK 21-26-51-000-001) and (Ref. AMM TASK 21-26-51-400-001).
  - \*\*\* If the fault continues:
    \*\*\*\* replace the C/B-AIR COND AVNCS VENT/MONG (6HQ).
  - If the circuit breaker stays closed and the fault continues:
  - \* replace the FAN-EXTRACT, AVNCS VENT (18HQ) (Ref. AMM TASK 21-26-51-000-001) and (Ref. AMM TASK 21-26-51-400-001).
- (6) If the circuit breaker (2HQ) is open:
   close the circuit breaker.
  - (a) If the circuit breaker trips:
    - do a check for a short to ground at the wiring between the extract fan (18HQ), pins A/J, A/K, A/L and the extract fan control-contactor (7HQ), pins L1, L2, L3 and the circuit breaker (2HQ) pins A2, B2, C2 (Ref. ASM 21-26/02).
    - 1 If there is a short to ground: - repair the related wiring.
    - 2 If there is no short to ground:
       replace the CNTOR-EXTRACT FAN CTL, AVNCS VENT (7HQ).
- (7) If the fault continues:
  - replace the PRESS SW-EXTRACT FAN, AVNCS VENT (30HQ) (Ref. AMM TASK 21-26-11-000-001) AND (Ref. AMM TASK 21-26-11-400-001).

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\*\*ON A/C 277-277, 426-450, 476-499,

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Post SB 21-1139 For A/C 277-277,426-450,476-499,

- B. Possible maintenance messages (one or more of these messages) EXTRACT FAN 18HQ PRESSURE SWITCH 30HQ SKIN AIR OUTLET V 22HQ ISOL V 24HQ
  - (1) If the test gives the maintenance message SKIN AIR OUTLET V 22HQ, replace the VALVE-SKIN AIR OUTLET, AVNCS VENT (22HQ) (Ref. AMM TASK 21-26-53-000-001) and (Ref. AMM TASK 21-26-53-400-001).
  - (2) If the test gives the maintenance message ISOL V 24HQ, replace the VALVE-SKIN EXCHANGER ISOLATION, AVNCS VENT (24HQ) (Ref. AMM TASK 21-26-55-000-001) and (Ref. AMM TASK 21-26-55-400-001).
  - (3) If the test gives the maintenance message EXTRACT FAN 18HQ:
    - make sure that the demister filter and the filter cartridge are not clogged (Ref. AMM TASK 21-26-42-200-006) and (Ref. AMM TASK 21-26-42-200-007). If necessary, replace them (Ref. AMM TASK 21-26-43-600-016) and (Ref. AMM TASK 21-26-43-600-017).
    - do a check of the status of the circuit breaker (2HQ).
  - (4) If the test also gives the maintenance message PRESSURE SW 30HQ:
     do the trouble shooting procedure (Ref. TASK 21-26-00-810-816).
  - (5) If the circuit breaker (2HQ) is closed:
    - do a check for 115VAC at pins A/J, A/K, A/L of the extract fan (18HQ).
    - (a) If there is no 115VAC:
      - do a check for 115VAC at pins T1, T2, T3 of the extract fan control-contactor (7HQ).
      - 1 If there is no 115VAC:
        - do a check for a short to ground at the wiring between the extract fan control-contactor (7HQ), pins L1, L2, L3 and the circuit breaker (2HQ), pins A2, B2, C2 (Ref. ASM 21-26/02).
        - <u>a</u> If there is a short to ground:repair the related wiring.
        - <u>b</u> If there is no short to ground:replace the C/B-AVNCS EXTRACT FAN (2HQ).
      - If there is 115VAC:do a check of the status of the circuit breaker (6HQ).

EFF: 277-277, 426-450, 476-499,

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- a If the circuit breaker (6HQ) is closed:
  - do a check for 28VDC at pin A/E of the extract fan (18HQ).
    - . If there is no 28VDC:
    - \* do a check for a short to ground at the wiring between the extract fan (18HQ) pin A/E and the circuit breaker (6HQ) (Ref. ASM 21-26/02).
    - \*\* If there is a short to ground:
      \*\*\* repair the related wiring.
    - \*\* If there is no short to ground:

      \*\*\* replace the C/B-AIR COND AVNCS VENT/MONG (6HQ).
    - . If there is 28VDC, make sure that the warning light of the extract fan (18HQ) is off.
    - \* If the warning light is on, push the RESET pushbutton switch on the extract fan (18HQ).
  - NOTE : The fan can operate immediately.
    The warning light goes off.
  - \*\* If the fault continues, replace the FAN-EXTRACT, AVNCS VENT (18HQ).
  - \* If the fault continues, do a check for 28VDC at pin AA/9A of the AEVC (10HQ).
  - \*\* If there is 28VDC:
  - \*\*\* replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).
  - \*\* If there is no 28VDC:
  - \*\*\* do a check and repair the wiring between the AEVC (10HQ), pin AA/9A and the extract fan control-contactor (7HQ), pin Z and between the extract fan control-contactor (7HQ), pin X and the extract fan (18HQ), pin A/D (Ref. ASM 21-26/02).
  - \*\*\* If the fault continues:

    \*\*\*\* replace the CNTOR-EXTRACT FAN CTL, AVNCS VENT (7HQ).
  - \*\*\*\*\* If the fault continues:

    \*\*\*\*\* replace the FAN-EXTRACT, AVNCS VENT (18HQ) (Ref. AMM TASK 21-26-51-000-001) and (Ref. AMM TASK 21-26-51-400-001).
- <u>b</u> If the circuit breaker (6HQ) is open:- close the circuit breaker.
  - . If the circuit breaker trips:

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- \* do a check for a short to ground at the wiring between the extract fan (18HQ), pin A/E and the circuit breaker (6HQ) (Ref. ASM 21-26/02).
- \*\* If there is a short to ground:
  \*\*\* repair the related wiring.
- \*\* If there is no short to ground:

  \*\*\* replace the FAN-EXTRACT, AVNCS VENT (18HQ) (Ref. AMM TASK 21-26-51-000-001) and (Ref. AMM TASK 21-26-51-400-001).
- \*\*\* If the fault continues:
  \*\*\*\* replace the C/B-AIR COND AVNCS VENT/MONG (6HQ).
- . If the circuit breaker stays closed and the fault continues:
- \* replace the FAN-EXTRACT, AVNCS VENT (18HQ) (Ref. AMM TASK 21-26-51-000-001) and (Ref. AMM TASK 21-26-51-400-001).
- (6) If the circuit breaker (2HQ) is open:
  - close the circuit breaker.
  - (a) If the circuit breaker trips:
    - do a check for a short to ground at the wiring between the extract fan (18HQ), pins A/J, A/K, A/L and the extract fan control-contactor (7HQ), pins L1, L2, L3 and the circuit breaker (2HQ) pins A2, B2, C2 (Ref. ASM 21-26/02).
    - 1 If there is a short to ground: - repair the related wiring.
    - 2 If there is no short to ground:
       - replace the CNTOR-EXTRACT FAN CTL, AVNCS VENT (7HQ).
  - (b) If the fault continues:
     replace the C/B-AVNCS EXTRACT FAN (2HQ).
- (7) If the fault continues:
  - replace the PRESS SW-EXTRACT FAN, AVNCS VENT (30HQ) (Ref. AMM TASK 21-26-11-000-001) AND (Ref. AMM TASK 21-26-11-400-001).

\*\*ON A/C ALL

C. Do the operational test given in Para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-811

Failure of the Smoke Detector

### 1. Possible Causes

- AEVC (10HQ)
- DET-SMOKE, AVNCS COMPT (1WA)
- RELAY-SMOKE WARNING, AVNCS COMPT (2WA)
- C/B-AIR COND AVNCS VENT/CTL (5HQ)
- wiring between pin A/A of the smoke detector (1WA) and the circuit breaker
   (5HQ

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |
|-----------|------------------|--|--|
|           |                  |  |  |
| AMM       | 21-26-00-710-001 | Operational Check of System via MCDU   |  |
| AMM       | 21-26-34-000-001 | Removal of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)                 |  |
| AMM       | 21-26-34-400-001 | <pre>Installation of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)</pre> |  |
| AMM       | 26-15-15-000-001 | Removal of the Smoke Detector (1WA) - Avionics<br>Compartment                        |  |
| AMM       | 26-15-15-400-001 | Installation of the Smoke Detector (1WA) - Avionics Compartment                      |  |
| AMM       | 31-50-00-710-001 | Ground Scanning of the Central Warning System  |  |
| ASM       | 21-26/03         | · ,  |  |
| AWM       | 21-26-06         |  |  |
| AWM       | 21-26-08         |  |  |
| AWM       | 26-15-01         |  |  |

### 3. Fault Confirmation

### A. Test

(1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).

### 4. Fault Isolation

A. Table of the circuit breakers used in this procedure:

PANEL DESIGNATION IDENT. LOCATION
49VU AIR COND/AVNCS VENT/CTL 5HQ D05

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- B. If the test gives the maintenance message SMOKE DETECTOR 1WA:
  - do a check of the status of the circuit breaker (5HQ).
  - (1) If the circuit breaker (5HQ) is closed:
    - do a check for a ground signal at pin AB/7D of the AEVC (10HQ)
       (Ref. ASM 21-26/03).
    - (a) If there is a ground signal:
      - do a check for 28VDC at pin A/X1 of the smoke warning relay (2WA) (Ref. AWM 26-15-01).
      - 1 If there is 28VDC:
        - replace the DET-SMOKE, AVNCS COMPT (1WA) (Ref. AMM TASK 26-15-15-000-001) and (Ref. AMM TASK 26-15-15-400-001).
      - 2 If there is no 28VDC:
        - replace the RELAY-SMOKE WARNING, AVNCS COMPT (2WA)
        - a If the fault continues:
          - do a check and repair the wiring between the smoke warning relay (2WA) and the AEVC (10HQ), pin A/A1 and pin AB/7D (Ref. ASM 21-26/03) (Ref. AWM 26-15-01) (Ref. AWM 21-26-06).
        - b If the fault continues:
          - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001)
             and (Ref. AMM TASK 21-26-34-400-001).
    - (b) If there is no ground signal:
      - do a check for a ground signal at pin A/A2 of the smoke warning relay (2WA).
      - 1 If there is a ground signal:
        - do a check for 28VDC at pin A/X1 of the smoke warning relay
           (2WA).
        - a If there is 28VDC:
          - replace the RELAY-SMOKE WARNING, AVNCS COMPT (2WA).
            - . If the fault continues:
            - \* do a check and repair the wiring between the smoke warning relay (2WA) and to the smoke detector (1WA), pin A/X1 and pin A/D (Ref. ASM 21-26/03) (Ref. AWM 26-15-01).
        - b If there is no 28VDC:
          - do a check for 28VDC at pin A/A of the smoke detector (1WA).
            - . If there is 28VDC:
            - \* replace the DET-SMOKE, AVNCS COMPT (1WA) (Ref. AMM TASK 26-15-15-000-001) and (Ref. AMM TASK 26-15-15-400-001).
            - . If there is no 28VDC:

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\* replace the C/B-AIR COND AVNCS VENT/CTL (5HQ).

\*\* If the fault continues:

\*\*\* do a check and repair the wiring between pin A/A of the smoke detector (1WA) and the circuit breaker (5HQ (Ref. ASM 21-26/03) (Ref. AWM 21-26-08) (Ref. AWM 26-15-01).

- C. Do the operational test given in Para. 3.
- D. Table of the circuit breakers used in this procedure:

| PANEL  | DESIGNATION   | IDENT. | LOCATION |
|--------|---------------|--------|----------|
| 49VU   | FWS/FWC1/SPLY | 3WW    | F01      |
| 12 1VU | EIS/FWC2/SPLY | 2WW    | Q07      |

E. Test

R

R

R

(1) Reset of the FWC1 and FWC2

NOTE: Reset of the FWC will clear the latched condition of the AVIONICS SMOKE ECAM warning. Then, no unwanted LAND ASAP message will show.

NOTE: Open the circuit breakers for some seconds before you close them.

- (a) Open this(these) circuit breaker(s):
  - <u>1</u> 2WW
  - 2 3WW
- (b) Close this(these) circuit breaker(s):
  - 1 2WW
  - 2 3WW
- (2) Do the ground scanning of the central warning system (Ref. AMM TASK 31-50-00-710-001).

EFF: ALL **SROS** 

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-812

AVIONICS SYSTEM FAULT ECAM Warning Unwanted or Inoperative

#### 1. Possible Causes

R

- CARTRIDGE-AVNCS VENT FILTER (2082HM)
- R AEVC (10HQ)
- R SDAC-1 (1WV1)
- R SDAC-2 (1WV2)
  - wiring between the AEVC (10HQ) and the SDAC-1 (1WV1)
  - wiring between the AEVC (10HQ) and the SDAC-2 (1WV2)

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| AMM       | 21-26-00-710-001 | Operational Check of System via MCDU               |
| AMM       | 21-26-34-000-001 | Removal of the Avionics Equipment Ventilation      |
|           |                  | Computer (AEVC) (10HQ)                             |
| AMM       | 21-26-34-400-001 | Installation of the Avionics Equipment Ventilation |
|           |                  | Computer (AEVC) (10HQ)                             |
| AMM       | 21-26-43-920-001 | Replacement of the Filter Cartridge                |
| AMM       | 31-55-34-000-001 | Removal of the SDAC (1WV1,1WV2)                    |
| AMM       | 31-55-34-400-001 | Installation of the SDAC (1WV1,1WV2)               |
| ASM       | 21-26/02         |  |

### 3. Fault Confirmation

#### A. Test

(1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).

### 4. Fault Isolation

R

- A. If the test gives the maintenance message TEST OK:
  - make sure that the avionics ventilation filter is not clogged. If necessary, replace the CARTRIDGE-AVNCS VENT FILTER (2082HM) (Ref. AMM TASK 21-26-43-920-001).
  - do a check and repair the wiring between the AEVC (10HQ) and the SDAC-1 (1WV1) and/or the wiring between the AEVC (10HQ) and the SDAC-2 (1WV2), pins AB/8A and pins AD/12C (Ref. ASM 21-26/02).

EFF: ALL

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- (1) If the fault continues:
  - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) (Ref. AMM TASK 21-26-34-400-001).
  - (a) If the fault continues:
    - replace the SDAC-1 (1WV1) and/or the SDAC-2 (1WV2) (Ref. AMM TASK 31-55-34-000-001) and (Ref. AMM TASK 31-55-34-400-001).

R

B. Do the operational test given in Para. 3.

EFF: ALL

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-813

Failure of the AEVC

1. Possible Causes

R

- CARTRIDGE-AVNCS VENT FILTER (2082HM)
- R AEVC (10HQ)
  - 2. Job Set-up Information
    - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| AMM       | 21-26-00-710-001 | Operational Check of System via MCDU   |
| AMM       | 21-26-34-000-001 | Removal of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)                 |
| AMM       | 21-26-34-400-001 | <pre>Installation of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)</pre> |
| AMM       | 21-26-43-920-001 | Replacement of the Filter Cartridge  |
| AMM       | 31-50-00-710-001 | Ground Scanning of the Central Warning System  |

- 3. Fault Confirmation
  - A. Test
    - (1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).
- 4. Fault Isolation

R

- A. If the test gives the maintenance message AEVC:
  - make sure that the avionics ventilation filter is not clogged. If necessary, replace the CARTRIDGE-AVNCS VENT FILTER (2082HM) (Ref. AMM TASK 21-26-43-920-001).
  - (1) Replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).

EFF: ALL 21

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### TROUBLE SHOOTING MANUAL

R

B. Table of the circuit breakers used in this procedure:

PANEL DESIGNATION IDENT. LOCATION

49VU FWS/FWC1/SPLY 3WW F01
121VU EIS/FWC2/SPLY 2WW Q07

- C. Test
  - (1) Reset of the FWC1 and FWC2

 ${\tt NOTE}$ : Open the circuit breakers for some seconds before you close them.

- (a) Open this(these) circuit breaker(s):
  - 1 2WW
  - 2 3WW
- (b) Close this(these) circuit breaker(s):
  - 1 2WW
  - 2 3WW
- (2) Do the ground scanning of the central warning system (Ref. AMM TASK 31-50-00-710-001).

EFF: ALL 21-26-00

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-814

Warning of the Blower-Fan Pressure Switch Inoperative

### 1. Possible Causes

- AEVC (10HQ)
- PRESS SW-BLOWER FAN, AVNCS VENT (19HQ)
- wiring between the AEVC (10HQ) and the blower fan pressure switch (19HQ)

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
|           |                  |   |
| AMM       | 21-26-00-710-001 | Operational Check of System via MCDU                |
| AMM       | 21-26-11-000-001 | Removal of the Blower and Extract Fan Pressure      |
|           |                  | Switches (17HQ, 19HQ, 30HQ)                         |
| AMM       | 21-26-11-400-001 | Installation of the Blower and Extract Fan Pressure |
|           |                  | Switches (17HQ, 19HQ, 30HQ)                         |
| AMM       | 21-26-34-000-001 | Removal of the Avionics Equipment Ventilation       |
|           |                  | Computer (AEVC) (10HQ)                              |
| AMM       | 21-26-34-400-001 | Installation of the Avionics Equipment Ventilation  |
|           |                  | Computer (AEVC) (10HQ)                              |
| ASM       | 21-26/03         |   |

### 3. Fault Confirmation

### A. Test

(1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).

### 4. Fault Isolation

- A. If the test gives the maintenance message PRESSURE SW 19HQ:
  - replace the PRESS SW-BLOWER FAN, AVNCS VENT (19HQ) (Ref. AMM TASK 21-26-11-000-001) and (Ref. AMM TASK 21-26-11-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring between the AEVC (10HQ) and the blower fan pressure switch (19HQ), pins AB/8D and the pins A/A (Ref. ASM 21-26/03).
    - (a) If the fault continues:
      - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).

EFF: ALL 21-26-00

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### TROUBLE SHOOTING MANUAL

B. Do the operational test given in Para. 3.

R EFF: ALL
SROS

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-815

Warning of the Blower-Fan Pressure Switch Inoperative

### 1. Possible Causes

- PRESS SW-BLOWER FAN, AVNCS VENT (17HQ)
- AEVC (10HQ)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| AMM       | 21-26-00-710-001 | Operational Check of System via MCDU   |
| AMM       | 21-26-11-000-001 | Removal of the Blower and Extract Fan Pressure Switches (17HQ, 19HQ, 30HQ)           |
| AMM       | 21-26-11-400-001 | Installation of the Blower and Extract Fan Pressure Switches (17HQ, 19HQ, 30HQ)      |
| AMM       | 21-26-34-000-001 | Removal of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)                 |
| AMM       | 21-26-34-400-001 | <pre>Installation of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)</pre> |
| ASM       | 21-26/03         | ·  |

### 3. Fault Confirmation

### A. Test

(1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).

### 4. Fault Isolation

- A. If the test gives the maintenance message PRESSURE SW 17HQ:
  - replace the PRESS SW-BLOWER FAN, AVNCS VENT (17HQ) (Ref. AMM TASK 21-26-11-000-001) and (Ref. AMM TASK 21-26-11-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring between the AEVC (10HQ) and the blower fan pressure switch (17HQ), pins AB/8C and pins A/A (Ref. ASM 21-26/03).
    - (a) If the fault continues:
      - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).

EFF: ALL 21-26-00

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### TROUBLE SHOOTING MANUAL

B. Do the operational test given in Para. 3.

EFF: ALL
SROS

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-816

Warning of the Extract-Fan Pressure Switch Inoperative

#### 1. Possible Causes

- PRESS SW-EXTRACT FAN, AVNCS VENT (30HQ)
- AEVC (10HQ)
- wiring between the AEVC (10HQ) and the extract fan pressure switch (30HQ)

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION   |  |
|-----------|------------------|---|--|
|           |                  |   |  |
| AMM       | 21-26-00-710-001 | Operational Check of System via MCDU  |  |
| AMM       | 21-26-11-000-001 | Removal of the Blower and Extract Fan Pressure Switches (17HQ, 19HQ, 30HQ)      |  |
| AMM       | 21-26-11-400-001 | Installation of the Blower and Extract Fan Pressure Switches (17HQ, 19HQ, 30HQ) |  |
| AMM       | 21-26-34-000-001 | Removal of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)            |  |
| AMM       | 21-26-34-400-001 | Installation of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)       |  |
| ASM       | 21-26/02         |   |  |

### 3. Fault Confirmation

### A. Test

(1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).

### 4. Fault Isolation

- A. If the test gives the maintenance message PRESSURE SW 30HQ:
  - replace the PRESS SW-EXTRACT FAN, AVNCS VENT (30HQ) (Ref. AMM TASK 21-26-11-000-001) and (Ref. AMM TASK 21-26-11-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring between the AEVC (10HQ) and the extract fan pressure switch (30HQ), pins AB/8B and pins A/A (Ref. ASM 21-26/02).
    - (a) If the fault continues:
      - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) (Ref. AMM TASK 21-26-34-400-001).

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### TROUBLE SHOOTING MANUAL

B. Do the operational test given in Para. 3.

EFF: ALL
SROS

21-26-00

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-817

Unwanted Warning of the Duct Temperature Sensor

### 1. Possible Causes

R

R

- CARTRIDGE-AVNCS VENT FILTER (2082HM)
- R SENSOR-DUCT TEMP, AVNCS VENT (26HQ)
  - AEVC (10HQ)
    - wiring between the AEVC (10HQ) and the duct temperature sensor (26HQ)

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE  |                              | DESIGNATION  |
|------------|------------------------------|--|
|            |                              |  |
| AMM        | 21-26-00-710-001             | Operational Check of System via MCDU   |
| AMM        | 21-26-12-000-001             | Removal of the Avionics Ventilation Duct Temperature Sensor (26HQ)                   |
| AMM        | 21-26-12-400-001             | Installation of the Avionics Ventilation Duct Temperature Sensor (26HQ)              |
| AMM        | 21-26-34-000-001             | Removal of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)                 |
| AMM        | 21-26-34-400-001             | <pre>Installation of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)</pre> |
| AMM<br>ASM | 21-26-43-920-001<br>21-26/03 | Replacement of the Filter Cartridge  |

### 3. Fault Confirmation

### A. Test

(1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).

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### TROUBLE SHOOTING MANUAL

### 4. Fault Isolation

R

- A. If the test gives the maintenance message DUCT TEMP SENSOR 26HQ:
  - make sure that the avionics ventilation filter is not clogged. If necessary, replace the CARTRIDGE-AVNCS VENT FILTER (2082HM) (Ref. AMM TASK 21-26-43-920-001).
  - (1) If the fault continues:
    - replace the SENSOR-DUCT TEMP, AVNCS VENT (26HQ) (Ref. AMM TASK 21-26-12-000-001) and (Ref. AMM TASK 21-26-12-400-001).
    - (a) If the fault continues:
      - do a check and repair the wiring between the AEVC (10HQ) and the duct temperature sensor (26HQ), pin AB/5D and pin A/C (Ref. ASM 21-26/03).
      - 1 If the fault continues:
        - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) (Ref. AMM TASK 21-26-34-400-001).

R

**SROS** 

B. Do the operational test given in Para. 3.

EFF: ALL 21-26-00

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-818

Warning of the Duct Temperature Sensor Inoperative

### 1. Possible Causes

- AEVC (10HQ)
- SENSOR-DUCT TEMP, AVNCS VENT (26HQ)
- wiring between the AEVC (10HQ) and the duct temperature sensor (26HQ)

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| AMM       | 21-26-00-710-001 | Operational Check of System via MCDU   |
| AMM       | 21-26-12-000-001 | Removal of the Avionics Ventilation Duct Temperature Sensor (26HQ)                   |
| AMM       | 21-26-12-400-001 | Installation of the Avionics Ventilation Duct Temperature Sensor (26HQ)              |
| AMM       | 21-26-34-000-001 | Removal of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)                 |
| AMM       | 21-26-34-400-001 | <pre>Installation of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)</pre> |
| ASM       | 21-26/03         | ·  |

### 3. Fault Confirmation

### A. Test

(1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).

### 4. Fault Isolation

- A. If the test gives the maintenance message DUCT TEMP SENSOR 26HQ:
  - replace the SENSOR-DUCT TEMP, AVNCS VENT (26HQ) (Ref. AMM TASK 21-26-12-000-001) and (Ref. AMM TASK 21-26-12-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring between the AEVC (10HQ) and the duct temperature sensor (26HQ), pins AB/5D and pins A/C (Ref. ASM 21-26/03).
    - (a) If the fault continues:
      - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).

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EFF:

### TROUBLE SHOOTING MANUAL

B. Do the operational test given in Para. 3.

EFF: ALL
SROS

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-819

Failure of the Skin Temperature Sensor

- 1. Possible Causes
  - AEVC (10HQ)
  - SENSOR-SKIN TEMP, AVNCS VENT (28HQ)
  - wiring between the AEVC (10HQ) and the skin temperature sensor (28HQ)
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
|           |                  |   |
| AMM       | 21-26-00-710-001 | Operational Check of System via MCDU                                      |
| AMM       | 21-26-13-000-001 | Removal of the Avionics Ventilation Skin Temperature Sensor (28HQ)        |
| AMM       | 21-26-13-400-001 | Installation of the Avionics Ventilation Skin Temperature Sensor (28HQ)   |
| AMM       | 21-26-34-000-001 | Removal of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)      |
| AMM       | 21-26-34-400-001 | Installation of the Avionics Equipment Ventilation Computer (AEVC) (10HQ) |
| ASM       | 21-26/02         | ·   |

### 3. Fault Confirmation

- A. Test
  - (1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).
- 4. Fault Isolation
  - A. If the test gives the maintenance message SKIN TEMP SENSOR 28HQ:
    - replace the SENSOR-SKIN TEMP, AVNCS VENT (28HQ) (Ref. AMM TASK 21-26-13-000-001) and (Ref. AMM TASK 21-26-13-400-001).
    - (1) If the fault continues:
      - do a check and repair the wiring between the AEVC (10HQ) and the skin temperature sensor (28HQ), pins AB/1D, AB/2D, AB/3D and pins A/A, A/B, A/C (Ref. ASM 21-26/02).
      - (a) If the fault continues:
        - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).

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21-26-00

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### TROUBLE SHOOTING MANUAL

B. Do the operational test given in Para. 3.

EFF: ALL
SROS

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-820

Failure of the Skin Exchanger-Outlet Bypass Valve

### 1. Possible Causes

R

- CARTRIDGE-AVNCS VENT FILTER (2082HM)
- R AEVC (10HQ)
  - VALVE-SKIN EXCHANGER OUTLET BYPASS, AVNCS VENT (23HQ)
  - wiring between the AEVC (10HQ) and the skin exchanger-outlet bypass valve (23HQ)
  - wiring from the AEVC (10HQ) to the skin exchanger-outlet bypass valve (23HQ)

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| AMM       | 21-26-00-710-001 | Operational Check of System via MCDU               |
| AMM       | 21-26-34-000-001 | Removal of the Avionics Equipment Ventilation      |
|           |                  | Computer (AEVC) (10HQ)                             |
| AMM       | 21-26-43-920-001 | Replacement of the Filter Cartridge                |
| AMM       | 21-26-55-000-003 | Removal of the Avionics Ventilation Skin Exchanger |
|           |                  | Outlet Bypass Valve (23HQ)                         |
| AMM       | 21-26-55-400-001 | Installation of the Avionics Ventilation Skin      |
|           |                  | Exchanger Inlet Bypass Valve (16HQ)                |
| AMM       | 21-26-55-400-003 | Installation of the Avionics Ventilation Skin      |
|           |                  | Exchanger Outlet Bypass Valve (23HQ)               |
| ASM       | 21-26/03         | 7,   |

### 3. Fault Confirmation

### A. Test

(1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21- 26-00-710-001).

EFF: ALL 21-26-00

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### 4. Fault Isolation

R

- A. If the test gives the maintenance message OUTLET BYPASS V 23HQ:
  - make sure that the avionics ventilation filter is not cloqued. If necessary, replace the CARTRIDGE-AVNCS VENT FILTER (2082HM) (Ref. AMM TASK 21-26-43-920-001).
  - do a check of the status of the skin exchanger-outlet bypass valve (23HQ) microswitches, between pin A/J and pin A/G and between pin A/M and pin A/K.
  - (1) If the status of the microswitch between pins A/J and A/G is equivalent to the status of the microswitch between pins A/M and A/K: - replace the VALVE-SKIN EXCHANGER OUTLET BYPASS, AVNCS VENT (23HQ) (Ref. AMM TASK 21-26-55-000-003) and (Ref. AMM TASK 21-26-55-400-003).
  - (2) If the status of the microswitch between pins A/J and A/G is not equivalent to the status of the microswitch between pins A/M and A/K: - do a check for a ground signal at pin A/U, pin A/G, and pin A/K of the skin exchanger-outlet bypass valve (23HQ) (Ref. ASM 21-26/03).
    - (a) If there is no ground signal: - repair the related wiring.
    - (b) If there is a ground signal:
      - do a check and repair the wiring between the AEVC (10HQ) and the skin exchanger-outlet bypass valve (23HQ), pin AB/6A and pin A/J and/or pin AB/6B and pin A/M.
      - If the fault continues:
        - do a check and repair the wiring from the AEVC (10HQ) to the skin exchanger-outlet bypass valve (23HQ), pin AA/6A to pin A/A and/or pin AA/6B to pin A/C.
        - If the fault continues:
          - replace the VALVE-SKIN EXCHANGER OUTLET BYPASS, AVNCS VENT (23HQ) (Ref. AMM TASK 21-26-55-000-003) and (Ref. AMM TASK 21-26-55-400-003).
  - (3) If the fault continues:
    - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-55-400-001).

R

B. Do the operational test given in Para. 3.

EFF: ALL **SROS** 

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-821

Loss of the Information from the LGCIUs

### 1. Possible Causes

- AEVC (10HQ)
- LGCIU-1 (5GA1)
- LGCIU-2 (5GA2)
- wiring between the AEVC (10HQ) and the LGCIU-1 (5GA1)
- wiring between the AEVC (10HQ) and the LGCIU-2 (5GA2)

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| AMM       | 21-26-00-710-001 | Operational Check of System via MCDU               |
| AMM       | 21-26-34-000-001 | Removal of the Avionics Equipment Ventilation      |
|           |                  | Computer (AEVC) (10HQ)                             |
| AMM       | 21-26-34-400-001 | Installation of the Avionics Equipment Ventilation |
|           |                  | Computer (AEVC) (10HQ)                             |
| AMM       | 32-31-71-000-001 | Removal of the LGCIU (5GA1, 5GA2)                  |
| AMM       | 32-31-71-400-001 | Installation of the LGCIU (5GA1, 5GA2)             |
| ASM       | 21-26/02         |  |

### 3. Fault Confirmation

### A. Test

(1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).

### 4. Fault Isolation

- A. If the test gives the maintenance message CHECK LGCIU AEVC INTFC:
  - do a check for a ground signal at pin AB/9C and pin AB/10C of the AEVC (10HQ).
  - (1) If there is a ground signal:
    - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).
  - (2) If there is no ground signal:
    - do a check and repair the wiring between the AEVC (10HQ) and the LGCIU-1 (5GA1), pins AB/9C and pins AB/1D and/or do a check and repair the wiring between the AEVC (10HQ) and the LGCIU-2 (5GA2), pins AB/10C and pins AB/1D (Ref. ASM 21-26/02).

EFF: ALL

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- (a) If the fault continues:
  - replace the LGCIU-1 (5GA1) and/or the LGCIU-2 (5GA2) (Ref. AMM TASK 32-31-71-000-001) and (Ref. AMM TASK 32-31-71-400-001).
- B. Do the operational test given in Para. 3.

EFF: ALL
SROS

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-822

Loss of the Information from the EIUs

- 1. Possible Causes
  - EIU-1 (1KS1)
  - EIU-2 (1KS2)
  - AEVC (10HQ)
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| AMM       | 21-26-00-710-001 | Operational Check of System via MCDU               |
| AMM       | 21-26-34-000-001 | Removal of the Avionics Equipment Ventilation      |
|           |                  | Computer (AEVC) (10HQ)                             |
| AMM       | 21-26-34-400-001 | Installation of the Avionics Equipment Ventilation |
|           |                  | Computer (AEVC) (10HQ)                             |
| AMM       | 73-25-34-000-040 | Removal of the Engine Interface Unit (EIU)         |
|           |                  | (1KS1,1KS2)  |
| AMM       | 73-25-34-400-040 | Installation of the Engine Interface Unit (EIU)    |
| 7         | 15 25 51 100 010 | (1KS1,1KS2)  |
| ASM       | 21-26/02         | ( INO I / INOL /                                   |
| ASI       | 21 20/02         |  |

### 3. Fault Confirmation

- A. Test
  - (1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).
- 4. Fault Isolation
  - A. If the test gives the maintenance message CHECK EIU AEVC INTFC:
    - make sure that there is no ground at pins AB/10A and AB/11A of the AEVC (10HQ).
    - (1) If there is a ground signal:
      - do a check and repair the wiring between the AEVC (10HQ) and the EIU-1 (1KS1), pins AB/10A and pins AB/1G and/or do a check and repair the wiring between the AEVC (10HQ) and the EIU-2 (1KS2), pins AB/11A pins AB/1G (Ref. ASM 21-26/02).

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- (a) If the fault continues:
  - replace the EIU-1 (1KS1) if the ground is at the pin AB/10A of the AEVC (10HQ) (Ref. AMM TASK 73-25-34-000-040) and (Ref. AMM TASK 73-25-34-400-040).
  - replace the EIU-2 (1KS2) if the ground is at the pin AB/11A of the AEVC (10HQ) (Ref. AMM TASK 73-25-34-000-040) and (Ref. AMM TASK 73-25-34-400-040).
- (2) If there is no ground signal:
  - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).
- B. Do the operational test given in Para. 3.

EFF: ALL

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-824

AVNCS SYS FAULT Warning Inoperative

- 1. Possible Causes
  - AEVC (10HQ)
  - SDAC-1 (1WV1)
  - SDAC-2 (1WV2)
  - wiring between the AEVC (10HQ) and the SDAC-1 (1WV1)
  - wiring between the AEVC (10HQ) and the SDAC-2 (1WV2)
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION                          |  |  |
|-----------|------------------|--------------------------------------|--|--|
| A MM      | 21-26-00-710-001 | Operational Check of System wis MCDU |  |  |
| AMM       | 21-26-00-710-001 | Operational Check of System via MCDU |  |  |
| AMM       | 31-55-34-000-001 | Removal of the SDAC (1WV1,1WV2)      |  |  |
| AMM       | 31-55-34-400-001 | Installation of the SDAC (1WV1,1WV2) |  |  |
| ASM       | 21-26/02         |                                      |  |  |

- 3. Fault Confirmation
  - A. Test
    - (1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).
- 4. Fault Isolation
  - A. If the test gives the maintenance message CHECK SDAC AEVC INTFC:
    - make sure that there is no ground at pins AB/10A and AB/11A of the AEVC (10HQ)
    - (1) If there is a ground signal:
      - replace the AEVC (10HQ) (Ref. AMM TASK 31-55-34-000-001) and (Ref. AMM TASK 31-55-34-400-001).
    - (2) If there is no ground signal:
      - do a check and repair the wiring between the AEVC (10HQ) and the SDAC-1 (1WV1), pin AB/8A and pin AD/12C and/or do a check and repair the wiring between the AEVC (10HQ) and the SDAC-2 (1WV2), pins AB/8A and AD/12C (Ref. ASM 21-26/02).
      - (a) If the fault continues:
        - replace the SDAC-1 (1WV1) and/or the SDAC-2 (1WV2) (Ref. AMM TASK 31-55-34-000-001) and (Ref. AMM TASK 31-55-34-400-001).

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B. Do the operational test given in Para. 3.

EFF: ALL
SROS

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-826

No Transmission by the ARINC 429 Bus

- 1. Possible Causes
  - AEVC (10HQ)
  - CFDIU (1TW)
  - wiring between the AEVC (10HQ) and the CFDIU (1TW)
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION   |  |  |
|-----------|------------------|---|--|--|
|           |                  |   |  |  |
| AMM       | 21-26-34-000-001 | Removal of the Avionics Equipment Ventilation Computer (AEVC) (10HQ)      |  |  |
| AMM       | 21-26-34-400-001 | Installation of the Avionics Equipment Ventilation Computer (AEVC) (10HQ) |  |  |
| AMM       | 31-32-00-869-002 | Procedure for Class 3 Faults Reading                                      |  |  |
| AMM       | 31-32-34-000-001 | Removal of the CFDIU (1TW)  |  |  |
| AMM       | 31-32-34-400-001 | Installation of the CFDIU (1TW)   |  |  |

- 3. Fault Confirmation
  - A. Test
    - (1) On the CFDS MENU page, get access to the AVIONICS STATUS page (Ref. AMM TASK 31-32-00-869-002).
- 4. Fault Isolation
  - A. If the test gives the maintenance message NO AEVC DATA:
    - do a check and repair the wiring between the AEVC (10HQ) and the CFDIU (1TW), pins AB/12A, AB/13A, AB/14A, AB/15A and pins AA/3D, AA/3E, AB/10A.
    - (1) If the fault continues:
      - replace the AEVC (10HQ) (Ref. AMM TASK 21-26-34-000-001) and (Ref. AMM TASK 21-26-34-400-001).
      - (a) If the fault continues:
        - replace the CFDIU (1TW) (Ref. AMM TASK 31-32-34-000-001) and (Ref. AMM TASK 31-32-34-400-001).
  - B. Do the operational test given in Para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-828

Loss of the Duct Temperature Sensor (26HQ)

- 1. Possible Causes
  - CARTRIDGE-AVNCS VENT FILTER (2082HM)
  - SENSOR DUCT TEMP AVNCS VENT (26HQ)
- 2. Job Set-up Information
  - A. Referenced Information

|   | REFERENCE |                  | DESIGNATION   |  |  |
|---|-----------|------------------|---|--|--|
|   | AMM       | 21-26-00-710-002 | Operational Check of Override Function (BLOWER and EXTRACT)             |  |  |
|   | AMM       | 21-26-12-000-001 | Removal of the Avionics Ventilation Duct Temperature Sensor (26HQ)      |  |  |
|   | AMM       | 21-26-12-400-001 | Installation of the Avionics Ventilation Duct Temperature Sensor (26HQ) |  |  |
| 2 | AMM       | 21-26-43-920-001 | Replacement of the Filter Cartridge                                     |  |  |

3. Fault Confirmation

- A. On the panel 22VU, release the VENTILATION/BLOWER pushbutton switch (13HQ) (the OVRD legend comes on).
- 4. Fault Isolation

R

R

- A. If the VENT BLOWER FAULT warning is in view on the upper ECAM DU:
  - make sure that the avionics ventilation filter is not clogged. If necessary, replace the CARTRIDGE-AVNCS VENT FILTER (2082HM) (Ref. AMM TASK 21-26-43-920-001).
  - (1) If the fault continues:
    - replace the SENSOR DUCT TEMP AVNCS VENT (26HQ) (Ref. AMM TASK 21-26-12-000-001) and (Ref. AMM TASK 21-26-12-400-001).

R

B. Test

**SROS** 

- (1) On the panel 22VU, push the VENTILATION/BLOWER pushbutton switch (13HQ) (the OVRD legend goes off).
- (2) Do the operational test of the override function (Ref. AMM TASK 21- 26-00-710-002).

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-829

Failure of one or more valves or of the AEVC

- 1. Possible Causes
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE            | DESIGNATION   |  |  |
|----------------------|---|--|--|
|                      |   |  |  |
|                      |   |  |  |
| 21-26-00-810-801     | Loss of the Automatic Control and Monitoring of the   |  |  |
|                      | Valves and Fans                                       |  |  |
| 21-26-00-810-803     | Failure of the Skin Air-Inlet Valve                   |  |  |
| 21-26-00-810-804     | Failure of the Skin Air-Outlet Valve                  |  |  |
| 21-26-00-810-805     | Failure of the Conditioned Air-Inlet Valve            |  |  |
| 21-26-00-810-806     | Failure of the Skin Exchanger-Inlet Bypass Valve      |  |  |
| 21-26-00-810-807     | Failure of the Skin Exchanger Isolation-Valve         |  |  |
| 21-26-00-810-813     | Failure of the AEVC                                   |  |  |
| AMM 21-26-00-710-001 | Operational Check of System via MCDU                  |  |  |
| AMM 21-26-00-710-009 | Operational Test to Read the CFDS for LAST LEG REPORT |  |  |
|                      | of the AEVC   |  |  |
| AMM 21-26-41-210-001 | Detailed Inspection of Check Valve Flappers for       |  |  |
|                      | Condition and Operation                               |  |  |

### 3. Fault Confirmation

- A. Test
  - (1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).
  - (2) Read the LAST LEG REPORT (Ref. AMM TASK 21-26-00-710-009).

### 4. Fault Isolation

A. Possible maintenance messages (one or more of these messages)
SKIN AIR INLET V 15HQ
SKIN AIR OUTLET V 22HQ
COND AIR INLET V 21HQ

INLET BYPASS V 16HQ

ISOL V 24HQ

**AEVC** 

associated with the ECAM warning VENT AVNCS SYS FAULT.

NOTE : The ECAM warnings VENT BLOWER FAULT and VENT EXTRACT FAULT will possibly not come into view before or after engine operation. But it is possible that the mechanic call horn will operate.

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- (1) Make sure that the avionics ventilation check valve (2140HM) (if installed) operates correctly (Ref. AMM TASK 21-26-41-210-001).
- (2) If the test gives the maintenance message SKIN AIR OUTLET V 22HQ, do the procedure (Ref. TASK 21-26-00-810-804).
- (3) If the fault continues or if the test gives the maintenance message ISOL V 24HQ, do the procedure (Ref. TASK 21-26-00-810-807).
- (4) If the fault continues or if the test gives the maintenance message SKIN AIR INLET V 15HQ, do the procedure (Ref. TASK 21-26-00-810-803).
- (5) If the fault continues or if the test gives the maintenance message COND AIR INLET V 21HQ, do the procedure (Ref. TASK 21-26-00-810-805).
- (6) If the fault continues or if the test gives the maintenance message INLET BYPASS V 16HQ, do the procedure (Ref. TASK 21-26-00-810-806).
- (7) If the fault continues or if the test gives the maintenance message AEVC, do the procedures (Ref. TASK 21-26-00-810-813) and (Ref. TASK 21-26-00-810-801).
- B. Do the operational test given in Para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-830

Failure of the Skin Air Valve

- 1. Possible Causes
  - VALVE-SKIN AIR INLET, AVNCS VENT (15HQ)
  - VALVE-SKIN AIR OUTLET, AVNCS VENT (22HQ)
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE            | DESIGNATION   |  |
|----------------------|---|--|
| AMM 21-26-00-710-001 | Operational Check of System wis MCDU  |  |
| = . =                | Operational Check of System via MCDU  |  |
| AMM 21-26-00-710-009 | Operational Test to Read the CFDS for LAST LEG REPORT of the AEVC               |  |
| AMM 21-26-52-000-001 | Removal of the Avionics Ventilation Skin Air Inlet Valve (15HQ)                 |  |
| AMM 21-26-52-400-001 | <pre>Installation of the Avionics Ventilation Skin Air Inlet Valve (15HQ)</pre> |  |
| AMM 21-26-53-000-001 | Removal of the Skin Air Outlet-Valve (22HQ)                                     |  |
| AMM 21-26-53-400-001 | Installation of the Skin Air Outlet-Valve (22HQ)                                |  |
|                      |   |  |

### 3. Fault Confirmation

- A. Test
  - (1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).
  - (2) Read the LAST LEG REPORT (Ref. AMM TASK 21-26-00-710-009).

#### 4. Fault Isolation

- A. Possible maintenance messages (one or more of the following messages) SKIN AIR INLET V 15HQ SKIN AIR OUTLET V 22HQ
  - (1) if the test gives SKIN AIR INLET V 15HQ, replace the VALVE-SKIN AIR INLET, AVNCS VENT (15HQ) (Ref. AMM TASK 21-26-52-000-001) and (Ref. AMM TASK 21-26-52-400-001).
  - (2) if the test gives SKIN AIR OUTLET V 22HQ, replace the VALVE-SKIN AIR OUTLET, AVNCS VENT (22HQ) (Ref. AMM TASK 21-26-53-000-001) and (Ref. AMM TASK 21-26-53-400-001).
- B. Do the operational test given in Para. 3.

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### TROUBLE SHOOTING MANUAL

#### TASK 21-26-00-810-831

Closure of the Avionics Skin Air Inlet and Outlet Valves after Failure of the Cabin Pressure Controller on Ground

### 1. Possible Causes

- CONTROLLER-CABIN PRESSURE 1 (11HL)
- CONTROLLER-CABIN PRESSURE 2 (12HL)

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE  | DESIGNATION   |  |  |
|--|---|--|--|
| AMM 21-26-00-710-001<br>AMM 21-31-34-000-001<br>AMM 21-31-34-400-001 | Operational Check of System via MCDU Removal of the Cabin Pressure Controller (11HL,12HL) Installation of the Cabin Pressure Controller (11HL,12HL) |  |  |

### 3. Fault Confirmation

#### A. Test

- (1) Do an operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).
  - (a) Make sure that the avionics equipment ventilation system operates correctly.
  - (b) Make sure that the skin air inlet and outlet valves (15HQ and 22HQ) stay closed.

### 4. Fault Isolation

- A. If the test confirms the fault:
  - (1) Remove the two cabin pressure controllers (11HL and 12HL) (Ref. AMM TASK 21-31-34-000-001).
  - (2) Make sure that the skin air inlet and outlet valves (15HQ and 22HQ) open.

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- (3) Install the cabin pressure controller 1 (11HL) (Ref. AMM TASK 21-31- 34-400-001).
  - (a) If the skin air inlet and outlet valves close:
    - Replace the CONTROLLER-CABIN PRESSURE 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - $\underline{2}$  Install the cabin pressure controller 2 (12HL) (Ref. AMM TASK 21-31-34-400-001).
  - (b) If the skin air inlet and outlet valves stay open:
    - $\underline{1}$  Install the cabin pressure controller 2 (12HL) (Ref. AMM TASK 21-31-34-400-001).
    - 2 Make sure that the skin air inlet and outlet valves close.
    - 3 Replace the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
- B. Do the operational test given in Para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-835

Failure of the Mechanic Call Horn During a Smoke Detection in the Avionics Compartment on Ground

#### 1. Possible Causes

- HORN-MECH CALL (15WC)
- wiring between the relay (4WC) and the mechanic call horn (15WC)
- wiring between the pin A/X2 of the relay (4WC) and the first terminal block
- diode module 1800VD
- wiring between the pin A/D of the relay (12KS2) and the pins A/28 and A/29 of the diode module 1800VD
- RELAY-OIL LOW PRESS AND GROUND, ENG1 (12KS1)
- RELAY-OIL LOW PRESS AND GROUND, ENG2 (12KS2)
- wiring between the pin A/8 of the relay (12KS2) and the pin A/D of the relay (12KS1)
- wiring between the pin A/8 of the relay (12KS1) and the pin A/A2 of the relay (9HQ)
- RELAY-HORN CONTROL (9HQ)
- diode module 1160VD
- wiring between the pin A/A1 of the relay (9HQ) and the pin A/11 of the diode module 1160VD
- wiring between the pin A/A of the relay (8WC) and the pin A/26 of the diode module 1160VD
- RELAY-HORN SPLY RESET (8WC)
- wiring between the pin A/1 of the relay (8WC) and the first terminal block

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE  | DESIGNATION  |
|--|--|
| AMM 21-26-00-710-003<br>AMM 23-42-21-000-001<br>AMM 23-42-21-400-001<br>ASM 21-26/00<br>ASM 23-42/00 | Operational Check of Smoke Configuration Control<br>Circuit<br>Removal of the Mechanic Call Horn (15WC)<br>Installation of the Mechanic Call Horn (15WC) |

### 3. Fault Confirmation

#### A. Test

- (1) Do an operational test of the control circuit of the smoke configuration (Ref. AMM TASK 21-26-00-710-003).
  - (a) Make sure that the mechanic call horn operates correctly.

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### 4. Fault Isolation

- A. If the mechanic call horn does not operate correctly:
  - on the VENTILATION section of the panel 22VU, release the EXTRACT and the BLOWER pushbutton switches
  - on the overhead control and indicating panel 21VU, push the CALLS/MECH pushbutton switch
  - make sure that the mechanic call horn operates correctly.
  - (1) If the mechanic call horn does not operate correctly:
    - make sure that the CALLS/MECH pushbutton switch is pushed, and do a check for:
      - ground at the pin A/X2 of the horn supply relay (4WC)
      - ground at the pin (-) of the mechanic call horn (15WC)
      - . 28VDC at the pin A/A1 of the horn supply relay (4WC)
      - 28VDC at the pin (+) of the mechanic call horn (15WC)
        (Ref. ASM 23-42/00).
    - (a) If there is a ground signal and 28VDC:
      - replace the HORN-MECH CALL (15WC) (Ref. AMM TASK 23-42-21-000-001) and (Ref. AMM TASK 23-42-21-400-001).
    - (b) If there is no ground signal and 28VDC:
      - repair the wiring between the relay (4WC) and the mechanic call horn (15WC).
      - 1 If the fault continues:
        - repair the wiring between the pin A/X2 of the relay (4WC) and the first terminal block.
  - (2) If the mechanic call horn operates correctly:
    - do a check for ground at the pin A/D of the ENG2 oil low pressure and ground relay (12KS2) (Ref. ASM 21-26/00).
    - (a) If there is no ground signal:
      - replace the diode module 1800VD.
      - 1 If the fault continues:
        - repair the wiring between the pin A/D of the relay (12KS2) and the pins A/28 and A/29 of the diode module 1800VD.
    - (b) If there is a ground signal:
      - do a check for ground at the pin A/A2 of the horn control relay (9HQ) (Ref. ASM 21-26/00).
      - 1 If there is no ground signal:
        - do a check of the RELAY-OIL LOW PRESS AND GROUND, ENG1 (12KS1) and the RELAY-OIL LOW PRESS AND GROUND, ENG2 (12KS2)
        - replace them if necessary.

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- a If the fault continues:
  - repair the wiring between the pin A/8 of the relay (12KS2) and the pin A/D of the relay (12KS1).
    - If the fault continues:
    - repair the wiring between the pin A/8 of the relay (12KS1) and the pin A/A2 of the relay (9HQ).
- 2 If there is a ground signal:
  - do a check for ground at the pin A/A of the horn supply-reset relay (8WC) (Ref. ASM 21-26/00) and (Ref. ASM 23-42/00).
  - a If there is no ground signal:
    - replace the RELAY-HORN CONTROL (9HQ).
      - If the fault continues:
      - . replace the diode module 1160VD.
      - If the fault continues:
      - repair the wiring between the pin A/A1 of the relay
        (9HQ) and the pin A/11 of the diode module 1160VD.
      - If the fault continues:
      - repair the wiring between the pin A/A of the relay (8WC) and the pin A/26 of the diode module 1160VD.
  - b If there is a ground signal:
    - do a check for ground signal at the pin A/X2 of the relay (4WC) (Ref. ASM 23-42/00).
      - If there is no ground signal:
      - . replace the RELAY-HORN SPLY RESET (8WC).
      - If the fault continues:
      - . repair the wiring between the pin A/1 of the relay (8WC) and the first terminal block.
- B. Do the operational test given in Para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-836

Avionics Ventilation System Bite Survey

- 1. Possible Causes
- 2. Job Set-up Information
  - A. Referenced Information

REFERENCE DESIGNATION

AMM 21-26-00-710-001 21-26-00-991-001 Operational Check of System via MCDU Fig. 201

3. Fault Confirmation

A. Test

(1) Do the operational check of system via Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).

- 4. Fault Isolation
  - A. If the test does not give the maintenance message AEVC and if the LAST LEG REPORT (LLR) shows no related CFDS message:
    - (1) Complete the page 11 of the SIL 21-099 (Ref. Fig. 201/TASK 21-26-00-991-001) and send it back to Airbus for analysis.

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| A319A320/A321 TFU 21.26.00.016   |   |        |  |                                     |          |             |
|--|---|--------|--|-------------------------------------|----------|-------------|
| AVIONICS VENTILATION SYSTEM BITE SURVEY IN CASE LAST LEG DOES NOT SHOW ANY ASSOCIATED CFDS MESSAGE |   |        |  |                                     |          |             |
| VENT AVIONICS SYS  | FAULT O                                   | EVE    | NT DATE  | :                                   |          |             |
| VENT SKIN VALVE FA   | ULT O                                     | MSN    | N:   |                                     | OPERATOR | <del></del> |
|  | VENT BLOWER FAULT O  VENT EXTRACT FAULT O |        | GROUND-FLIGHT TRANSITION BETWEEN FAILURE EVENT AND LLR INTERROGATION  O YES O NO O UNKNOWN |                                     |          | RROGATION   |
| FLIGHT PHASE AT E  | /ENT:                                     |        |  |                                     |          |             |
| TAT °C= CLASS III O YES POST FLIGHT FATTACHED O NO ATTACHED  |   |        |  | O YES                               |          |             |
| COCKPIT CREW AC  | TION PERFO                                | RMED:  |  | •                                   |          |             |
| RESET BY O YES OVERD P/B   |   | TCD    | YES<br>NO  | ACTION CLEARED O YES THE FAULT O NO |          |             |
| MAINTEMANCE CR   | EW ACTION F                               | PERFOR | MED:   |                                     |          |             |
| (OPTIONAL)   |   |        | GREE   | N                                   | AMBER    | WHITE       |
| GND  | GND                                       |        |  |                                     |          |             |
| VENT  INLET EXTRACT  PLEASE MARK  VLV POSN  ADDITIONAL REMARKS                                     |   |        |  |                                     |          |             |
| BACK TO RESIDENT AIRBUS OFFICE OR FAX TO 33 56 193 44 38, ATTN. MISS.                              |   |        |  |                                     |          |             |
| NURCOMBE AI/SE-E22   |   |        |  |                                     |          |             |

Illustration of the Avionics Ventilation System Bite Survey Figure 201/TASK 21-26-00-991-001

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-837

Rumbling Noise in the Cockpit

- 1. Possible Causes
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE                                    | DESIGNATION   |  |  |
|--|---|--|--|
| 05-50-00-810-801                             | Identification of the Cause of In-Flight Airframe Vibrations and/or Noises  |  |  |
| AMM 05-21-20-200-001                         | Zonal Inspection of the FWD Avionics Compartment (Zones 121 and 122)  |  |  |
| AMM 05-21-20-200-003<br>AMM 05-21-20-200-005 | Zonal Inspection of the Lateral Avionics Compartment Zonal Inspection of the AFT Avionics Compartment (Zones 127 and 128) |  |  |

### 3. Fault Confirmation

A. Make sure that the identification of the cause of the noise is correct (Ref. TASK 05-50-00-810-801).

#### 4. Fault Isolation

- A. If the fault symptom is identified by the crew observation: Rumbling noise in the cockpit:
  - Do an inspection of the avionics compartment to make sure that the silencers are in correct condition (if necessary, remove the related ducts) (Ref. AMM TASK 05-21-20-200-001), (Ref. AMM TASK 05-21-20-200-005).
  - (1) If a silencer or the flanges that old it in position are not correctly attached:
    - Do an inspection downstream from the silencer flanges to find the missing honeycomb piece at the avionics filters.

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### TROUBLE SHOOTING MANUAL

TASK 21-26-00-810-838

R Skin Air Inlet and Outlet Valve Cycling on Ground

- 1. Possible Causes
  - SENSOR-SKIN TEMP, AVNCS VENT (28HQ)
  - AEVC (10HQ)

R

R

**SROS** 

- aircraft wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION   |  |  |  |
|-----------|------------------|---|--|--|--|
|           |                  |   |  |  |  |
| AMM       | 21-26-13-000-001 | Removal of the Avionics Ventilation Skin Temperature Sensor (28HQ)      |  |  |  |
| AMM       | 21-26-13-400-001 | Installation of the Avionics Ventilation Skin Temperature Sensor (28HQ) |  |  |  |
| ASM       | 21-26/01         |   |  |  |  |
| ASM       | 21-26/02         |   |  |  |  |
| ASM       | 32-62/01         |   |  |  |  |
| ASM       | 32-62/02         |   |  |  |  |
| ASM       | 73-25/09         |   |  |  |  |

- 3. Fault Confirmation
  - A. Not applicable, you cannot confirm this fault on the ground.
- 4. Fault Isolation
  - A. If the fault symptom is identified by the crew observation: Skin Air Valves cycling on ground:
    - replace the SENSOR-SKIN TEMP, AVNCS VENT (28HQ), (Ref. AMM TASK 21-26-13-000-001) and (Ref. AMM TASK 21-26-13-400-001).
    - (1) If the fault continues:
      - do a check of the aircraft wiring between the avionics-ventilation skin temperature-sensor and the AEVC (10HQ) (Ref. ASM 21-26/02).
      - (a) If the wiring is not ok: - repair it.
      - (b) If the wiring is ok:
        - do a check of the aircraft wiring between the AEVC pin AB/10A and the EIU 1 (1KS1) pin AB/1G, and between the AEVC pin AB/11A and the EIU 2 (1KS2) pin AB/1G (Ref. ASM 73-25/09).

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- 1 If the wiring is not ok: - repair it.
- 2 If the wiring is ok:

R R

R

R

- do a check of the aircraft wiring between the LGCIU 1 (5GA1) pin AB/1D and the AEVC pin AB/9C (Ref. ASM 21-26/01) and (Ref. ASM 32-62/01).
  - a If the wiring is not ok: - repair it.
  - b If the wiring is ok:
    - do a check and repair the aircraft wiring between the LGCIU 2 (5GA2) pin AB/1D and the AEVC pin AB/10C (Ref. ASM 21-26/01) and (Ref. ASM 32-62/02).

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### TROUBLE SHOOTING MANUAL

### AVIONICS EQUIPMENT GROUND COOLING - FAULT ISOLATION PROCEDURES

TASK 21-27-00-810-801

Failure of the Ground Cooling Unit

### 1. Possible Causes

- COOLING UNIT-GND (12HD)
- FILTER ELEMENT-AIR, GND COOL (2200HM)
- CNTOR-GND COOLING UNIT CTL (6HD)
- PRESS SW-GND COOL FAN (13HD)
- condenser
- C/B-VENT/GND COOL/UNIT (2HD)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE         |  | DESIGNATION   |  |  |
|-------------------|--|---|--|--|
| CMM               | 21-55-01   |   |  |  |
| AMM               | 21-26-00-710-001                                 | Operational Check of System via MCDU  |  |  |
| AMM               | 21-27-00-710-001                                 | Operational Check of Fault Warning  |  |  |
| AMM               | 21-27-11-000-001                                 | Removal of the Ground Cooling Fan Pressure Switch (13HD)                        |  |  |
| AMM               | 21-27-11-400-001                                 | <pre>Installation of the Ground Cooling Fan Presssure Switch (13HD)</pre>       |  |  |
| AMM               | 21-27-34-000-001                                 | Removal of the Ground Cooling Unit (12HD)                                       |  |  |
| AMM<br>AMM<br>ASM | 21-27-34-400-001<br>21-27-42-600-001<br>21-27/01 | Installation of the Ground Cooling Unit (12HD) Servicing of the Filter (2200HM) |  |  |

### 3. Fault Confirmation

#### A. Test

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(1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).

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### TROUBLE SHOOTING MANUAL

### 4. Fault Isolation

A. Table of the circuit breakers used in this procedure:

-----

PANEL DESIGNATION

IDENT. LOCATION

#### C/B NOT APPLICABLE

.....

- B. If the test gives the maintenance message GND COOL UNIT 12HD:
  - do a check for 28VDC at pins B/3 and B/5 of the contactor (6HD) (Ref. ASM 21-27/01).

<u>NOTE</u>: If the HP magnetic indicator on the electronic controller of the ground cooling unit shows red (fault indication):

- the ground cooling unit must stay off for a minimum of 20 minutes before you reset it.
   If the GND COOL FAULT warning comes into view on the lower ECAM DU (and if the HP magnetic indicator shows red) the ground cooling unit is not defective if:
- the ground cooling unit fan is not defective
- the Outside Air Temperature (OAT) is more than 48 deg.C (118.40 deg.F).

NOTE: For the ground cooling unit P/N 786A, if you do a reset of the magnetic indicators on the electronic controller with the RESET pushbutton switch, the ground cooling unit will start again if there is no longer the initial fault condition.

For the ground cooling unit P/N 786B, if you do a general reset with the GND COOL pushbutton switch in the cockpit, the ground cooling unit will start again if there is no longer the initial fault condition.

But we recommend that you do a reset of the magnetic indicators on the ground cooling unit electronic controller with the RESET pushbutton switch to remove the indication of the initial fault which stays latched on the ground cooling unit electronic controller.

This is to make sure that if the fault occurs again, the indications on the magnetic indicators are correct.

- (1) If there is 28VDC:
  - do a check for 115VAC at pins A, B, C of the ground cooling unit (12HD).
  - (a) If there is 115VAC:
    - replace the COOLING UNIT-GND (12HD) (Ref. AMM TASK 21-27-34-000-001) and (Ref. AMM TASK 21-27-34-400-001).
    - 1 If the fault continues:
      - replace the FILTER ELEMENT-AIR, GND COOL (2200HM) (Ref. AMM TASK 21-27-42-600-001).

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- 2 If the fault continues:
  - clean the condenser of the COOLING UNIT-GND (12HD). Refer to (Ref. CMM 21-55-01).
- (b) If there is no 115VAC:
  - do a check for 115VAC at pins A2, B2, C2 of the circuit breaker (2HD):
  - 1 If there is no 115VAC:
    - replace the C/B-VENT/GND COOL/UNIT (2HD).
  - 2 If there is 115VAC:
    - replace the CNTOR-GND COOLING UNIT CTL (6HD)
    - a If the fault continues:
      - do a check and repair the wiring from the circuit breaker (2HD) to the ground cooling unit (12HD) (Ref. ASM 21-27/01).
- (2) If there is no 28VDC:
  - replace the COOLING UNIT-GND (12HD) (Ref. AMM TASK 21-27-34-000-001) and (Ref. AMM TASK 21-27-34-400-001).
  - (a) If the fault continues:
    - replace the PRESS SW-GND COOL FAN (13HD) (Ref. AMM TASK 21-27-11-000-001) and (Ref. AMM TASK 21-27-11-400-001).
  - (b) If the fault continues:
    - do a check and repair the wiring:
      - from pin B/3 of the contactor (6HD) to pin A/C1 of the VENTILATION/GND COOL pushbutton switch (4HD)
      - . from pin B/5 of the contactor (6HD) to pin B/H of the ground cooling unit (12HD)
      - . from pin A/B of the pressure switch (13HD) to pin B/J of the ground cooling unit (12HD)  $\,$
      - . from pin A/C of the pressure switch (13HD) to the first terminal block.
- C. Do the operational test of the avionics equipment ground cooling fault warning (Ref. AMM TASK 21-27-00-710-001).

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EFF: ALL

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### TROUBLE SHOOTING MANUAL

TASK 21-27-00-810-803

Failure of the Ground Cooling Fan

- 1. Possible Causes
  - FAN-GND COOL (8HD)
  - FILTER ELEMENT-AIR, GND COOL (2200HM)
  - COOLING UNIT-GND (12HD)
  - C/B-VENT/GND COOL/FAN (1HD)
  - CNTOR-GND COOL FAN CTL (5HD)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE  | DESIGNATION   |  |  |
|--|---|--|--|
| AMM 21-26-00-710-001<br>AMM 21-27-34-000-001<br>AMM 21-27-34-400-001<br>AMM 21-27-42-600-001<br>AMM 21-27-51-000-001<br>AMM 21-27-51-400-001 | Operational Check of System via MCDU Removal of the Ground Cooling Unit (12HD) Installation of the Ground Cooling Unit (12HD) Servicing of the Filter (2200HM) Removal of the Ground Cooling Fan (8HD) Installation of the Ground Cooling Fan (8HD) |  |  |
| ASM 21-27/01   |   |  |  |

- 3. Fault Confirmation
  - A. Test
    - (1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).
- 4. Fault Isolation
  - A. Table of the circuit breakers used in this procedure:

PANEL DESIGNATION IDENT. LOCATION

C/B NOT APPLICABLE

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- B. If the test gives the maintenance message GROUPE FAN O8HD:
  - do a check for 28VDC at pins X and Z of the contactor (5HD) (Ref. ASM 21-27/01).
  - (1) If there is 28VDC:
    - do a check for 115VAC at pins J, K, L of the fan (8HD).
    - (a) If there is 115VAC:
      - on the ground cooling fan, make sure that the TEMP SENSOR light does not come on.
      - 1 If the TEMP SENSOR light comes on:
        - replace the FAN-GND COOL (8HD) (Ref. AMM TASK 21-27-51-000-001) and (Ref. AMM TASK 21-27-51-400-001).
      - 2 If the TEMP SENSOR light does not come on but the blower fan does not operate:
        - replace the FAN-GND COOL (8HD) (Ref. AMM TASK 21-27-51-000-001) and (Ref. AMM TASK 21-27-51-400-001).
      - <u>3</u> If the TEMP SENSOR light does not come on but the blower fan operates:
        - do the servicing of the FILTER ELEMENT-AIR, GND COOL (2200HM) or replace it (Ref. AMM TASK 21-27-42-600-001).
        - a If the fault continues:
          - remove the COOLING UNIT-GND (12HD) (Ref. AMM TASK 21-27-34-000-001) and do a check for contamination of the condenser of the ground cooling unit.
            - . If there is contamination:
          - clean the condenser of the ground cooling unit.
            - . If there is no contamination:
          - replace the COOLING UNIT-GND (12HD) (Ref. AMM TASK 21-27-34-400-001).
    - (b) If there is no 115VAC:
      - do a check for 115VAC at pins A2, B2, C2 of the circuit breaker (1HD):
      - 1 If there is no 115VAC:
        - replace the C/B-VENT/GND COOL/FAN (1HD).
      - 2 If there is 115VAC:
        - replace the CNTOR-GND COOL FAN CTL (5HD).
        - a If the fault continues:
          - do a check and repair the wiring from the circuit breaker (1HD) to the fan (8HD) (Ref. ASM 21-27/01).

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- (2) If there is no 28VDC:
  - do a check and repair the wiring:
    - . from pin A/D of the fan (8HD) to pin A/J of the skin air-outlet valve (10HD)
    - from pin A/G of the valve (10HD) to the first terminal block
    - from pin A/E of the fan (8HD) to pin A/B of the skin air-inlet valve (11HD)
    - . from pin A/D1 of the VENTILATION/GND COOL pushbutton switch (4HD) to pin A/A of the valve (11HD).
- C. Do the test given in Para. 3.

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TASK 21-27-00-810-809

Failure of the Ground Cooling Unit

### 1. Possible Causes

- COOLING UNIT-GND (12HD)
- VALVE-SKIN AIR OUTLET, GND COOL (10HD)
- VALVE-SKIN AIR INLET, GND COOL (11HD)
- DEMISTER-AVNCS VENT FILTER (2080HM)
- evaporator
- FAN-GND COOL (8HD)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
|           |                  |   |
| CMM       | 21-55-01         |   |
| AMM       | 21-26-00-710-001 | Operational Check of System via MCDU  |
| AMM       | 21-26-43-000-001 | Removal of the Demister Filter (2080HM)                                       |
| AMM       | 21-26-43-400-001 | Installation of the Demister Filter (2080HM)                                  |
| AMM       | 21-27-00-710-001 | Operational Check of Fault Warning  |
| AMM       | 21-27-34-000-001 | Removal of the Ground Cooling Unit (12HD)                                     |
| AMM       | 21-27-34-400-001 | Installation of the Ground Cooling Unit (12HD)                                |
| AMM       | 21-27-52-000-001 | Removal of the Ground Cooling Skin Air Inlet Valve (11HD)                     |
| AMM       | 21-27-52-400-001 | Installation of the Ground Cooling Skin Air Inlet Valve (11HD)                |
| AMM       | 21-27-53-000-001 | Removal of the Ground Cooling Skin Air Outlet Valve (10HD)                    |
| AMM       | 21-27-53-400-001 | Installation of the Ground Cooling Skin Air Outlet Valve (10HD)               |
| AMM       | 24-41-00-861-002 | Energize the Aircraft Electrical Circuits from the External Power             |
| AMM       | 24-41-00-862-002 | De-energize the Aircraft Electrical Circuits Supplied from the External Power |

### 3. Fault Confirmation

- A. Job Set-up
  - (1) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
  - (2) On the panel 22VU, make sure that the GND COOL pushbutton switch is pushed (the OFF legend is on).

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#### B. Test

(1) Do the operational test of the avionics equipment ventilation from the Multipurpose Control and Display Unit (MCDU) (Ref. AMM TASK 21-26-00-710-001).

NOTE : If the external temperature is cold, let the avionics compartment become warn.

- (2) When the avionics compartment temperature is more than 24 deg., release the GND COOL pushbutton switch (the ON legend comes on).
- (3) On the ground cool unit, make sure that the LP magnetic indicator is red.

#### 4. Fault Isolation

A. If the VENT GND COOL FAULT warning comes into view on the upper ECAM DU and if the test gives no maintenance message:

<u>NOTE</u>: If the HP magnetic indicator on the electronic controller of the ground cooling unit shows red (fault indication):

the ground cooling unit must stay off for a minimum of 20 minutes before you reset it.

If the GND COOL FAULT warning comes into view on the lower ECAM DU (and if the HP magnetic indicator shows red) the ground cooling unit is not defective if:

- the ground cooling unit fan is not defective
- the Outside Air Temperature (OAT) is more than 48 deg. C (118.4 deg. F).
- <u>NOTE</u>: For the ground cooling unit P/N 786A, if you do a reset of the magnetic indicators on the electronic controller with the RESET pushbutton switch, the ground cooling unit will start again if there is no longer the initial fault condition.

For the ground cooling unit P/N 786B, if you do a general reset with the GND COOL pushbutton switch in the cockpit, the ground cooling unit will start again if there is no longer the initial fault condition.

But we recommend that you do a reset of the magnetic indicators on the ground cooling unit electronic controller with the RESET pushbutton switch to remove the indication of the initial fault which stays latched on the ground cooling unit electronic controller.

This is to make sure that if the fault occurs again, the indications on the magnetic indicators are correct.

- replace the DEMISTER-AVNCS VENT FILTER (2080HM) (Ref. AMM TASK 21-26-43-400-001) and (Ref. AMM TASK 21-26-43-000-001).

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- (1) If the fault continues:
  - clean the evaporator of the COOLING UNIT-GND (12HD) (Ref. CMM 21-55-01).
- (2) If the TEMP SENSOR magnetic indicator shows red:
  - do a check of the defective evaporator
  - do a check of the FAN-GND COOL (8HD)
- (3) If the fault continues or if the THERM SWITCH magnetic indicator shows red:
  - replace the COOLING UNIT-GND (12HD) (Ref. AMM TASK 21-27-34-000-001) and (Ref. AMM TASK 21-27-34-400-001).
- B. If the test gives the maintenance message VALVES 10HD OR 11HD:
  - do the operational test of the avionics equipment ground cooling fault warning (Ref. AMM TASK 21-27-00-710-001).
  - (1) If there is a failure on the valve (10HD):
    - replace the VALVE-SKIN AIR OUTLET, GND COOL (10HD) (Ref. AMM TASK 21-27-53-000-001) and (Ref. AMM TASK 21-27-53-400-001).
  - (2) If there is a failure on the valve (11HD):
    - replace the VALVE-SKIN AIR INLET, GND COOL (11HD) (Ref. AMM TASK 21-27-52-000-001) and (Ref. AMM TASK 21-27-52-400-001).
  - (3) If the fault continues:
    - do a check and repair the wiring
      - . from pin A/A of the valve (10HD) to pin 19 of the diode module (1178VD)
      - ${\tt .}$  from pin A/C of the valve (10HD) to pin 17 of the diode module (1178VD)
      - . from pin A/U of the valve (10HD) to the first terminal block
      - $\blacksquare$  from pin A/A of the valve (11HD) to pin 20 of the diode module (1178VD)
      - from pin A/C of the valve (11HD) to pin 16 of the diode module (1178VD)
      - . from pin A/U of the valve (11HD) to the first terminal block.
- C. Make sure that the VENT GND COOL FAULT warning does not come into view on the upper ECAM DU.
- 5. Close-up
  - A. De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

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EFF: ALL

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### TROUBLE SHOOTING MANUAL

### CARGO COMPARTMENT VENTILATION - FAULT ISOLATION PROCEDURES

R \*\*ON A/C 201-225, 227-227, 229-299, 426-499, 503-549, 551-599,

TASK 21-28-00-810-802

AFT Cargo-Compartment Isolation Valve(s) Fault

### 1. Possible Causes

- VALVE-ISOLATION, AFT CARGO COMPT (33HN)
- CONT-CARGO VENTILATION (10HN)
- VALVE-ISOLATION, AFT CARGO COMPT (34HN)
- BOARD-ANN LT TEST & INTFC (8LP)
- wiring
- PUSHBUTTON SWITCH-CARGO SMOKE/TEST (13WH)
- PUSHBUTTON SWITCH-CARGO VENT/AFT ISOL VALVE (36HN)

#### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION   |  |
|-----------|------------------|---|--|
|           | 24 24 52 422 224 |   |  |
| AMM       | 21-26-52-400-001 | <pre>Installation of the Avionics Ventilation Skin Air Inlet Valve (15HQ)</pre>                               |  |
| AMM       | 21-28-00-710-006 | Operational Test of the AFT Cargo-Compartment Ventilation-System  |  |
| AMM       | 21-28-34-000-001 | Removal of the Ventilation Controller (10HN)  |  |
| AMM       | 21-28-34-400-001 | Installation of the Ventilation Controller (10HN)   |  |
| AMM       | 21-28-52-000-001 | Removal of the AFT Cargo-Compartment Ventilation Isolation-Valves (33HN,34HN)                                 |  |
| AMM       | 21-28-52-400-001 | Installation of the AFT Cargo-Compartment Ventilation Isolation-Valves (33HN,34HN)                            |  |
| AMM       | 26-17-00-710-001 | Operational Test of the Lavatory Smoke-Detection System   |  |
| AMM       | 32-69-00-740-001 | BITE Check Landing Gear Control Interface Unit (LGCIU) using MCDU to Ensure that Continuous BITE is Operative |  |
| ASM       | 21-28/02         | ·   |  |

### 3. Fault Confirmation

A. Do the operational test of the AFT cargo-compartment ventilation-system (Ref. AMM TASK 21-28-00-710-006).

NOTE: You must visually monitor the inlet and outlet isolation valves in the AFT cargo compartment during the test.

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### 4. Fault Isolation

- A. If the isolation valve (33HN) does not operate and the FAULT legend on the pushbutton switch AFT ISOL VALVE, which is installed on the panel 22VU, comes on:
  - do a check of the valve for damage (Ref. AMM TASK 21-28-52-000-001) and (Ref. AMM TASK 21-26-52-400-001).
  - (1) If the valve is damaged:
    - replace the VALVE-ISOLATION, AFT CARGO COMPT (33HN) (referred to as VALVE (33HN)) (Ref. AMM TASK 21-28-52-000-001) and (Ref. AMM TASK 21-28-52-400-001).
  - (2) If the fault continues:
    - replace the CONT-CARGO VENTILATION (10HN) (Ref. AMM TASK 21-28-34-000-001) and (Ref. AMM TASK 21-28-34-400-001).
  - (3) If the fault continues:
    - do a check and repair the wiring between:

```
VALVE (33HN) connector A/E and VC (10HN) connector B/X, VALVE (33HN) connector A/B and VC (10HN) connector B/Y, VALVE (33HN) connector A/A and VC (10HN) connector B/<B, VALVE (33HN) connector A/D and VC (10HN) connector B/<A, VALVE (33HN) connector A/F and GND, VALVE (33HN) connector A/C and GND (Ref. ASM 21-28/02).
```

- B. If the isolation valve (34HN) does not operate and the FAULT legend on the pushbutton switch AFT ISOL VALVE, which is installed on the panel 22VU, comes on:
  - do a check of the valve for damage (Ref. AMM TASK 21-28-52-000-001) and (Ref. AMM TASK 21-26-52-400-001).
  - (1) If the valve is damaged:
    - replace the VALVE-ISOLATION, AFT CARGO COMPT (34HN) (referred to as VALVE (34HN)) (Ref. AMM TASK 21-28-52-000-001) and (Ref. AMM TASK 21-28-52-400-001).
  - (2) If the fault continues:
    - replace the CONT-CARGO VENTILATION (10HN) (Ref. AMM TASK 21-28-34-000-001) and (Ref. AMM TASK 21-28-34-400-001).
  - (3) If the fault continues:
    - do a check and repair the wiring between:
       VALVE (34HN) connector A/E and VC (10HN) connector B/<C,</li>
       VALVE (34HN) connector A/B and VC (10HN) connector B/<D,</li>

VALVE (34HN) connector A/A and VC (10HN) connector B/<F,

VALVE (34HN) connector A/D and VC (10HN) connector B/<E,

VALVE (34HN) connector A/F and GND,

VALVE (34HN) connector A/C and GND (Ref. ASM 21-28/02).

EFF: 201-225, 227-227, 229-299, 426-499, 503-549, 551-599,

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- C. If the two isolation valves (33HN) and (34HN) do not operate but the FAULT legend on the pushbutton switch AFT ISOL VALVE, which is installed on the panel 22VU, does not come on:
  - do a check for a ground signal at the VC (10HN) connector B/H (Ref. ASM 21-28/02).
  - (1) If there is a ground signal:
    - do a check of the PUSHBUTTON SWITCH-CARGO SMOKE/TEST (13WH) and replace it if necessary (Ref. ASM 21-28/02).
    - (a) If the fault continues:
      - do a check and repair the wiring if necessary between:
         VC (10HN) connector B/H and SW (13WH) connector A/11,
         SW (13WH) connector A12 and GND (Ref. ASM 21-28/02).
  - (2) If the fault continues:
    - do a check for a ground signal at the VC (10HN) connector B/K (Ref. ASM 21-28/02).
    - (a) If there is a ground signal:
      - do the operational test of the lavatory smoke-detection sytem (Ref. AMM TASK 26-17-00-710-001).
      - 1 If the test gives a different maintenance message, refer to the Fault Symptom List.
    - (b) If the fault continues:
      - do a check and repair the wiring if necessary between:
         VC (10HN) connector B/K and SDCU (10WQ) connector A/3C,
         SDCU (10WQ) connector A/3D and GND (Ref. ASM 21-28/02).
  - (3) If the fault continues:
    - do a check for a ground signal at the VC (10HN) connector B/T (Ref. ASM 21-28/02).
    - (a) If there is a ground signal:
      - do a check of the PUSHBUTTON SWITCH-CARGO VENT/AFT ISOL VALVE (36HN) and replace it if necessary (Ref. ASM 21-28/02).
    - (b) If the fault continues:
      - do a check and repair the wiring if necessary between:
         VC (10HN) connector B/T and SW (36HN) connector A/A2,
         SW (36HN) connector A/A3 and GND (Ref. ASM 21-28/02).
  - (4) If the fault continues:
    - replace the CONT-CARGO VENTILATION (10HN) (Ref. AMM TASK 21-28-34-000-001) and (Ref. AMM TASK 21-28-34-400-001).

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- (5) If the fault continues:
  - do a check and repair the wiring between:
  - VC (10HN) connector B/L and CB (31HN),
  - VC (10HN) connector B/M and GND,
  - VC (10HN) connector B/N and GND,
  - VC (10HN) connector B/Z and GND (Ref. ASM 21-28/02).
- D. If the two isolation valves (33HN) and (34HN) operate but the FAULT legend on the pushbutton switch AFT ISOL VALVE, which is installed on the panel 22VU, comes on:
  - do the bite test of the landing gear (Ref. AMM TASK 32-69-00-740-001).
  - (1) If the test gives a different maintenance message, refer to the Fault Symptom List.
  - (2) If the fault continues:
    - do a check of the BOARD-ANN LT TEST & INTFC (8LP) and replace it if necessary (Ref. ASM 21-28/02).
  - (3) If the fault continues:
    - replace the CONT-CARGO VENTILATION (10HN) (Ref. AMM TASK 21-28-34-000-001) and (Ref. AMM TASK 21-28-34-400-001).
  - (4) If the fault continues:
    - do a check and repair the wiring between: VC (10HN) connector B/S and RELAY (8LP) connector A/14, RELAY (8LP) connector A/15 and CB (31HN), RELAY (8LP) connector A/13 and SW (36HN) connector A/7, RELAY (8LP) connector A/41 and GND (Ref. ASM 21-28/02).
- E. Do the test as given in the Para. 3.A.

#### 5. Close-up

A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

```
R **ON A/C ALL
  TASK 21-28-00-810-803
  FWD Cargo-Compartment Fan Fault
  1. Possible Causes
R
     - CONT-ZONE TEMPERATURE (8HK)
R
     - wiring
  2. Job Set-up Information
     A. Referenced Information
R
R
  ______
  REFERENCE
                           DESIGNATION
R
  AMM 21-61-00-710-001
                           Operational Test of the Pack Temperature-Control
                           System
  AMM
       21-63-34-000-001
                           Removal of the Zone Controller (8HK)
R
  AMM 21-63-34-400-001
                           Installation of the Zone Controller (8HK)
  ASM 21-63/01
R
  3. Fault Confirmation
R
     A. Test
        NOTE: This fault isolation procedure is applicable although the FWD
R
R
               cargo-compartment ventilation system is not installed.
        (1) Do the operational test of the pack temperature-control system
R
            (Ref. AMM TASK 21-61-00-710-001).
R
R
  4. Fault Isolation
     A. If the test gives the maintenance message FWD CARGO FAN OR SPLY:
R
        - replace the CONT-ZONE TEMPERATURE (8HK)
R
          (Ref. AMM TASK 21-63-34-000-001) and
R
          (Ref. AMM TASK 21-63-34-400-001).
        (1) If the fault continues:
            (a) Remove the CONT-ZONE TEMPERATURE (8HK).
R
            (b) Do a check and repair the wiring between:
R
                - connector (8HK/AB) pin 1A and GND
R
                  (Ref. ASM 21-63/01).
R
            (c) Install the CONT-ZONE TEMPERATURE (8HK).
R
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  EFF:
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           ALL
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- R B. Do the test as given in the Para. 3.A.
- R 5. Close-up
- R A. Put the aircraft back to its initial configuration.

R EFF : ALL
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### TROUBLE SHOOTING MANUAL

TASK 21-28-00-810-805

AFT Cargo-Compartment Fan Fault

- 1. Possible Causes
  - FAN-EXTRACTION, AFT CARGO COMPT (35HN)
  - CONT-ZONE TEMPERATURE (8HK)
  - CONT-CARGO VENTILATION (10HN)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
| AMM       | 21-28-34-000-001 | Removal of the Ventilation Controller (10HN)   |
| AMM       | 21-28-34-400-001 | Installation of the Ventilation Controller (10HN)                                      |
| AMM       | 21-28-54-000-001 | Removal of the Aft Cargo-Compartment Ventilation Extraction-Fan (35HN)                 |
| AMM       | 21-28-54-400-001 | <pre>Installation of the Aft Cargo-Compartment Ventilation Extraction-Fan (35HN)</pre> |
| AMM       | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System                                |
| AMM       | 21-63-34-000-001 | Removal of the Zone Controller (8HK)   |
| AMM       | 21-63-34-400-001 | Installation of the Zone Controller (8HK)  |
| ASM       | 21-28/02         |  |
| ASM       | 21-61/01         |  |
| ASM       | 21-63/01         |  |

- 3. Fault Confirmation
- R \*\*ON A/C 201-225, 227-227, 229-299, 426-499, 503-549, 551-599,
  - A. Test
    - (1) Make sure that the CB's 30HN and 31HN are closed.
    - (2) Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

\*\*ON A/C 701-749,

A. Test

NOTE : This fault isolation procedure is applicable although the AFT cargo-compartment ventilation system is not installed.

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(1) Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

\*\*ON A/C ALL

- 4. Fault Isolation
- R \*\*ON A/C 201-225, 227-227, 229-299, 426-499, 503-549, 551-599,
  - A. If the test gives the maintenance message AFT CARGO FAN OR SPLY: - replace the FAN-EXTRACTION, AFT CARGO COMPT (35HN) (Ref. AMM TASK 21-28-54-000-001) and, (Ref. AMM TASK 21-28-54-400-001).
    - (1) If the fault continues:
      - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and, (Ref. AMM TASK 21-63-34-400-001).
    - (2) If the fault continues:
      - (a) Do a check and repair the wiring (Ref. ASM 21-63/01) from:
         the ZC (8HK) to the VC (10HN).
    - (3) If the fault continues:
      - replace the CONT-CARGO VENTILATION (10HN) (Ref. AMM TASK 21-28-34-000-001) and, (Ref. AMM TASK 21-28-34-400-001).
    - (4) If the fault continues:
      - do a check and repair the wiring (Ref. ASM 21-28/02) and (Ref. ASM 21-61/01) from:
      - the VC (10HN) to the ZC (8HK),
      - the VC (10HN) to the FAN (35HN),
      - the VC (10HN) to ground,
      - the VC (10HN) to the CB (30HN),
      - the VC (10HN) to the CB (31HN) and,
      - the FAN (35HN) to ground.

\*\*ON A/C 701-749,

- B. If the test gives the maintenance message AFT CARGO FAN OR SPLY or AFT CARGO FANS OR SPLY:
  - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and, (Ref. AMM TASK 21-63-34-400-001).
  - (1) If the fault continues:
    - (a) Do a check and repair the wiring (Ref. ASM 21-63/01) from: the ZC (8HK) to the VC (10HN).

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R \*\*ON A/C ALL

C. Do the test as given in the Para. 3.A.

R

5. <u>Close-up</u>

R

A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

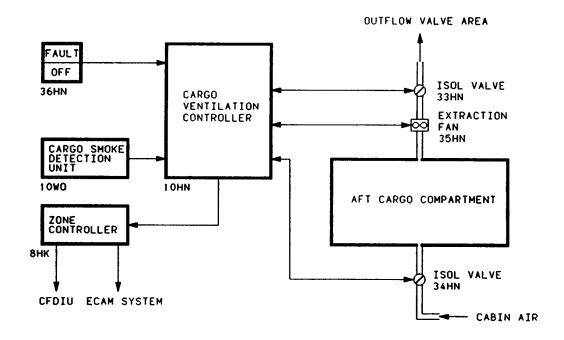
CARGO COMPARTMENT VENTILATION - TASK SUPPORTING DATA

EFF: 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, SROS

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AFT Cargo Compartment Ventilation - Block Diagram Figure 301

R EFF: 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, SROS

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### TROUBLE SHOOTING MANUAL

### PRESSURE CONTROL AND MONITORING - FAULT ISOLATION PROCEDURES

TASK 21-31-00-810-803

Fault Codes - Fault Isolation Procedure Index

- 1. Possible Causes
- 2. Job Set-up Information
  - A. Referenced Information

|   | REFERENCE        | DESIGNATION  |
|---|------------------|--|
|   | 21-31-00-810-801 | Cabin Pressure Controller 1 Fault                            |
|   | 21-31-00-810-804 | Outflow Valve Auto Motor 1 or 2 Fault                        |
|   | 21-31-00-810-805 | Outflow Valve Feedback Assembly Fault (CPC 1)                |
|   | 21-31-00-810-806 | Cabin Pressure Controller 2 Fault                            |
|   | 21-31-00-810-807 | Outflow Valve Fault (05), (11), (24), (25), (26), (29), (60) |
|   | 21-31-00-810-826 | Outflow Valve Feedback Assembly Fault (CPC 2)                |
| R | 21-31-00-810-828 | Outflow Valve Fault (33) (81)                                |
|   | 21-31-00-810-829 | Outflow Valve Electronic Module 1 Fault (04)                 |
|   | 21-31-00-810-830 | Outflow Valve Electronic Module 2 Fault (04)                 |
|   | 21-31-00-810-831 | Outflow Valve Electronic Module 1 Fault (52)                 |
|   | 21-31-00-810-832 | Outflow Valve Electronic Module 2 Fault (52)                 |
|   | 21-31-00-810-833 | Outflow Valve Electronic Module 1 Fault (64), (65),          |
|   |                  | (66), (67), (72), (76), (83), (87)                           |
|   | 21-31-00-810-834 | Outflow Valve Electronic Module 2 Fault (64), (65),          |
|   |                  | (66), (67), (72), (76), (83), (87)                           |
|   | 21-31-00-810-835 | Outflow Valve Electronic Module 1 Fault (77)                 |
|   | 21-31-00-810-836 | Outflow Valve Electronic Module 2 Fault (77)                 |
|   | 21-31-00-810-837 | Cabin Pressure Controller 1 Fault (51)                       |
|   | 21-31-00-810-838 | Cabin Pressure Controller 2 Fault (51)                       |
|   | 21-31-00-810-839 | Cabin Pressure Controller 1 Fault (59)                       |
|   | 21-31-00-810-840 | Cabin Pressure Controller 2 Fault (59)                       |

- 3. Fault Confirmation
  - A. Read-out
    - (1) For Class 1 Faults
      - (a) Do a read-out of the LAST LEG and the PREVIOUS LEG REPORTS of the cabin pressure control system.

NOTE: If a fault is detected, these reports show fault codes for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

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- (2) For Class 3 Faults
  - (a) Do a read-out of the CLASS 3 FAULTS of the cabin pressure control system.

NOTE: If a fault is detected, these reports show fault codes for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

(3) From the fault code/s given in the reports refer to the list which follows for the applicable fault isolation procedure.

#### 4. Fault Isolation

A. CFDS Message, Fault Code and Task Reference List

```
(1) Fault Codes (00), (01), (08), (12), (13), (18), (22), (34), (36),
             (37), (38), (39), (40), (41), (45), (46), (47), (49), (53), (59),
R
R
             (61).
             (a) For the CFDS messages and associated fault codes which follow,
                 - PRESS CONTROLLER 1 (00),
                 - PRESS CONTROLLER 1 (01),
                 - PRESS CONTROLLER 1 (08),
                 - PRESS CONTROLLER 1 (12),
                 - PRESS CONTROLLER 1 (13),
                 - PRESS CONTROLLER 1 (18),
                 - PRESS CONTROLLER 1 (22),
R
                 - PRESS CONTROLLER 1 (34),
                 - PRESS CONTROLLER 1 (36),
                 - PRESS CONTROLLER 1 (37),
                 - PRESS CONTROLLER 1 (38),
                 - PRESS CONTROLLER 1 (39),
                 - PRESS CONTROLLER 1 (40),
                 - PRESS CONTROLLER 1 (41),
                 - PRESS CONTROLLER 1 (45),
                 - PRESS CONTROLLER 1 (46),
                 - PRESS CONTROLLER 1 (47),
                 - PRESS CONTROLLER 1 (49),
                 - PRESS CONTROLLER 1 (53),
                 - PRESS CONTROLLER 1 (58),
                 - PRESS CONTROLLER 1 (61),
                   refer to (Ref. TASK 21-31-00-810-801).
                 - PRESS CONTROLLER 2 (00),
                 - PRESS CONTROLLER 2 (01),
                 - PRESS CONTROLLER 2 (08),
                 - PRESS CONTROLLER 2 (12),
                 - PRESS CONTROLLER 2 (13),
                 - PRESS CONTROLLER 2 (18),
                 - PRESS CONTROLLER 2 (22),
R
                 - PRESS CONTROLLER 2 (34),
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```
- PRESS CONTROLLER 2 (36),
        - PRESS CONTROLLER 2 (37),
        - PRESS CONTROLLER 2 (38),
        - PRESS CONTROLLER 2 (39),
        - PRESS CONTROLLER 2 (40),
        - PRESS CONTROLLER 2 (41),
        - PRESS CONTROLLER 2 (45),
        - PRESS CONTROLLER 2 (46),
        - PRESS CONTROLLER 2 (47),
        - PRESS CONTROLLER 2 (49),
        - PRESS CONTROLLER 2 (53),
        - PRESS CONTROLLER 2 (58),
        - PRESS CONTROLLER 2 (61),
          refer to (Ref. TASK 21-31-00-810-806).
(2) Fault Code (04)
    (a) For the CFDS message and associated fault code which follows,
        - OUTFLOW VALVE ELEC 1 (04),
          refer to (Ref. TASK 21-31-00-810-829).
        - OUTFLOW VALVE ELEC 2 (04),
          refer to (Ref. TASK 21-31-00-810-830).
(3) Fault Codes (05), (11), (24), (25), (26), (29), (60).
    (a) For the CFDS message and associated fault code which follows,
        - OUTFLOW VALVE (05),
        - OUTFLOW VALVE (11),
        - OUTFLOW VALVE (24),
        - OUTFLOW VALVE (25),
        - OUTFLOW VALVE (26),
        - OUTFLOW VALVE (29),
        - OUTFLOW VALVE (60),
          refer to (Ref. TASK 21-31-00-810-807).
(4) Fault Codes (33), (81)
    (a) For the CFDS messages and associated fault codes which follow,
        - OUTFLOW VALVE (33),
        - OUTFLOW VALVE (81),
          refer to (Ref. TASK 21-31-00-810-828).
(5) Fault Code (51)
    (a) For the CFDS messages and associated fault code which follows,
        - PRESS CONTROLLER 1 (51),
          refer to (Ref. TASK 21-31-00-810-837).
        - PRESS CONTROLLER 2 (51),
          refer to (Ref. TASK 21-31-00-810-838).
```

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```
R
         (6) Fault Code (52)
             (a) For the CFDS messages and associated fault code which follows,
                 - OUTFLOW VALVE ELEC 1 (52),
                   refer to (Ref. TASK 21-31-00-810-831).
                 - OUTFLOW VALVE ELEC 2 (52),
                   refer to (Ref. TASK 21-31-00-810-832).
         (7) Fault Code (59)
R
             (a) For the CFDS messages and associated fault code which follows,
                 - PRESS CONTROLLER 1 (59),
                   refer to (Ref. TASK 21-31-00-810-839).
                 - PRESS CONTROLLER 2 (59),
                   refer to (Ref. TASK 21-31-00-810-840).
R
         (8) Fault Codes (64), (65), (66), (67), (72), (76), (83) and (87)
             (a) For the CFDS messages and associated fault codes which follow,
                 - OUTFLOW VALVE ELEC 1 (64),
                 - OUTFLOW VALVE ELEC 1 (65),
                 - OUTFLOW VALVE ELEC 1 (66),
                 - OUTFLOW VALVE ELEC 1 (67),
                 - OUTFLOW VALVE ELEC 1 (72),
                 - OUTFLOW VALVE ELEC 1 (76),
                 - OUTFLOW VALVE ELEC 1 (83),
                 - OUTFLOW VALVE ELEC 1 (87),
                   refer to (Ref. TASK 21-31-00-810-833).
             (b) For the CFDS messages and associated fault codes which follow,
                 - OUTFLOW VALVE ELEC 2 (64),
                 - OUTFLOW VALVE ELEC 2 (65),
                 - OUTFLOW VALVE ELEC 2 (66),
                 - OUTFLOW VALVE ELEC 2 (67),
                 - OUTFLOW VALVE ELEC 2 (72),
                 - OUTFLOW VALVE ELEC 2 (76),
                 - OUTFLOW VALVE ELEC 2 (83),
                 - OUTFLOW VALVE ELEC 2 (87),
                   refer to (Ref. TASK 21-31-00-810-834).
         (9) Fault Code (77)
R
             (a) For the CFDS messages and associated fault code which follows,
                 - OUTFLOW VALVE ELEC 1 (77),
                   refer to (Ref. TASK 21-31-00-810-835).
                 - OUTFLOW VALVE ELEC 2 (77),
                   refer to (Ref. TASK 21-31-00-810-836).
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- (10) Fault Code (78)
  - (a) For the CFDS messages and associated fault code which follows,
    - OUTFLOW VALVE ELEC 1 (78) or,
    - OUTFL.V FEEDB ASSY 1 (78), refer to (Ref. TASK 21-31-00-810-805).
    - OUTFLOW VALVE ELEC 2 (78) or,
    - OUTFL.V FEEDB ASSY 2 (78), refer to (Ref. TASK 21-31-00-810-826).
- (11) Fault Code (88)
  - (a) For the CFDS messages and associated fault code which follows,
    - OUTFL.V AUTO MOTOR 1 (88),
    - OUTFL.V AUTO MOTOR 2 (88), refer to (Ref. TASK 21-31-00-810-804).

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#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-801

Cabin Pressure Controller 1 Fault

- 1. Possible Causes
  - CONTROLLER-CABIN PRESSURE 1 (11HL)
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE                                    | DESIGNATION  |  |  |  |
|--|--|--|--|--|
| AMM 21-31-00-710-002                         | Operational Test of the Pressure Control and Monitoring  |  |  |  |
| AMM 21-31-34-000-001<br>AMM 21-31-34-400-001 | Removal of the Cabin Pressure Controller (11HL,12HL) Installation of the Cabin Pressure Controller (11HL,12HL) |  |  |  |

- 3. Fault Confirmation
  - A. Test
    - (1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).
- 4. Fault Isolation
  - A. If one or more of these reports, LAST LEG REPORT, PREVIOUS LEG REPORT and CLASS 3 REPORT and/or the test gives one of the maintenance messages which follow:

```
- PRESS CONTROLLER 1 (00) or,
- PRESS CONTROLLER 1 (01) or,
- PRESS CONTROLLER 1 (08) or,
- PRESS CONTROLLER 1 (12) or,
- PRESS CONTROLLER 1 (13) or,
- PRESS CONTROLLER 1 (18) or,
- PRESS CONTROLLER 1 (22) or,
- PRESS CONTROLLER 1 (34) or,
- PRESS CONTROLLER 1 (36) or,
- PRESS CONTROLLER 1 (37) or,
- PRESS CONTROLLER 1 (38) or,
- PRESS CONTROLLER 1 (39) or,
```

- PRESS CONTROLLER 1 (40) or, - PRESS CONTROLLER 1 (41) or, - PRESS CONTROLLER 1 (45) or, - PRESS CONTROLLER 1 (46) or, - PRESS CONTROLLER 1 (47) or, - PRESS CONTROLLER 1 (49) or,

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- PRESS CONTROLLER 1 (53) or,
- PRESS CONTROLLER 1 (58) or,
- PRESS CONTROLLER 1 (61),
- replace the CONTROLLER-CABIN PRESSURE 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
- B. Do the test as given in the Para. 3.A.

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```
R TASK 21-31-00-810-802
R Manual Mode - CPC Fault
  1. Possible Causes
     - CONTROLLER-CABIN PRESSURE 1 (11HL)
R
     - CONTROLLER-CABIN PRESSURE 2 (12HL)
     - P/BSW-CABIN PRESS/MODE SEL/AUTO (14HL)
     - CONNECTOR (11HL-AB)
     - CONNECTOR (12HL-AB)
     - CONNECTOR (14HL-A)
  2. Job Set-up Information
R
     A. Referenced Information
  REFERENCE
                           DESIGNATION
   ______
R
  AMM 21-31-00-710-002
                           Operational Test of the Pressure Control and
R
                           Monitoring
  AMM 21-31-34-000-001
                           Removal of the Cabin Pressure Controller (11HL, 12HL)
R
  AMM 21-31-34-400-001
                            Installation of the Cabin Pressure Controller
R
                            (11HL, 12HL)
R
R
  ASM 21-31/01
  3. Fault Confirmation
     A. Do the operational test of the pressure control and monitoring system
R
R
        (Ref. AMM TASK 21-31-00-710-002).
  4. Fault Isolation
R
     A. If, when the MAN mode is selected, on the upper ECAM DU the warning CAB
R
        PR SYS 1+2 FAULT shows and,
R
        on the MODE SEL p/b switch the FAULT legend comes on do a:
R
        (1) Wiring Continuity and Ground check (Ref. ASM 21-31/01)
R
            (a) Do a check for continuity at,
                - the CONNECTOR (11HL-AB) pin 3B,
R
                - the CONNECTOR (12HL-AB) pin 3B and,
R
                - the CONNECTOR (14HL-A) pin C1.
R
R
            (b) Do a check for ground at,
                - the CONNECTOR (11HL-AB) pin 3B,
R
                - the CONNECTOR (12HL-AB) pin 3B and,
R
                - the CONNECTOR (14HL-A) pin C1.
R
                NOTE: A ground condition should not be found.
R
```

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- R (2) If continuity is not found, or if a ground condition is found at any
  of the pins checked in Para. 4 A. (1):
   replace the related,
   CONTROLLER-CABIN PRESSURE 1 (11HL) or CONTROLLER-CABIN PRESSURE 2
   (12HL), (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31R 34-400-001) or,
   the P/BSW-CABIN PRESS/MODE SEL/AUTO (14HL) (Ref. ASM 21-31/01).
- R 5. Close-up
- R A. Do the test as in Para. 3. A.

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#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-804

Outflow Valve Auto Motor 1 or 2 Fault

- 1. Possible Causes
  - VALVE-OUTFLOW (10HL)
  - VALVE-OUTFLOW (10HL), AUTO MOTOR 1
  - VALVE-OUTFLOW (10HL), AUTO MOTOR 2
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |  |  |  |  |
|-----------|------------------|--|--|--|--|--|--|
|           |                  |  |  |  |  |  |  |
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and Monitoring                          |  |  |  |  |  |
| AMM       | 21-31-51-000-001 | Removal of the Outflow Valve 10HL (From Inside)                                  |  |  |  |  |  |
| AMM       | 21-31-51-000-003 | Removal of the Outflow Valve (10HL) - Auto Motor 10HL-3 (10HL-4)                 |  |  |  |  |  |
| AMM       | 21-31-51-000-006 | Removal of the Outflow Valve 10HL (From Outside)                                 |  |  |  |  |  |
| AMM       | 21-31-51-400-001 | Installation of the Outflow Valve 10HL (From Inside)                             |  |  |  |  |  |
| AMM       | 21-31-51-400-003 | <pre>Installation of the Outflow Valve (10HL) - Auto Motor 10HL-3 (10HL-4)</pre> |  |  |  |  |  |
| AMM       | 21-31-51-400-006 | Installation of the Outflow Valve 10HL (From Outside)                            |  |  |  |  |  |

- 3. Fault Confirmation
  - A. Test
    - (1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).
- 4. Fault Isolation
  - A. If one or both of these reports, LAST LEG REPORT, PREVIOUS LEG REPORT and/or the test gives the maintenance message,
    - OUTFLOW VALVE ELEC 1 (88):
    - replace the VALVE-OUTFLOW (10HL), AUTO MOTOR 1 (Ref. AMM TASK 21-31-51-000-003) and (Ref. AMM TASK 21-31-51-400-003).
    - (1) If the fault continues:
      - replace the VALVE-OUTFLOW (10HL)
         (Ref. AMM TASK 21-31-51-000-001) and,
         (Ref. AMM TASK 21-31-51-400-001) or,
         (Ref. AMM TASK 21-31-51-000-006) and,
         (Ref. AMM TASK 21-31-51-400-006).

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- B. If one or both of these reports, LAST LEG REPORT, PREVIOUS LEG REPORT and/or the test gives the maintenance message,
  - OUTFLOW VALVE ELEC 2 (88):
  - replace the VALVE-OUTFLOW (10HL), AUTO MOTOR 2 (Ref. AMM TASK 21-31-51-000-003) and (Ref. AMM TASK 21-31-51-400-003).
  - (1) If the fault continues:
    - replace the VALVE-OUTFLOW (10HL)
       (Ref. AMM TASK 21-31-51-000-001) and,
       (Ref. AMM TASK 21-31-51-400-001) or,
       (Ref. AMM TASK 21-31-51-000-006) and,
       (Ref. AMM TASK 21-31-51-400-006).
- C. Do the test as given in the Para. 3.A.

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### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-805

Outflow Valve Feedback Assembly Fault (CPC 1)

- 1. Possible Causes
  - VALVE-OUTFLOW (10HL)
  - VALVE-OUTFLOW (10HL), FEEDBACK ASSEMBLY
  - VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 1
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |  |  |
|-----------|------------------|--|--|--|--|
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and                                   |  |  |  |
|           |                  | Monitoring   |  |  |  |
| AMM       | 21-31-51-000-001 | Removal of the Outflow Valve 10HL (From Inside)                                |  |  |  |
| AMM       | 21-31-51-000-002 | Removal of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)       |  |  |  |
| AMM       | 21-31-51-000-005 | Removal of the Outflow Valve (10HL) - Feedback<br>Assembly 10HL-6              |  |  |  |
| AMM       | 21-31-51-400-001 | Installation of the Outflow Valve 10HL (From Inside)                           |  |  |  |
| AMM       | 21-31-51-400-002 | Installation of the Outflow Valve (10HL) -                                     |  |  |  |
|           |                  | Electronics Module 10HL-1 (10HL-2)   |  |  |  |
| AMM       | 21-31-51-400-005 | <pre>Installation of the Outflow Valve (10HL) - Feedback Assembly 10HL-6</pre> |  |  |  |
| ASM       | 21-31/01         | ,  |  |  |  |
| ASM       | 21-31/03         |  |  |  |  |

### 3. Fault Confirmation

#### A. Test

(1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

NOTE : Before you do the fault isolation procedure you must make a note of:

- the part number of the **OFV** which is installed in the aircraft.

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### 4. Fault Isolation

#### A. Test Results

NOTE : This procedure is only applicable for:
- Outflow Valve Part Numbers 9023-15703-81 and previous.

- (1) If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT and/or the test gives the maintenance message,
  - OUTFL.V FEEDB ASSY 1 (78):
  - replace the VALVE-OUTFLOW (10HL), FEEDBACK ASSEMBLY (referred to as OFV (10HL)) (Ref. AMM TASK 21-31-51-000-005) and (Ref. AMM TASK 21-31-51-400-005).
- (2) If the fault continues:
  - replace the VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 1 (Ref. AMM TASK 21-31-51-400-002).

NOTE : The electronic module 1 is connected to the electrical connector 10HL-A.

- (3) If the fault continues:
  - do a check and repair the wiring between the:
  - OFV connector (10HL-D) pins A, B, C, D and E and the OFV connector (10HL-A) pins A, B, C, E and F,
  - OFV connector (10HL-D) pin J and GND (Ref. ASM 21-31/01) and (Ref. ASM 21-31/03).

#### **B.** Test Results

NOTE : This procedure is only applicable for:
- Outflow Valve Part Number 20790-01AA and onwards.

- (1) If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT and/or the test gives the maintenance message,
  - OUTFL.V FEEDB ASSY 1 (78):
  - replace the VALVE-OUTFLOW (10HL) (Ref. AMM TASK 21-31-51-000-001) and (Ref. AMM TASK 21-31-51-400-001).
- (2) If the fault continues:
  - do a check and repair the wiring between the:
  - OFV connector (10HL-D) pins A, B, C, D and E and the OFV connector (10HL-A) pins A, B, C, E and F,
  - OFV connector (10HL-D) pin J and GND (Ref. ASM 21-31/01) and (Ref. ASM 21-31/03).
- C. Do the test as given in the Para. 3.A.

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#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-806

Cabin Pressure Controller 2 Fault

- 1. Possible Causes
  - CONTROLLER-CABIN PRESSURE 2 (12HL)
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE                                    | DESIGNATION  |  |  |  |
|--|--|--|--|--|
| AMM 21-31-00-710-002                         | Operational Test of the Pressure Control and Monitoring  |  |  |  |
| AMM 21-31-34-000-001<br>AMM 21-31-34-400-001 | Removal of the Cabin Pressure Controller (11HL,12HL) Installation of the Cabin Pressure Controller (11HL,12HL) |  |  |  |

- 3. Fault Confirmation
  - A. Test
    - (1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).
- 4. Fault Isolation
  - A. If one or more of these reports, LAST LEG REPORT, PREVIOUS LEG REPORT and CLASS 3 REPORT and/or the test gives one of the maintenance messages which follow:

```
- PRESS CONTROLLER 2 (00) or,
```

- PRESS CONTROLLER 2 (01) or,
- PRESS CONTROLLER 2 (08) or,
- PRESS CONTROLLER 2 (12) or,
- PRESS CONTROLLER 2 (13) or,
- PRESS CONTROLLER 2 (18) or,
- PRESS CONTROLLER 2 (22) or,
- PRESS CONTROLLER 2 (34) or,
- PRESS CONTROLLER 2 (36) or,
- PRESS CONTROLLER 2 (37) or,
- PRESS CONTROLLER 2 (38) or,
- PRESS CONTROLLER 2 (39) or,
- PRESS CONTROLLER 2 (40) or,
- PRESS CONTROLLER 2 (41) or,
- PRESS CONTROLLER 2 (45) or,
- PRESS CONTROLLER 2 (46) or,
- PRESS CONTROLLER 2 (47) or,
- PRESS CONTROLLER 2 (49) or,

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- PRESS CONTROLLER 2 (53) or,
- PRESS CONTROLLER 2 (58) or,
- PRESS CONTROLLER 2 (61),
- replace the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
- B. Do the test as given in the Para. 3.A.

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### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-807

Outflow Valve Fault (05), (11), (24), (25), (26), (29), (60)

- 1. Possible Causes
  - VALVE-OUTFLOW (10HL)
  - VALVE-OUTFLOW (10HL), AUTO MOTOR 1
  - VALVE-OUTFLOW (10HL), FEEDBACK ASSEMBLY
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE  |                                      | DESIGNATION  |  |  |  |  |  |
|------------|--------------------------------------|--|--|--|--|--|--|
| AMM        | 21-31-00-710-002                     | Operational Test of the Pressure Control and Monitoring  |  |  |  |  |  |
| AMM<br>AMM | 21-31-51-000-001<br>21-31-51-000-003 | Removal of the Outflow Valve 10HL (From Inside) Removal of the Outflow Valve (10HL) - Auto Motor 10HL-3 (10HL-4) |  |  |  |  |  |
| AMM        | 21-31-51-000-005                     | Removal of the Outflow Valve (10HL) - Feedback<br>Assembly 10HL-6  |  |  |  |  |  |
| AMM        | 21-31-51-000-006                     | Removal of the Outflow Valve 10HL (From Outside)   |  |  |  |  |  |
| AMM        | 21-31-51-400-001                     | Installation of the Outflow Valve 10HL (From Inside)   |  |  |  |  |  |
| AMM        | 21-31-51-400-003                     | <pre>Installation of the Outflow Valve (10HL) - Auto Motor 10HL-3 (10HL-4)</pre>                                 |  |  |  |  |  |
| AMM        | 21-31-51-400-005                     | Installation of the Outflow Valve (10HL) - Feedback Assembly 10HL-6  |  |  |  |  |  |
| AMM        | 21-31-51-400-006                     | Installation of the Outflow Valve 10HL (From Outside)  |  |  |  |  |  |

- 3. Fault Confirmation
  - A. Test
    - (1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).
- 4. Fault Isolation
  - A. If one of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT, CLASS 3 FAULTS and/or the test gives one of the maintenance messages which follow,
    - OUTFLOW VALVE (05),
    - OUTFLOW VALVE (11),
    - OUTFLOW VALVE (24),
    - OUTFLOW VALVE BLOCKED (29) or,
    - OUTFLOW VALVE (60):
    - replace the VALVE-OUTFLOW (10HL), AUTO MOTOR 1 (Ref. AMM TASK 21-31-51-000-003) and (Ref. AMM TASK 21-31-51-400-003).

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- (1) If the fault continues:
  - replace the VALVE-OUTFLOW (10HL) (Ref. AMM TASK 21-31-51-000-001) and (Ref. AMM TASK 21-31-51-400-001) or (Ref. AMM TASK 21-31-51-000-006) and (Ref. AMM TASK 21-31-51-400-006).
- B. Test Result
  - ${\color{red} {\tt NOTE} \over {\tt 9023-15703}}$  : This procedure is only applicable for Outflow Valve Part Numbers
  - (1) If the test gives the maintenance message, OUTFLOW VALVE (25), or OUTFLOW VALVE (26):
    - replace the VALVE-OUTFLOW (10HL), FEEDBACK ASSEMBLY (Ref. AMM TASK 21-31-51-000-005) and (Ref. AMM TASK 21-31-51-400-005).
- C. Test Result
  - ${\tt NOTE}$ : This procedure is only applicable for Outflow Valve Part Number 20790-01AA and onwards.
  - (1) If the test gives the maintenance message, OUTFLOW VALVE (25), or OUTFLOW VALVE (26):
    - replace the VALVE-OUTFLOW (10HL) (Ref. AMM TASK 21-31-51-000-001) and (Ref. AMM TASK 21-31-51-400-001).
- D. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

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#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-808

Safety Valves open

### 1. Possible Causes

- VALVE-SAFETY 1 (6HL)
- VALVE-SAFETY 2 (7HL)
- VALVE-OUTFLOW (10HL)
- R SDAC-1 (1WV1)
  - SDAC-2 (1WV2)
    - wiring

### 2. Job Set-up Information

A. Referenced Information

|   | REFERENCE |                  | DESIGNATION   |  |  |  |  |
|---|-----------|------------------|---|--|--|--|--|
|   |           |                  |   |  |  |  |  |
|   | AMM       | 21-31-51-000-001 | Removal of the Outflow Valve 10HL (From Inside)       |  |  |  |  |
|   | AMM       | 21-31-51-000-006 | Removal of the Outflow Valve 10HL (From Outside)      |  |  |  |  |
|   | AMM       | 21-31-51-400-001 | Installation of the Outflow Valve 10HL (From Inside)  |  |  |  |  |
|   | AMM       | 21-31-51-400-006 | Installation of the Outflow Valve 10HL (From Outside) |  |  |  |  |
|   | AMM       | 21-31-52-000-001 | Removal of the Safety Valve 6HL (7HL)                 |  |  |  |  |
|   | AMM       | 31-50-00-710-001 | Ground Scanning of the Central Warning System         |  |  |  |  |
| R | AMM       | 31-55-34-000-001 | Removal of the SDAC (1WV1,1WV2)                       |  |  |  |  |
| R | AMM       | 31-55-34-400-001 | Installation of the SDAC (1WV1,1WV2)                  |  |  |  |  |
|   | AMM       | 31-60-00-860-001 | EIS Start Procedure                                   |  |  |  |  |
|   | ASM       | 21-31/02         |   |  |  |  |  |
|   | ASM       | 21-31/02         |   |  |  |  |  |
|   | ASM       | 21-31/02         |   |  |  |  |  |

### 3. Fault Confirmation

A. Do a check of the safety-valve symbol position on the ECAM CAB PRESS page (Ref. AMM TASK 31-60-00-860-001).

#### 4. Fault Isolation

### A. If:

- (1) the safety-valves have opened during flight below delta p = 8.4 psi:
  - replace the VALVE-SAFETY 1 (6HL) and the VALVE-SAFETY 2 (7HL) (Ref. AMM TASK 21-31-52-000-001) and (Ref. AMM TASK 21-31-52-000-001).
  - add fault history on the replaced units.

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- (2) the safety valves have opened during flight at apprx. 8.6 psi. and the outflow valve was indicated closed at that time, (associated failure message would be OUTFLOW VALVE with code (81) in LLR, however this message is not necessarily generated):
  - replace the VALVE-OUTFLOW (10HL) (Ref. AMM TASK 21-31-51-000-001)
    and (Ref. AMM TASK 21-31-51-400-001) or (Ref. AMM TASK 21-31-51000-006) and (Ref. AMM TASK 21-31-51-400-006).
  - add fault history on the replaced unit.
- B. If the safety-valve symbol is closed:no other maintenance action is necessary.
- C. If the safety-valve symbol is open:
  - do a check for a ground signal at the SAFETY VALVE 1 (6HL) A/2 (Ref. ASM 21-31/02).
  - (1) If there is no ground signal:
    - replace the VALVE-SAFETY 1 (6HL) (Ref. AMM TASK 21-31-52-000-001) and (Ref. AMM TASK 21-31-52-000-001).
    - (a) If the fault continues:
      - do a check and repair the wiring from the VALVE 1 (6HL) A/1 to the GND (Ref. ASM 21-31/02).
  - (2) If there is a ground signal:
    - do a check for a ground signal at the SAFETY VALVE 2 (7HL) A/2 (Ref. ASM 21-31/02).
    - (a) If there is no ground signal:
      - replace the VALVE-SAFETY 2 (7HL) (Ref. AMM TASK 21-31-52-000-001) and (Ref. AMM TASK 21-31-52-000-001).
    - (b) If the fault continues:
      - do a check and repair the wiring from the VALVE 2 (7HL) A/1 to the GND (Ref. ASM 21-31/02).
  - (3) If the fault continues:
    - do the operational test of the central warning system (Ref. AMM TASK 31-50-00-710-001).
    - (a) If the test gives a different maintenance message, refer to the Fault Symptom List.
- (4) If the fault continues:
  - replace the SDAC-1 (1WV1) (Ref. AMM TASK 31-55-34-000-001) and (Ref. AMM TASK 31-55-34-400-001).
- (5) If the fault continues:
  - replace the SDAC-2 (1WV2) (Ref. AMM TASK 31-55-34-000-001) and (Ref. AMM TASK 31-55-34-400-001).

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R

R R

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R

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- R (6) If the fault continues:
  - do a check and repair the wiring between: VALVE 1 (6HL) A/2 and SDAC 1 (1WV1) AA/9A, SDAC 1 (1WV1) AA/9A and SDAC 2 (1WV2) AA/9A, VALVE 2 (7HL) A/2 and SDAC 2 (1WV2) AD/9G, SDAC 2 (1WV2) AD/9G and SDAC 1 (1WV1) AD/9G (Ref. ASM 21-31/02).
  - D. Do the test as given in the Para. 3.A.
  - 5. Close-up
    - A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-809

Excessive Cabin Altitude

#### 1. Possible Causes

- CONTROLLER-CABIN PRESSURE 1 (11HL)
- CONTROLLER-CABIN PRESSURE 2 (12HL)
- VALVE-OUTFLOW (10HL)
- LGCIU-1 (5GA1)
- LGCIU-2 (5GA2)
- air conditioning pack ducts
- trim air ducts
- isolation valves
- bleed air system
- skin air valves
- structural damage (Ref. SIL 21-040)
- cargo door seals
- avionics compartment hatch seals
- passenger door seals
- emergency exit seals
- outflow valve seals
- emergency ram air check valve
- hydraulic pipe connections/seals
- water drain valves
- wiring

#### 2. Job Set-up Information

A. Referenced Information

|   | REFE | RENCE            | DESIGNATION   |  |  |  |  |  |
|---|------|------------------|---|--|--|--|--|--|
|   |      |                  |   |  |  |  |  |  |
| R | CMM  | 213121           |   |  |  |  |  |  |
|   | AMM  | 05-53-00-780-003 | Test to Measure the Structural Leakage                |  |  |  |  |  |
|   | AMM  | 21-31-00-100-001 | Cleaning of the Moveable Seals of the Outflow-Valve   |  |  |  |  |  |
|   | AMM  | 21-31-34-000-001 | Removal of the Cabin Pressure Controller (11HL,12HL)  |  |  |  |  |  |
|   | AMM  | 21-31-34-400-001 | Installation of the Cabin Pressure Controller         |  |  |  |  |  |
|   |      |                  | (11HL,12HL)   |  |  |  |  |  |
|   | AMM  | 21-31-51-000-001 | Removal of the Outflow Valve 10HL (From Inside)       |  |  |  |  |  |
|   | AMM  | 21-31-51-000-006 | Removal of the Outflow Valve 10HL (From Outside)      |  |  |  |  |  |
|   | AMM  | 21-31-51-400-001 | Installation of the Outflow Valve 10HL (From Inside)  |  |  |  |  |  |
|   | AMM  | 21-31-51-400-006 | Installation of the Outflow Valve 10HL (From Outside) |  |  |  |  |  |
|   | AMM  | 21-52-00-200-001 | Detailed Inspection of Interior and Exterior of       |  |  |  |  |  |
|   |      |                  | Plenum Chamber (10HM5 and 11HM5) for Signs of         |  |  |  |  |  |
|   |      |                  | Delamination  |  |  |  |  |  |
|   | AMM  | 21-55-41-210-001 | Detailed Visual Inspection of Emergency Ram-Air/Low   |  |  |  |  |  |
|   |      |                  | Pressure Ground-Air Check-Valve Flappers for          |  |  |  |  |  |
|   |      |                  | Condition and Operation                               |  |  |  |  |  |
|   | AMM  | 31-50-00-710-002 | Operational Test of the Flight Warning Computer (FWC) |  |  |  |  |  |
|   |      |                  |   |  |  |  |  |  |

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| REFERENCE |                  | DESIGNATION   |  |  |  |  |
|-----------|------------------|---|--|--|--|--|
|           |                  |   |  |  |  |  |
| AMM       | 32-31-71-000-001 | Removal of the LGCIU (5GA1, 5GA2)                         |  |  |  |  |
| AMM       | 32-31-71-400-001 | Installation of the LGCIU (5GA1, 5GA2)                    |  |  |  |  |
| AMM       | 52-10-00-220-006 | Detailed Visual Inspection of the Door Seal               |  |  |  |  |
| AMM       | 52-21-00-200-002 | Inspection of the Emergency Exit Hatch Mechanism          |  |  |  |  |
| AMM       | 52-30-00-200-002 | Visual Inspection of Cargo-Compartment-Door Seals         |  |  |  |  |
| AMM       | 52-41-00-210-001 | Detailed Inspection of the Door Seals.                    |  |  |  |  |
| AMM       | 53-00-00-210-001 | Removal and Detailed Inspection of the Piston-Type        |  |  |  |  |
|           |                  | Drain Valves in the Lower Fuselage Shell                  |  |  |  |  |
| ASM       | 21-31/00         | <u>-</u>  |  |  |  |  |
| ASM       | 21-31/03         |   |  |  |  |  |
| TSM       | 21-31-00-810-827 | Excessive Cabin Altitude associated with CAB PR SYS FAULT |  |  |  |  |

### 3. Fault Confirmation

A. Not applicable, you cannot confirm this fault on the ground.

#### 4. Fault Isolation

- A. If the crew or the POST FLIGHT REPORT confirms the fault and the POST FLIGHT REPORT gives a maintenance message associated to the cabin pressure control system refer to (Ref. TSM TASK 21-31-00-810-827).
- B. If the crew or the POST FLIGHT REPORT confirms the fault but the POST FLIGHT REPORT gives no maintenance message:
  - (1) Do a check for,
    - (a) cracks or malfunctions of,
      - the air conditioning pack ducts,
      - the trim air ducts, the isolation valves and the bleed air system (Ref. AMM TASK 21-52-00-200-001).
    - (b) correct function of the skin air valves.
    - (c) structural damage (Ref. SIL 21-040) and (Ref. AMM TASK 05-53-00-780-003) with special attention to,
      - the cargo door seals (Ref. AMM TASK 52-30-00-200-002),
      - the avionics compartment hatch seals (Ref. AMM TASK 52-41-00-210-001),
      - the passenger door seals (Ref. AMM TASK 52-10-00-220-006),
      - the emergency exit seals (Ref. AMM TASK 52-21-00-200-002),
      - the outflow valve seals (Ref. AMM TASK 21-31-00-100-001),
      - the emergency ram air check valve (Ref. AMM TASK 21-55-41-210-001),
      - the hydraulic pipe connections/seals at the rear bulkhead and,
      - the water drain valves in the lower fuselage (Ref. AMM TASK 53-00-00-210-001).

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- (2) If no damage is found:
  - (a) compare the cabin altitude between the auto and manual mode as follows,
    - make sure that the MODE SEL pushbutton switch is in the AUTO mode,
    - on the CAB PRESS page of the lower ECAM display unit, read the CAB ALT in FT,
    - push the MODE SEL pushbutton switch to the MAN mode position (the MAN legend comes on),
    - on the CAB PRESS page, read the CAB ALT in FT. Make sure that the cabin altitude between the auto and the manual mode is +/-1000FT,
    - push the MODE SEL pushbutton switch to the AUTO mode (the MAN legend goes off).
  - (b) If the difference between the auto and manual cabin altitude is more then 1000FT.
    - replace the CONTROLLER-CABIN PRESSURE 1 (11HL)
       (Ref. AMM TASK 21-31-34-000-001) and,
       (Ref. AMM TASK 21-31-34-400-001).
- (3) If the fault continues:
  - do the operational test of the flight warning computer (Ref. AMM TASK 31-50-00-710-002).
- (4) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 21-31/03) from:
  - the CPC 1 (11HL) to the FWC 1 (1WW1) and FWC 2 (1WW2),
  - the CPC 1 (11HL) to the SDAC 1 (1WV1) and,
  - the CPC 1 (11HL) to the SDAC 2 (1WV2).
- C. If the crew or the POST FLIGHT REPORT confirms the fault but,
  - the outflow valve does not close during the flight and,
  - the POST FLIGHT REPORT gives no maintenance message,
  - (1) Make a print out of:
    - the POST FLIGHT REPORT,
    - the CPC1 and CPC2 LAST LEG REPORT and the PREVIOUS LEG REPORT and,
    - if available the ECS REPORT 19.
  - (2) Replace the CONTROLLER-CABIN PRESSURE 1 (11HL) and the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and, (Ref. AMM TASK 21-31-34-400-001).
    - (a) If possible do print out of the NON-VOLATILE MEMORY read-out (Ref. CMM 213121).

NOTE: It is recommended to:

 advise Airbus Industrie in case excessive cabin altitude is experienced and,

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- provide Airbus Industrie with the information given by the reports in work steps (1) and (2)(a).
- (3) Replace the VALVE-OUTFLOW (10HL)

(Ref. AMM TASK 21-31-51-000-001),

(Ref. AMM TASK 21-31-51-400-001),

(Ref. AMM TASK 21-31-51-000-006) and,

(Ref. AMM TASK 21-31-51-400-006).

<u>NOTE</u>: It is recommended that the removed outflow valve and controllers should be returned to the vendor for a detailed examination.

- D. If the crew or the POST FLIGHT REPORT confirms the fault but the outflow valve remains open after take-off and,
  - the POST FLIGHT REPORT does not give a maintenance message,
  - (1) Do a check of the wiring for open circuit or ground at the: LGCIU-1 connector (5GA1/AB) pin C3 and, LGCIU-2 connector (5GA2/AB) pin C3.
    - NOTE: Ground signal could be determined by connecting 28V with a 30 k0hm series resistance to the pin. The voltage at the pin should be less than 5V.
    - (a) If there is an open circuit replace the LGCIU-1 (5GA1) or the LGCIU-2 (5GA2) (Ref. AMM TASK 32-31-71-000-001) and, (Ref. AMM TASK 32-31-71-400-001).
    - (b) If there is no open circuit do check and repair the wiring from the:
      - CPC1 connector (11HL/AB) pin 1B to the LGCIU-1 connector (5GA1/AB) pin C3,
      - CPC2 connector (12HL/AB) pin 1B to the LGCIU-1 connector (5GA1/AB) pin C3,
      - CPC1 connector (11HL/AB) pin 2B to the LGCIU-2 connector (5GA2/AB) pin C3 and,
      - CPC2 connector (12HL/AB) pin 2B to the LGCIU-2 connector (5GA2/AB) pin C3. (Ref. ASM 21-31/00).
  - (2) If the fault continues:
    - replace the CONTROLLER-CABIN PRESSURE 1 (11HL) or the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and, (Ref. AMM TASK 21-31-34-400-001).

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- E. If the crew or the POST FLIGHT REPORT confirms the fault but:
  - the outflow valve remains more than half open after take-off and,
  - the POST FLIGHT REPORT does not give a maintenance message,
  - (1) Replace the VALVE-OUTFLOW (10HL) (Ref. AMM TASK 21-31-51-000-001), (Ref. AMM TASK 21-31-51-400-001), (Ref. AMM TASK 21-31-51-000-006) and, (Ref. AMM TASK 21-31-51-400-006).
  - (2) If the fault continues:
    - replace the CONTROLLER-CABIN PRESSURE 1 (11HL) or the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and, (Ref. AMM TASK 21-31-34-400-001).
- F. If the crew or the POST FLIGHT REPORT confirms the fault but:
  - the outflow valve is less than half open after take-off and the cabin is constantly depressurized and,
  - the POST FLIGHT REPORT does not give a maintenance message,
  - (1) Do a check of the wiring for open circuit or ground at the: LGCIU-1 connector (5GA1/AB) pin C3 and, LGCIU-2 connector (5GA2/AB) pin C3.
    - NOTE : Ground signal could be determined by connecting 28V with a 30 k0hm series resistance to the pin. The voltage at the pin should be less than 5V.
    - (a) If there is an open circuit replace the LGCIU-1 (5GA1) or the LGCIU-2 (5GA2) LGCIU-1 connector (5GA1/AB) pin C3 and, LGCIU-2 connector (5GA2/AB) pin C3.
    - (b) If there is an open circuit replace the LGCIU-1 (5GA1) or the LGCIU-2 (5GA2) (Ref. AMM TASK 32-31-71-000-001) and, (Ref. AMM TASK 32-31-71-400-001).
    - (c) If there is no open circuit do check and repair the wiring from the:
      - CPC1 connector (11HL/AB) pin 1B to the LGCIU-1 connector (5GA1/AB) pin C3,
      - CPC2 connector (12HL/AB) pin 1B to the LGCIU-1 connector (5GA1/AB) pin C3,
      - CPC1 connector (11HL/AB) pin 2B to the LGCIU-2 connector (5GA2/AB) pin C3 and,
      - CPC2 connector (12HL/AB) pin 2B to the LGCIU-2 connector (5GA2/AB) pin C3. (Ref. ASM 21-31/00).

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- (2) If the fault continues:
  - replace the CONTROLLER-CABIN PRESSURE 1 (11HL) or the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and, (Ref. AMM TASK 21-31-34-400-001).
- G. If the crew or the POST FLIGHT REPORT confirms the fault but:
  - the outflow valve is fully closed after take-off and,
  - the POST FLIGHT REPORT does not give a maintenance message,
  - (1) Do a check for,
    - (a) cracks or malfunctions of,
      - the air conditioning pack ducts,
      - the trim air ducts, the isolation valves and the bleed air system (Ref. AMM TASK 21-52-00-200-001).
    - (b) correct function of the skin air valves.
    - (c) structural damage (Ref. SIL 21-040) and (Ref. AMM TASK 05-53-00-780-003) with special attention to,
      - the cargo door seals (Ref. AMM TASK 52-30-00-200-002),
      - the avionics compartment hatch seals (Ref. AMM TASK 52-41-00-210-001),
      - the passenger door seals (Ref. AMM TASK 52-10-00-220-006),
      - the emergency exit seals (Ref. AMM TASK 52-21-00-200-002),
      - the outflow valve seals (Ref. AMM TASK 21-31-00-100-001),
      - the emergency ram air check valve (Ref. AMM TASK 21-55-41-210-001),
      - the hydraulic pipe connections/seals at the rear bulkhead and,
      - the water drain valves in the lower fuselage (Ref. AMM TASK 53-00-00-210-001).

### 5. Close-up

A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-810

Low Differential Pressure

- 1. Possible Causes
- 2. Job Set-up Information

Not Applicable

- 3. Fault Confirmation
  - A. Not applicable, you cannot confirm this fault on the ground.
- 4. Fault Isolation
  - A. If the POST FLIGHT REPORT gives a maintenance message, refer to the Fault Symptoms List for the applicable trouble shooting procedures.
  - B. If the POST FLIGHT REPORT gives no maintenance message:no other maintenance action is necessary.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

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#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-811

Landing Field Elevation Fault

#### 1. Possible Causes

- CONTROLLER-CABIN PRESSURE 1 (11HL)
- CONTROLLER-CABIN PRESSURE 2 (12HL)
- SEL-CABIN PRESS/LDG ELEV AUTO (20HL)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE  |                                      | DESIGNATION  |
|------------|--------------------------------------|--|
| AMM        | 21-31-00-710-002                     | Operational Test of the Pressure Control and Monitoring  |
| AMM<br>AMM | 21-31-34-000-001<br>21-31-34-400-001 | Removal of the Cabin Pressure Controller (11HL,12HL) Installation of the Cabin Pressure Controller |
| ASM<br>ASM | 21-31/01<br>21-31/01                 | (11HL,12HL)  |

### 3. Fault Confirmation

#### A. Test

- (1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).
- (2) Do a read-out of the CLASS 3 FAULTS report of the CPCS.

NOTE: If a fault is detected, the applicable report of the CPC shows a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

#### 4. Fault Isolation

- A. If the test with the CPC 1 (11HL) gives the maintenance message LFES (50):
  - do a check of the SEL-CABIN PRESS/LDG ELEV AUTO (20HL) and replace it if necessary (Ref. ASM 21-31/01).
  - (1) If the fault continues:
    - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).

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- (2) If the fault moves with the CPC 1:
  - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - replace the CONTROLLER-CABIN PRESSURE 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
- (3) If the fault does not move with the CPC 1:
  - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - do a check and repair the wiring between:
     CPC 1 connector (11HLAB) pins 7A and 8A and the FMS1,
     CPC 1 connector (11HLAB) pins 9A and 10A and the FMS2.
     (Ref. ASM 21-31/01).
- B. If the test with the CPC 2 (12HL) gives the maintenance message LFES (50):
  - do a check of the SEL-CABIN PRESS/LDG ELEV AUTO (20HL) and replace it if necessary (Ref. ASM 21-31/01).
  - (1) If the fault continues:
    - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (2) If the fault moves with the CPC 2:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - replace the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (3) If the fault does not move with the CPC 1:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - do a check and repair the wiring between:
       CPC 2 connector (12HLAB) pins 7A and 8A and the FMS1,
       CPC 2 connector (12HLAB) pins 9A and 10A and the FMS2,
       (Ref. ASM 21-31/01).
- C. Do the test as given in the Para. 3.A.

#### 5. Close-up

A. Put the aircraft back to its initial configuration.

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#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-812

CPC 1 receives no Data from the FMGS

- 1. Possible Causes
  - CONTROLLER-CABIN PRESSURE 1 (11HL)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE  |                              | DESIGNATION  |  |  |  |
|------------|------------------------------|--|--|--|--|
| AMM        | 21-31-00-710-002             | Operational Test of the Pressure Control and                         |  |  |  |
| Amm        | 21-31-00-110-002             | Monitoring   |  |  |  |
| AMM        | 21-31-34-000-001             | Removal of the Cabin Pressure Controller (11HL,12HL)                 |  |  |  |
| AMM        | 21-31-34-400-001             | <pre>Installation of the Cabin Pressure Controller (11HL,12HL)</pre> |  |  |  |
| AMM<br>ASM | 22-96-00-710-001<br>21-31/03 | Operational Test of the AFS  |  |  |  |

#### 3. Fault Confirmation

- A. test
  - (1) Do a read-out of the CLASS III FAULT REPORT of the cabin pressure-control system 1.

NOTE: If a fault is detected, the CLASS III FAULT REPORT of the CPC shows a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

- (2) Start the Flight Management System (FMS).
- (3) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

EFF:

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#### TROUBLE SHOOTING MANUAL

### 4. Fault Isolation

- A. If the test with the CPC 1 (11HL) gives the maintenance message NO DATA FROM FMGS 1 (54):
  - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (1) If the fault moves with the CPC 1:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - replace the CONTROLLER-CABIN PRESSURE 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (2) If the fault does not move with the CPC 1:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).
    - (a) If the test gives a different maintenance message, refer to the Fault Symptom List.
    - (b) If the fault continues:
      - do a check and repair the wiring of the signal ARINC 429 OUT from the FMGC 1 (1CA1) to the CPC 1 (11HL) (Ref. ASM 21-31/03).
- B. If the test with the CPC 1 (11HL) gives the maintenance message NO DATA FROM FMGS 2 (55):
  - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (1) If the fault moves with the CPC 1:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - replace the CONTROLLER-CABIN PRESSURE 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (2) If the fault does not move with the CPC 1:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).
    - (a) If the test gives a different maintenance message, refer to the Fault Symptom List.
    - (b) If the fault continues:
      - do a check and repair the wiring of the signal ARINC 429 OUT from the FMGC 2 (1CA2) to the CPC 1 (11HL) (Ref. ASM 21-31/03).
- C. Do the test as given in the Para. 3.A.

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| 5. | r | ı | _ |   | e  | _ |   | n |
|----|---|---|---|---|----|---|---|---|
| J. | u | ι | υ | S | E. | _ | u | υ |

A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-813

CPC 2 receives no Data from the FMGS

- 1. Possible Causes
  - CONTROLLER-CABIN PRESSURE 2 (12HL)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE  |                              | DESIGNATION   |  |
|------------|------------------------------|---|--|
| AMM        | 21-31-00-710-002             | Operational Test of the Pressure Control and Monitoring   |  |
| AMM        | 21-31-34-000-001             | Removal of the Cabin Pressure Controller (11HL,12HL)      |  |
| AMM        | 21-31-34-400-001             | Installation of the Cabin Pressure Controller (11HL,12HL) |  |
| AMM<br>ASM | 22-96-00-710-001<br>21-31/03 | Operational Test of the AFS                               |  |

#### 3. Fault Confirmation

- A. Test
  - (1) Do a read-out of the CLASS III FAULT REPORT of the cabin pressure-control system 2.
    - <u>NOTE</u>: If a fault is detected, the CLASS III FAULT REPORT of the CPC shows a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.
  - (2) Start the FMS (1+2).
  - (3) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

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#### TROUBLE SHOOTING MANUAL

### 4. Fault Isolation

- A. If the test with the CPC 2 (12HL) gives the maintenance message NO DATA FROM FMGS 1 (54):
  - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (1) If the fault moves with the CPC 2:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - replace the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (2) If the fault does not move with the CPC 2:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).
    - (a) If the test gives a different maintenance message, refer to the Fault Symptom List.
    - (b) If the fault continues:
      - do a check and repair the wiring of the signal ARINC 429 OUT from the FMGC 1 (1CA1) to the CPC 2 (12HL) (Ref. ASM 21-31/03).
- B. If the test with the CPC 2 (12HL) gives the maintenance message NO DATA FROM FMGS 2 (55):
  - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (1) If the fault moves with the CPC 2:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - replace the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (2) If the fault does not move with the CPC 2:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).
    - (a) If the test gives a different maintenance message, refer to the Fault Symptom List.
    - (b) If the fault continues:
      - do a check and repair the wiring of the signal ARINC 429 OUT from the FMGC 2 (1CA2) to the CPC 2 (12HL) (Ref. ASM 21-31/03).
- C. Do the test as given in the Para. 3.A.

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### TROUBLE SHOOTING MANUAL

| _  |    |     |     |
|----|----|-----|-----|
| 5. | Cl | ose | -up |

A. Put the aircraft back to its initial configuration.

EFF: ALL
SROS

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#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-814

CPC 1 receives no Data from the ADIRS

- 1. Possible Causes
  - CONTROLLER-CABIN PRESSURE 1 (11HL)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and Monitoring              |
| AMM       | 21-31-34-000-001 | Removal of the Cabin Pressure Controller (11HL,12HL)                 |
| AMM       | 21-31-34-400-001 | <pre>Installation of the Cabin Pressure Controller (11HL,12HL)</pre> |
| AMM       | 34-13-00-740-002 | INTERFACE TEST of the ADR  |
| ASM       | 21-31/03         |  |

#### 3. Fault Confirmation

- A. Test
  - (1) Do a read-out of the CLASS III FAULT REPORT of the cabin pressure-control system 1.

NOTE: If a fault is detected, the CLASS III FAULT REPORT of the CPC shows a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

- (2) Make sure that all ADIRS (1,2 and 3) are switched on.
- (3) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

#### TROUBLE SHOOTING MANUAL

### 4. Fault Isolation

- A. If the test with the CPC 1 (11HL) gives the maintenance message NO DATA FROM ADIRS 1 (19):
  - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (1) If the fault moves with the CPC 1:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - replace the CONTROLLER-CABIN PRESSURE 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (2) If the fault does not move with the CPC 1:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - do the INTERFACE test of the ADR system (Ref. AMM TASK 34-13-00-740-002).
    - (a) If the test gives a different maintenance message refer to the Fault Symptom List.
    - (b) If the fault continues:
      - do a check and repair the wiring of the signal DATA BUS #3 from the ADIRS 1 (1FP1) to the CPC 1 (11HL) (Ref. ASM 21-31/03).
- B. If the test with the CPC 1 (11HL) gives the maintenance message NO DATA FROM ADIRS 2 (20):
  - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (1) If the fault moves with the CPC 1:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - replace the CONTROLLER-CABIN PRESSURE 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (2) If the fault does not move with the CPC 1:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - do the INTERFACE test of the ADR system (Ref. AMM TASK 34-13-00-740-002).
    - (a) If the test gives a different maintenance message refer to the Fault Symptom List.
    - (b) If the fault continues:
      - do a check and repair the wiring of the signal DATA BUS #4 from the ADIRS 2 (1FP2) to the CPC 1 (11HL) (Ref. ASM 21-31/03).

#### TROUBLE SHOOTING MANUAL

- C. If the test with the CPC 1 (11HL) gives the maintenance message NO DATA FROM ADIRS 3 (21):
  - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (1) If the fault moves with the CPC 1:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - replace the CONTROLLER-CABIN PRESSURE 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (2) If the fault does not move with the CPC 1:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - do the INTERFACE test of the ADR system (Ref. AMM TASK 34-13-00-740-002).
    - (a) If the test gives a different maintenance message refer to the Fault Symptom List.
    - (b) If the fault continues:
      - do a check and repair if necessary the wiring of the signal DATA BUS #3 from the ADIRS 3 (1FP3) to the CPC 1 (11HL) (Ref. ASM 21-31/03).
- D. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-815

CPC 2 receives no Data from the ADIRS

- 1. Possible Causes
  - CONTROLLER-CABIN PRESSURE 2 (12HL)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and Monitoring              |
| AMM       | 21-31-34-000-001 | Removal of the Cabin Pressure Controller (11HL,12HL)                 |
| AMM       | 21-31-34-400-001 | <pre>Installation of the Cabin Pressure Controller (11HL,12HL)</pre> |
| AMM       | 34-13-00-740-002 | INTERFACE TEST of the ADR  |
| ASM       | 21-31/03         |  |
| ASM       | 21-31/03         |  |

#### 3. Fault Confirmation

- A. Test
  - (1) Do a read-out of the CLASS III FAULT REPORT of the cabin pressure-control system.

NOTE: If a fault is detected, the CLASS III FAULT REPORT of the CPC shows a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

- (2) Make sure that all ADIRS (1,2 and 3) are switched on.
- (3) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

#### TROUBLE SHOOTING MANUAL

### 4. Fault Isolation

- A. If the test with the CPC 2 (12HL) gives the maintenance message NO DATA FROM ADIRS 1 (19):
  - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (1) If the fault moves with the CPC 2:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - replace the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (2) If the fault does not move with the CPC 2:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - do the INTERFACE test of the ADR system (Ref. AMM TASK 34-13-00-740-002).
    - (a) If the test gives a different maintenance message refer to the Fault Symptom List.
    - (b) If the fault continues:
      - do a check and repair the wiring of the signal DATA BUS #4 from the ADIRS 1 (1FP1) to the CPC 2 (12HL) (Ref. ASM 21-31/03) and (Ref. ASM 21-31/03).
- B. If the test with the CPC 2 (12HL) gives the maintenance message NO DATA FROM ADIRS 2 (20):
  - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (1) If the fault moves with the CPC 2:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - replace the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (2) If the fault does not move with the CPC 2:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - do the INTERFACE test of the ADR system (Ref. AMM TASK 34-13-00-740-002).
    - (a) If the test gives a different maintenance message refer to the Fault Symptom List.
    - (b) If the fault continues:
      - do a check and repair the wiring of the signal DATA BUS #2 from the ADIRS 2 (1FP2) to the CPC 2 (12HL) (Ref. ASM 21-31/03) and (Ref. ASM 21-31/03).

EFF: ALL

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- C. If the test with the CPC 2 (12HL) gives the maintenance message NO DATA FROM ADIRS 3 (21):
  - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (1) If the fault moves with the CPC 2:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - replace the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (2) If the fault does not move with the CPC 2:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - do the INTERFACE test of the ADR system (Ref. AMM TASK 34-13-00-740-002).
    - (a) If the test gives a different maintenance message refer to the Fault Symptom List.
    - (b) If the fault continues:
      - do a check and repair the wiring of the signal DATA BUS #4 from the ADIRS 3 (1FP3) to the CPC 2 (12HL) (Ref. ASM 21-31/03) and (Ref. ASM 21-31/03).
- D. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-816

EIU Signal Replaced

- 1. Possible Causes
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

REFERENCE DESIGNATION

R AMM 73-25-34-710-043 Operational Test of the Engine Interface Unit

R AMM 73-25-34-710-043 ASM 21-31/02

- 3. Fault Confirmation
  - A. Not applicable, you cannot confirm this fault on the ground.

NOTE : In the flight phases 4 and 5 the maintenance message EIU SIGNAL REPLACED shows that:

- during the take-off at least one of the throttle levers was not set to take-off power >70%.
- 4. Fault Isolation
  - A. If the CPC 1 (11HL) and/or CPC 2 (12HL) CLASS 3 FAULTS gives the maintenance messsage EIU SIGNAL REPLACED (17) caused in flight phase 7 or 8, no other maintenance action is necessary.

NOTE: The fault is caused by LDG 'bouncing' or by a hard landing.

- B. If the CPC 1 (11HL) CLASS 3 FAULTS gives the maintenance messsage EIU SIGNAL REPLACED (17) caused in flight phase other than 7 or 8 and, the take off was performed with the minimum max. climb setting (throttle levers set at 70%):
  - do the operational test of the engine interface unit (Ref. AMM TASK 73-25-34-710-043).
  - (1) If the test gives a different maintenance message refer to the Fault Symptom List.
  - (2) If the fault continues:
    - do a check and repair the wiring between:
       CPC 1 (11HL) AB/7D and EIU 1 (1KS1) AB/G1,
       CPC 1 (11HL) AB/8D and EIU 2 (1KS2) AB/G1 (Ref. ASM 21-31/02).

EFF: ALL

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### TROUBLE SHOOTING MANUAL

- C. If the CPC 2 (12HL) CLASS 3 FAULTS gives the maintenance messsage EIU SIGNAL REPLACED (17) caused in flight phase other than 7 or 8:
  - do the operational test of the engine interface unit (Ref. AMM TASK 73-25-34-710-043).
  - (1) If the test gives a different maintenance message refer to the Fault Symptom List.
  - (2) If the fault continues:
    - do a check and repair the wiring between:
       CPC 2 (12HL) AB/8D and EIU 2 (1KS2) AB/G1,
       CPC 2 (12HL) AB/7D and EIU 1 (1KS2) AB/G1 (Ref. ASM 21-31/02).
- D. Do the test as given in the Para. 3.A.

### 5. Close-up

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A. Put the aircraft back to its initial configuration.

EFF: ALL 21-31-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-817

LGCIU Signal Mismatch

- 1. Possible Causes
  - CONTROLLER-CABIN PRESSURE 1 (11HL)
  - CONTROLLER-CABIN PRESSURE 2 (12HL)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
| AMM       | 21-31-34-000-001 | Removal of the Cabin Pressure Controller (11HL,12HL)  |
| AMM       | 21-31-34-400-001 | Installation of the Cabin Pressure Controller (11HL,12HL)   |
| AMM       | 32-69-00-740-001 | BITE Check Landing Gear Control Interface Unit (LGCIU) using MCDU to Ensure that Continuous BITE is Operative |
| ASM       | 21-31/02         | ·   |

### 3. Fault Confirmation

A. Not applicable, you cannot confirm this fault on the ground.

#### 4. Fault Isolation

- A. If the CPC 1 (11HL) CLASS 3 FAULTS gives the maintenance messsage LGCIU SIG. REPLACED (35):
  - do the BITE test of the landing gear (Ref. AMM TASK 32-69-00-740-001).
  - (1) If the test gives a different maintenance message refer to the Fault Symptom List.
  - (2) If the fault continues:
    - do a check and repair the wiring between:
       CPC 1 (11HL) AB/1B and LGCIU 1 (5GA1) AB/C3,
       CPC 1 (11HL) AB/2B and LGCIU 2 (5GA2) AB/C3 (Ref. ASM 21-31/02).
  - (3) If the fault continues:
    - replace the CONTROLLER-CABIN PRESSURE 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).

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### TROUBLE SHOOTING MANUAL

- B. If the CPC 2 (12HL) CLASS 3 FAULTS gives the maintenance messsage LGCIU SIG. REPLACED (35):
  - do the BITE test of the landing gear (Ref. AMM TASK 32-69-00-740-001).
  - (1) If the test gives a different maintenance message refer to the Fault Symptom List.
  - (2) If the fault continues:
    - do a check and repair the wiring between:
       CPC 2 (12HL) AB/2B and LGCIU 2 (5GA2) AB/C3,
       CPC 2 (12HL) AB/1B and LGCIU 1 (5GA1) AB/C3 (Ref. ASM 21-31/02).
  - (3) If the fault continues:
    - replace the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).

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- C. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

EFF: ALL 21-31-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-818

DMU receives no Data from the CPC 1

- 1. Possible Causes
  - DMU (1TV)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |
|-----------|------------------|--|--|
|           |                  |  |  |
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and         |  |
|           |                  | Monitoring   |  |
| AMM       | 31-36-00-710-001 | Test of the DMU (1TV)                                |  |
| AMM       | 31-36-34-000-001 | Removal of the Data Management Unit (DMU) (1TV)      |  |
| AMM       | 31-36-34-400-001 | Installation of the Data Management Unit (DMU) (1TV) |  |
| ASM       | 21-31/03         |  |  |
| ASM       | 21-31/03         |  |  |

#### 3. Fault Confirmation

A. Do the Test of the DMU (Ref. AMM TASK 31-36-00-710-001).

NOTE: Make sure that the circuit breakers 1HL, 2HL and 3HL are closed during the test.

#### 4. Fault Isolation

- A. If the test gives the maintenance message NO PRESS CONTROL 1 DATA:
  - do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).
  - (1) If the fault continues:
    - replace the DMU (1TV) (Ref. AMM TASK 31-36-34-000-001) and (Ref. AMM TASK 31-36-34-400-001).
  - (2) If the fault continues:
    - do a check and repair the wiring of the signal ARINC 429 OUT (BUS 1.1) from the CPC 1 (11HL) to the DMU (1TV) (Ref. ASM 21-31/03) and (Ref. ASM 21-31/03).
- B. Do the test given in para. 3.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

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#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-819

DMU receives no Data from the CPC 2

- 1. Possible Causes
  - DMU (1TV)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
|           |                  |   |
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and Monitoring |
| AMM       | 31-36-00-710-001 | Test of the DMU (1TV)                                   |
| AMM       | 31-36-34-000-001 | Removal of the Data Management Unit (DMU) (1TV)         |
| AMM       | 31-36-34-400-001 | Installation of the Data Management Unit (DMU) (1TV)    |
| ASM       | 21-31/03         |   |

#### 3. Fault Confirmation

A. Do the Test of the DMU (Ref. AMM TASK 31-36-00-710-001).

NOTE: Make sure that the circuit breakers 1HL, 2HL and 3HL are closed during the test.

#### 4. Fault Isolation

- A. If the test gives the maintenance message NO PRESS CONTROL 2 DATA:
  - do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).
  - (1) If the fault continues:
    - replace the DMU (1TV) (Ref. AMM TASK 31-36-34-000-001) and (Ref. AMM TASK 31-36-34-400-001).
  - (2) If the fault continues:
    - do a check and repair the wiring of the signal ARINC 429 OUT (BUS 2.1) from the CPC 2 (12HL) to the DMU (1TV) (Ref. ASM 21-31/03).
- B. Do the test given in para. 3.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-822

Outflow Valve does not close in the Ditching Configuration

- 1. Possible Causes
  - DITCHING pushbutton switch (13HL)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

REFERENCE DESIGNATION

AMM 21-31-00-710-004

Operational Test of the Outflow Valve Closing in Ditching Configuration

ASM 21-31/01

- 3. Fault Confirmation
  - A. Do the operational test of the outflow valve closing in the ditching configuration (Ref. AMM TASK 21-31-00-710-004).
- 4. Fault Isolation
  - A. If the outflow valve does not close:
    - replace the DITCHING pushbutton switch (13HL).
    - (1) If the fault continues:
      - do a check and repair the wiring between:
        - .the DITCHING pushbutton switch (13HL) and the CPC 1 (11HL) AB/4B,
        - .the DITCHING pushbutton switch (13HL) and the CPC 2 (12HL) AB/4B,
        - .the DITCHING pushbutton switch (13HL) and the GND.

(Ref. ASM 21-31/01).

B. Do the test given in para. 3.

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#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-823

Outflow Valve does not operate during the Emergency Ram Air Configuration

- 1. Possible Causes
  - RAM AIR pushbutton switch (4HZ)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFE | RENCE            | DESIGNATION  |
|------|------------------|--|
| AMM  | 21-31-00-710-005 | Operational Test of Outflow Valve Partial Opening by |
| ASM  | 21-31/02         | Emergency Ram Air Switch                             |

- 3. Fault Confirmation
  - A. Do the operational test of the outflow opening (50 deg.) by emergency ram air switch (Ref. AMM TASK 21-31-00-710-005).
- 4. Fault Isolation
  - A. If the outflow valve does not close to approx. 50 deg: replace the RAM AIR pushbutton switch (4HZ).
    - (1) If the fault continues:
      - do a check and repair the wiring between:
        - .the RAM AIR pushbutton switch (4HZ) and the CPC 1 (11HL) AA/5B,
        - the RAM AIR pushbutton switch (4HZ) and the CPC 2 (12HL) AA/5B,
      - the RAM AIR pushbutton switch (4HZ) and the GND,

(Ref. ASM 21-31/02).

B. Do the test given in para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-824

Outflow Valve does not operate in the Manual Mode

#### 1. Possible Causes

- MANUAL MOTOR
- OUTFLOW VALVE (10HL)
- MODE SEL pushbutton switch (14HL)
- MAN V/S CTL switch (5HL)
- wiring
- CIRCUIT BREAKER (3HL)

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
| AMM       | 21-31-00-710-003 | Operational Test of Manual Mode Selection and Manual Mode Pressure Control and Functional Test of Manual |
|           |                  | Mode Cabin Altitude/Outflow Valve Position Indication  |
| AMM       | 21-31-51-000-001 | Removal of the Outflow Valve 10HL (From Inside)  |
| AMM       | 21-31-51-000-004 | Removal of the Outflow Valve (10HL) - Manual Motor<br>10HL-5   |
| AMM       | 21-31-51-000-006 | Removal of the Outflow Valve 10HL (From Outside)   |
| AMM       | 21-31-51-400-001 | Installation of the Outflow Valve 10HL (From Inside)   |
| AMM       | 21-31-51-400-004 | <pre>Installation of the Outflow Valve (10HL) - Manual Motor 10HL-5</pre>                                |
| AMM       | 21-31-51-400-006 | <pre>Installation of the Outflow Valve 10HL (From Outside)</pre>   |
| ASM       | 21-31/01         |  |

### 3. Fault Confirmation

A. Do the operational test of the manual pressure control and monitoring (Ref. AMM TASK 21-31-00-710-003).

EFF: ALL

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#### TROUBLE SHOOTING MANUAL

### 4. Fault Isolation

- A. If the outflow valve does not operate during the manual mode:
  - do a check for 28VDC at the outflow valve (10HL) between the pin C/A and C/B with the MAN V/S CTL switch (5HL) in the full UP and in the full DN position.
  - (1) If the voltage is correct:
    - replace the MANUAL MOTOR (Ref. AMM TASK 21-31-51-000-004) and (Ref. AMM TASK 21-31-51-400-004).
    - (a) If the fault continues:
      - replace the OUTFLOW VALVE (10HL) (Ref. AMM TASK 21-31-51-000-001) and (Ref. AMM TASK 21-31-51-400-001) or (Ref. AMM TASK 21-31-51-000-006) and (Ref. AMM TASK 21-31-51-400-006).
  - (2) If the voltage is not correct:
    - do a check for 28VDC at the circuit breaker 3HL.
    - (a) If the voltage is correct:
      - replace the MODE SEL pushbutton switch (14HL).
      - 1 If the fault continues:
        - replace the MAN V/S CTL switch (5HL).
      - 2 If the fault continues:
        - do a check and repair the wiring between:

           the circuit breaker (3HL) and the OUTFLOW VALVE (10HL)
           C/A,B via the MODE SEL pushbutton switch (14HL) and the MAN
           V/S CTL switch (5HL),
          - .the OUTFLOW VALVE (10HL) C/B to the GND via the MAN V/S CTL switch (5HL),  $\ \ \,$
        - (Ref. ASM 21-31/01).
    - (b) If the voltage is not correct:
      - replace the CIRCUIT BREAKER (3HL).
- B. Do the test given in para. 3.

#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-825

MODE SEL Pushbutton Switch FAULT Legend on

#### 1. Possible Causes

- BOARD-ANN LT TEST & INTFC (7LP)
- CONTROLLER-CABIN PRESSURE 1 (11HL)
- CONTROLLER-CABIN PRESSURE 2 (12HL)
- RELAY-AUTO MODE 1 FAULT (18HL)
- RELAY-AUTO MODE 2 FAULT (19HL)
- BOARD-ANN LT TEST & INTFC (40LP)

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE     |            | ESIGNATION  |
|---------------|------------|---|
| 24 74 00      | 710 000    |   |
| AMM 21-31-00- |            | perational Test of the Pressure Control and onitoring   |
| AMM 21-31-34  | -000-001 R | emoval of the Cabin Pressure Controller (11HL,12HL)     |
| AMM 21-31-34  |            | nstallation of the Cabin Pressure Controller 11HL,12HL) |
| ASM 21-31/01  |            |   |

#### 3. Fault Confirmation

A. Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

### 4. Fault Isolation

- A. If the FAULT legend in the pushbutton switch CABIN PRESS/MODE SEL/AUTO, which is installed on the panel 25VU, is on.
  - do a check of the BOARD-ANN LT TEST & INTFC (7LP) and replace it if necessary (Ref. ASM 21-31/01).
  - (1) If the fault continues:
    - do a check of the BOARD-ANN LT TEST & INTFC (40LP) and replace it if necessary (Ref. ASM 21-31/01).
  - (2) If the fault continues:
    - replace the CONTROLLER-CABIN PRESSURE 1 (11HL) and CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).

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- (3) If the fault continues:
  - replace the RELAY-AUTO MODE 1 FAULT (18HL) and RELAY-AUTO MODE 2 FAULT (19HL).

(Ref. ASM 21-31/01).

B. Do the test given in para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-826

Outflow Valve Feedback Assembly Fault (CPC 2)

- 1. Possible Causes
  - VALVE-OUTFLOW (10HL)
  - VALVE-OUTFLOW (10HL), FEEDBACK ASSEMBLY
  - VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 2
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and                                   |
|           |                  | Monitoring   |
| AMM       | 21-31-51-000-001 | Removal of the Outflow Valve 10HL (From Inside)                                |
| AMM       | 21-31-51-000-002 | Removal of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)       |
| AMM       | 21-31-51-000-005 | Removal of the Outflow Valve (10HL) - Feedback<br>Assembly 10HL-6              |
| AMM       | 21-31-51-400-001 | Installation of the Outflow Valve 10HL (From Inside)                           |
| AMM       | 21-31-51-400-002 | Installation of the Outflow Valve (10HL) -                                     |
|           |                  | Electronics Module 10HL-1 (10HL-2)   |
| AMM       | 21-31-51-400-005 | <pre>Installation of the Outflow Valve (10HL) - Feedback Assembly 10HL-6</pre> |
| ASM       | 21-31/01         | ,  |
| ASM       | 21-31/03         |  |

### 3. Fault Confirmation

#### A. Test

(1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

NOTE : Before you do the fault isolation procedure you must make a note of:

- the part number of the OFV installed in the aircraft.

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#### TROUBLE SHOOTING MANUAL

### 4. Fault Isolation

#### A. Test Results

NOTE : This procedure is only applicable for:
- Outflow Valve Part Numbers 9023-15703-81 and previous.

- (1) If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT and/or the test gives the maintenance message,
  - OUTFL.V FEEDB ASSY 2 (78):
  - replace the VALVE-OUTFLOW (10HL), FEEDBACK ASSEMBLY (referred to as OFV (10HL)) (Ref. AMM TASK 21-31-51-000-005) and (Ref. AMM TASK 21-31-51-400-005).
- (2) If the fault continues:
  - replace the VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 2 (Ref. AMM TASK 21-31-51-400-002).

NOTE : The electronic module 2 is connected to the electrical connector 10HL-B.

- (3) If the fault continues:
  - do a check and repair the wiring between the:
     OFV connector (10HL-E) pins E, F, A, B and C and the OFV connector (10HL-B) pins E, F, A, B and C,
     OFV connector (10HL-E) pin H and GND (Ref. ASM 21-31/01).
- B. Test Results
  - NOTE : This procedure is only applicable for:
     Outflow Valve Part Number 20790-01AA and onwards.
  - (1) If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT and/or the test gives the maintenance message,
    - OUTFL.V FEEDB ASSY 2 (78):
    - replace the VALVE-OUTFLOW (10HL) (Ref. AMM TASK 21-31-51-000-001) and (Ref. AMM TASK 21-31-51-400-001).
  - (2) If the fault continues:
    - do a check and repair the wiring between the: OFV connector (10HL-D) pins A, B, C, D and E and the OFV connector (10HL-A) pins A, B, C, E and F, OFV connector (10HL-D) pin J and GND (Ref. ASM 21-31/01) and (Ref. ASM 21-31/03).
- C. Do the test as given in the Para. 3.A.

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## *GA319/A320/A321*

#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-827

Excessive Cabin Altitude associated with CAB PR SYS FAULT

#### 1. Possible Causes

- CONTROLLER-CABIN PRESSURE 1 (11HL)
- CONTROLLER-CABIN PRESSURE 2 (12HL)
- VALVE-OUTFLOW (10HL)
- wiring

### 2. Job Set-up Information

A. Referenced Information

|   | REFE | RENCE            | DESIGNATION  |
|---|------|------------------|--|
|   |      |                  |  |
| R | CMM  | 213121           |  |
|   | AMM  | 21-31-00-760-001 | Resistance Check of the Return Ground Connections - Cabin Pressure Controller (CPC) 1 (11HL) and 2 (12HL) and the Electronic Modules 10HL-1 and 10HL-2 |
|   | AMM  | 21-31-34-000-001 | Removal of the Cabin Pressure Controller (11HL,12HL)   |
|   | AMM  | 21-31-34-400-001 | <pre>Installation of the Cabin Pressure Controller (11HL,12HL)</pre>   |
|   | AMM  | 21-31-51-000-001 | Removal of the Outflow Valve 10HL (From Inside)  |
|   | AMM  | 21-31-51-000-006 | Removal of the Outflow Valve 10HL (From Outside)   |
|   | AMM  | 21-31-51-400-001 | Installation of the Outflow Valve 10HL (From Inside)   |
|   | AMM  | 21-31-51-400-006 | Installation of the Outflow Valve 10HL (From Outside)  |
|   |      |                  |  |

#### 3. Fault Confirmation

A. Do a read out of the POST FLIGHT REPORT.

### 4. Fault Isolation

- A. If the POST FLIGHT REPORT gives the ECAM warnings CAB PR EXCESS CAB ALT together with CAB PR SYS 1 FAULT or CAB PR SYS 2 FAULT,
  - (1) Make a print out of:
    - the POST FLIGHT REPORT,
    - the CPC1 and CPC2 LAST LEG REPORTS and PREVIOUS LEG REPORTS and,
    - if available the ECS REPORT 19.
  - (2) Replace the CONTROLLER-CABIN PRESSURE 1 (11HL) and the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and, (Ref. AMM TASK 21-31-34-400-001).

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## *GA319/A320/A321*

#### TROUBLE SHOOTING MANUAL

(a) If possible do a print out of the NON-VOLATILE MEMORY read-out (Ref. CMM 213121).

NOTE: It is recommended to:

- advise Airbus Industrie in case excessive cabin altitude is experienced and,
- provide Airbus Industrie with the information provided by the reports and read-out from work steps (1) and (2)(a).
- (3) Replace the VALVE-OUTFLOW (10HL)

(Ref. AMM TASK 21-31-51-000-001) and,

(Ref. AMM TASK 21-31-51-400-001) or,

(Ref. AMM TASK 21-31-51-000-006) and,

(Ref. AMM TASK 21-31-51-400-006).

NOTE: It is recommended that the removed outflow valve and controllers should be returned to the vendor for a detailed examination.

(4) Do the resistance check of the ground wiring (Ref. AMM TASK 21-31-00-760-001).

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### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-828

Outflow Valve Fault (33) (81)

- 1. Possible Causes
  - VALVE-OUTFLOW (10HL)
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE  | DESIGNATION   |
|--|---|
| AMM 21-31-51-000-001<br>AMM 21-31-51-000-006<br>AMM 21-31-51-400-001<br>AMM 21-31-51-400-006 | Removal of the Outflow Valve 10HL (From Inside) Removal of the Outflow Valve 10HL (From Outside) Installation of the Outflow Valve 10HL (From Inside) Installation of the Outflow Valve 10HL (From Outside) |

- 3. Fault Confirmation
  - A. The fault cannot be reproduced on the ground.
- 4. Fault Isolation
- R \*\*ON A/C 201-205, 227-227, 229-241, 276-283, 426-428, 476-480, 701-749,
  - A. If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT gives the maintenance messages OUTFLOW VALVE (33) and/or OUTFLOW VALVE (81):
    - Replace the VALVE-OUTFLOW (10HL)
      - (Ref. AMM TASK 21-31-51-000-001) and
      - (Ref. AMM TASK 21-31-51-400-001) or
      - (Ref. AMM TASK 21-31-51-000-006) and
      - (Ref. AMM TASK 21-31-51-400-006).
    - NOTE: It is necessary to do the tests of the Pressure Control and Monitoring System on the two system channels at the end of the installation procedure.
    - After the subsequent flight, make sure that the fault does not continue.

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#### TROUBLE SHOOTING MANUAL

\*\*ON A/C 206-225, 242-253, 284-299,

- A. If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT gives the maintenance messages OUTFLOW VALVE (33) and/or OUTFLOW VALVE (81):
  - Replace the VALVE-OUTFLOW (10HL) (Ref. AMM TASK 21-31-51-000-006) and (Ref. AMM TASK 21-31-51-400-006).
  - NOTE: It is necessary to do the tests of the Pressure Control and Monitoring System on the two system channels at the end of the installation procedure.
  - After the subsequent flight, make sure that the fault does not continue.
- R \*\*ON A/C 254-275, 429-475, 481-499, 503-549, 551-599,
  - A. If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT gives the maintenance messages OUTFLOW VALVE (33) and/or OUTFLOW VALVE (81):
    - Replace the VALVE-OUTFLOW (10HL) (Ref. AMM TASK 21-31-51-000-001) and (Ref. AMM TASK 21-31-51-400-001).
    - NOTE: It is necessary to do the tests of the Pressure Control and Monitoring System on the two system channels at the end of the installation procedure.
    - After the subsequent flight, make sure that the fault does not continue.

206-225, 242-275, 284-299, 429-475,

481-499, 503-549, 551-599,

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### TROUBLE SHOOTING MANUAL

#### R \*\*ON A/C ALL

TASK 21-31-00-810-829

Outflow Valve Electronic Module 1 Fault (04)

### 1. Possible Causes

- CONTROLLER-CABIN PRESSURE 1 (11HL)
- VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 1
- RELAY-AUTO MODE DRIVE SHUT OFF (17HL)
- PUSHBUTTON SWITCH-CABIN PRESS/MODE SEL/AUTO (14HL)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE            | DESIGNATION  |  |
|----------------------|--|--|
|                      |  |  |
| AMM 21-31-00-710-002 | Operational Test of the Pressure Control and Monitoring  |  |
| AMM 21-31-00-760-001 | Resistance Check of the Return Ground Connections - Cabin Pressure Controller (CPC) 1 (11HL) and 2 (12HL) and the Electronic Modules 10HL-1 and 10HL-2 |  |
| AMM 21-31-34-000-001 | Removal of the Cabin Pressure Controller (11HL,12HL)   |  |
| AMM 21-31-34-400-001 | <pre>Installation of the Cabin Pressure Controller (11HL,12HL)</pre>   |  |
| AMM 21-31-51-000-002 | Removal of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)   |  |
| AMM 21-31-51-400-002 | Installation of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)  |  |
| ASM 21-31/01         |  |  |
| ASM 21-31/02         |  |  |

### 3. Fault Confirmation

### A. Test

(1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

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### 4. Fault Isolation

- A. If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT, and/or the test gives the maintenance message which follows,
  - OUTFLOW VALVE ELEC 1 (04):
  - replace the VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 1 (referred to as OFV (10HL)) (Ref. AMM TASK 21-31-51-000-002) and (Ref. AMM TASK 21-31-51-400-002).
  - NOTE: The electronic module 1 is connected to the electrical connector 10HL-A.
  - (1) If the fault continues:
    - do a check of the RELAY-AUTO MODE DRIVE SHUT OFF (17HL) and replace it if necessary (Ref. ASM 21-31/01).
  - (2) If the fault continues:
    - do a check of the PUSHBUTTON SWITCH-CABIN PRESS/MODE SEL/AUTO (14HL) and replace it if necessary, (Ref. ASM 21-31/01).
  - (3) If the fault continues:
    - swap the CPC 1 (11HL) and the CPC 2 (12HL), (Ref. AMM TASK 21-31-34-000-001) and, (Ref. AMM TASK 21-31-34-400-001).
    - (a) If the fault moves with the CPC 1:
      - swap back the CPC 1 (11HL) and the CPC 2 (12HL), (Ref. AMM TASK 21-31-34-000-001) and, (Ref. AMM TASK 21-31-34-400-001).
      - replace the CONTROLLER-CABIN PRESSURE 1 (11HL), (Ref. AMM TASK 21-31-34-000-001) and, (Ref. AMM TASK 21-31-34-400-001).
    - (b) If the fault does not move with the CPC 1:
      - swap back the CPC 1 (11HL) and the CPC 2 (12HL), (Ref. AMM TASK 21-31-34-000-001) and, (Ref. AMM TASK 21-31-34-400-001).
      - 1 Do a check and repair the wiring from the:
        - OFV connector (10HL-A) pin K to the CB (1HL),
        - OFV connector (10HL-A) pin L to the CPC 1 connector (11HL-AA) pin 15D,
        - OFV connector (10HL-A) pins G and J to the GND,
        - OFV connector (10HL-A) pins R, P, N and M to the CPC 1 connector (11HL-AA) pins 7A, 8A, 9A and 10A. (Ref. ASM 21-31/01) and, (Ref. ASM 21-31/02).
      - Do a check of the earthing resistance at the return ground connections (Ref. AMM TASK 21-31-00-760-001) on: the CPC 1 connector (11HL-AC) pin 2 and on,

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- the electronic module 1 connector (10HL-A) pin J.

NOTE: The resistance must be smaller than 20 m.ohms.

B. Do the test as given in the Para. 3.A.

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#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-830

Outflow Valve Electronic Module 2 Fault (04)

#### 1. Possible Causes

- CONTROLLER-CABIN PRESSURE 2 (12HL)
- VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 2
- RELAY-AUTO MODE DRIVE SHUT OFF (17HL)
- PUSHBUTTON SWITCH-CABIN PRESS/MODE SEL/AUTO (14HL)
- wiring

#### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |
|-----------|------------------|--|--|
|           |                  |  |  |
|           |                  |  |  |
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and Monitoring  |  |
| AMM       | 21-31-00-760-001 | Resistance Check of the Return Ground Connections - Cabin Pressure Controller (CPC) 1 (11HL) and 2 (12HL) and the Electronic Modules 10HL-1 and 10HL-2 |  |
| AMM       | 21-31-34-000-001 | Removal of the Cabin Pressure Controller (11HL,12HL)   |  |
| AMM       | 21-31-34-400-001 | Installation of the Cabin Pressure Controller (11HL,12HL)  |  |
| AMM       | 21-31-51-000-002 | Removal of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)   |  |
| AMM       | 21-31-51-400-002 | <pre>Installation of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)</pre>   |  |
| ASM       | 21-31/01         |  |  |
| ASM       | 21-31/02         |  |  |

### 3. Fault Confirmation

#### A. Test

(1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

### 4. Fault Isolation

- A. If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT, and/or the test gives the maintenance message which follows,
  - OUTFLOW VALVE ELEC 2 (04):
  - replace the VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 2 (referred to as OFV (10HL)) (Ref. AMM TASK 21-31-51-000-002) and (Ref. AMM TASK 21-31-51-400-002).

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- NOTE : The electronic module 2 is connected to the electrical connector 10HL-B.
- (1) If the fault continues:
  - do a check of the RELAY-AUTO MODE DRIVE SHUT OFF (17HL) and replace it if necessary (Ref. ASM 21-31/01).
- (2) If the fault continues:
  - do a check of the PUSHBUTTON SWITCH-CABIN PRESS/MODE SEL/AUTO (14HL) and replace it if necessary (Ref. ASM 21-31/01).
- (3) If the fault continues:
  - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (a) If the fault moves with the CPC 2:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - replace the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (b) If the fault does not move with the CPC 2.
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - 1 do a check and repair the wiring from the:
      - OFV connector (10HL-B) pin K to the CB (2HL),
      - OFV connector (10HL-B) pin L to the CPC 2 connector (12HL-AA) pin 15D,
      - OFV connector (10HL-B) pins G and J to the GND,
      - OFV connector (10HL-B) pins R, P, N and M to the CPC 2 connector (12HL-AA) pins 7A, 8A, 9A and 10A. (Ref. ASM 21-31/01) and (Ref. ASM 21-31/02).
    - 2 do a check of the earthing resistance at the return ground connections (Ref. AMM TASK 21-31-00-760-001) on:
      - the CPC 2 connector 12HL-AC, pin 2 and on,
      - the electronic module 2 connector 10HL-B, pin J.

NOTE: The resistance value must be smaller than 20 m.ohms.

B. Do the test as given in the Para. 3.A.

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#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-831

Outflow Valve Electronic Module 1 Fault (52)

#### 1. Possible Causes

- CONTROLLER-CABIN PRESSURE 1 (11HL)
- VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 1
- wiring

#### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |
|-----------|------------------|--|--|
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and Monitoring  |  |
| AMM       | 21-31-00-760-001 | Resistance Check of the Return Ground Connections - Cabin Pressure Controller (CPC) 1 (11HL) and 2 (12HL) and the Electronic Modules 10HL-1 and 10HL-2 |  |
| AMM       | 21-31-34-000-001 | Removal of the Cabin Pressure Controller (11HL,12HL)   |  |
| AMM       | 21-31-34-400-001 | <pre>Installation of the Cabin Pressure Controller (11HL,12HL)</pre>   |  |
| AMM       | 21-31-51-000-002 | Removal of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)   |  |
| AMM       | 21-31-51-400-002 | <pre>Installation of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)</pre>   |  |
| ASM       | 21-31/02         |  |  |

#### 3. Fault Confirmation

- A. Test
  - (1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

### 4. Fault Isolation

- A. Test Results
  - (1) If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT gives the maintenance message which follows,
    - OUTFLOW VALVE ELEC 1 (52) and/or,
    - if the test gives the maintenance message OUTFLOW VALVE ELEC 1 (52)
       or,

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EFF:

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- (2) If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT gives the maintenance message which follows,
  - OUTFLOW VALVE ELEC 1 (52) but the test cannot confirm the fault:
  - replace the VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 1 (referred to as OFV (10HL)) (Ref. AMM TASK 21-31-51-000-002) and (Ref. AMM TASK 21-31-51-400-002).
  - NOTE: The electronic module 1 is connected to the electrical connector 10HL-A.
- (3) If the fault continues:
  - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (a) If the fault moves with the CPC 1:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001) and,
    - replace the CONTROLLER-CABIN PRESSURE 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (b) If the fault does not move with the CPC 1:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - 1 Do a check and repair the wiring from the:
      - OFV connector (10HL-A) pins R, P, N, and M to the CPC 1 connector (11HL-AA) pins 7A, 8A, 9A, and 10A (Ref. ASM 21-31/02).
    - 2 Do a check of the earthing resistance at the return ground connections (Ref. AMM TASK 21-31-00-760-001) on:
      - the CPC 1 connector 11HL-AC pin 2 and on,
      - the electronic module 1 connector 10HL-A pin J.

NOTE: The resistance value must be smaller than 20 m.ohms.

B. Do the test as given in the Para. 3.A.

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### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-832

Outflow Valve Electronic Module 2 Fault (52)

#### 1. Possible Causes

- CONTROLLER-CABIN PRESSURE 2 (12HL)
- VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 2
- wiring

#### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and Monitoring  |
| AMM       | 21-31-00-760-001 | Resistance Check of the Return Ground Connections - Cabin Pressure Controller (CPC) 1 (11HL) and 2 (12HL) and the Electronic Modules 10HL-1 and 10HL-2 |
| AMM       | 21-31-34-000-001 | Removal of the Cabin Pressure Controller (11HL,12HL)   |
| AMM       | 21-31-34-400-001 | Installation of the Cabin Pressure Controller (11HL,12HL)  |
| AMM       | 21-31-51-000-002 | Removal of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)   |
| AMM       | 21-31-51-400-002 | <pre>Installation of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)</pre>   |
| ASM       | 21-31/02         |  |

#### 3. Fault Confirmation

- A. Test
  - (1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

### 4. Fault Isolation

- A. Test Results
  - (1) If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT gives the maintenance message which follows,
    - OUTFLOW VALVE ELEC 2 (52) and/or,
    - if the test gives the maintenance message OUTFLOW VALVE ELEC 2 (52)
       or,

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#### TROUBLE SHOOTING MANUAL

- (2) If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT gives the maintenance message which follows,
  - OUTFLOW VALVE ELEC 2 (52) but the test cannot confirm the fault:
  - replace the VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 2 (referred to as OFV (10HL)) (Ref. AMM TASK 21-31-51-000-002) and (Ref. AMM TASK 21-31-51-400-002).
  - NOTE : The electronic module 2 is connected to the electrical connector 10HL-B.
- (3) If the fault continues:
  - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (a) If the fault moves with the CPC 2:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - replace the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (b) If the fault does not move with the CPC 2:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - do a check and repair the wiring from the: OFV connector (10HL-B) pins R, P, N and M to the CPC 2 connector (12HL-AA) pins 7A, 8A, 9A and 10A (Ref. ASM 21-31/02).
    - do a check of the earthing resistance at the return ground connections (Ref. AMM TASK 21-31-00-760-001) on:
    - 1 the CPC 2 connector 12HL-AC, pin 2 and on,
    - 2 the electronic module 2 connector 10HL-B, pin J.

NOTE: The resistance value must be smaller than 20 m.ohms.

B. Do the test as given in the Para. 3.A.

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#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-833

Outflow Valve Electronic Module 1 Fault (64), (65), (66), (67), (72), (76), (83), (87)

- 1. Possible Causes
  - VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 1
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE        | DESIGNATI               | DESIGNATION  |  |
|------------------|-------------------------|--|--|
| AMM 21-31-00-710 | Operation<br>Monitoring | al Test of the Pressure Control and                            |  |
| AMM 21-31-51-000 | 0-002 Removal o         | f the Outflow Valve (10HL) - Electronics<br>HL-1 (10HL-2)      |  |
| AMM 21-31-51-400 |                         | ion of the Outflow Valve (10HL) -<br>cs Module 10HL-1 (10HL-2) |  |
|                  |                         |  |  |

- 3. Fault Confirmation
  - A. Test
    - (1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).
- 4. Fault Isolation
  - A. If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT, and/or the test gives one of the maintenance messages which follow, OUTFLOW VALVE ELEC 1 (64), OUTFLOW VALVE ELEC 1 (65), OUTFLOW VALVE ELEC 1 (66), OUTFLOW VALVE ELEC 1 (67), OUTFLOW VALVE ELEC 1 (72), OUTFLOW VALVE ELEC 1 (76), OUTFLOW VALVE ELEC 1 (76), OUTFLOW VALVE ELEC 1 (83) or, OUTFLOW VALVE ELEC 1 (87):

     replace the VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 1 (referred to as OFV (10HL)) (Ref. AMM TASK 21-31-51-400-002).
    - NOTE : The electronic module 1 is connected to the electrical connector 10HL-A.
  - B. Do the test as given in the Para. 3.A.

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#### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-834

Outflow Valve Electronic Module 2 Fault (64), (65), (66), (67), (72), (76), (83), (87)

- 1. Possible Causes
  - VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 2
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE            | DESIGNATION  |  |
|----------------------|--|--|
| AMM 21-31-00-710-002 | Operational Test of the Pressure Control and Monitoring                                  |  |
| AMM 21-31-51-000-002 | Removal of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)                 |  |
| AMM 21-31-51-400-002 | <pre>Installation of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)</pre> |  |
|                      |  |  |

- 3. Fault Confirmation
  - A. Test
    - (1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).
- 4. Fault Isolation
  - A. If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT, and/or the test gives one of the maintenance messages which follow, OUTFLOW VALVE ELEC 2 (64), OUTFLOW VALVE ELEC 2 (65), OUTFLOW VALVE ELEC 2 (66), OUTFLOW VALVE ELEC 2 (67), OUTFLOW VALVE ELEC 2 (72), OUTFLOW VALVE ELEC 2 (72), OUTFLOW VALVE ELEC 2 (76), OUTFLOW VALVE ELEC 2 (83) or, OUTFLOW VALVE ELEC 2 (87):

     replace the VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 2 (referred to as OFV (10HL)) (Ref. AMM TASK 21-31-51-400-002).

 $\begin{tabular}{ll} {\tt NOTE} \\ \hline & \tt 10HL-B. \\ \end{tabular}$ 

B. Do the test as given in the Para. 3.A.

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**SROS** 

### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-835

Outflow Valve Electronic Module 1 Fault (77)

- 1. Possible Causes
  - VALVE-OUTFLOW (10HL)
  - VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 1
  - VALVE-OUTFLOW (10HL), FEEDBACK ASSEMBLY
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           | 24 74 00 740 002 |  |
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and Monitoring                                  |
| AMM       | 21-31-51-000-001 | Removal of the Outflow Valve 10HL (From Inside)  |
| AMM       | 21-31-51-000-002 | Removal of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)                 |
| AMM       | 21-31-51-000-005 | Removal of the Outflow Valve (10HL) - Feedback<br>Assembly 10HL-6                        |
| AMM       | 21-31-51-400-001 | Installation of the Outflow Valve 10HL (From Inside)                                     |
| AMM       | 21-31-51-400-002 | <pre>Installation of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)</pre> |
| AMM       | 21-31-51-400-005 | Installation of the Outflow Valve (10HL) - Feedback Assembly 10HL-6                      |
| ASM       | 21-31/01         |  |

### 3. Fault Confirmation

### A. Test

(1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

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### TROUBLE SHOOTING MANUAL

### 4. Fault Isolation

#### A. Fault Isolation

NOTE : This procedure is only applicable for Outflow Valve Part Numbers 9023-15703-81 and previous.

- (1) If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT, and/or the test gives the maintenance message, OUTFLOW VALVE ELEC 1 (77):
  - replace the VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 1 (referred to as OFV (10HL)) (Ref. AMM TASK 21-31-51-000-002) and (Ref. AMM TASK 21-31-51-400-002).
  - NOTE : The electronic module 1 is connected to the electrical connector 10HL-A.
  - (a) If the fault continues:
    - replace the VALVE-OUTFLOW (10HL), FEEDBACK ASSEMBLY (referred to as OFV (10HL)) (Ref. AMM TASK 21-31-51-000-005) and (Ref. AMM TASK 21-31-51-400-005).
  - (b) If the fault continues:
    - do a check and repair the wiring from the:
       OFV connector (10HL-D) pins A, B, C, D and E to the OFV connector (10HL-A) pins A, B, C, E and F (Ref. ASM 21-31/01).

#### B. Fault Isolation

- NOTE : This procedure is only applicable for Outflow Valve Part Number 20790-01AA and onwards.
- (1) If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT, and/or the test gives the maintenance message, OUTFLOW VALVE ELEC 1 (77):
  - replace the VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 1 (referred to as OFV (10HL)) (Ref. AMM TASK 21-31-51-000-002) and (Ref. AMM TASK 21-31-51-400-002).
  - NOTE : The electronic module 1 is connected to the electrical connector 10HL-A.
  - (a) If the fault continues:
    - replace the VALVE-OUTFLOW (10HL) (Ref. AMM TASK 21-31-51-000-001) and (Ref. AMM TASK 21-31-51-400-001).
  - (b) If the fault continues:
    - do a check and repair the wiring from the: OFV connector (10HL-D) pins A, B, C, D and E to the OFV connector (10HL-A) pins A, B, C, E and F (Ref. ASM 21-31/01).
- C. Do the test as given in the Para. 3.A.

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### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-836

Outflow Valve Electronic Module 2 Fault (77)

- 1. Possible Causes
  - VALVE-OUTFLOW (10HL)
  - VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 2
  - VALVE-OUTFLOW (10HL), FEEDBACK ASSEMBLY
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and Monitoring                                  |
| AMM       | 21-31-51-000-001 | Removal of the Outflow Valve 10HL (From Inside)  |
| AMM       | 21-31-51-000-002 | Removal of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)                 |
| AMM       | 21-31-51-000-005 | Removal of the Outflow Valve (10HL) - Feedback<br>Assembly 10HL-6                        |
| AMM       | 21-31-51-400-001 | Installation of the Outflow Valve 10HL (From Inside)                                     |
| AMM       | 21-31-51-400-002 | <pre>Installation of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)</pre> |
| AMM       | 21-31-51-400-005 | Installation of the Outflow Valve (10HL) - Feedback Assembly 10HL-6                      |
| ASM       | 21-31/01         | •  |

### 3. Fault Confirmation

### A. Test

(1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

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### TROUBLE SHOOTING MANUAL

### 4. Fault Isolation

#### A. Fault Isolation

NOTE : This procedure is only applicable for Outflow Valve Part Numbers 9023-15703-81 and previous.

- (1) If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT, and/or the test gives the maintenance message,
  - OUTFLOW VALVE ELECTRONIC 2 (77):
  - replace the VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 2 (referred to as OFV (10HL)) (Ref. AMM TASK 21-31-51-000-002) and (Ref. AMM TASK 21-31-51-400-002).
  - NOTE: The electronic module 2 is connected to the electrical connector 10HL-B.
  - (a) If the fault continues:
    - replace the VALVE-OUTFLOW (10HL), FEEDBACK ASSEMBLY (referred to as OFV (10HL)) (Ref. AMM TASK 21-31-51-000-005) and (Ref. AMM TASK 21-31-51-400-005).
  - (b) If the fault continues:
    - do a check and repair the wiring from the:
       OFV connector (10HL-E) pins A, B, C, E and F to the OFV connector (10HL-B) pins A, B, C, E and F (Ref. ASM 21-31/01).

#### B. Fault Isolation

- NOTE : This procedure is only applicable for Outflow Valve Part Number 20790-01AA and onwards.
- (1) If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT and/or the test gives the maintenance message,
  - OUTFLOW VALVE ELEC 2 (77):
  - replace the VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 2 (referred to as OFV (10HL)) (Ref. AMM TASK 21-31-51-000-002) and (Ref. AMM TASK 21-31-51-400-002).
  - NOTE: The electronic module 2 is connected to the electrical connector 10HL-B.
  - (a) If the fault continues:
    - replace the VALVE-OUTFLOW (10HL) (Ref. AMM TASK 21-31-51-000-001) and (Ref. AMM TASK 21-31-51-400-001).
  - (b) If the fault continues:
    - do a check and repair the wiring from the:
       OFV connector (10HL-E) pins A, B, C, E and F to the OFV connector (10HL-B) pins A, B, C, E and F (Ref. ASM 21-31/01).
- C. Do the test as given in the Para. 3.A.

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### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-837

Cabin Pressure Controller 1 Fault (51)

#### 1. Possible Causes

- CONTROLLER-CABIN PRESSURE 1 (11HL)
- VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 1
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE            | DESIGNATION  |
|----------------------|--|
| AMM 21310076000100   |  |
|                      | Occupational Test of the Bosses of Octavel and                           |
| AMM 21-31-00-710-002 | Operational Test of the Pressure Control and Monitoring                  |
| AMM 21-31-34-000-001 | Removal of the Cabin Pressure Controller (11HL,12HL)                     |
| AMM 21-31-34-400-001 | Installation of the Cabin Pressure Controller (11HL,12HL)                |
| AMM 21-31-51-000-002 | Removal of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2) |
| AMM 21-31-51-400-002 | Installation of the Outflow Valve (10HL) -                               |
|                      | Electronics Module 10HL-1 (10HL-2)                                       |
| ASM 21-31/02         |  |

#### 3. Fault Confirmation

#### A. Test

(1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

#### 4. Fault Isolation

- A. If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT and/or the test gives the maintenance message,
  - PRESS CONTROLLER 1 (51):
  - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (1) If the fault moves with the CPC 1:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - (a) Replace the CONTROLLER-CABIN PRESSURE 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).

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- (2) If the fault does not move with the CPC 1:
  - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (a) Replace the VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 1 (Ref. AMM TASK 21-31-51-000-002) and (Ref. AMM TASK 21-31-51-400-002).

NOTE: The electronic module 1 is connected to the electrical connector 10HL-A.

- (3) If the fault continues:
  - (a) do a check and repair the wiring from the:
    - CPC 1 controller (11HL-AA) pins 7A, 8A, 9A and 10A to the OFV connector (10HL-A) pins R, P, N and M (Ref. ASM 21-31/02).
  - (b) Do a check of the earthing resistance at the return ground connections (Ref. AMM 21310076000100) on:
    - the CPC 1 connector 11HL-AC, pin 2 and on,
    - the electronic module 1 connector 10HL-A, pin J.

NOTE: The resistance must be smaller than 20 m.ohms.

B. Do the test as given in the Para. 3.A.

EFF: ALL

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### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-838

Cabin Pressure Controller 2 Fault (51)

#### 1. Possible Causes

- CONTROLLER-CABIN PRESSURE 2 (12HL)
- VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 2
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |
|-----------|------------------|--|--|
| 4 14 14   | 2474007/000400   |  |  |
| AMM       | 21310076000100   |  |  |
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and Monitoring                                  |  |
| AMM       | 21-31-34-000-001 | Removal of the Cabin Pressure Controller (11HL,12HL)                                     |  |
| AMM       | 21-31-34-400-001 | Installation of the Cabin Pressure Controller (11HL,12HL)                                |  |
| AMM       | 21-31-51-000-002 | Removal of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)                 |  |
| AMM       | 21-31-51-400-002 | <pre>Installation of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)</pre> |  |
| ASM       | 21-31/02         |  |  |

#### 3. Fault Confirmation

#### A. Test

(1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

#### 4. Fault Isolation

- A. If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT, and/or the test gives the maintenance message,
  - PRESS CONTROLLER 2 (51):
  - swap the CPC 2 (12HL) and the CPC 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (1) If the fault moves with the CPC 2:
    - (a) Swap back the CPC 2 (12HL) and the CPC 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - (b) Replace the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).

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### TROUBLE SHOOTING MANUAL

- (2) If the fault does not move with the CPC 2:
  - (a) Swap back the CPC 2 (12HL) and the CPC 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (b) Replace the VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 2 (Ref. AMM TASK 21-31-51-000-002) and (Ref. AMM TASK 21-31-51-400-002).

NOTE: The electronic module 2 is connected to the electrical connector 10HL-B.

- (3) If the fault continues:
  - (a) Do a check and repair the wiring from the:
    - CPC 2 controller (12HL-AA) pins 7A, 8A, 9A and 10A to the OFV controller (10HL-B) pins R, P, N and M (Ref. ASM 21-31/02).
  - (b) Do a check of the earthing resistance at the return ground connections (Ref. AMM 21310076000100) on:
    - the CPC 2 connector 12HL-AC, pin 2 and on,
    - the electronic module 2 connector 10HL-B, pin J.

NOTE: The resistance value must be smaller than 20 m.ohms.

B. Do the test as given in the Para. 3.A.

EFF: ALL

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### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-839

Cabin Pressure Controller 1 Fault (59)

### 1. Possible Causes

- CONTROLLER-CABIN PRESSURE 1 (11HL)
- VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 1
- RELAY-AUTO MODE DRIVE SHUT OFF (17HL)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |
|-----------|------------------|--|--|
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and Monitoring  |  |
| AMM       | 21-31-00-760-001 | Resistance Check of the Return Ground Connections - Cabin Pressure Controller (CPC) 1 (11HL) and 2 (12HL) and the Electronic Modules 10HL-1 and 10HL-2 |  |
| AMM       | 21-31-34-000-001 | Removal of the Cabin Pressure Controller (11HL,12HL)   |  |
| AMM       | 21-31-34-400-001 | <pre>Installation of the Cabin Pressure Controller (11HL,12HL)</pre>   |  |
| AMM       | 21-31-51-000-002 | Removal of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)   |  |
| AMM       | 21-31-51-400-002 | <pre>Installation of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)</pre>   |  |
| ASM       | 21-31/01         |  |  |

### 3. Fault Confirmation

#### A. Test

(1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

### 4. Fault Isolation

- A. If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT, and/or the test gives the maintenance message,
  - PRESS CONTROLLER 1 (59):
  - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).

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- (1) If the fault moves with the CPC 1:
  - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (a) Replace the CONTROLLER-CABIN PRESSURE 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
- (2) If the fault does not move with the CPC 1:
  - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (a) Replace the VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 1 (Ref. AMM TASK 21-31-51-000-002) and (Ref. AMM TASK 21-31-51-400-002).

NOTE: The electronic module 1 is connected to the electrical connector 10HL-A.

- (3) If the fault continues:
  - replace the RELAY-AUTO MODE DRIVE SHUT OFF (17HL).
- (4) If the fault continues:
  - do a check and repair the wiring from the:
  - CPC 1 connector (11HL-AA) pin 15D to the OFV connector (10HL-A) pin L (Ref. ASM 21-31/01).
  - (a) Do a check of the earthing resistance at the return ground connections (Ref. AMM TASK 21-31-00-760-001) on:
    - the CPC 1 connector 11HL-AC, pin 2 and on,
    - the electronic module 1 connector 10HL-A, pin J.

NOTE: The resistance value must be smaller than 20 m.ohms.

B. Do the test as given in the Para. 3.A.

EFF: ALL

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### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-840

Cabin Pressure Controller 2 Fault (59)

### 1. Possible Causes

- CONTROLLER-CABIN PRESSURE 2 (12HL)
- VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 2
- RELAY-AUTO MODE DRIVE SHUT OFF (17HL)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |
|-----------|------------------|--|--|
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and Monitoring  |  |
| AMM       | 21-31-00-760-001 | Resistance Check of the Return Ground Connections - Cabin Pressure Controller (CPC) 1 (11HL) and 2 (12HL) and the Electronic Modules 10HL-1 and 10HL-2 |  |
| AMM       | 21-31-34-000-001 | Removal of the Cabin Pressure Controller (11HL,12HL)   |  |
| AMM       | 21-31-34-400-001 | <pre>Installation of the Cabin Pressure Controller (11HL,12HL)</pre>   |  |
| AMM       | 21-31-51-000-002 | Removal of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)   |  |
| AMM       | 21-31-51-400-002 | <pre>Installation of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)</pre>   |  |
| ASM       | 21-31/01         |  |  |

### 3. Fault Confirmation

#### A. Test

(1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

### 4. Fault Isolation

- A. If one or both of the reports, LAST LEG REPORT, PREVIOUS LEG REPORT, and/or the test gives the maintenance message,
  - PRESS CONTROLLER 2 (59):
  - swap the CPC 2 (12HL) and the CPC 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).

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#### TROUBLE SHOOTING MANUAL

- (1) If the fault moves with the CPC 2:
  - swap back the CPC 2 (12HL) and the CPC 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (a) Replace the CONTROLLER-CABIN PRESSURE 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
- (2) If the fault does not move with the CPC 2:
  - swap back the CPC 2 (12HL) and the CPC 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (a) Replace the VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 2 (Ref. AMM TASK 21-31-51-000-002) and (Ref. AMM TASK 21-31-51-400-002).

NOTE: The electronic module 2 is connected to the electrical connector 10HL-B.

- (3) If the fault continues:
  - replace the RELAY-AUTO MODE DRIVE SHUT OFF (17HL).
- (4) If the fault continues:
  - do a check and repair the wiring from the:
  - CPC 2 connector (12HL-AA) pin 15D to the OFV connector (10HL-B) pin L (Ref. ASM 21-31/01).
  - (a) Do a check of the earthing resistance at the return ground connections (Ref. AMM TASK 21-31-00-760-001) on:
    - the CPC 2 connector 12HL-AC, pin 2 and on,
    - the electronic module 2 connector 10HL-B, pin J.

NOTE: The resistance value must be smaller than 20 m.ohms.

B. Do the test as given in the Para. 3.A.

EFF: ALL

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### TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-841

CPC 1 - MCDU Fault

### 1. Possible Causes

- CONTROLLER-CABIN PRESSURE 1 (11HL)
- VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 1
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
| AMM       | 21310076000100   |  |
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and Monitoring                                  |
| AMM       | 21-31-34-000-001 | Removal of the Cabin Pressure Controller (11HL,12HL)                                     |
| AMM       | 21-31-34-400-001 | <pre>Installation of the Cabin Pressure Controller (11HL,12HL)</pre>                     |
| AMM       | 21-31-51-000-002 | Removal of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)                 |
| AMM       | 21-31-51-400-002 | <pre>Installation of the Outflow Valve (10HL) - Electronics Module 10HL-1 (10HL-2)</pre> |
| ASM       | 21-31/01         |  |
| ASM       | 21-31/02         |  |

### 3. Fault Confirmation

- A. Test
  - (1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

### 4. Fault Isolation

- A. If the test cannot be done with the CPC 1:
  - swap the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (1) If the fault moves with the CPC 1:
    - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
    - (a) Replace the CONTROLLER-CABIN PRESSURE 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).

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### TROUBLE SHOOTING MANUAL

- (2) If the fault does not move with the CPC 1:
  - swap back the CPC 1 (11HL) and the CPC 2 (12HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
  - (a) Replace the VALVE-OUTFLOW (10HL), ELECTRONIC MODULE 1 (Ref. AMM TASK 21-31-51-000-002) and (Ref. AMM TASK 21-31-51-400-002).

NOTE: The electronic module 1 is connected to the electrical connector 10HL-A.

- (3) If the fault continues:
  - do a check and repair the wiring from the:
  - CPC 1 connector (11HL-AA) pins 7A, 8A, 9A and 10A to the OFV connector (10HL-A) pins R, P, N and M (Ref. ASM 21-31/02).
- (4) If the fault continues:
  - do a check of the earthing resistance at the return ground connections (Ref. AMM 21310076000100) on:
  - the CPC 1 connector 11HL-AC, pin 2 and on,
  - the electronic module 1 connector 10HL-A, pin J.
- (5) If the fault continues:
  - do a check and repair the wiring from the:
  - CPC 1 connector (11HL-AC) pin 3 to the CB (1HL),
  - CPC 1 connector (11HL-AC) pins 2, 4 and 13D to the GND (Ref. ASM 21-31/01).
- B. Do the test as given in the Para. 3.A.

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EFF:

## TROUBLE SHOOTING MANUAL

TASK 21-31-00-810-843

Outlow Valve Mistakenly Reported Not Open On Ground

- 1. Possible Causes
  - SDAC-1 (1WV1)
  - SDAC-2 (1WV2)
  - CONTROLLER-CABIN PRESSURE 1 (11HL)
  - VALVE-OUTFLOW (10HL)
  - Outflow Valve Feedback-Assembly 10HL6
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and                         |
|           |                  | Monitoring   |
| AMM       | 21-31-34-000-001 | Removal of the Cabin Pressure Controller (11HL,12HL)                 |
| AMM       | 21-31-34-400-001 | <pre>Installation of the Cabin Pressure Controller (11HL,12HL)</pre> |
| AMM       | 21-31-51-000-001 | Removal of the Outflow Valve 10HL (From Inside)                      |
| AMM       | 21-31-51-000-005 | Removal of the Outflow Valve (10HL) - Feedback Assembly 10HL-6       |
| AMM       | 21-31-51-000-006 | Removal of the Outflow Valve 10HL (From Outside)                     |
| AMM       | 21-31-51-400-001 | Installation of the Outflow Valve 10HL (From Inside)                 |
| AMM       | 21-31-51-400-005 | Installation of the Outflow Valve (10HL) - Feedback Assembly 10HL-6  |
| AMM       | 21-31-51-400-006 | Installation of the Outflow Valve 10HL (From Outside)                |
| AMM       | 31-55-34-000-001 | Removal of the SDAC (1WV1,1WV2)                                      |
| AMM       |                  | Installation of the SDAC (1WV1,1WV2)                                 |
| ASM       |                  | The contraction of the opine (intropinate)                           |
| ASM       | 21-31/03         |  |
| MOIT      | 2 1-3 1/ UJ      |  |

### 3. Fault Confirmation

- A. Test
  - (1) Do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).

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### TROUBLE SHOOTING MANUAL

### 4. Fault Isolation

### A. Test Results

NOTE : This procedure is only applicable for:
- Outflow Valve Part Numbers 9023-15705-81 and previous.

- (1) If the POST FLIGHT REPORT gives the maintenance message:
  - CAB PR OUTFLOW VALVE NOT OPEN and a visual inspection of the outflow valve shows that it is open, then:
  - replace the SDAC-1 (1WV1) (Ref. AMM TASK 31-55-34-000-001) and (Ref. AMM TASK 31-55-34-400-001).
- (2) If the fault continues:
  - replace the SDAC-2 (1WV2) (Ref. AMM TASK 31-55-34-000-001) and (Ref. AMM TASK 31-55-34-400-001).
- (3) If the fault continues:
  - replace the Outflow Valve Feedback-Assembly 10HL6 (Ref. AMM TASK 21-31-51-000-005) and (Ref. AMM TASK 21-31-51-400-005).
- (4) If the fault continues:
  - do a check and repair the wiring between the:
  - OFV connector (10HL-D) pin F and the CPC connector (11HL-AB) pin 1D.
  - OFV connector (10HL-D) pin G and the CPC connector (11HL-AB) pin 2D.
  - OFV connector (10HL-D) pin H and the CPC connector (11HL-AB) pin 3D (Ref. ASM 21-31/01) (Ref. ASM 21-31/03).
- (5) If the fault continues:
  - replace the CONTROLLER-CABIN PRESSURE 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
- B. Test Results
  - NOTE : This procedure is only applicable for:
     Outflow Valve Part Number 20790-01AA and onwards.
  - (1) If the POST FLIGHT REPORT gives the maintenance message:
    - CAB PR OUTFLOW VALVE NOT OPEN and a visual inspection of the outflow valve shows that it is open, then:
    - replace the SDAC-1 (1WV1) (Ref. AMM TASK 31-55-34-000-001) and (Ref. AMM TASK 31-55-34-400-001).
  - (2) If the fault continues:
    - replace the SDAC-2 (1WV2) (Ref. AMM TASK 31-55-34-000-001) and (Ref. AMM TASK 31-55-34-400-001).

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- (3) If the fault continues:
  - do a check and repair the wiring between the:
  - OFV connector (10HL-D) pin F and the CPC connector (11HL-AB) pin 1D.
  - OFV connector (10HL-D) pin G and the CPC connector (11HL-AB) pin 2D.
  - OFV connector (10HL-D) pin H and the CPC connector (11HL-AB) pin 3D (Ref. ASM 21-31/01) (Ref. ASM 21-31/03).
- (4) If the fault continues:
  - replace the VALVE-OUTFLOW (10HL) (Ref. AMM TASK 21-31-51-000-001) and (Ref. AMM TASK 21-31-51-400-001) or or (Ref. AMM TASK 21-31-51-000-006) and (Ref. AMM TASK 21-31-51-400-006).
- (5) If the fault continues:
  - replace the CONTROLLER-CABIN PRESSURE 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
- C. Do the test as given in the Para. 3.A.

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EFF:

```
TROUBLE SHOOTING MANUAL
R **ON A/C 456-475,
 TASK 21-31-00-810-844
R RPCU - Fault
  1. Possible Causes
R
R
     - RPCU 9HL
      - RPCU RELAY (21HL)
      - P/BSW-CABIN PRESS / MODE SEL / AUTO (14HL)
      - wiring
      - CIRCUIT BREAKER (4HL)
R 2. Job Set-up Information
R
      A. Referenced Information
                             DESIGNATION
R
  AMM 21-31-00-710-003
                             Operational Test of Manual Mode Selection and Manual
                             Mode Pressure Control and Functional Test of Manual
R
                             Mode Cabin Altitude/Outflow Valve Position Indication
R
R
  AMM 21-31-35-000-001
                             Removal of the Residual Pressure Control Unit (9HL)
  AMM 21-31-35-400-001
                             Installation of the Residual Pressure Control Unit
R
                             (9HL)
R
  ASM 21-31/01
R
  3. Fault Confirmation
      A. Do the operational test in the manual mode (Ref. AMM TASK 21-31-00-710-
R
         003) but make sure that on the panel 122VU the circuit breaker RPCU SPLY
R
         4HL is closed during the test.
R
  4. Fault Isolation
R
      A. Fault Isolation and Correction
R
         (1) If the outflow valve does not open automatically during the
             operational test in the manual mode:
R
             (a) Replace the RPCU 9HL (Ref. AMM TASK 21-31-35-000-001) and (Ref.
R
                 AMM TASK 21-31-35-400-001).
R
             (b) If the fault continues:
R
```

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R

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- Replace the RPCU RELAY (21HL) on panel 96VU.

#### TROUBLE SHOOTING MANUAL

```
R
             (c) If the fault continues:
R
                 - Replace the P/BSW-CABIN PRESS / MODE SEL / AUTO (14HL) on panel
                   25VU.
R
             (d) If the fault continues:
R
                 - Do a check and repair the wiring (Ref. ASM 21-31/01) from:
R
R
                 - the RPCU RELAY (21HL) to ground and to the RPCU (9HL).
             (e) If the fault continues:
R
                 - Do a check for ground at:
R
                 - the RPCU (9HL)A pins <B, B, C and <I
R
R
                 - the RPCU (9HL)B pin F
             (f) If the fault continues:
R
                 - Do a check for 28VDC at:
R
                 - the RPCU (9HL)A pin A,
R
R
                 - the RPCU RELAY (21HL)A pin B1.
R
             (g) If the voltage is not correct:
                 - Do a check for 28VDC at the circuit breaker (4HL) on the panel
R
                   122VU.
R
             (h) If the voltage is not correct:
R
R
                 - Replace the CIRCUIT BREAKER (4HL) on the panel 122VU.
             (i) If the voltage is not correct:
R
R
                 - Trouble shoot the electrical power system (Ref. TSM 24).
             (j) If the fault continues:
R
R
                 - Do a check and repair the wiring (Ref. ASM 21-31/01) from:
R
                 - the RPCU (9HL) to the CPC2 (12HL),
R
                 - the RPCU (9HL) to the CPC1 (11HL),
                 - the P/BSW- CABIN PRESS/MODE SEL/AUTO (14HL) to the CPC1 (11HL),
R
                 - the P/BSW- CABIN PRESS/MODE SEL/AUTO (14HL) to the CPC2 (12HL),
R
R
                 - the RPCU (9HL) to the ENG/MASTER switches (1KS1 and 1KS2),
                 - the RPCU (9HL) to the PARK BRAKE CTL RELAY (1804GL),
R
R
                 - the RPCU (9HL) to the LGCIU (5GA1 and 5GA2) and
                 - the RPCU (9HL) to the Air Data/Inertial Reference Units (1FP1,
R
R
                   1FP2, 1FP3).
```

B. Do the test given in para. 3.

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R

### TROUBLE SHOOTING MANUAL

R \*\*ON A/C ALL

TASK 21-31-00-810-845

Excess Residual-Pressure Fault

- 1. Possible Causes
- 2. Job Set-up Information
  - A. Referenced Information

DESTAURT DESTAURT DESTAURT DESTAURT DESTAURT DESTAURT DESTAURT DESTAURT DESTAURT DES AUGUST DES AUG

REFERENCE

DESIGNATION

-----

21-31-00-810-844

RPCU - Fault

AMM 21-31-00-710-002

Operational Test of the Pressure Control and

Monitoring

- 3. Fault Confirmation
- R \*\*ON A/C ALL

Post SB 31-1267 For A/C 254-275,426-499,564-564,701-749,

R Post SB 31-1300 For A/C ALL

- A. Do the operational test of the pressure control and monitoring (Ref. AMM TASK 21-31-00-710-002).
- R \*\*ON A/C ALL
  - 4. Fault Isolation
- R \*\*ON A/C ALL

**SROS** 

Post SB 31-1267 For A/C 254-275,426-499,564-564,701-749,

R Post SB 31-1300 For A/C ALL

- R A. If the test gives a maintenance message:
- Do the related trouble shooting procedure. Use the fault symptom(s) as entry into the TSM.
  - B. If the test gives no maintenance messages:
    - make sure that the outflow valve is fully open and that no objects prevents the free flow of air through the outflow valve.

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## TROUBLE SHOOTING MANUAL

\*\*ON A/C 456-475,

Post SB 31-1267 For A/C 456-475, Post SB 31-1300 For A/C 456-475,

C. If the outflow valve does not open automatically in the manual mode:
 - do the trouble shooting of the RPCU (Ref. TASK 21-31-00-810-844) .

\*\*ON A/C ALL

Post SB 31-1267 For A/C 254-275,426-499,564-564,701-749,

R Post SB 31-1300 For A/C 201-225,227-227,229-253,276-299,503-549,551-563,

R 565-599,

D. Do the test given in para. 3.

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SROS

### TROUBLE SHOOTING MANUAL

### PRESSURE CONTROL AND MONITORING - TASK SUPPORTING DATA

### 1. Cabin Pressure Controller

A. CFDS Fault Information

Additional information about a failed component are available in the MCDU CAB PRESS CONT menu.

The related LAST LEG REPORT page shows:

- the date and time when the fault occurs,
- the ATA number of the component,
- the FIN of the component,
- a fault code for shop maintenance.
- B. Additional BITE Fault Information Handling

If a fault is detected by the CPC BITE, a fault code for shop maintenance is shown on the CFDS in addition to the related CFDS message.

The subsequent tables show the possible fault codes with their attached fault origins:

R \*\*ON A/C 201-225, 227-227, 229-245, 276-286, 426-428, 476-480, 503-549,

R 551-551, 701-749,

NOTE: There are two tables in this sub-paragraph.

This table is only applicable to Cabin Pressure Controller Part Numbers 9022-15702-9 and previous.

| FAULT<br>  CODE | FAULT ORIGIN<br>                     | CFDS MESSAGE<br>         |
|-----------------|--------------------------------------|--------------------------|
| 00              | CONTR. ON-CHIP RAM                   | PRESS CONTROLLER 1 (2)   |
| 01              | CONTR. EXTERNAL RAM                  | PRESS CONTROLLER 1 (2)   |
| 02              | FMS 1 DATA OUT OF RANGE              | FMGS 1 OUT OF RANGE      |
| 03              | FMS 2 DATA OUT OF RANGE              | FMGS 2 OUT OF RANGE      |
| 04              | ACTUATOR STATUS                      | OUTFLOW VALVE ELEC 1 (2) |
| 05              | CALIBRATION TIME (OPEN)              | OUTFLOW VALVE            |
| 06              | CONTR. BACKGR. TIME DID NOT COMPLETE | <br>                     |
| 07              | CONTR. LAST REAL TIME DID NOT FINISH | <br>                     |
| 08              | CONTR. ROM CRC                       | PRESS CONTROLLER 1 (2)   |
| 09              | CONTR. RS422 WRAPAROUND              | CONTR                    |
| 10              | CONTR. RS422 CHECKSUM                |                          |
| I               |                                      |                          |

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## TROUBLE SHOOTING MANUAL

| FAULT | FAULT ORIGIN                        | CFDS MESSAGE           |
|-------|-------------------------------------|------------------------|
| 11    | CALIBRATION TIME (CLOSED)           | OUTFLOW VALVE          |
| 12    | G/A WATCHDOG REFRESH TOO EARLY FAIL | PRESS CONTROLLER 1 (2) |
| 13    | G/A WATCHDOG REFRESH TOO LATE FAIL  | PRESS CONTROLLER 1 (2) |
| 14    | ADIRS 1 DATA OUT OF RANGE           | ADIRS 1 OUT OF RANGE   |
| 15    | ADIRS 2 DATA OUT OF RANGE           | ADIRS 2 OUT OF RANGE   |
| 16    | CONTR. A/D FRAME LATE               | <br> <br>              |
| 17    | EIU SIGNAL REPLACED                 | EIU SIGNAL REPLACED    |
| 18    | CONTROLLER ALU                      | <br> <br>              |
| 19    | ADIRS 1 DATA FAULT                  | NO DATA FROM ADIRS 1   |
| 20    | ADIRS 2 DATA FAULT                  | NO DATA FROM ADIRS 2   |
| 21    | ADIRS 3 DATA FAULT                  | NO DATA FROM ADIRS 3   |
| 22    | ALL MUX FAIL                        | PRESS CONTROLLER 1 (2) |
| 23    | CONTR. RS422 ACTIVITY               | <br> <br>              |
| 24    | SLEW RATE END TO END (CLOSED)       | OUTFLOW VALVE          |
| 25    | RVT CALIBRATION (OPEN)              | OUTFLOW VALVE          |
| 26    | RVT CALIBRATION (CLOSED)            | OUTFLOW VALVE          |
|       | ADIRS 3 DATA OUT OF RANGE           | ADIRS 3 OUT OF RANGE   |
| 28    | STATE CHANGE INTERRUPT              | <br> <br>              |
|       |                                     | OUTFL. VAL. BLOCKED    |
|       | PRESS SENSOR AGAINST ADC            | <br>  CONTR            |
|       | CONTR. SW TIMER EARLY               | <br> <br>              |
| :     | SYSTEM FAIL FLAG                    | <br> <br>              |
| 33    | LOW CABIN PRESSURE                  | <br>  OUTFLOW VALVE    |
| :     | HIGH CABIN PRESSURE RATE            | PRESS CONTROLLER 1 (2) |
|       |                                     |                        |

EFF: 201-225, 227-227, 229-245, 276-286, 426-428, 476-480, 503-549, 551-551, 701-749, SROS

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## TROUBLE SHOOTING MANUAL

| FAULT<br>CODE | -<br>  FAULT ORIGIN<br>             | -<br>  CFDS MESSAGE<br>  |
|---------------|-------------------------------------|--------------------------|
| 35            | LGCIU SIGNAL REPLACED               | LGCIU SIGNAL REPLACED    |
| 36            | CONTR POWER SUPPLY +15V             | PRESS CONTROLLER 1 (2)   |
| 37            | CONTR POWER SUPPLY -15V             | PRESS CONTROLLER 1 (2)   |
| 38            | CONTR A/D CONVERTER                 | PRESS CONTROLLER 1 (2)   |
| 39            | NO TEMP UPDATE IN PRESS SENSOR      | PRESS CONTROLLER 1 (2)   |
| 40            | CONTR PASS SIGN WRAPAROUND          | PRESS CONTROLLER 1 (2)   |
| 41            | CONTR FAULT WARNING W/A             | PRESS CONTROLLER 1 (2)   |
| 42            | PRESS. DELTA RESTART                | PRESS CONTROLLER 1 (2)   |
| 43            | <br>  MODE FAIL FLAG (NVM)          | PRESS CONTROLLER 1 (2)   |
| 44            | CFDS BUS                            |                          |
| 45            | <br>  CONTR. ARINC 429 MUX 1        | PRESS CONTROLLER 1 (2)   |
| 46            | <br>  CONTR. ARINC 429 MUX 2        | PRESS CONTROLLER 1 (2)   |
| 47            | <br>  CONTR. ARINC 429 MUX 3        | PRESS CONTROLLER 1 (2)   |
| 48            | GWDOG INIT TEST FAULT               | PRESS CONTROLLER 1 (2)   |
| 49            | PRESSURE SENSOR RANGE               | PRESS CONTROLLER 1 (2)   |
| 50            | LAND FIELD ELEV. SELECT             | <br>  LFES               |
| 51            | CONTR RS422 TXT/RXT                 | PRESS CONTROLLER 1 (2)   |
| 52            | <br>  ACTUAT. RS422 TXT/RXT         | OUTFLOW VALVE ELEC 1 (2) |
| 53            | G/A WATCHDOG CLOCK FAIL             | PRESS CONTROLLER 1 (2)   |
| 54            | <br>  FMGS 1 DATA FAULT<br>         | NO DATA FROM FMGS 1      |
| 55            | I                                   | NO DATA FROM FMGS 2      |
| 56            | <br>  28 VOLT DRIVE LOW             |                          |
| 57            | LOW VOLTAGE CUTOFF                  |                          |
| 58            | <br>  DRIVE ENABLE SIGNAL (28V)<br> | PRESS CONTROLLER 1 (2)   |

EFF: 201-225, 227-227, 229-245, 276-286, 426-428, 476-480, 503-549, 551-551, 701-749, SROS

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| FAULT | FAULT ORIGIN                         | CFDS MESSAGE             |
|-------|--------------------------------------|--------------------------|
| 59    | HIGH SIDE SWITCH SHORT               | PRESS CONTROLLER 1 (2)   |
| 60    | SLEW RATE END TO END                 | OUTFLOW VALVE            |
| 61    | CABIN PRESSURE REFRESH FAULT         | PRESS CONTROLLER 1 (2)   |
| 62    | STATE CHANGE MOTION (OPEN)           | OUTFL. VAL. BLOCKED      |
| 63    | STATE CHANGE MOTION (CLOSED)         | OUTFL. VAL. BLOCKED      |
| 64    | ACTUATOR ON-CHIP RAM                 | OUTFLOW VALVE ELEC 1 (2) |
| 65    | ACTUATOR EXTERNAL RAM                | OUTFLOW VALVE ELEC 1 (2) |
| 66    | ACTUATOR ON-CHIP RAM AT POR          | OUTFLOW VALVE ELEC 1 (2) |
| 67    | ACTUATOR EXTERNAL RAM AT POR         | OUTFLOW VALVE ELEC 1 (2) |
| 68    | UNUSED                               | <br> <br>                |
| 69    | UNUSED                               | <br> <br>                |
| 70    | ACTUATOR BACKGROUND DID NOT COMPLETE | <br> <br>                |
| 71    | ACT. LAST REAL TIME DID NOT FINISH   | <br> <br>                |
| 72    | ACTUATOR ROM                         | OUTFLOW VALVE ELEC 1 (2) |
| 73    | RS422 WRAPAROUND (ACTUATOR)          |                          |
| 74    | ACTUATOR RS422 ACTIVITY              | <br> <br>                |
| 75    | ACTUATOR RS422 INTERRUPT             | <br> <br>                |
| 76    | ACTUATOR DISCRETE MUX                | OUTFLOW VALVE ELEC 1 (2) |
| •     | RVT EXCITATION                       | OUTFLOW VALVE ELEC 1 (2) |
| 78    | RVT RANGE                            | OUTFLOW VALVE ELEC 1 (2) |
| 79    | UNUSED                               | <br> <br>                |
|       | ACTUATOR A/D FRAME LATE              | <br> <br>                |
|       | ACTUATOR LOOP CLOSURE                | OUTFLOW VALVE            |
|       | ACTUATOR UNUSED INTER. OCCURED       |                          |
|       |                                      |                          |

EFF: 201-225, 227-227, 229-245, 276-286, 426-428, 476-480, 503-549, 551-551, 701-749, SROS

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| FAULT<br>  CODE | FAULT ORIGIN                         | CFDS MESSAGE              |
|-----------------|--------------------------------------|---------------------------|
| 83              | ACTUATOR ALU                         | OUTFLOW VALVE ELEC 1 (2)  |
| 84              | UNUSED                               |                           |
| 85              | UNUSED                               |                           |
| 86              | UNUSED                               |                           |
| 87              | ACTUATOR PWR SUPPLY +15V OR A/D CONV |                           |
| 88              | ACTUATOR MOTOR HALL SENSOR           | OUTFLOW VALVE ELEC 1 (2)  |
| 89              | ACTUATOR S/W TIMER TOO EARLY         | OUTFLOW VALVE ELEC 1 (2)  |
| 90              | ACTUATOR ALT. LIMIT SWITCH CLOSED    |                           |
| 91              | ACTUATOR RS422 CHECKSUM              |                           |
| 92              | UNUSED                               |                           |
| 93              | UNUSED                               |                           |
| 94              | UNUSED                               |                           |
| 95              | UNUSED                               | <br>                      |
| '               | <sup>1</sup>                         | <sup> </sup> <sup> </sup> |

NOTE : This table is only applicable to Cabin Pressure Controller Part Numbers 20791-02AB.

| FAULT  <br>  CODE | FAULT ORIGIN           | CFDS MESSAGE             |
|-------------------|------------------------|--------------------------|
| 00                | RAM_FAILED_REG         | PRESS CONTROLLER 1 (2)   |
| 01                | RAM_FAILED_RAM         | PRESS CONTROLLER 1 (2)   |
| 02                | FMS1_DATA_OUT_OF_RANGE | FMGS1 OUT OF RANGE       |
| 03                | FMS2_DATA_OUT_OF_RANGE | FMGS2 OUT OF RANGE       |
| 04                | ACT_STATUS_FAIL        | OUTFLOW VALVE ELEC 1 (2) |
| 05                | CAL_TIME_OPEN_FAIL     | OUTFLOW VALVE            |
| 06                | BACKGROUND_TIMEOUT     |                          |

EFF: 201-225, 227-227, 229-245, 276-286, 426-428, 476-480, 503-549, 551-551, 701-749, SROS

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## TROUBLE SHOOTING MANUAL

| FAULT | FAULT ORIGIN                       | CFDS MESSAGE           |
|-------|------------------------------------|------------------------|
| 07    | UNUSED                             |                        |
| 08    | ROM_CRC_FAIL                       | PRESS CONTROLLER 1 (2) |
| 09    | RS422_WR_FAIL                      | CONTR                  |
| 10    | RS422_CHECKSUM_FAIL                | <br> <br>              |
| 11    | CAL_TIME_CLOSE_FAIL                | OUTFLOW VALVE          |
| 12    | WDT_EXPIRED                        | PRESS CONTROLLER 1 (2) |
| 13    | G/A WATCHDOG REFRESH TOO LATE FAIL | PRESS CONTROLLER 1 (2) |
| 14    | ADIRS1_DATA_OUT_OF_RANGE           | ADIRS1 OUT OF RANGE    |
| 15    | ADIRS2_DATA_OUT_OF_RANGE           | ADIRS2 OUT OF RANGE    |
| 16    | AD_FRAME_COMPLETED_LATE_FAIL       |                        |
| 17    | EIU_SIGNAL_REPLACED                | EIU SIG REPLACED       |
| 18    | ZCAL_FAIL                          |                        |
| 19    | ADIRS1_FAIL                        | NO DATA FROM ADIRS1    |
| 20    | ADIRS2_FAIL                        | NO DATA FROM ADIRS2    |
| 21    | ADIRS3_FAIL                        | NO DATA FROM ADIRS3    |
| 22    | ARINC_WR_FAIL                      | PRESS CONTROLLER 1 (2) |
| 23    | RS422_ACTIVITY_FAIL                | <br> <br>              |
| 24    | SLEW_RATE_CLOSE_FAIL               | OUTFLOW VALVE          |
| 25    | ZCAL_OPEN_FAIL                     | OUTFLOW VALVE          |
| 26    | ZCAL_CLOSED_FAIL                   | OUTFLOW VALVE          |
| 27    | ADIRS3_DATA_OUT_OF_RANGE           | ADIRS3 OUT OF RANGE    |
| 28    | STATE_CHANGE_DURING_SCBIT          | <br> <br>              |
| 29    | SCBIT_START_FAIL                   | OUTFL. VAL. BLOCKED    |
| 30    | PC_VERSUS_PA_FAIL                  | <br>  CONTR            |

EFF: 201-225, 227-227, 229-245, 276-286, 426-428, 476-480, 503-549, 551-551, 701-749, SROS

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## TROUBLE SHOOTING MANUAL

| FAULT<br>  CODE | FAULT ORIGIN             | CFDS MESSAGE             |
|-----------------|--------------------------|--------------------------|
| 31              | UNUSED                   | <br> <br>                |
| 32              | SYSTEM_FAIL              | <br> <br>                |
| 33              | OFV_BETA_FAIL            | OUTFLOW VALVE            |
| 34              | HIGH_CABIN_RATE_FAIL     | PRESS CONTROLLER 1 (2)   |
| 35              | LGCIU_SIGNAL_REPLACED    | LGCIU SIG REPLACED       |
| 36              | +15V_POWER_FAIL          | PRESS CONTROLLER 1 (2)   |
| 37              | -15V_POWER_FAIL          | PRESS CONTROLLER 1 (2)   |
| 38              | A/D_CONVERTER_FAIL       | PRESS CONTROLLER 1 (2)   |
| 39              | CFDS_WR_FAIL             | PRESS CONTROLLER 1 (2)   |
| 40              | PASS_SIGN_WR_FAIL        | PRESS CONTROLLER 1 (2)   |
| 41              | FAULT_WARN_WR_FAIL       | PRESS CONTROLLER 1 (2)   |
| 42              | PC_CAL_ROM_FAIL          | PRESS CONTROLLER 1 (2)   |
| 43              | NVM_FAIL                 | PRESS CONTROLLER 1 (2)   |
| 44              | CFDS_BUS_FAIL            | <br> <br>                |
| 45              | ADIRS1_WR_FAIL           | PRESS CONTROLLER 1 (2)   |
| 46              | ADIRS2_WR_FAIL           | PRESS CONTROLLER 1 (2)   |
| 47              | ADIRS3_WR_FAIL           | PRESS CONTROLLER 1 (2)   |
| 48              | WDT_TEST_FAIL            | PRESS CONTROLLER 1 (2)   |
| 49              | FMS1_WR_FAIL             | PRESS CONTROLLER 1 (2)   |
| 50              | <br>  LFES_FAIL          | <br>  LFES               |
| 51              | RS422_FAULT_ISO_CTR_FAIL | PRESS CONTROLLER 1 (2)   |
| 52              | RS422_FAULT_ISO_ACT_FAIL | OUTFLOW VALVE ELEC 1 (2) |
| 53              | <br>  FMS2_WR_FAIL       | PRESS CONTROLLER 1 (2)   |
| 54              |                          | NO DATA FROM FMGS1       |
| 1               |                          |                          |

EFF: 201-225, 227-227, 229-245, 276-286, 426-428, 476-480, 503-549, 551-551, 701-749, SROS

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## TROUBLE SHOOTING MANUAL

| FAULT<br>  CODE | FAULT ORIGIN                  | CFDS MESSAGE                   |
|-----------------|-------------------------------|--------------------------------|
| 55              | FMS2_FAIL                     | NO DATA FROM FMGS2             |
| 56              | 28V_DRIVE_LOW                 | <br> <br>                      |
| 57              | 28V_DRIVE_CUT_OFF             | <br> <br>                      |
| 58              | HSS_OPEN_FAIL                 | PRESS CONTROLLER 1 (2)         |
| 59              | HSS_SHORT_FAIL                | PRESS CONTROLLER 1 (2)         |
| 60              | SLEW_RATE_OPEN_FAIL           | OUTFLOW VALVE                  |
| 61              | PC_SENSOR_FAIL                | PRESS CONTROLLER 1 (2)         |
| 62              | SCBIT_OPEN_FAIL               | OUTFL. VAL. BLOCKED            |
| 63              | SCBIT_CLOSE_FAIL              | OUTFL. VAL. BLOCKED            |
| 64              | OFV_RAM_FAIL_RAM              | OUTFLOW VALVE ELEC 1 (2)       |
| 65              | OFV_RAM_FAIL_REG              | OUTFLOW VALVE ELEC 1 (2)       |
| 66              | OFV_INIT_RAM_FAIL_REG         | OUTFLOW VALVE ELEC 1 (2)       |
| 67              | OFV_INIT_RAM_FAIL_RAM         | OUTFLOW VALVE ELEC 1 (2)       |
| 68              | UNUSED                        | <br> <br>                      |
| 69              | UNUSED                        |                                |
| 70              | OFV_BACKGROUND_TIMEOUT        |                                |
| <br>  <b>71</b> | OFV_SIGNPOST_FAIL             |                                |
| 72              | OFV_ROM_CRC_FAIL              | OUTFLOW VALVE ELEC 1 (2)       |
| 73              | <br>  OFV_RS422_WR_FAIL       |                                |
| <br>  74        | OFV_RS422_ACTIVITY_FAIL       |                                |
| <br>  75        | OFV_RS422_RCVR_INTR_FAIL      |                                |
| <br>  76        | <br>  MOTOR_DIRECTION_WR_FAIL | OUTFLOW VALVE ELEC 1 (2)       |
| <br>  77        | OFV_SENSOR_EXCITATION_FAIL    | OUTFLOW VALVE ELEC 1 (2)       |
| <br>  78        | OFV_SENSOR_RANGE_FAIL         | <br>  OUTFLOW VALVE ELEC 1 (2) |
|                 |                               |                                |

EFF: 201-225, 227-227, 229-245, 276-286, 426-428, 476-480, 503-549, 551-551, 701-749, SROS

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## TROUBLE SHOOTING MANUAL

| FAULT<br>  CODE | FAULT ORIGIN            | CFDS MESSAGE             |
|-----------------|-------------------------|--------------------------|
| 79              | OFV_AC_ID_A320          |                          |
| 80              | OFV_A/D_FRAME_LATE_FAIL |                          |
| 81              | OFV_LOOP_CLOSURE_FAIL   | OUTFLOW VALVE            |
| 82              | OFV_UNUSED_INTR         |                          |
| 83              | OFV_ALU_FAIL            | OUTFLOW VALVE ELEC 1 (2) |
| 84              | OFV_CHAN2_SEL           |                          |
| 85              | UNUSED                  |                          |
| 86              | UNUSED                  |                          |
| 87              | OFV_A/D_CONVERT_FAIL    | OUTFLOW VALVE ELEC 1 (2) |
| 88              | OFV_HALL_SENSOR_FAIL    | OUTFL.V AUTO MOTOR 1 (2) |
| 89              | OFV_SW_INTR_FAIL        |                          |
| 90              | CAB_PRESS_SW_ACTIVE     |                          |
| 91              | OFV_RS422_MESSAGE_FAIL  | <br>                     |
| 92              | OFV_AC_PIN_PROG_FAIL    | <br>                     |

\*\*ON A/C 247-275, 287-299, 429-475, 481-499, 553-599,

NOTE: There are two tables in this sub-paragraph.

This table is only applicable to Cabin Pressure Controller Part

Number 9022-15702-10 and.

| <br> <br> | FAULT<br>CODE | FAULT ORIGIN           | CFDS MESSAGE           | l |
|-----------|---------------|------------------------|------------------------|---|
|           | 00            | RAM_FAILED_REG         | PRESS CONTROLLER 1 (2) |   |
|           | 01            | RAM_FAILED_RAM         | PRESS CONTROLLER 1 (2) |   |
|           | 02            | FMS1_DATA_OUT_OF_RANGE | FMGS1 OUT OF RANGE     |   |
|           | 03            | FMS2_DATA_OUT_OF_RANGE | FMGS2 OUT OF RANGE     |   |
| - 1       |               |                        |                        |   |

EFF: 201-225, 227-227, 229-245, 247-299, 426-499, 503-549, 551-551, 553-599, 701-749, SROS

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## TROUBLE SHOOTING MANUAL

| FAULT | FAULT ORIGIN             | CFDS MESSAGE              |
|-------|--------------------------|---------------------------|
| 04    | ACT_STATUS_FAIL          | OUTFLOW VALVE ELEC 1 (2)  |
| 05    | CAL_TIME_OPEN_FAIL       | OUTFLOW VALVE             |
| 06    | BACKGROUND_TIMEOUT       | <br> <br>                 |
| 07    | SIGNPOST_FAIL            | <br> <br>                 |
| 08    | ROM_CRC_FAIL             | PRESS CONTROLLER 1 (2)    |
| 09    | RS422_WR_FAIL            | CONTR                     |
| 10    | RS422_CHECKSM_FAIL       | CONTR                     |
| 11    | CAL_TIME_CLOSE_FAIL      | OUTFLOW VALVE             |
| 12    | WDT_TRIPPED_EARLY_FAIL   | PRESS CONTROLLER 1 (2)    |
| 13    | WDT_TRIPPED_LATE_FAIL    | PRESS CONTROLLER 1 (2)    |
| 14    | ADIRS1_DATA_OUT_OF_RANGE | ADIRS1 OUT OF RANGE       |
| 15    | ADIRS2_DATA_OUT_OF_RANGE | ADIRS2 OUT OF RANGE       |
| 16    | AD_FRAME_LATE_FAIL       | <br> <br>                 |
| 17    | EIU_SIGNAL_REPLACED      | EIU SIGNAL REPLACED       |
| 18    | PC_STEP_FAIL             | PRESS CONTROLLER 1 (2)    |
| 19    | ADIRS1_FAIL              | NO DATA FROM ADIRS1       |
| 20    | ADIRS2_FAIL              | NO DATA FROM ADIRS2       |
| 21    | ADIRS3_FAIL              | NO DATA FROM ADIRS3       |
| 22    | ALL_ARINC_MUX_FAIL       | PRESS CONTROLLER 1 (2)    |
| 23    | RS422_ACTIVITY_FAIL      | <br> <br>                 |
| 24    | SLEW_RATE_CLOSE_FAIL     | <br>  OUTFLOW VALVE       |
| 25    | ZCAL_OPEN_FAIL           | <br>  OUTFLOW VALVE       |
| 26    | ZCAL_CLOSED_FAIL         | <br>  OUTFLOW VALVE       |
| 27    | ADIRS3_DATA_OUT_OF_RANGE | <br>  ADIRS3 OUT OF RANGE |
|       |                          |                           |

EFF: 247-275, 287-299, 429-475, 481-499, 553-599,

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## TROUBLE SHOOTING MANUAL

| FAULT  <br>  CODE | FAULT ORIGIN              | CFDS MESSAGE              |
|-------------------|---------------------------|---------------------------|
| 28                | STATE_CHANGE_DURING_SCBIT | <br> <br>                 |
| 29                | SCBIT_START_FAIL          | OUTFL. VAL. BLOCKED       |
| 30                | PC_VERSUS_PA_FAIL         | CONTR                     |
| 31                | SW_INTERRUPT_TOO_EARLY    |                           |
| 32                | SYSTEM_FAIL               |                           |
|                   | OFV_BETA_FAIL             | <br>  OUTFLOW VALVE       |
| 34                | HIGH_CABIN_RATE_FAIL      | PRESS CONTROLLER 1 (2)    |
| 35                | LGCIU_SIGNAL_REPLACED     | <br>  LGCIU SIG. REPLACED |
| 36                |                           | PRESS CONTROLLER 1 (2)    |
| 37                | -15V_POWER_FAIL           | PRESS CONTROLLER 1 (2)    |
| 38                | A/D_CONVERTER_FAIL        | PRESS CONTROLLER 1 (2)    |
| 39                | TEMP_REFRESH_FAIL         | PRESS CONTROLLER 1 (2)    |
| 40                | PASS_SIGN_WR_FAIL         | PRESS CONTROLLER 1 (2)    |
| 41                | FAULT_WARN_WR_FAIL        | PRESS CONTROLLER 1 (2)    |
| 42                | PRESSURE_DELTA_RESTART    | <br> <br>                 |
| 43                | NVM_FAIL                  | <br> <br>                 |
| 44                | CFDS_BUS_FAIL             | <br> <br>                 |
| <br>  45          | ARINC_MUX1_FAIL           | PRESS CONTROLLER 1 (2)    |
| 46                | ARINC_MUX2_FAIL           | PRESS CONTROLLER 1 (2)    |
| <br>  <b>47</b>   | ARINC_MUX3_FAIL           | PRESS CONTROLLER 1 (2)    |
| 48                | GA_WATCHDOG_INIT_FAIL     | <br> <br>                 |
| <br>  <b>49</b>   | PRESSURE_SENSOR_FAIL      | PRESS CONTROLLER 1 (2)    |
| <br>  50          | <br>  LFES_FAIL           | <br>  LFES                |
| <br>  51          | RS422_FAULT_ISO_CTR_FAIL  | PRESS CONTROLLER 1 (2)    |

EFF: 247-275, 287-299, 429-475, 481-499, 553-599,

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## TROUBLE SHOOTING MANUAL

| FAULT CODE | -<br>  FAULT ORIGIN<br>        | CFDS MESSAGE             |
|------------|--------------------------------|--------------------------|
| 52         | <br>  RS422_FAULT_ISO_ACT_FAIL | OUTFLOW VALVE ELEC 1 (2) |
| 53         | GA_LOSS_OF_CLOCK_FAIL          | PRESS CONTROLLER 1 (2)   |
| 54         |                                | NO DATA FROM FMGS1       |
| 55         | <br>  FMS2_FAIL                | NO DATA FROM FMGS2       |
| 56         | <br>  28V_DRIVE_LOW            |                          |
| 57         | 28V_DRIVE_CUT_OFF              |                          |
| 58         | <br>  HSS_OPEN_FAIL            | PRESS CONTROLLER 1 (2)   |
| 59         | <br>  HSS_SHORT_FAIL           | PRESS CONTROLLER 1 (2)   |
| 60         | <br>  SLEW_RATE_OPEN_FAIL      | OUTFLOW VALVE            |
| 61         | PC_REFRESH_FAIL                | PRESS CONTROLLER 1 (2)   |
| 62         | <br>  SCBIT_OPEN_FAIL          | OUTFL. VAL. BLOCKED      |
| 63         | SCBIT_CLOSE_FAIL               | OUTFL. VAL. BLOCKED      |
| 64         | <br>  OFV_RAM_FAIL_RAM         | OUTFLOW VALVE ELEC 1 (2) |
| 65         | <br>  OFV_RAM_FAIL_REG         | OUTFLOW VALVE ELEC 1 (2) |
| 66         | <br>  OFV_INIT_RAM_FAIL_REG    | OUTFLOW VALVE ELEC 1 (2) |
| 67         | <br>  OFV_INIT_RAM_FAIL_RAM    | OUTFLOW VALVE ELEC 1 (2) |
| 68         | UNUSED                         |                          |
| 69         | UNUSED                         |                          |
| 70         | OFV_BACKGROUND_TIMEOUT         |                          |
| 71         | OFV_SIGNPOST_FAIL              |                          |
| 72         | <br>  OFV_ROM_CRC_FAIL         | OUTFLOW VALVE ELEC 1 (2) |
| 73         |                                |                          |
| 74         | <br>  OFV_RS422_ACTIVITY_FAIL  |                          |
| 75         | OFV_RS422_RCVR_INTR_FAIL       |                          |

EFF: 247-275, 287-299, 429-475, 481-499, 553-599,

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## TROUBLE SHOOTING MANUAL

| FAULT<br>  CODE | FAULT ORIGIN                | CFDS MESSAGE             |
|-----------------|-----------------------------|--------------------------|
| 76              | OFV_DISCRETE_MUX_FAIL       | OUTFLOW VALVE ELEC 1 (2) |
| 77              | OFV_SENSOR_EXITATION_FAIL   | OUTFLOW VALVE ELEC 1 (2) |
| 78              | OFV_SENSOR_RANGE_FAIL       | OUTFL.V FEEDB ASSY 1 (2) |
| 79              | OFV_AC_ID_A320              |                          |
| 80              | OFV_A/D_FRAME_LATE_FAIL     |                          |
| 81              | OFV_LOOP_CLOSURE_FAIL       | OUTFLOW VALVE            |
| 82              | OFV_UNUSED_INTR             |                          |
| 83              | OFV_ALU_FAIL                | OUTFLOW VALVE ELEC 1 (2) |
| 84              | OFV_CHAN2_SEL               |                          |
| 85              | UNUSED                      |                          |
| 86              | UNUSED                      |                          |
| 87              | OFV_A/D_CONVERT_FAIL        | OUTFLOW VALVE ELEC 1 (2) |
| 88              | OFV_HALL_SENSOR_FAIL        | OUTFL.V AUTO MOTOR 1 (2) |
| 89              | OFV_SW_INTR_FAIL            |                          |
| 90              | OFV_CAB_PRESS_SWITCH_ACTIVE |                          |
| 91              | OFV_RS422_MSSAGE_FAIL       |                          |
| 92              | OFV_AC_PIN_PROG_FAIL        |                          |
| 93              | UNUSED                      |                          |
| 94              | UNUSED                      |                          |
| 95              | UNUSED                      |                          |

NOTE : This table is only applicable to Cabin Pressure Controller Part Number 20791-02AB.

EFF: 247-275, 287-299, 429-475, 481-499, 553-599, SROS

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## TROUBLE SHOOTING MANUAL

| FAULT CODE | FAULT ORIGIN                       | CFDS MESSAGE             |
|------------|------------------------------------|--------------------------|
| 00         | RAM_FAILED_REG                     | PRESS CONTROLLER 1 (2)   |
| 01         | <br>  RAM_FAILED_RAM               | PRESS CONTROLLER 1 (2)   |
| 02         | <br>  FMS1_DATA_OUT_OF_RANGE       | FMGS1 OUT OF RANGE       |
| 03         | <br>  FMS2_DATA_OUT_OF_RANGE       | FMGS2 OUT OF RANGE       |
| 04         | ACT_STATUS_FAIL                    | OUTFLOW VALVE ELEC 1 (2) |
| 05         | CAL_TIME_OPEN_FAIL                 | OUTFLOW VALVE            |
| 06         | BACKGROUND_TIMEOUT                 | - <br>                   |
| 07         | UNUSED                             | - <br>                   |
| 08         | ROM_CRC_FAIL                       | PRESS CONTROLLER 1 (2)   |
| 09         | <br>  RS422_WR_FAIL                | CONTR                    |
| 10         | RS422_CHECKSUM_FAIL                | - <br>                   |
| 11         | <br>  CAL_TIME_CLOSE_FAIL          | OUTFLOW VALVE            |
| 12         | <br>  WDT_EXPIRED                  | PRESS CONTROLLER 1 (2)   |
| 13         | G/A WATCHDOG REFRESH TOO LATE FAIL | PRESS CONTROLLER 1 (2)   |
| 14         | ADIRS1_DATA_OUT_OF_RANGE           | ADIRS1 OUT OF RANGE      |
| 15         | <br>  ADIRS2_DATA_OUT_OF_RANGE     | ADIRS2 OUT OF RANGE      |
| 16         | AD_FRAME_COMPLETED_LATE_FAIL       | - <br>                   |
| 17         | <br>  EIU_SIGNAL_REPLACED          | EIU SIG REPLACED         |
| 18         | ZCAL_FAIL                          |                          |
| 19         | <br>  ADIRS1_FAIL                  | NO DATA FROM ADIRS1      |
| 20         | <br>  ADIRS2_FAIL                  | NO DATA FROM ADIRS2      |
| 21         | <br>  ADIRS3_FAIL                  | NO DATA FROM ADIRS3      |
| 22         | <br>  ARINC_WR_FAIL                | PRESS CONTROLLER 1 (2)   |
| 23         | <br>  RS422_ACTIVITY_FAIL<br>      | - <br>                   |

EFF: 247-275, 287-299, 429-475, 481-499, 553-599,

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## TROUBLE SHOOTING MANUAL

| FAULT CODE | FAULT ORIGIN              | -<br>  CFDS MESSAGE<br>      |
|------------|---------------------------|------------------------------|
| 24         | SLEW_RATE_CLOSE_FAIL      | <br>  OUTFLOW VALVE          |
| 25         | ZCAL_OPEN_FAIL            | <br>  OUTFLOW VALVE          |
| 26         | ZCAL_CLOSED_FAIL          | OUTFLOW VALVE                |
| 27         | ADIRS3_DATA_OUT_OF_RANGE  | ADIRS3 OUT OF RANGE          |
| 28         | STATE_CHANGE_DURING_SCBIT | <br> <br>                    |
| 29         | SCBIT_START_FAIL          | OUTFL. VAL. BLOCKED          |
| 30         | PC_VERSUS_PA_FAIL         | CONTR                        |
| 31         | UNUSED                    | <br> <br>                    |
| 32         | SYSTEM_FAIL               | <br> <br>                    |
| 33         | OFV_BETA_FAIL             | <br>  OUTFLOW VALVE          |
| 34         | HIGH_CABIN_RATE_FAIL      | PRESS CONTROLLER 1 (2)       |
| 35         | LGCIU_SIGNAL_REPLACED     | <br>  LGCIU SIG REPLACED     |
| 36         | +15V_POWER_FAIL           | PRESS CONTROLLER 1 (2)       |
| 37         | -15V_POWER_FAIL           | PRESS CONTROLLER 1 (2)       |
| 38         | A/D_CONVERTER_FAIL        | PRESS CONTROLLER 1 (2)       |
| 39         | CFDS_WR_FAIL              | PRESS CONTROLLER 1 (2)       |
| 40         | PASS_SIGN_WR_FAIL         | PRESS CONTROLLER 1 (2)       |
| 41         | FAULT_WARN_WR_FAIL        | PRESS CONTROLLER 1 (2)       |
| 42         | PC_CAL_ROM_FAIL           | <br>  PRESS CONTROLLER 1 (2) |
| 43         | NVM_FAIL                  | <br>  PRESS CONTROLLER 1 (2) |
| 44         | CFDS_BUS_FAIL             | <br> <br>                    |
| 45         | ADIRS1_WR_FAIL            | <br>  PRESS CONTROLLER 1 (2) |
| 46         | ADIRS2_WR_FAIL            | <br>  PRESS CONTROLLER 1 (2) |
| 47         | <br>  ADIRS3_WR_FAIL      | PRESS CONTROLLER 1 (2)       |

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| FAULT CODE | FAULT ORIGIN                | -<br>  CFDS MESSAGE<br>        |
|------------|-----------------------------|--------------------------------|
| 48         | WDT_TEST_FAIL               | PRESS CONTROLLER 1 (2)         |
| 49         | <br>  FMS1_WR_FAIL          | PRESS CONTROLLER 1 (2)         |
| 50         | <br>  LFES_FAIL             |                                |
| 51         | RS422_FAULT_ISO_CTR_FAIL    | PRESS CONTROLLER 1 (2)         |
| 52         | RS422_FAULT_ISO_ACT_FAIL    | OUTFLOW VALVE ELEC 1 (2)       |
| 53         | <br>  FMS2_WR_FAIL          | PRESS CONTROLLER 1 (2)         |
| 54         | <br>  FMS1_FAIL             | NO DATA FROM FMGS1             |
| 55         | <br>  FMS2_FAIL             | NO DATA FROM FMGS2             |
| 56         | <br>  28V_DRIVE_LOW         | <br> <br>                      |
| 57         | 28V_DRIVE_CUT_OFF           | <br> <br>                      |
| 58         | <br>  HSS_OPEN_FAIL         | PRESS CONTROLLER 1 (2)         |
| 59         | HSS_SHORT_FAIL              | PRESS CONTROLLER 1 (2)         |
| 60         | SLEW_RATE_OPEN_FAIL         | OUTFLOW VALVE                  |
| 61         | PC_SENSOR_FAIL              | PRESS CONTROLLER 1 (2)         |
| 62         | SCBIT_OPEN_FAIL             | OUTFL. VAL. BLOCKED            |
| 63         | SCBIT_CLOSE_FAIL            | OUTFL. VAL. BLOCKED            |
| 64         | OFV_RAM_FAIL_RAM            | OUTFLOW VALVE ELEC 1 (2)       |
| 65         | OFV_RAM_FAIL_REG            | OUTFLOW VALVE ELEC 1 (2)       |
| 66         | OFV_INIT_RAM_FAIL_REG       | OUTFLOW VALVE ELEC 1 (2)       |
| 67         | <br>  OFV_INIT_RAM_FAIL_RAM | <br>  OUTFLOW VALVE ELEC 1 (2) |
| 68         | <br>  Unused                | <br> <br>                      |
| 69         | <br>  Unused                | <br> <br>                      |
| 70         | OFV_BACKGROUND_TIMEOUT      |                                |
| 71         | OFV_SIGNPOST_FAIL           | <br>                           |

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## TROUBLE SHOOTING MANUAL

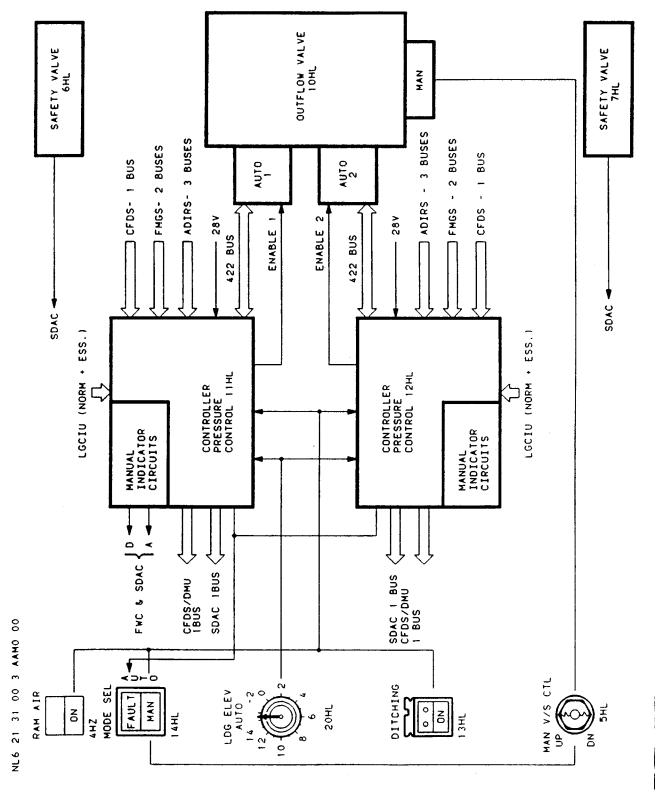
| FAULT          | FAULT ORIGIN               | CFDS MESSAGE             |
|----------------|----------------------------|--------------------------|
| 72             | OFV_ROM_CRC_FAIL           | OUTFLOW VALVE ELEC 1 (2) |
| 73             | OFV_RS422_WR_FAIL          |                          |
| 74             | OFV_RS422_ACTIVITY_FAIL    |                          |
| 75             | OFV_RS422_RCVR_INTR_FAIL   |                          |
| 76             | MOTOR_DIRECTION_WR_FAIL    | OUTFLOW VALVE ELEC 1 (2) |
| 77             | OFV_SENSOR_EXCITATION_FAIL | OUTFLOW VALVE ELEC 1 (2) |
| 78             | OFV_SENSOR_RANGE_FAIL      | OUTFLOW VALVE ELEC 1 (2) |
| 79             | OFV_AC_ID_A320             |                          |
| 80             | OFV_A/D_FRAME_LATE_FAIL    | <br> <br>                |
| 81             | OFV_LOOP_CLOSURE_FAIL      | OUTFLOW VALVE            |
| 82             | OFV_UNUSED_INTR            | <br> <br>                |
| 83             | OFV_ALU_FAIL               | OUTFLOW VALVE ELEC 1 (2) |
| 84             | OFV_CHAN2_SEL              |                          |
| 85             | <br>  Unused<br>           | <br> <br>                |
| 86             | UNUSED                     |                          |
| 87             | OFV_A/D_CONVERT_FAIL       | OUTFLOW VALVE ELEC 1 (2) |
| 88             | OFV_HALL_SENSOR_FAIL       | OUTFL.V AUTO MOTOR 1 (2) |
| 89             | OFV_SW_INTR_FAIL           |                          |
| 90             | CAB_PRESS_SW_ACTIVE        |                          |
| 91             | OFV_RS422_MESSAGE_FAIL     |                          |
| <b>9</b> 2<br> | OFV_AC_PIN_PROG_FAIL       |                          |

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Pressure Control and Monitoring - Block Diagram Figure 301

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### TROUBLE SHOOTING MANUAL

### CARGO COMPARTMENT HEATING - FAULT ISOLATION PROCEDURES

R

TASK 21-43-00-810-802

AFT Cargo-Duct Temperature-Sensor Fault

- 1. Possible Causes
  - SENSOR-DUCT TEMP (13HC)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
|           | 24 (7 02 7/2 022 |   |
| AMM       | 21-43-00-740-002 | Power-up (BITE) Test of the Cargo-Compartment Heating Controller            |
| AMM       | 21-43-15-000-001 | Removal of the Aft Cargo-Compartment Temperature-Sensors 13HC and 14HC      |
| AMM       | 21-43-15-400-001 | Installation of the Aft Cargo-Compartment Temperature-Sensors 13HC and 14HC |
| ASM       | 21-43/02         | Tamper deal of delices of issue and Tame                                    |

- 3. Fault Confirmation
  - A. To Confirm the Fault
    - (1) Do a read out of the POST FLIGHT and/or LAST LEG REPORT.
    - (2) Do the power-up (BITE) test of the cargo compartment heating controller (Ref. AMM TASK 21-43-00-740-002).
- 4. Fault Isolation
  - A. If the conditions which follow occur:
    - the POST FLIGHT and/or the LAST LEG REPORT gives the maintenance message AFT DUCT TEMP SENSOR and, on the lower ECAM display unit COND page the AFT duct temperature shows amber XX:
    - replace the SENSOR-DUCT TEMP (13HC) (Ref. AMM TASK 21-43-15-000-001) and (Ref. AMM TASK 21-43-15-400-001).
    - (1) If the fault continues:
      - do a check and repair the wiring (Ref. ASM 21-43/02) from:
      - the SENSOR (13HC) to the ACHC (10HC) and,
      - the SENSOR (13HC) to ground.

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B. Do the test as given in the Para. 3.A.

## 5. Close-up

A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

TASK 21-43-00-810-804

AFT Cargo-Compartment Temperature-Sensor Fault

- 1. Possible Causes
  - SENSOR-COMPT TEMP (14HC)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
|           |                  |   |
| AMM       | 21-43-00-740-002 | Power-up (BITE) Test of the Cargo-Compartment Heating Controller            |
| AMM       | 21-43-15-000-001 | Removal of the Aft Cargo-Compartment Temperature-Sensors 13HC and 14HC      |
| AMM       | 21-43-15-400-001 | Installation of the Aft Cargo-Compartment Temperature-Sensors 13HC and 14HC |
| ASM       | 21-43/02         |   |

### 3. Fault Confirmation

- A. To Confirm the Fault
  - (1) Do a read out of the POST FLIGHT and/or LAST LEG REPORT.
  - (2) Do the power-up (BITE) test of the cargo compartment heating controller (Ref. AMM TASK 21-43-00-740-002).

#### 4. Fault Isolation

- A. If the conditions which follow occur:
  - the POST FLIGHT and/or the LAST LEG REPORT gives the maintenance message AFT COMP TEMP SENSOR and, on the lower ECAM display unit COND page the AFt cargo-compartment temperature shows amber XX:
  - replace the SENSOR-COMPT TEMP (14HC) (Ref. AMM TASK 21-43-15-000-001) and (Ref. AMM TASK 21-43-15-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-43/02) from:
    - the SENSOR (14HC) to the ACHC (10HC) and,
    - the SENSOR (14HC) to ground.
- B. Do the test as given in the Para. 3.A.

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| _  | _ |      |     |
|----|---|------|-----|
| 5. | C | ose- | au. |

A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

TASK 21-43-00-810-806

AFT Cargo-Compartment Temperature-Selector Function Fault

- 1. Possible Causes
  - SEL-CARGO HEAT/AFT (15HC)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

REFERENCE DESIGNATION

AMM 21-61-00-710-001

Operational Test of the Pack Temperature-Control System

ASM 21-43/02

- 3. Fault Confirmation
  - A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: The ZC (8HK) also monitors the cargo compartment heating system.

- 4. Fault Isolation
  - A. If the test gives the maintenance message AFT TEMP SELECTOR: replace the SEL-CARGO HEAT/AFT (15HC).
    - (1) If the fault continues:
      - do a check and repair the wiring between: the SELECTOR (15HC) pin 4 and ACHC (10HC) AB/3A, the SELECTOR (15HC) pin 7 and ACHC (10HC) AB/2A, the SELECTOR (15HC) pin 2 and ACHC (10HC) AB/1A, the SELECTOR (15HC) pin 8 and GND (Ref. ASM 21-43/02).
  - B. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

TASK 21-43-00-810-808

AFT Cargo-Compartment Trim-Air Regulation Fault

#### 1. Possible Causes

- VALVE-TRIM AIR, AFT CARGO COMPT (12HC)
- CONT-CARGO HEAT (10HC)
- wiring

#### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
| AMM       | 21-43-00-740-002 | Power-up (BITE) Test of the Cargo-Compartment Heating |
|           |                  | Controller  |
| AMM       | 21-43-34-000-002 | Removal of the AFT Cargo Heat Controller (10HC)       |
| AMM       | 21-43-34-400-002 | Installation of the AFT Cargo Heat Controller (10HC)  |
| AMM       | 21-43-51-000-001 | Removal of the Aft Cargo-Trim Air-Valve (12HC)        |
| AMM       | 21-43-51-400-001 | Installation of the Aft Cargo-Trim Air-Valve (12HC)   |
| ASM       | 21-43/02         | <del>-</del>  |

### 3. Fault Confirmation

- A. To Confirm the Fault
  - (1) Do a read out of the POST FLIGHT and/or LAST LEG REPORT.
  - (2) Do the power-up (BITE) test of the cargo compartment heating controller (Ref. AMM TASK 21-43-00-740-002).

### 4. Fault Isolation

- A. If the conditions which follow occur:
  - the POST FLIGHT and/or the LAST LEG REPORT gives the maintenance message AFT TRIM AIR VALVE and, on the lower ECAM display unit COND page the AFT trim-air valve position shows amber XX:
  - replace the VALVE-TRIM AIR, AFT CARGO COMPT (12HC) (Ref. AMM TASK 21-43-51-000-001) and (Ref. AMM TASK 21-43-51-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-43/02) from:
    - the VALVE (12HC) to the ACHC (10HC) and,
    - the VALVE (12HC) to ground.

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- (2) If the fault continues:
  - replace the CONT-CARGO HEAT (10HC) (Ref. AMM TASK 21-43-34-000-002) and (Ref. AMM TASK 21-43-34-400-002).
- B. Do the test as given in the Para. 3.A.

## 5. Close-up

A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

R

TASK 21-43-00-810-809

AFT Cargo-Compartment Trim Air Pressure Regulating Fault

- 1. Possible Causes
  - VALVE-PRESS REG (11HC)
  - PROX SW-FRAME, BULK CARGO COMPT DOOR (50WV)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE  |                                      | DESIGNATION  |
|------------|--------------------------------------|--|
| AMM        | 21-43-00-740-002                     | Power-up (BITE) Test of the Cargo-Compartment Heating                          |
| AMM        | 21-43-52-000-001                     | Controller<br>Removal of the Pressure Regulating Valve - Aft                   |
| AMM        | 21-43-52-400-001                     | Cargo-Compartment Heating Installation of the Pressure Regulating Valve - Aft  |
| A M M      | E2 74 42 000 007                     | Cargo-Compartment Heating  |
| AMM<br>AMM | 52-71-12-000-003<br>52-71-12-400-003 | Removal of the Proximity Switch 50WV Installation of the Proximity Switch 50WV |
| ASM        | 21-43/02                             |  |

#### 3. Fault Confirmation

R

- A. To Confirm the Fault
  - (1) Do a read out of the POST FLIGHT and/or LAST LEG REPORT.
  - (2) Do the power-up (BITE) test of the cargo compartment heating controller (Ref. AMM TASK 21-43-00-740-002).

R

- 4. Fault Isolation
  - A. If the conditions which follow occur:
    - the POST FLIGHT and/or the LAST LEG REPORT gives the maintenance message AFT PRESSURE REG VALVE and, on the lower ECAM display unit COND page the aft-cargo hot air shutoff-valve (HOT AIR symbol) shows AMBER XX:
    - replace the VALVE-PRESS REG (11HC) (Ref. AMM TASK 21-43-52-000-001) and (Ref. AMM TASK 21-43-52-400-001).

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- (1) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 21-43/02) from:
  - the VALVE (11HC) to the CONTROLLER (10HC),
  - the VALVE (11HC) to the SDAC 1 (1WV1),
  - the VALVE (11HC) to the SDAC 2 (1WV2),
  - the VALVE (11HC) to the CB (31HN),
  - the VALVE (11HC) to ground and,
  - the VALVE (11HC) to the SWITCH (50WV).
- (2) If the fault continues:
  - replace the PROX SW-FRAME, BULK CARGO COMPT DOOR (50WV) (Ref. AMM TASK 52-71-12-000-003) and (Ref. AMM TASK 52-71-12-400-003).
- B. Do the test as given in the Para. 3.A.

### 5. Close-up

R

A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

TASK 21-43-00-810-811

AFT Cargo-Compartment Heating Controlling Fault

#### 1. Possible Causes

- CONT-CARGO HEAT (10HC)
- RELAY-TAPRV CLOSE (17HC)
- PUSHBUTTON SWITCH-CARGO HEAT/HOT AIR (16HC)
- wiring

### Job Set-up Information

A. Referenced Information

| REFERENCE         | DESIGNATION   |
|-------------------|---|
|                   |   |
| AMM 21-43-34-000- | Removal of the AFT Cargo Heat Controller (10HC)         |
| AMM 21-43-34-400- | Installation of the AFT Cargo Heat Controller (10HC)    |
| AMM 21-61-00-710- | Operational Test of the Pack Temperature-Control System |
|                   | System  |
| ASM 21-43/01      |   |
| ASM 21-43/02      |   |

### 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: The ZC (8HK) also monitors the cargo compartment heating system.

### 4. Fault Isolation

- A. If the test gives the maintenance message AFT CARGO HEAT CONT:
  - replace the CONT-CARGO HEAT (10HC) (Ref. AMM TASK 21-43-34-000-002) and (Ref. AMM TASK 21-43-34-400-002).
  - (1) If the fault continues:
    - do a check of the RELAY-TAPRV CLOSE (17HC) and replace it if necessary (Ref. ASM 21-43/01).
  - (2) If the fault continues:
    - do a check of the PUSHBUTTON SWITCH-CARGO HEAT/HOT AIR (16HC) and replace it if necessary (Ref. ASM 21-43/01).
  - (3) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-43/02) from:
    - the ACHC (10HC) to the CB (31HN),
    - the ACHC (10HC) to ground,
    - the ACHC (10HC) to the SW (50WV),

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## TROUBLE SHOOTING MANUAL

```
- the ACHC (10HC) to the RELAY (11LP),
- the ACHC (10HC) AA/9A to ground,
- the ACHC (10HC) to the VC (10HN),
- the ACHC (10HC) to the LGCIU 1 (5GA1),
- the ACHC (10HC) to the SDAC 1 (1WV1) and,
- the ACHC (10HC) to the SDAC 2 (1WV2).
```

B. Do the test as given in the Para. 3.A.

## 5. Close-up

A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

TASK 21-43-00-810-812

AFT Cargo-Compartment Trim-Air Pressure Regulating Fault

- 1. Possible Causes
  - VALVE-PRESS REG (11HC)
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
| A MM      | 21-43-00-710-003 | Occastical Test of the AFT Cours Compostment Heating                          |
| AMM       | 21-43-00-710-003 | Operational Test of the AFT Cargo Compartment Heating System                  |
| AMM       | 21-43-52-000-001 | Removal of the Pressure Regulating Valve - Aft Cargo-Compartment Heating      |
| AMM       | 21-43-52-400-001 | Installation of the Pressure Regulating Valve - Aft Cargo-Compartment Heating |

### 3. Fault Confirmation

A. Do the operational test of the AFT cargo-compartment Ventilation system (Ref. AMM TASK 21-43-00-710-003).

NOTE: During this test, monitor the position of the trim-air pressure-regulating valve (11HC) on the ECAM.

#### 4. Fault Isolation

- A. If the temperature in the AFT cargo compartment is lower than the selected temperature and the AFT cargo-compartment pressure-regulating valve-symbol on ECAM is closed (green):
  - replace the VALVE-PRESS REG (11HC) (Ref. AMM TASK 21-43-52-000-001) and (Ref. AMM TASK 21-43-52-400-001).
- B. Do the test as given in the Para. 3.A.

#### 5. Close-up

A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

TASK 21-43-00-810-817

AFT Cargo Temperature Sensor Fault

- 1. Possible Causes
  - SENSOR-DUCT TEMP (3HC)
  - SENSOR-DUCT TEMP (4HC)
- 2. Job Set-up Information
  - A. Referenced Information

REFERENCE DESIGNATION AMM 21-43-00-100-001 Cleaning of the Cargo Compartment Duct-Temperature Sensors 3HC, 4HC and/or 13HC and the Cargo Compartment-Temperature Sensor 14HC

- 3. Fault Confirmation
  - A. Not applicable.
- 4. Fault Isolation
  - A. If the AFT cargo-compartment temperature is below the selected temperature:
    - clean the SENSOR-DUCT TEMP (3HC) and SENSOR-DUCT TEMP (4HC) (Ref. AMM TASK 21-43-00-100-001).

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### TROUBLE SHOOTING MANUAL

TASK 21-43-00-810-819

Electrical Circuit Fault

#### 1. Possible Causes

- BOARD-ANN LT TEST & INTFC (11LP)
- CONT-CARGO HEAT (10HC)
- PUSHBUTTON SWITCH-CARGO HEATD/HOT AIR (16HC)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
| AMM       | 21-43-34-000-002 | Removal of the AFT Cargo Heat Controller (10HC)                      |
| AMM       | 21-43-34-400-002 | Installation of the AFT Cargo Heat Controller (10HC)                 |
| AMM       | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System              |
| AMM       | 33-14-00-710-001 | Operational Test of the Annunciator Light Test System in the Cockpit |
| ASM       | 21-43/02         |  |

## 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: The ZC (8HK) also monitors the cargo compartment heating system.

#### 4. Fault Isolation

- A. If the test gives the maintenance message TEST OK, but the FAULT legend on the pushbutton switch CARGO HEAT/HOT AIR, which is installed on the CARGO HEAT panel 25VU, comes on:
  - do the operational test of the annunciator light test system (Ref. AMM TASK 33-14-00-710-001).
  - (1) If the operational test of the annunciator light test shows a fault:do the trouble shooting of the annunciator light test system.
  - (2) If the operational test of the annunciator light test is correct: - do a check of the PUSHBUTTON SWITCH-CARGO HEATD/HOT AIR (16HC) and replace it if necessary (Ref. ASM 21-43/02).
    - (a) If the fault continues:
      - do a check of the BOARD-ANN LT TEST & INTFC (11LP) and replace it if necessary (Ref. ASM 21-43/02).

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## TROUBLE SHOOTING MANUAL

- (b) If the fault continues:
  - replace the CONT-CARGO HEAT (10HC) (Ref. AMM TASK 21-43-34-000-002) and (Ref. AMM TASK 21-43-34-400-002).
- (c) If the fault continues:
  - do a check and repair the wiring between: the RELAY (11LP) A/13 and SW (16HC) A/7, the RELAY (11LP) A/14 and ACHC (10HC) AA/5A (Ref. ASM 21-43/02).
- B. Do the test given in para. 3.

## 5. Close-up

A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

TASK 21-43-00-810-820

Aft Trim Air Pressure Regulating Valve (TAPRV) Control Circuit Fault

#### 1. Possible Causes

- RELAY-TAPRV CLOSE (17HC)
- PUSHBUTTON SWITCH-CARGO HEAT/HOT AIR (16HC)
- wiring

#### 2. Job Set-up Information

A. Referenced Information

REFERENCE DESIGNATION

AMM 21-61-00-710-001 Operational Test of the Pack Temperature-Control System

ASM 21-43/02

## 3. Fault Confirmation

ASM 21-43/02

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: The ZC (8HK) also monitors the cargo compartment heating system.

#### 4. Fault Isolation

- A. If the test gives the maintenance message AFT TAPRV SHUT OFF RELAY:
  - do a check for the RELAY-TAPRV CLOSE (17HC) and replace it if necessary (Ref. ASM 21-43/02).
  - (1) If the fault continues:
    - do a check for the PUSHBUTTON SWITCH-CARGO HEAT/HOT AIR (16HC) and replace it if necessary (Ref. ASM 21-43/02).
  - (2) If the fault continues:
    - do a check and repair the wiring between: the ACHC (10HC) AA/6A and CB (31HN) (Ref. ASM 21-43/02).
- B. Do the test given in para. 3.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

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R

EFF: 251-251,

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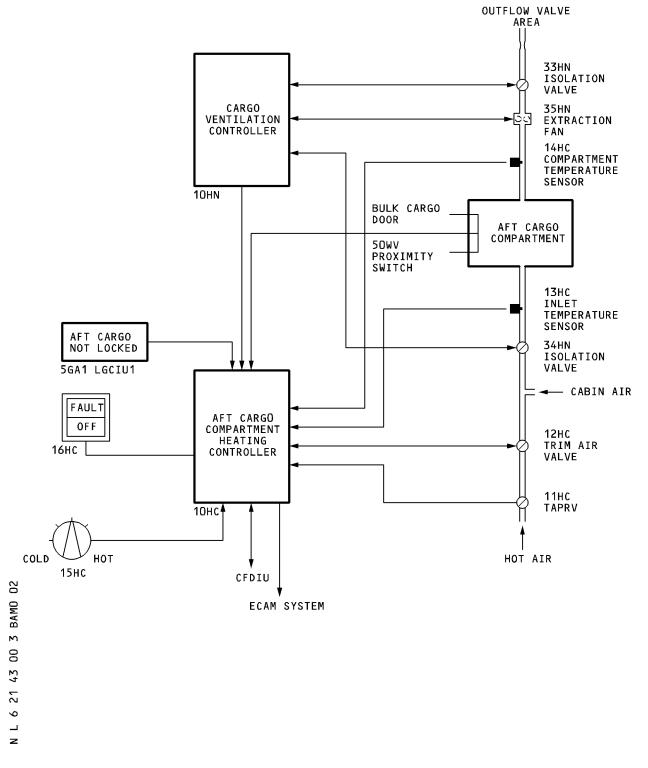
## TROUBLE SHOOTING MANUAL

CARGO COMPARTMENT HEATING - TASK SUPPORTING DATA

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AFT Cargo Compartment Heating - Block Diagram Figure 301

R EFF: 251-251, Page 302 May 01/05 SROS Printed in France

## TROUBLE SHOOTING MANUAL

## AIR COOLING - FAULT ISOLATION PROCEDURES

TASK 21-50-00-810-801

Belly-Fairing Blow-Out Panel in open position

### 1. Possible Causes

- belly-fairing blow-out panel
- pack outlet bellows
- condenser
- the ram-air inlet door
- ram-air inlet duct
- ram-air inlet plenum-chamber
- primary heat exchanger
- pack ram-air outlet plenum-chamber

## 2. Job Set-up Information

A. Referenced Information

|        | REFERENCE |                  | DESIGNATION   |  |
|--------|-----------|------------------|---|--|
| R<br>R | AMM       | 21-52-00-200-011 | General Visual Inspection of the Bellows between the Pack Outlet and the Mixer Unit |  |
|        | AMM       | 21-52-22-400-001 | Installation of the Fan Plenum Chamber 10HM5 (11HM5)                                |  |
|        | AMM       | 21-52-25-400-001 | Installation of the Primary Heat Exchanger 10HM6 (11HM6)                            |  |
|        | AMM       | 21-52-32-000-001 | Removal of the Condenser 10HM2 (11HM2)  |  |
|        | AMM       | 21-52-32-400-001 | Installation of the Condenser 10HM2 (11HM2)   |  |
|        | AMM       | 21-61-51-400-002 | Installation of the Air Inlet   |  |
|        | AMM       | 53-35-12-000-002 | Removal of the Belly Fairing Blowout Panel  |  |
|        | AMM       | 53-35-12-400-002 | Installation of the Belly Fairing Blowout Panel                                     |  |

A. Not applicable

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## 4. Fault Isolation

| R A. If the belly-fairing blow-out panel is in the open position, and R associated R |  | If the belly-fairing blow-out panel is in the open position, and no associated  |  |  |  |
|--|--|---|--|--|--|
| R  |  | maintenance message appears in the post flight report:  |  |  |  |
| R<br>R   |  | (1) Do a visual inspection of,  |  |  |  |
| R<br>R<br>R<br>R   |  | <ul> <li>(a) The belly-fairing blow-out panel for correct condition and adjustment,</li> <li>- adjust/replace, if necessary (Ref. AMM TASK 53-35-12-000-002) and (Ref. AMM TASK 53-35-12-400-002).</li> </ul> |  |  |  |
| R<br>R<br>R  |  | <ul><li>(b) The pack outlet bellows for correct condition (Ref. AMM TASK 21-52-00-200-011),</li><li>replace if necessary.</li></ul>   |  |  |  |
| R<br>R   |  | (c) The condenser for correct condition,<br>- replace if necessary (Ref. AMM TASK 21-52-32-000-001) and (Ref. AMM TASK 21-52-32-400-001).   |  |  |  |
| R<br>R   |  | (2) Do a visual inspection of:  |  |  |  |
| R<br>R   |  | (a) The installation of the the ram-air inlet door (Ref. AMM TASK 21-61-51-400-002).  |  |  |  |
| R<br>R   |  | (b) The installation of the ram-air inlet duct (Ref. AMM TASK 21-61-51-400-002).  |  |  |  |
| R<br>R   |  | (c) The installation of the ram-air inlet plenum-chamber.   |  |  |  |
| R<br>R   |  | (d) The installation of the primary heat exchanger (Ref. AMM TASK 21-52-25-400-001).  |  |  |  |
| R  |  | (e) The installation of the pack ram-air outlet plenum-chamber (Ref. AMM TASK 21-52-22-400-001).  |  |  |  |
| R<br>R<br>R  |  | NOTE: If one or more of the components are not correctly<br>installed, install the applicable component correctly and<br>close the belly-fairing blow-out panel.  |  |  |  |
|  |  |   |  |  |  |

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## TROUBLE SHOOTING MANUAL

## FLOW CONTROL AND INDICATING - FAULT ISOLATION PROCEDURES

TASK 21-51-00-810-801

Flow Selection Fault

- 1. Possible Causes
  - CTL SW-AIR COND/PACK FLOW (5HB)
  - CONT-ZONE TEMPERATURE (8HK)
  - RESISTOR (18HB)
  - RESISTOR (19HB)
  - wiring
  - PUSHBUTTON SWITCH-AIR COND/ECON FLOW (5HB)
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE         |  | DESIGNATION  |
|-------------------|--|--|
| AMM               | 21-61-00-710-001                                 | Operational Test of the Pack Temperature-Control System                        |
| AMM<br>AMM<br>ASM | 21-63-34-000-001<br>21-63-34-400-001<br>21-51/01 | Removal of the Zone Controller (8HK) Installation of the Zone Controller (8HK) |
| ASM               | 21-51/01   |  |

- 3. Fault Confirmation
  - A. Do the operational test of the pack temperature-control system. (Ref. AMM TASK 21-61-00-710-001).
- 4. Fault Isolation
- R \*\*ON A/C 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,
  - A. If the test gives the maintenance message FLOW SEL:
    - replace the CTL SW-AIR COND/PACK FLOW (5HB).

**NOTE**: In this procedure:

- the CTL SW-AIR COND/PACK FLOW (5HB) is referred to as the PACK FLOW SELECTOR,
- for the subsequent aircraft wiring (Ref. ASM 21-51/01).

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- (1) If the fault continues:
  - (a) On the AIR COND panel 30VU:
    - do a check for continuity of the RESISTOR (18HB) between PACK
       FLOW SELECTOR pins 2 and 3.
  - (b) If there is no continuity:
     replace the RESISTOR (18HB).
- (2) If the fault continues:
  - (a) On the AIR COND panel 30VU:
    - do a check for continuity of the RESISTOR (19HB) between PACK
       FLOW SELECTOR pins 3 and 4.
  - (b) If there is no continuity:
     replace the RESISTOR (19HB).
- (3) If the fault continues:
  - replace the CONT-ZONE TEMPERATURE (8HK).
     (Ref. AMM TASK 21-63-34-000-001) and,
     (Ref. AMM TASK 21-63-34-400-001).
- (4) If the fault continues:
  - do a check and repair the wiring:
     from PACK FLOW SELECTOR (5HB) pin 2 to ZC 1 (8HK) pin A/15D,
     from PACK FLOW SELECTOR (5HB) pin 4 to ZC 1 (8HK) pin A/14D,
     from PACK FLOW SELECTOR (5HB) pin 1 to ZC 1 (8HK) pin A/13D.

\*\*ON A/C 276-299, 476-499, 503-549,

A. If the test gives the maintenance message FLOW SEL:
- replace the PUSHBUTTON SWITCH-AIR COND/ECON FLOW (5HB).

NOTE: In this procedure:

- the PUSHBUTTON SWITCH-AIR COND/ECON FLOW (5HB) is referred to as the PACK FLOW SWITCH,
- for the susequent aircraft wiring (Ref. ASM 21-51/01).
- (1) If the fault continues:
  - do a check for continuity of the RESISTOR (18HB) from ECON FLOW SWITCH (5HB) pin A/B1 to pin A/B2.
  - (a) If there is no continuity:

- replace the RESISTOR (18HB).

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### TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
  - do a check for continuity of the RESISTOR (19HB) from ECON FLOW SWITCH (5HB) pin A/B2 to ZONE CONT (8HK) pin AA/14D.
  - (a) If there is no continuity:
     replace the RESISTOR (19HB).
- (3) If the fault continues:
  - replace the CONT-ZONE TEMPERATURE (8HK).
     (Ref. AMM TASK 21-63-34-000-001) and,
     (Ref. AMM TASK 21-63-34-400-001).
- (4) If the fault continues:
  - do a check and repair the wiring: from ECON FLOW SWITCH (5HB) pin A/B1 to ZC (8HK) pin AA/15D, from ECON FLOW SWITCH (5HB) pin A/B2 to ZC (8HK) pin AA/14D, from ECON FLOW SWITCH (5HB) pin A/B3 to ZC (8HK) pin AA/13D.

\*\*ON A/C ALL

- B. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

TASK 21-51-00-810-802

Mixer Flap Actuator Fault

#### 1. Possible Causes

- ACTUATOR-MIXER FLAP (20HB)
- CONT-ZONE TEMPERATURE (8HK)
- RELAY-BACK-UP FLAP (4HB)
- RELAY-BACK-UP FLAP DISAGREE (21HB)
- PUSHBUTTON SWITCH-AIR COND/PACK 1 (7HB)
- PUSHBUTTON SWITCH-AIR COND/PACK 2 (6HB)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
|           |                  |   |
| AMM       | 21-51-52-000-001 | Removal of the Mixer Flap Actuator 20HB                 |
| AMM       | 21-51-52-400-001 | Installation of the Mixer Flap Actuator 20HB            |
| AMM       | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System |
| AMM       | 21-63-34-000-001 | Removal of the Zone Controller (8HK)                    |
| AMM       | 21-63-34-400-001 | Installation of the Zone Controller (8HK)               |
| ASM       | 21-51/02         |   |
| ASM       | 21-51/02         |   |

### 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

#### 4. Fault Isolation

- A. If the test gives the maintenance message MIXER FLAP DRIVE OR SPLY:
  - replace the ACTUATOR-MIXER FLAP (20HB) (Ref. AMM TASK 21-51-52-000-001) (Ref. AMM TASK 21-51-52-400-001).
  - (1) If the fault continues:
    - do a check of the RELAY-BACK-UP FLAP (4HB) and replace it if necessary (Ref. ASM 21-51/02).

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- (2) If the fault continues:
  - do a check of the RELAY-BACK-UP FLAP DISAGREE (21HB) and replace it if necessary (Ref. ASM 21-51/02).
- (3) If the fault continues:
  - do a check of the PUSHBUTTON SWITCH-AIR COND/PACK 1 (7HB) and replace it if necessary (Ref. ASM 21-51/02).
- (4) If the fault continues:
  - do a check of the PUSHBUTTON SWITCH-AIR COND/PACK 2 (6HB) and replace it if necessary (Ref. ASM 21-51/02).
- (5) If the fault continues:
  - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001):
- (6) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 21-51/02) from:
  - the ACTUATOR (20HB) to the RELAY (4HB),
  - the ACTUATOR (20HB) to ground,
  - the RELAY (4HB) to the CB (3HB) and,
  - the RELAY (4HB) to ground.
- B. Do the test as given in the Para. 3.A.

## 5. Close-up

A. Put the aircraft back to its initial configuration.

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## TROUBLE SHOOTING MANUAL

TASK 21-51-00-810-803

Pack 1 Flow Control Valve (Pack 1 Flow Control Unit) Fault

### 1. Possible Causes

- VALVE-FLOW CTL (11HB)
- BOARD-ANN LT TEST & INTFC (8LP)
- CONTROLLER-PACK 1 TEMP (7HH)
- Flow-Control Valve Filter
- RELAY-L PACK CLOSE (13HB)
- RELAY-L FCV DISAGREE (15HB)
- PUSHBUTTON SWITCH-AIR COND/PACK 1 (7HB)
- RELAY-ENGINE 1 START (17HB)
- RELAY-RAM AIR CLOSE CTL (3HZ)
- RELAY-ENGINE 2 START (16HB)
- wiring

## 2. Job Set-up Information

### A. Referenced Information

|        | REFE | RENCE            | DESIGNATION  |  |
|--------|------|------------------|--|--|
|        |      |                  |  |  |
|        | AMM  | 21-51-00-200-001 | Delta P Sense Lines Torque Check and Inspection  |  |
|        | AMM  | 21-51-00-710-002 | Operational Test of the Flow Control and Indicating System                             |  |
| R<br>R | AMM  | 21-51-51-000-001 | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit                         |  |
| R<br>R | AMM  | 21-51-51-400-001 | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre>         |  |
| R<br>R | AMM  | 21-51-51-600-001 | Scheduled Replacement of the Trailing-Edge Probe Filter of the Pack Flow-Control Valve |  |
|        | AMM  | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System                                |  |
|        | AMM  | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)   |  |
|        | AMM  | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)  |  |
|        | AMM  | 73-25-34-710-040 | Operational Test of the Engine Interface Unit (1KS1,1KS2)                              |  |
|        | ASM  | 21-51/01         |  |  |
|        | ASM  | 21-51/02         |  |  |
|        | ASM  | 21-51/02         |  |  |
|        |      |                  |  |  |

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### TROUBLE SHOOTING MANUAL

| REFERENCE | DESIGNATION |
|-----------|-------------|

AWM 21-51-04

### 3. Fault Confirmation

#### A. Test

- (1) Do the operational test of the flow control and indication system (Ref. AMM TASK 21-51-00-710-002).
- (2) Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

### 4. Fault Isolation

- A. If the test is OK, no other maintenance action is necessary.
- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - **B.** This paragraph is only applicable for flow control valves with the part numbers which follow:

P/N 751A0000-07 Amendment ABC,

P/N 751A0000-07 Amendment BC and,

P/N 751B0000-02 Amendment AB.

- (1) If the test confirms the fault:
  - (a) Replace the Flow-Control Valve Filter (Ref. AMM TASK 21-51-51-600-001).
  - (b) If the fault continues:
    - replace the VALVE-FLOW CTL (11HB) (referred to as FCV (11HB)) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).

\*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

- B. If the test confirms the fault:
  - replace the VALVE-FLOW CTL (11HB) (referred to as FCV (11HB)) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
- C. If the fault continues:
  - do the inspection of the delta P sense lines (Ref. AMM TASK 21-51-00- 200-001).

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#### \*\*ON A/C ALL

- D. If the fault continues:
  - do a check of the RELAY-L PACK CLOSE (13HB) and replace it if necessary (Ref. ASM 21-51/02).
  - (1) If the fault continues:
    - do a check of the RELAY-L FCV DISAGREE (15HB) and replace it if necessary (Ref. ASM 21-51/02).
  - (2) If the fault continues:
    - do a check of the BOARD-ANN LT TEST & INTFC (8LP) and replace it if necessary (Ref. ASM 21-51/02).
  - (3) If the fault continues:
    - do a check of the PUSHBUTTON SWITCH-AIR COND/PACK 1 (7HB) and replace it if necessary (Ref. ASM 21-51/02).
  - (4) If the fault continues:
    - do the operational test of the engine interface unit (1KS1) (Ref. AMM TASK 73-25-34-710-040).
    - (a) If the test gives a different maintenance message refer to the Fault Symptom List.
  - (5) If the fault continues:
    - do a check of the RELAY-ENGINE 1 START (17HB) and replace it if necessary (Ref. ASM 21-51/02).
  - (6) If the fault continues:
    - do a check of the RELAY-RAM AIR CLOSE CTL (3HZ) and replace it if necessary (Ref. ASM 21-51/02).
  - (7) If the fault continues:
    - do a check of the RELAY-ENGINE 2 START (16HB) and replace it if necessary (Ref. ASM 21-51/02).
  - (8) If the fault continues:
    - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
- E. If the fault continues:
  - do a check and repair the wiring (Ref. ASM 21-51/01) between:
  - the FCV (11HB) and the PC (7HH),
  - the FCV (11HB) and GND,
  - the RELAY (13HB) and the FCV (11HB),
  - the RELAY (15HB) and the FCV (11HB) and,
  - the RELAY (15HB) and the PC (7HH).
  - do a check and repair the wiring (Ref. AWM 21-51-04) between:

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- R the circuit connection 209VT connector Y and the PC (7HH) connector AB
  pin 7A,
  R the circuit connection 209VT connector P and RELAY (15HB) connector A
  - the circuit connection 209VT connector P and RELAY (15HB) connector A pin A2.
    - F. Do the test as given in the Para. 3.A.

## 5. Close-up

A. Put the aircraft back to its initial configuration.

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## TROUBLE SHOOTING MANUAL

TASK 21-51-00-810-804

Pack 2 Flow Control Valve (Pack 2 Flow Control Unit) Fault

### 1. Possible Causes

R

- VALVE-FLOW CTL (8HB)
- FLOW CTL UNIT PACK 2 (24HB)
- BOARD-ANN LT TEST & INTFC (20LP)
- ENG/APU FIRE PNL (1WD)
- CONTROLLER-PACK 2 TEMP (27HH)
- Flow-Control Valve Filter
- RELAY-R PACK CLOSE (12HB)
- RELAY-R FCV DISAGREE (14HB)
- PUSHBUTTON SWITCH-AIR COND/PACK 2 (6HB)
- RELAY-ENGINE 2 START (16HB)
- RELAY-RAM AIR CLOSE CTL (3HZ)
- RELAY-ENGINE 1 START (17HB)
- wiring

## 2. Job Set-up Information

#### A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| AMM       | 21-51-00-200-001 | Delta P Sense Lines Torque Check and Inspection  |
| AMM       | 21-51-00-710-002 | Operational Test of the Flow Control and Indicating System                             |
| AMM       | 21-51-51-000-001 | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit                         |
| AMM       | 21-51-51-400-001 | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre>         |
| AMM       | 21-51-51-600-001 | Scheduled Replacement of the Trailing-Edge Probe Filter of the Pack Flow-Control Valve |
| AMM       | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System                                |
| AMM       | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)   |
| AMM       | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)  |
| AMM       | 73-25-34-710-040 | Operational Test of the Engine Interface Unit (1KS1,1KS2)                              |
| ASM       | 21-51/01         |  |
| ASM       | 21-51/02         |  |
| ASM       | 21-51/02         |  |
| AWM       | 21-51-05         |  |

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## 3. Fault Confirmation

- A. Test
  - (1) Do the operational test of the flow control and indication system (Ref. AMM TASK 21-51-00-710-002).
  - (2) Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).
- 4. Fault Isolation
  - A. If the test is OK, no other maintenance action is necessary.
- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - **B.** This paragraph is only applicable for flow control valves with the part numbers which follow:

P/N 751A0000-07 Amendment ABC,

P/N 751A0000-07 Amendment BC and,

P/N 751B0000-02 Amendment AB.

- (1) If the test confirms the fault:
  - (a) Replace the Flow-Control Valve Filter (Ref. AMM TASK 21-51-51-600-001).
  - (b) If the fault continues:
    - replace the VALVE-FLOW CTL (8HB) (referred to as FCV (8HB)) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).

\*\*ON A/C 209-225, 247-275, 285-299, 429-455, 479-499, 503-549, 551-599, 701-749,

- B. If the test confirms the fault:
  - replace the VALVE-FLOW CTL (8HB) (referred to as FCV (8HB)) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).

\*\*ON A/C 456-475,

- B. If the test confirms the fault:
  - replace the FLOW CTL UNIT PACK 2 (24HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).

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R \*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, R 701-749,

C. If the fault continues:

- do the inspection of the delta P sense lines (Ref. AMM TASK 21-51-00-200-001).

#### \*\*ON A/C ALL

- D. If the fault continues:
  - do a check of the RELAY-R PACK CLOSE (12HB) and replace it if necessary (Ref. ASM 21-51/02).
  - (1) If the fault continues:
    - do a check of the RELAY-R FCV DISAGREE (14HB) and replace it if necessary (Ref. ASM 21-51/02).
  - (2) If the fault continues:
    - do a check of the BOARD-ANN LT TEST & INTFC (20LP) and replace it if necessary (Ref. ASM 21-51/02).
  - (3) If the fault continues:
    - do a check of the PUSHBUTTON SWITCH-AIR COND/PACK 2 (6HB) and replace it if necessary (Ref. ASM 21-51/02).
  - (4) If the fault continues:
    - do the operational test of the engine interface unit (1KS2) (Ref. AMM TASK 73-25-34-710-040).
    - (a) If the test gives a different maintenance message refer to the Fault Symptom List.
  - (5) If the fault continues:
    - do a check of the RELAY-ENGINE 2 START (16HB) and replace it if necessary (Ref. ASM 21-51/02).
  - (6) If the fault continues:
    - do a check of the ENG/APU FIRE PNL (1WD) and replace it if necessary (Ref. ASM 21-51/02) and (Ref. ASM 21-51/02).
  - (7) If the fault continues:
    - do a check of the RELAY-RAM AIR CLOSE CTL (3HZ) and replace it if necessary (Ref. ASM 21-51/02).
  - (8) If the fault continues:
    - do a check of the RELAY-ENGINE 1 START (17HB) and replace it if necessary (Ref. ASM 21-51/02).
  - (9) If the fault continues:
    - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).

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- E. If the fault continues:
- do a check and repair the wiring (Ref. ASM 21-51/01) between:
  - the FCV (8HB) and PC (27HH),
  - the FCV (8HB) and ground,
  - the RELAY (12HB) and the FCV (8HB),

R

- the RELAY (14HB) and the FCV (8HB) and,
- the RELAY (14HB) and the PC (27HH).
- do a check and repair the wiring (Ref. AWM 21-51-05) between:
  - the circuit connection 210VT connector U and the PC (27HH) connector AB
- the circuit connection 210VT connector T and RELAY (14HB) connector A R pin A2.
  - F. Do the test as given in the Para. 3.A.

## 5. Close-up

**SROS** 

A. Put the aircraft back to its initial configuration.

EFF: ALL

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### TROUBLE SHOOTING MANUAL

TASK 21-51-00-810-805

Pack 1 Flow Sensor Fault

### 1. Possible Causes

- SENSOR-PRESSURE (10HB)
- CONTROLLER-PACK 1 TEMP (7HH)
- wiring
- pressure sense line

## 2. Job Set-up Information

A. Referenced Information

|        | REFE       | RENCE                        | DESIGNATION  |  |
|--------|------------|------------------------------|--|--|
|        | AMM        | 21-51-11-000-001             | Removal of the Differential Pressure Sensor 9HB (10HB)                         |  |
|        | AMM        | 21-51-11-400-001             | Installation of the Differential Pressure Sensor 9HB (10HB)                    |  |
| R<br>R | AMM        | 21-51-51-000-001             | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit                 |  |
| R<br>R | AMM        | 21-51-51-400-001             | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre> |  |
|        | AMM        | 21-61-00-710-001             | Operational Test of the Pack Temperature-Control System                        |  |
|        | AMM        | 21-61-34-000-001             | Removal of the Pack Controller (7HH, 27HH)                                     |  |
|        | AMM<br>ASM | 21-61-34-400-001<br>21-51/01 | Installation of the Pack Controller (7HH, 27HH)                                |  |

## 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

### 4. Fault Isolation

- A. If the test gives the maintenance message P1 FLOW SENSOR:
  - replace the SENSOR-PRESSURE (10HB) (Ref. AMM TASK 21-51-11-000-001) and (Ref. AMM TASK 21-51-11-400-001).
  - (1) If the fault continues:
    - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).

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SROS

EFF:

ALL

#### TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
  - do a check and repair the wiring if necessary between: CONNECTOR (7558VC) pin A/A and PC 1 (7HH) connector AB/9C, CONNECTOR (7558VC) pin A/D and PC 1 (7HH) connector AB/10C, CONNECTOR (7558VC) pin A/C and PC 1 (7HH) connector AB/10B, CONNECTOR (7558VC) pin A/B and PC 1 (7HH) connector AB/9D (Ref. ASM 21-51/01).
- (3) If the fault continues:
  - do a check of the pressure sense line between the SENSOR (10HB) and the FCV (11HB) for leaks.
  - if leaks are found, tighten the connection or repair the line (Ref. AMM TASK 21-51-11-000-001), (Ref. AMM TASK 21-51-11-400-001), (Ref. AMM TASK 21-51-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
- B. Do the test as given in the Para. 3.A.

#### 5. Close-up

R

R R

R

A. Put the aircraft back to its initial configuration.

EFF: ALL
SROS

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#### TROUBLE SHOOTING MANUAL

TASK 21-51-00-810-806

Pack 2 Flow Sensor Fault

#### 1. Possible Causes

- SENSOR-PRESSURE (9HB)
- CONTROLLER-PACK 2 TEMP (27HH)
- wiring
- pressure sense line

#### 2. Job Set-up Information

A. Referenced Information

|        | REFE | RENCE                        | DESIGNATION  |
|--------|------|------------------------------|--|
|        | AMM  | 21-51-11-000-001             | Removal of the Differential Pressure Sensor 9HB                                |
|        | AMM  | 21-51-11-400-001             | (10HB) Installation of the Differential Pressure Sensor 9HB (10HB)             |
| R<br>R | AMM  | 21-51-51-000-001             | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit                 |
| R<br>R | AMM  | 21-51-51-400-001             | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre> |
|        | AMM  | 21-61-00-710-001             | Operational Test of the Pack Temperature-Control System                        |
|        | AMM  | 21-61-34-000-001             | Removal of the Pack Controller (7HH, 27HH)                                     |
|        |      | 21-61-34-400-001<br>21-51/01 | Installation of the Pack Controller (7HH, 27HH)                                |

#### 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

#### 4. Fault Isolation

- A. If the test gives the maintenance message P2 FLOW SENSOR:
  - replace the SENSOR-PRESSURE (9HB) (Ref. AMM TASK 21-51-11-000-001) and (Ref. AMM TASK 21-51-11-400-001).
  - (1) If the fault continues:
    - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).

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#### TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
  - do a check and repair the wiring if necessary between: CONNECTOR (7557VC) pin A/A and PC 2 (27HH) connector AB/9C, CONNECTOR (7557VC) pin A/D and PC 2 (27HH) connector AB/10C, CONNECTOR (7557VC) pin A/C and PC 2 (27HH) connector AB/10B, CONNECTOR (7557VC) pin A/B and PC 2 (27HH) connector AB/9D (Ref. ASM 21-51/01).
- (3) If the fault continues:
  - do a check of the pressure sense line between the SENSOR (9HB) and the FCV (8HB) for leaks.
  - if leaks are found, tighten the connection or repair the line (Ref. AMM TASK 21-51-11-000-001), (Ref. AMM TASK 21-51-11-400-001), (Ref. AMM TASK 21-51-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
- B. Do the test as given in the Para. 3.A.

#### 5. Close-up

**SROS** 

R

R R

R

A. Put the aircraft back to its initial configuration.

EFF: ALL 21-51-00

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### *GA319/A320/A321*

#### TROUBLE SHOOTING MANUAL

TASK 21-51-00-810-807

FCV 1 (FCU 1) Regulation/Indication Fault

#### 1. Possible Causes

- SENSOR-PRESSURE (10HB)
- VALVE-FLOW CTL (11HB)
- VALVE-FLOW CTL (8HB)
- Flow-Control Valve Filter
- wiring
- sense line connectors

#### 2. Job Set-up Information

A. Referenced Information

|        | REFE | RENCE  | DESIGNATION  |
|--------|------|--|--|
|        | ASM  | 2151801  |  |
|        |      | 21-51-00-200-001<br>21-51-11-000-001             | Delta P Sense Lines Torque Check and Inspection Removal of the Differential Pressure Sensor 9HB (10HB) |
|        | AMM  | 21-51-11-400-001                                 | Installation of the Differential Pressure Sensor 9HB (10HB)  |
| R<br>R | AMM  | 21-51-51-000-001                                 | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit   |
| R<br>R | AMM  | 21-51-51-400-001                                 | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre>                         |
| R<br>R | AMM  | 21-51-51-600-001                                 | Scheduled Replacement of the Trailing-Edge Probe Filter of the Pack Flow-Control Valve                 |
|        |      | 71-00-00-710-003<br>71-00-00-710-028<br>21-51/01 | Engine Automatic Start Engine Shutdown   |

#### 3. Fault Confirmation

- A. Bleed Air Supply Source from the Engines
  - (1) Start the engines, Ref. Para. 3.B, to supply the bleed air.
- B. Start the engines (Ref. AMM TASK 71-00-00-710-003) if necessary.
- C. Initial Test Set-up with Engines as Bleed Air Source Supply
  - (1) On the AIR COND panel 30VU:
    - push the HOT AIR pushbutton switch to the on position (the OFF legend goes off),
    - turn the COCKPIT, FWD CABIN and the AFT CABIN temperature selectors to the HOT positions and,

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#### TROUBLE SHOOTING MANUAL

- make sure that the PACK 1 and the PACK 2 pushbutton switches are in the on position (the OFF legends are off).
- (2) On the ECAM BLEED page:
  - make sure that the pack 1 inlet pressure indication shows a minimum of 24 PSI.

NOTE: If the indication shows less than 24 PSI you must slowly adjust the throttle levers until you get the minimum indication of 24 PSI.

D. AIDS ALPHA CALL-UP menu

ACTION RESULT

1. On one MCDU:

- press the line key adjacent to the AIDS menu page shows. the AIDS indication.
- press the line key adjacent to the AIDS PARAM CALL-UP page shows. the CALL-UP PARAM indication.
- the PARAM ALPHA CALL-UP indication.
- 2. On the MCDU keyboard:
  - press the up or down arrow keys empty box indications show in lines. (to scroll the page).
  - press the P and F keys.
- 3. On the MCDU:
  - press the line key adjacent to one of the empty box line indications.

On the MCDU:

- press the line key adjacent to the AIDS ALPHA CALL-UP page shows.
  - On the MCDU:

In the lower left corner of the AIDS ALPHA CALL-UP page: - PF shows.

On the AIDS ALPHA CALL-UP page:

- ALPHA, SOURCE and POS. VALUE columns show.

Below the ALPHA column:

- the indications <PF and KG/SE show.

Below the SOURCE column:

- the indications PACK-1 and PACK-2 show.

Below the POS.VALUE column:

- the indications 1:.XX and 2:.XX show.

NOTE: XX indicates the actual pack flow values (KG/SE)

EFF: ALL 21-51-00

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### TROUBLE SHOOTING MANUAL

R \*\*ON A/C 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,

| _ | _ |   |   |   |
|---|---|---|---|---|
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|   |   | _ | 3 | · |

RESULT

1. On the AIR COND panel 30VU:

- turn the **PACK FLOW** selector to the NORM position and wait for - under the POS VALUE column the 120 sec.

On the MCDU at the AIDS ALPHA CALL-UP page:

indication 1: shows between .47 and .63 (KG/SE).

\*\*ON A/C 276-299, 476-499, 503-549,

E. Test

ACTION

**RESULT** 

- 1. On the AIR COND panel 30VU:
  - push the ECON FLOW pushbutton page: switch to the off position (the - under the POS VALUE column the ON legend goes off) and wait for 120 sec.

On the MCDU at the AIDS ALPHA CALL-UP

indication 1: shows between .55 and .74 (KG/SE).

\*\*ON A/C ALL

- 4. Fault Isolation
- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - A. This paragraph is only applicable for flow control valves with the part numbers which follow:

P/N 751A0000-07 Amendment ABC,

P/N 751A0000-07 Amendment BC and,

P/N 751B0000-02 Amendment AB.

On the MCDU at the AIDS ALPHA CALL-UP page:

- if the POS VALUE indication 1: does not agree with the flow indication parameters:
- replace the Flow-Control Valve Filter (Ref. AMM TASK 21-51-51-600-001).
- (1) If the fault continues:
  - replace the SENSOR-PRESSURE (10HB) (Ref. AMM TASK 21-51-11-000-001) and (Ref. AMM TASK 21-51-11-400-001).

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#### TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
  - replace the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
- (3) If the fault continues:
  - do a check and repair the wiring between the:
  - FCV connector (8HB-A) pin C and the PC connector (7HH-AA) pin B7. (Ref. ASM 2151SO1).
- (4) If the fault continues:
  - replace the VALVE-FLOW CTL (8HB) (Ref. AMM TASK 21-51-51-000-001)
     and (Ref. AMM TASK 21-51-51-400-001).

\*\*ON A/C 209-225, 247-275, 287-299, 429-475, 481-499, 503-549, 551-599, 703-749,

- A. On the MCDU at the AIDS ALPHA CALL-UP page:
  - if the POS VALUE indication 1: does not agree with the flow indication parameters:
  - make sure that the torque of the sense line connectors at the flow control valve and related sensor is correct. (Ref. AMM TASK 21-51-11-400-001) and (Ref. AMM TASK 21-51-51-400-001).
  - (1) If the fault continues:
    - replace the SENSOR-PRESSURE (10HB) (Ref. AMM TASK 21-51-11-000-001) and (Ref. AMM TASK 21-51-11-400-001).
  - (2) If the fault continues:
    - replace the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
  - (3) If the fault continues:
    - do a check and repair the wiring between the:
    - FCV connector (8HB-A) pin C and the PC connector (7HH-AA) pin B7. (Ref. ASM 2151SO1).
  - (4) If the fault continues:
    - replace the VALVE-FLOW CTL (8HB) (Ref. AMM TASK 21-51-51-000-001)
       and (Ref. AMM TASK 21-51-51-400-001).

\*\*ON A/C 285-286, 479-480, 701-702,

- A. On the MCDU at the AIDS ALPHA CALL-UP page if the POS VALUE indication 1: does not agree with the flow indication parameters:
  - replace the SENSOR-PRESSURE (10HB) (Ref. AMM TASK 21-51-11-000-001) and (Ref. AMM TASK 21-51-11-400-001).
  - (1) If the fault continues:
    - replace the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).

EFF: 201-225, 227-227, 229-245, 247-299, 426-499, 503-549, 551-599, 701-749,

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- (2) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 21-51/01) from:
  - FCV connector (8HB-A) pin D and the PC connector (7HH-AA) pin B7.
- (3) If the fault continues:
  - do the inspection of the delta P sense lines (Ref. AMM TASK 21-51-00-200-001).
- (4) If the fault continues:
  - replace the VALVE-FLOW CTL (8HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).

\*\*ON A/C ALL

B. Do the test as given in the Para. 3.E.

#### 5. Close-up

A. Stop the engines (Ref. AMM TASK 71-00-00-710-028).

EFF: ALL 21-51-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-51-00-810-808

FCV 2 (FCU 2) Regulation/Indication Fault

#### 1. Possible Causes

- SENSOR-PRESSURE (9HB)
- VALVE-FLOW CTL (8HB)
- VALVE-FLOW CTL (11HB)
- Flow-Control Valve Filter
- wiring
- sense lines connectors

#### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                                 | DESIGNATION  |  |
|-----------|---------------------------------|--|--|
|           |                                 |  |  |
| AMM       | 21-51-00-200-001                | Delta P Sense Lines Torque Check and Inspection  |  |
| AMM       | 21-51-11-000-001                | Removal of the Differential Pressure Sensor 9HB (10HB)   |  |
| AMM       | 21-51-11-400-001                | Installation of the Differential Pressure Sensor 9HB (10HB)  |  |
| AMM       | 21-51-51-000-001                | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit   |  |
| AMM       | 21-51-51-400-001                | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre>   |  |
| AMM       | 21-51-51-600-001                | Scheduled Replacement of the Trailing-Edge Probe Filter of the Pack Flow-Control Valve   |  |
| AMM       | 71-00-00-710-003                | Engine Automatic Start   |  |
| ΔΜΜ       | 71-00-00-710-028                | Engine Shutdown  |  |
|           |                                 | Engine shacdown  |  |
| A2M       | 21-21/01                        |  |  |
|           | AMM<br>AMM<br>AMM<br>AMM<br>AMM | AMM 21-51-00-200-001<br>AMM 21-51-11-000-001<br>AMM 21-51-11-400-001<br>AMM 21-51-51-000-001<br>AMM 21-51-51-600-001<br>AMM 21-51-51-600-001<br>AMM 71-00-00-710-003<br>AMM 71-00-00-710-028 |  |

#### 3. Fault Confirmation

- A. Bleed Air Supply Source from the Engines
  - (1) Start the engines, Ref. Para. 3.B, to supply the bleed air.
- B. Start the engines (Ref. AMM TASK 71-00-00-710-003) if necessary.
- C. Initial Test Set-up with Engines as Bleed Air Source Supply
  - (1) On the AIR COND panel 30VU:
    - push the HOT AIR pushbutton switch to the on position (the OFF legend goes off),
    - turn the COCKPIT, FWD CABIN and the AFT CABIN temperature selectors to the HOT positions and,

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#### TROUBLE SHOOTING MANUAL

- make sure that the PACK 1 and the PACK 2 pushbutton switches are in the on position (the OFF legends are off).
- (2) On the ECAM BLEED page:
  - make sure that the pack 2 inlet pressure indication shows a minimum of 24 PSI.

NOTE: If the indication shows less than 24 PSI you must slowly adjust the throttle levers until you get the minimum indication of 24 PSI.

D. AIDS ALPHA CALL-UP menu

ACTION RESULT

1. On one MCDU:

- press the line key adjacent to the AIDS menu page shows. the AIDS indication.
- press the line key adjacent to the AIDS PARAM CALL-UP page shows. the CALL-UP PARAM indication.
- the PARAM ALPHA CALL-UP indication.
- 2. On the MCDU keyboard:
  - press the up or down arrow keys empty box indications show in lines. (to scroll the page).
  - press the P and F keys.
- 3. On the MCDU:
  - press the line key adjacent to one of the empty box line indications.

On the MCDU:

- press the line key adjacent to the AIDS ALPHA CALL-UP page shows.
  - On the MCDU:

In the lower left corner of the AIDS ALPHA CALL-UP page: - PF shows.

On the AIDS ALPHA CALL-UP page:

- ALPHA, SOURCE and POS. VALUE columns show.

Below the ALPHA column:

- the indications <PF and KG/SE show.

Below the SOURCE column:

- the indications PACK-1 and PACK-2 show.

Below the POS.VALUE column:

- the indications 1:.XX and 2:.XX show.

NOTE: XX indicates the actual pack flow values (KG/SE)

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R \*\*ON A/C 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,

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RESULT

1. On the AIR COND panel 30VU:

- turn the **PACK FLOW** selector to the NORM position and wait for 120 sec.

On the MCDU at the AIDS ALPHA CALL-UP page:

- under the POS VALUE column the indication 2: shows between .47 and .63 (KG/SE).

\*\*ON A/C 276-299, 476-499, 503-549,

E. Test

ACTION RESULT

1. On the AIR COND panel 30VU:

- push the ECON FLOW pushbutton page: switch to the off position (the - under the POS VALUE column the ON legend goes off) and wait for 120 sec.

On the MCDU at the AIDS ALPHA CALL-UP

indication 2: shows between .55 and .74 (KG/SE).

\*\*ON A/C ALL

4. Fault Isolation

R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,

A. This paragraph is only applicable for flow control valves with the part numbers which follow:

P/N 751A0000-07 Amendment ABC, P/N 751A0000-07 Amendment BC and,

P/N 751B0000-02 Amendment AB.

On the MCDU / AIDS ALPHA CALL-UP page if the POS VALUE indication 2: does not agree with the flow indication parameters:

- replace the Flow-Control Valve Filter (Ref. AMM TASK 21-51-51-600-001).
- (1) If the fault continues:
  - replace the SENSOR-PRESSURE (9HB) (Ref. AMM TASK 21-51-11-000-001) and (Ref. AMM TASK 21-51-11-400-001).

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- (2) If the fault continues:
  - replace the VALVE-FLOW CTL (8HB) (Ref. AMM TASK 21-51-51-000-001)
     and (Ref. AMM TASK 21-51-51-400-001).
- (3) If the fault continues:
  - do a check and repair the wiring between the:
  - FCV connector (11HB-A) pin C and the PC connector (27HH-AA) pin B7. (Ref. ASM 21-51/01).
- (4) If the fault continues:
  - replace the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).

\*\*ON A/C 209-225, 247-275, 287-299, 429-475, 481-499, 503-549, 551-599, 703-749,

- A. On the MCDU / AIDS ALPHA CALL-UP page if the POS VALUE indication 2: does not agree with the flow indication parameters:
  - make sure that the torque of the sense lines connectors at the flow control valve and related sensor is correct (Ref. AMM TASK 21-51-11-400-001) and (Ref. AMM TASK 21-51-51-400-001) and,
  - the sense lines are in a good condition.
  - (1) If the fault continues:
    - replace the SENSOR-PRESSURE (9HB) (Ref. AMM TASK 21-51-11-000-001) and (Ref. AMM TASK 21-51-11-400-001).
  - (2) If the fault continues:
    - replace the VALVE-FLOW CTL (8HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
  - (3) If the fault continues:
    - do a check and repair the wiring between the:
    - FCV connector (11HB-A) pin C and the PC connector (27HH-AA) pin B7. (Ref. ASM 21-51/01).
  - (4) If the fault continues:
    - replace the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-000-001)
       and (Ref. AMM TASK 21-51-51-400-001).

\*\*ON A/C 285-286, 479-480, 701-702,

- A. On the MCDU / AIDS ALPHA CALL-UP page if the POS VALUE indication 2: does not agree with the flow indication parameters:
  - replace the SENSOR-PRESSURE (9HB) (Ref. AMM TASK 21-51-11-000-001) and (Ref. AMM TASK 21-51-11-400-001).
  - (1) If the fault continues:
    - replace the VALVE-FLOW CTL (8HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).

EFF: 201-225, 227-227, 229-245, 247-299, 426-499, 503-549, 551-599, 701-749,

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#### TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 21-51/01) from:
  - the FCV connector (11HB-A) pin D and the PC connector (27HH-AA) pin B7.
- (3) If the fault continues:
  - do the inspection of the delta P sense lines (Ref. AMM TASK 21-51-00-200-001).
- (4) If the fault continues:
  - replace the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).

\*\*ON A/C ALL

- B. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Stop the engines (Ref. AMM TASK 71-00-00-710-028).

EFF: ALL 21-51-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-51-00-810-809

CPC 1 / SDAC 1+2 Interface Fault

#### 1. Possible Causes

- SDAC-1 (1WV1)
- CONTROLLER-CABIN PRESSURE 1 (11HL)
- SDAC-2 (1WV2)
- wiring

#### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |
|-----------|------------------|--|--|
|           |                  |  |  |
| AMM       | 21-31-00-710-002 | Operational Test of the Pressure Control and Monitoring              |  |
| AMM       | 21-31-34-000-001 | Removal of the Cabin Pressure Controller (11HL,12HL)                 |  |
| AMM       | 21-31-34-400-001 | <pre>Installation of the Cabin Pressure Controller (11HL,12HL)</pre> |  |
| AMM       | 31-50-00-710-001 | Ground Scanning of the Central Warning System                        |  |
| AMM       | 31-55-34-000-001 | Removal of the SDAC (1WV1,1WV2)                                      |  |
| AMM       | 31-55-34-400-001 | Installation of the SDAC (1WV1,1WV2)                                 |  |
| ASM       | 21-31/03         |  |  |

#### 3. Fault Confirmation

A. Do the operational test of the central warning system (Ref. AMM TASK 31- 50-00-710-001).

NOTE: Make sure that the circuit breaker 3HL is closed during the test.

#### 4. Fault Isolation

- A. If the test gives the maintenance message SDAC1: NO CPCU1 DATA 11HL or SDAC1: NO CPC 1 ANALOG SIGNAL:
  - do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).
  - (1) If the test gives a different maintenance message refer to the Fault Symptom List.
  - (2) If the test is OK: replace the SDAC-1 (1WV1) (Ref. AMM TASK 31-55-34-000-001) and (Ref. AMM TASK 31-55-34-400-001).

EFF: ALL

21-51-00

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(3) If the fault continues:

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- do a check and repair the wiring (Ref. ASM 21-31/03): from the CPC 1 (11HL)AA/1C to the SDAC 1 (1WV1)AE/10F, from the CPC 1 (11HL)AA/4D to the SDAC 1 (1WV1)AE/10E.
- (4) If the fault continues: replace the CONTROLLER-CABIN PRESSURE 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
- B. If the test gives the maintenance message SDAC2: NO CPCU1 DATA 11HL or SDAC2: NO CPC1 ANALOG SIGNAL:
  - do the operational test of the pressure control and monitoring system (Ref. AMM TASK 21-31-00-710-002).
  - (1) If the test gives a different maintenance message refer to the Fault Symptom List.
  - (2) If the test is OK: replace the SDAC-2 (1WV2) (Ref. AMM TASK 31-55-34-000-001) and (Ref. AMM TASK 31-55-34-400-001).
  - (3) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-31/03): from the CPC 1 (11HL)AA/1C to the SDAC 2 (1WV2)AE/10F, from the CPC 1 (11HL)AA/4D to the SDAC 2 (1WV2)AE/10E.
  - (4) If the fault continues: replace the CONTROLLER-CABIN PRESSURE 1 (11HL) (Ref. AMM TASK 21-31-34-000-001) and (Ref. AMM TASK 21-31-34-400-001).
- C. Do the test given in para. 3.

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EFF: ALL

#### TROUBLE SHOOTING MANUAL

TASK 21-51-00-810-810

ADIRU 3 / ZC Interface Fault

- 1. Possible Causes
  - CONT-ZONE TEMPERATURE (8HK)
  - ADIRU-3 (1FP3)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |
|-----------|------------------|--|--|
| AMM       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |  |
| AMM       | 21-63-34-000-001 | Removal of the Zone Controller (8HK)   |  |
| AMM       | 21-63-34-400-001 | Installation of the Zone Controller (8HK)                                    |  |
| AMM       | 34-12-34-000-001 | Removal of the ADIRU (1FP1, 1FP2, 1FP3)                                      |  |
| AMM       | 34-12-34-400-001 | Installation of the ADIRU (1FP1, 1FP2, 1FP3)                                 |  |
| AMM       | 34-13-00-740-002 | INTERFACE TEST of the ADR  |  |
| AMM       | 34-14-00-740-001 | Interface Test of the IR   |  |
| ASM       | 21-63/03         |  |  |
| ASM       | 34-13/01         |  |  |

#### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature control system (Ref. AMM TASK 21-63-00-710-004).

NOTE: Make sure that the subsequent circuit breakers are closed during the test:
- 4FP3, 5FP3, 6FP3, 8FP, 9FP.

#### 4. Fault Isolation

- A. If the test gives the maintenance message NO DATA FROM ADIRS:
  - do the BITE tests of the ADIRS (Ref. AMM TASK 34--13--00--740--002) (Ref. AMM TASK 34--14--00--740--001).
  - (1) If the test gives a different maintenance message refer to the Fault Symptom List.

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- (2) If the test is OK: replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).
- (3) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 21-63/03) (Ref. ASM 34-13/01):

from the ZC (8HK)AA/1D to the ADIRU 3 (1FP3)AA/9A, from the ZC (8HK)AA/2D to the ADIRU 3 (1FP3)AA/9B.

(4) If the fault continues: replace the ADIRU-3 (1FP3) (Ref. AMM TASK 34-12-34-000-001) and (Ref. AMM TASK 34-12-34-400-001).

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B. Do the test given in para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-51-00-810-811

Pack 1 FCV (Pack 1 FCU) - Symbol replaced by Amber XX

- 1. Possible Causes
  - SDAC-1 (1WV1)
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE  | DESIGNATION  |
|--|--|
| AMM 31-50-00-710-001<br>AMM 31-55-34-000-001<br>AMM 31-55-34-400-001 | Ground Scanning of the Central Warning System Removal of the SDAC (1WV1,1WV2) Installation of the SDAC (1WV1,1WV2) |

#### 3. Fault Confirmation

A. Do the operational test of the central warning system (Ref. AMM TASK 31-50-00-710-001).

#### 4. Fault Isolation

- A. If the test gives the maintenance message SDAC1: replace the SDAC-1 (1WV1) (Ref. AMM TASK 31-55-34-000-001) and (Ref. AMM TASK 31-55-34-400-001).
- B. Do the test given in para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-51-00-810-812

Pack 2 FCV (Pack 2 FCU) - Symbol replaced by Amber XX

- 1. Possible Causes
  - SDAC-2 (1WV2)
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE  | DESIGNATION  |
|--|--|
| AMM 31-50-00-710-001<br>AMM 31-55-34-000-001<br>AMM 31-55-34-400-001 | Ground Scanning of the Central Warning System Removal of the SDAC (1WV1,1WV2) Installation of the SDAC (1WV1,1WV2) |

- 3. Fault Confirmation
  - A. Do the operational test of the central warning system (Ref. AMM TASK 31-50-00-710-001).
- 4. Fault Isolation
  - A. If the test gives the maintenance message SDAC2: replace the SDAC-2 (1WV2) (Ref. AMM TASK 31-55-34-000-001) and (Ref. AMM TASK 31-55-34-400-001).
  - B. Do the test given in para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-51-00-810-813

Pack 1 Flow Indication Fault

#### 1. Possible Causes

- VALVE-FLOW CTL (11HB)
- SENSOR-PRESSURE (10HB)
- VALVE-FLOW CTL (8HB)
- SENSOR-COMPRESSOR PNEUMATIC OVHT (10HM9)
- REHEATER (10HM3)
- P1 OZONE FILTER (100HM)
- wiring

#### 2. Job Set-up Information

A. Referenced Information

|        | REFERENCE |                  | DESIGNATION  |  |
|--------|-----------|------------------|--|--|
|        | ASM       | 2151\$01         |  |  |
|        | _         | 12-33-21-618-001 | Pre-conditioning through the HP Ground Connection                                      |  |
|        | AMM       |                  | Removal of the Differential Pressure Sensor 9HB (10HB)                                 |  |
|        | AMM       | 21-51-11-400-001 | <pre>Installation of the Differential Pressure Sensor 9HB (10HB)</pre>                 |  |
|        | AMM       | 21-51-41-000-001 | Removal of the Ozone Filter (Converter) 100HM (101HM)                                  |  |
|        | AMM       | 21-51-41-400-001 | Installation of the Ozone Filter 100HM (101HM)   |  |
| R<br>R | AMM       | 21-51-51-000-001 | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit                         |  |
| R<br>R | AMM       | 21-51-51-400-001 | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre>         |  |
| R<br>R | AMM       | 21-51-51-600-001 | Scheduled Replacement of the Trailing-Edge Probe Filter of the Pack Flow-Control Valve |  |
|        | AMM       | 21-52-31-000-001 | Removal of the Reheater 10HM3 (11HM3)  |  |
|        | AMM       | 21-52-31-400-001 | Installation of the Reheater 10HM3 (11HM3)   |  |
|        | AMM       | 21-61-18-000-001 | Removal of the Compressor Pneumatic Overheat-Sensor 10HM9 (11HM9)                      |  |
|        | AMM       | 21-61-18-400-001 | <pre>Installation of the Compressor Pneumatic Overheat-Sensor 10HM9 (11HM9)</pre>      |  |
|        | AMM       | 71-00-00-710-003 | Engine Automatic Start   |  |
|        | AMM       | 71-00-00-710-028 | Engine Shutdown  |  |

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#### TROUBLE SHOOTING MANUAL

#### 3. Fault Confirmation

- A. Bleed Air Supply Source from the HP Ground Connection
  - NOTE: The HP ground supply source must be able to give a pack inlet pressure of 24 PSI minimum. If it can not do this then you must get the bleed air supply from the engines.

    The work steps which follow show the conditions necessary before you get the minimum pack-inlet pressure.
  - (1) Do the pre-conditioning through the HP ground connection (Ref. AMM TASK 12-33-21-618-001).
  - (2) On the AIR COND panel 30VU:
    - push the HOT AIR pushbutton switch to the on position (the OFF legend goes off),
    - turn the COCKPIT, FWD CABIN and the AFT CABIN temperature selectors to the HOT positions and,
    - make sure that the PACK 1 and the PACK 2 pushbutton switches are in the on position (the OFF legends are off).
  - (3) On the ECAM BLEED page:
    - make sure that the pack 1 inlet pressure indication shows a minimum of 24 PSI.
    - NOTE: If the indication shows less than 24 PSI you must:
      - increase the ground pressure supply until the indication shows a minimum of 24 PSI.
- B. Start the engines (Ref. AMM TASK 71-00-00-710-003) if necessary.
- C. Initial Test Set-up with Engines as Bleed Air Source Supply
  - (1) On the AIR COND panel 30VU:
    - push the HOT AIR pushbutton switch to the on position (the OFF legend goes off),
    - turn the COCKPIT, FWD CABIN and the AFT CABIN temperature selectors to the HOT positions and,
    - make sure that the PACK 1 and the PACK 2 pushbutton switches are in the on position (the OFF legends are off).
  - (2) On the ECAM BLEED page:
    - make sure that the pack 1 inlet pressure indication shows a minimum of 24 PSI.

NOTE : If the indication shows less than 24 PSI you must slowly adjust the throttle levers until you get the minimum indication of 24 PSI.

EFF: ALL

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#### TROUBLE SHOOTING MANUAL

R \*\*ON A/C 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,

D. Test

120 sec.

ACTION RESULT

# 1. On the AIR COND panel 30VU:turn the PACK FLOW selector to

the LO position and wait for

- 2. On the AIR COND panel 30VU:
  - push the PACK 2 P/BSW and wait for 120 sec.
- 3. On the AIR COND panel 30VU: push the PACK 2 P/BSW.
- 4. On the AIR COND panel 30VU:
  - turn the PACK FLOW selector to the NORM position and wait for 120 sec.
- 5. On the AIR COND panel 30VU:
  - turn the PACK FLOW selector to the HI position and wait for 120 sec.

#### On the ECAM BLEED page:

 the pack 1 flow indication shows between the LO and the 11 o'clock positions.

#### On the AIR COND panel 30VU:

- the OFF light of the PACK 2 P/BSW comes on.

#### On the ECAM BLEED page:

 the pack 1 flow indication shows between the 1 o'clock and the HI positions.

#### On the AIR COND panel 30VU:

 the OFF light of the PACK 2 P/BSW goes off.

#### On the ECAM BLEED page:

 the pack 1 flow indication shows between the 11 o'clock and the 1 o'clock positions.

#### On the ECAM BLEED page:

 the pack 1 flow indication shows between the 1 o'clock and the HI positions.

EFF: 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,

331 377, 101 147,

**SROS** 

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#### TROUBLE SHOOTING MANUAL

\*\*ON A/C 276-299, 476-499, 503-549,

D. Test

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### ACTION

#### RESULT

- 1. On the AIR COND panel 30VU:
  - ON legend comes on) and wait for 120 sec.
- 2. On the AIR COND panel 30VU:
  - push the PACK 2 P/BSW and wait for 120 sec.
- On the ECAM BLEED page:
- push the ECON FLOW pushbutton the pack 1 flow indication shows switch to the on position (the between the LO and the 11 o'clock positions.
  - On the AIR COND panel 30VU:
  - the OFF light of the PACK 2 P/BSW comes on.

#### On the ECAM BLEED page:

- the pack 1 flow indication shows between the 1 o'clock and the HI positions.
- 3. On the AIR COND panel 30VU:
  - push the PACK 2 P/BSW.
- On the AIR COND panel 30VU:
- the OFF light of the PACK 2 P/BSW goes off.
- 4. On the AIR COND panel 30VU:
  - On the AIR COND panel 30VU:

    On the ECAM BLEED page:

     push the ECON FLOW pushbutton

     the pack 1 flow indication shows switch to the off position (the ON legend goes off) and wait for 120 sec.
- On the ECAM BLEED page:
  - between the 11 o'clock and the 1 o'clock positions.

\*\*ON A/C ALL

- 4. Fault Isolation
- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - A. If the pack 1 flow indicator on the ECAM BLEED page is stuck in the high position:

NOTE: Do the following step only, if the FCV is of the standard:

- PN 751A0000-07 Amdt. ABC or,
- PN 751A0000-07 Amdt. BC or,
- PN 751B0000-02 Amdt. ABC.
- (1) Replace the filter of the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-600-001).

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#### TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
  - replace the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
- (3) If the fault continues:
  - replace the SENSOR-PRESSURE (10HB) (Ref. AMM TASK 21-51-11-000-001) (Ref. AMM TASK 21-51-11-400-001).
- (4) If the fault continues:
  - do a check and repair the wiring between the:
  - FCV connector (11HB-A) pin C and the PC connector (27HH-AA) pin B7.
  - FCV connector (11HB-A) pin D and the PC connector (7HH-AB) pin B6.
  - FCV connector (11HB-A) pin B and GND (Ref. ASM 2151S01).
- (5) If the fault continues:
  - do a check and repair the wiring between the:
  - FCV connector (8HB-A) pin C and the PC connector (7HH-AA) pin B7.
  - FCV connector (8HB-A) pin D and the PC connector (27HH-AB) pin B6.
  - FCV connector (8HB-A) pin B and GND (Ref. ASM 2151SO1).
- (6) Do a check for leakage at the cabin-pressure sense-line between FCV (11HB) and the pressurized area.

\*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

- A. If the pack 1 flow indicator on the ECAM BLEED page is stuck in the high position:
  - (1) Replace the VALVE-FLOW CTL (8HB) of the opposite pack (pack 2) (Ref. AMM TASK 21-51-51-000-001) (Ref. AMM TASK 21-51-51-400-001).
  - (2) If the fault continues:
    - do a leakage check of the sense line between the angled connector of the pressure-sensor(10HB) and the downstream pressure-port at the FCV (11HB), and replace if necessary.
  - (3) If the fault continues:
    - replace the SENSOR-PRESSURE (10HB) (Ref. AMM TASK 21-51-11-000-001) (Ref. AMM TASK 21-51-11-400-001).
  - (4) If the fault continues:
    - do a check and repair the wiring of the opposite FCV (8HB) between the:
    - FCV connector (8HB-A) pin C and the PC connector (7HH-AA) pin B7.
    - FCV connector (8HB-A) pin D and the PC connector (27HH-AB) pin B6.
    - FCV connector (8HB-A) pin B and GND (Ref. ASM 2151SO1).
  - (5) If the fault continues:
    - replace the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-000-001) (Ref. AMM TASK 21-51-51-400-001).

EFF: 201-225, 227-227, 229-245, 247-299, 426-499, 503-549, 551-599, 701-749,

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- (6) If the fault continues:
  - do a check and repair the wiring between the:
  - FCV connector (11HB-A) pin C and the PC connector (27HH-AA) pin B7.
  - FCV connector (11HB-A) pin D and the PC connector (7HH-AB) pin B6.
  - FCV connector (11HB-A) pin B and GND (Ref. ASM 2151SO1).
- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - **B.** If the pack 1 flow indicator on the **ECAM BLEED** page is stuck in the low position:

NOTE: Do the following step only if the FCV is of the standard:

- PN 751A0000-07 Amdt. ABC or,
  - PN 751A0000-07 Amdt. BC or,
  - PN 751B0000-02 Amdt. ABC.
- (1) Replace the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
- (2) If the fault continues:
  - do a leakage check of the sense-line between the FCW (11HB) and the pressure-sensor (10HB), and replace if necessary.
- (3) If the fault continues:
  - replace the SENSOR-PRESSURE (10HB) (Ref. AMM TASK 21-51-11-000-001)
     (Ref. AMM TASK 21-51-11-400-001)
- (4) If the fault continues:
  - do a leakage check of the sense-line between the CPNOH (10HM9) and the FCV (11HB), and replace if necessary.
- (5) If the fault continues:
  - replace the SENSOR-COMPRESSOR PNEUMATIC OVHT (10HM9) (Ref. AMM TASK 21-61-18-000-001) (Ref. AMM TASK 21-61-18-400-001)
- (6) If the fault continues:
  - Replace the REHEATER (10HM3) (Ref. AMM TASK 21-52-31-000-001) and (Ref. AMM TASK 21-52-31-400-001).

\*\*ON A/C 209-225, 247-253, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

- **B.** If the pack 1 flow indicator on the **ECAM BLEED** page is stuck in the low position:
  - (1) Do a leakage check of the sense-line between the in-line-connector of the pressure-sensor (10HB), and the upstream port at the FCV (11HB), and replace if necessary.

EFF: 201-225, 227-227, 229-245, 247-299, 426-499, 503-549, 551-599, 701-749,

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- (2) If the fault continues:
  - replace the SENSOR-PRESSURE (10HB) (Ref. AMM TASK 21-51-11-000-001)
     (Ref. AMM TASK 21-51-11-400-001)
- (3) If the fault continues:
  - replace the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
- (4) If the fault continues:
  - do a leakage check the sense-line between the CPNOH (10HM9) and the FCV (11HB), and replace if necessary.
- (5) If the fault continues:
  - replace the SENSOR-COMPRESSOR PNEUMATIC OVHT (10HM9) (Ref. AMM TASK 21-61-18-000-001) (Ref. AMM TASK 21-61-18-400-001)
- (6) If the fault continues:
  - replace the REHEATER (10HM3) (Ref. AMM TASK 21-52-31-000-001) and (Ref. AMM TASK 21-52-31-400-001).

\*\*ON A/C 202-202,

Post SB 21-1119 For A/C 202-202,

- **B.** If the pack 1 flow indicator on the **ECAM BLEED** page is stuck in the low position:
  - NOTE: Do the following step only if the FCV is of the standard:
    - PN 751A0000-07 Amdt. ABC or,
    - PN 751A0000-07 Amdt. BC or,
    - PN 751B0000-02 Amdt. ABC.
  - (1) Replace the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
  - (2) If the fault continues:
    - do a leakage check of the sense-line between the FCW (11HB) and the pressure-sensor (10HB), and replace if necessary.
  - (3) If the fault continues:
    - replace the SENSOR-PRESSURE (10HB) (Ref. AMM TASK 21-51-11-000-001) (Ref. AMM TASK 21-51-11-400-001)
  - (4) If the fault continues:
    - do a leakage check of the sense-line between the CPNOH (10HM9) and the FCV (11HB), and replace if necessary.
  - (5) If the fault continues:
    - replace the SENSOR-COMPRESSOR PNEUMATIC OVHT (10HM9) (Ref. AMM TASK 21-61-18-000-001) (Ref. AMM TASK 21-61-18-400-001)

EFF: 202-202, 209-225, 247-253, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

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(6) If the fault continues: R R - replace the P1 OZONE FILTER (100HM) (Ref. AMM TASK 21-51-41-000-001) and (Ref. AMM TASK 21-51-41-400-001). R (7) If the fault continues: R - Replace the REHEATER (10HM3) (Ref. AMM TASK 21-52-31-000-001) and R R (Ref. AMM TASK 21-52-31-400-001). \*\*ON A/C 254-275, 564-599, Post SB 21-1119 For A/C 564-599, B. If the pack 1 flow indicator on the ECAM BLEED page is stuck in the low R position: R (1) Do a leakage check of the sense-line between the in-line-connector of R the pressure-sensor (10HB), and the upstream port at the FCV (11HB), R and replace if necessary. R (2) If the fault continues: R - replace the SENSOR-PRESSURE (10HB) (Ref. AMM TASK 21-51-11-000-001) R R (Ref. AMM TASK 21-51-11-400-001) (3) If the fault continues: R - replace the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-000-001) R and (Ref. AMM TASK 21-51-51-400-001). R (4) If the fault continues: R - do a leakage check the sense-line between the CPNOH (10HM9) and the R R FCV (11HB), and replace if necessary. R (5) If the fault continues: replace the SENSOR-COMPRESSOR PNEUMATIC OVHT (10HM9) (Ref. AMM TASK R 21-61-18-000-001) (Ref. AMM TASK 21-61-18-400-001) R (6) If the fault continues: R R - replace the P1 OZONE FILTER (100HM) (Ref. AMM TASK 21-51-41-000-001) and (Ref. AMM TASK 21-51-41-400-001). R R (7) If the fault continues: - replace the REHEATER (10HM3) (Ref. AMM TASK 21-52-31-000-001) and R R (Ref. AMM TASK 21-52-31-400-001).

\*\*ON A/C ALL

C. Do the test as given in the Para. 3.E.

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### 5. Close-up

A. Stop the engines (Ref. AMM TASK 71-00-00-710-028) or the preconditioning through the HP ground connection (Ref. AMM TASK 12-33-21-618-001) (as applicable).

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### TROUBLE SHOOTING MANUAL

TASK 21-51-00-810-814

Pack 2 Flow Indication Fault

#### 1. Possible Causes

- VALVE-FLOW CTL (8HB)
- SENSOR-PRESSURE (9HB)
- VALVE-FLOW CTL (11HB)
- SENSOR-COMPRESSOR PNEUMATIC OVHT (11HM9)
- REHEATER (11HM3)
- SENSOR-PRESSURE (10HB)
- P2 FLOW CTL VALVE (8HB)
- P2 OZONE FILTER (101HM)
- wiring

#### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |
|-----------|------------------|--|--|
| ASM       | 2151\$01         |  |  |
| AMM       | 12-33-21-618-001 | Pre-conditioning through the HP Ground Connection                                      |  |
| AMM       | 21-51-11-000-001 | Removal of the Differential Pressure Sensor 9HB (10HB)                                 |  |
| AMM       | 21-51-11-400-001 | Installation of the Differential Pressure Sensor 9HB (10HB)                            |  |
| AMM       | 21-51-41-000-001 | Removal of the Ozone Filter (Converter) 100HM (101HM)                                  |  |
| AMM       | 21-51-41-400-001 | Installation of the Ozone Filter 100HM (101HM)   |  |
| AMM       | 21-51-51-000-001 | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit                         |  |
| AMM       | 21-51-51-400-001 | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre>         |  |
| AMM       | 21-51-51-600-001 | Scheduled Replacement of the Trailing-Edge Probe Filter of the Pack Flow-Control Valve |  |
| AMM       | 21-52-31-000-001 | Removal of the Reheater 10HM3 (11HM3)  |  |
| AMM       | 21-52-31-400-001 | Installation of the Reheater 10HM3 (11HM3)   |  |
| AMM       | 21-61-18-000-001 | Removal of the Compressor Pneumatic Overheat-Sensor 10HM9 (11HM9)                      |  |
| AMM       | 21-61-18-400-001 | <pre>Installation of the Compressor Pneumatic Overheat-Sensor 10HM9 (11HM9)</pre>      |  |
| AMM       | 71-00-00-710-003 | Engine Automatic Start   |  |
| AMM       | 71-00-00-710-028 | Engine Shutdown  |  |

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#### 3. Fault Confirmation

- A. Bleed Air Supply Source from the HP Ground Connection
  - NOTE: The HP ground supply source must be able to give a pack inlet pressure of 24 PSI minimum. If it can not do this then you must get the bleed air supply from the engines.

    The work steps which follow show the conditions necessary before you get the minimum pack-inlet pressure.
  - (1) Do the pre-conditioning through the HP ground connection (Ref. AMM TASK 12-33-21-618-001).
  - (2) On the AIR COND panel 30VU:
    - push the HOT AIR pushbutton switch to the on position (the OFF legend goes off),
    - turn the COCKPIT, FWD CABIN and the AFT CABIN temperature selectors to the HOT positions and,
    - make sure that the PACK 1 and the PACK 2 pushbutton switches are in the on position (the OFF legends are off).
  - (3) On the ECAM BLEED page:
    - make sure that the pack 1 inlet pressure indication shows a minimum of 24 PSI.
    - NOTE: If the indication shows less than 24 PSI you must:
      - increase the ground pressure supply until the indication shows a minimum of 24 PSI.
- B. Start the engines (Ref. AMM TASK 71-00-00-710-003) if necessary.
- C. Initial Test Set-up with Engines as Bleed Air Source Supply
  - (1) On the AIR COND panel 30VU:
    - push the HOT AIR pushbutton switch to the on position (the OFF legend goes off),
    - turn the COCKPIT, FWD CABIN and the AFT CABIN temperature selectors to the HOT positions and,
    - make sure that the PACK 1 and the PACK 2 pushbutton switches are in the on position (the OFF legends are off).
  - (2) On the ECAM BLEED page:
    - make sure that the pack 2 inlet pressure indication shows a minimum of 24 PSI.

NOTE : If the indication shows less than 24 PSI you must slowly adjust the throttle levers until you get the minimum indication of 24 PSI.

EFF: ALL

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R \*\*ON A/C 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,

D. Test

**ACTION** 

#### RESULT

- 1. On the AIR COND panel 30VU:
  - turn the **PACK FLOW** selector to the LO position and wait for 120 sec.
- 2. On the AIR COND panel 30VU:
  - push the PACK 1 P/BSW and wait for 120 sec.
- 3. On the AIR COND panel 30VU:
  - push the PACK 1 P/BSW.
- 4. On the AIR COND panel 30VU:
  - turn the PACK FLOW selector to the NORM position and wait for 120 sec.
- 5. On the AIR COND panel 30VU:
  - turn the PACK FLOW selector to the HI position and wait for 120 sec.

#### On the ECAM BLEED page:

 the pack 2 flow indication shows between the LO and the 11 o'clock positions.

#### On the AIR COND panel 30VU:

- the OFF light of the PACK 1 P/BSW comes on.

#### On the ECAM BLEED page:

- the pack 2 flow indication shows between the 1 o'clock and the HI positions.

#### On the AIR COND panel 30VU:

- the OFF light of the PACK 1 P/BSW goes off.

#### On the ECAM BLEED page:

- the pack 2 flow indication shows between the 11 o'clock and the 1 o'clock positions.

#### On the ECAM BLEED page:

- the pack 2 flow indication shows between the 1 o'clock and the HI positions.

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#### TROUBLE SHOOTING MANUAL

\*\*ON A/C 276-299, 476-499, 503-549,

D. Test

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#### ACTION

#### RESULT

- 1. On the AIR COND panel 30VU:
  - ON legend comes on) and wait for 120 sec.
- 2. On the AIR COND panel 30VU:
  - push the PACK 1 P/BSW and wait for 120 sec.
- On the ECAM BLEED page:
- push the ECON FLOW pushbutton the pack 2 flow indication shows switch to the on position (the between the LO and the 11 o'clock positions.
  - On the AIR COND panel 30VU:
  - the OFF light of the PACK 1 P/BSW comes on.

#### On the ECAM BLEED page:

- the pack 2 flow indication shows between the 1 o'clock and the HI positions.
- 3. On the AIR COND panel 30VU:
  - push the PACK 1 P/BSW.
- On the AIR COND panel 30VU:
- the OFF light of the PACK 1 P/BSW goes off.
- 4. On the AIR COND panel 30VU:
  - switch to the off position (the ON legend goes off) and wait for 120 sec.

#### On the ECAM BLEED page:

On the AIR COND panel 30VU:

On the ECAM BLEED page:

- push the ECON FLOW pushbutton

- the pack 2 flow indication shows between the 11 o'clock and the 1 o'clock positions.

\*\*ON A/C ALL

- 4. Fault Isolation
- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - A. If the pack 2 flow indicator on the ECAM BLEED page is stuck in the high position:

NOTE: Do the following step only if, the FCV is of the standard:

- PN 751A0000-07 Amdt. ABC or,
- PN 751A0000-07 Amdt. BC or,
- PN 751B0000-02 Amdt. ABC.
- (1) Replace the filter of the VALVE-FLOW CTL (8HB) (Ref. AMM TASK 21-51-51-600-001)

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- (2) If the fault continues:
  - replace the VALVE-FLOW CTL (8HB) (Ref. AMM TASK 21-51-51-000-001)
     and (Ref. AMM TASK 21-51-51-400-001).
- (3) If the fault continues:
  - replace the SENSOR-PRESSURE (9HB) (Ref. AMM TASK 21-51-11-000-001) (Ref. AMM TASK 21-51-11-400-001).
- (4) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 2151S01) from:
  - the FCV (8HB)A pin C to the PC (7HH)AA pin 7B,
  - the FCV (8HB)A pin D to the PC (27HH)AB pin 6B and,
  - the FCV (8HB)A pin B to ground.
- (5) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 2151S01) from:
  - the FCV (11HB)A pin C to the PC (27HH)AA pin 7B,
  - the FCV (11HB)A pin D to the PC (7HH)AB pin 6B and,
  - the FCV (11HB)A pin B to ground.
- (6) Do a check for leakage at the cabin-pressure sense-line between FCV (8HB) and the pressurized area.

\*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

- A. If the pack 2 flow indicator on the ECAM BLEED page is stuck in the high position:
  - NOTE : Do the following step only if the FCV is of the standard:
     PN 1303A0000-02 without additional Amendment
  - (1) Replace the VALVE-FLOW CTL (11HB) of the opposite pack (pack 1) (Ref. AMM TASK 21-51-51-000-001) (Ref. AMM TASK 21-51-51-400-001).
  - (2) If the fault continues:
    - do a leakage check of the sense-line between the angled connector of the pressure-sensor(9HB) and the downstream pressure-port at the FCV (8HB), and replace if necessary.
  - (3) If the fault continues:
    - replace the SENSOR-PRESSURE (9HB) (Ref. AMM TASK 21-51-11-000-001) (Ref. AMM TASK 21-51-11-400-001).
  - (4) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 2151S01) from:
    - the FCV (11HB)A pin C to the PC (27HH)AA pin 7B.
    - the FCV (11HB)A pin D to the PC (7HH)AB pin 6B and,
    - the FCV (11HB)A pin B to ground.

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- (5) If the fault continues:
  - replace the VALVE-FLOW CTL (8HB) (Ref. AMM TASK 21-51-51-000-001) (Ref. AMM TASK 21-51-51-400-001).
- (6) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 2151S01) from:
  - the FCV (8HB)A pin C to the PC (7HH)AA pin 7B,
  - the FCV (8HB)A pin D to the PC (27HH)AB pin 6B and,
  - the FCV (8HB)A pin B to ground.
- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - B. If the pack 2 flow indicator on the ECAM BLEED page is stuck in the low position:
    - NOTE: The following step is only to be performed if the FCV is of the standard:
      - PN 751A0000-07 Amdt. ABC or,
      - PN 751A0000-07 Amdt. BC or,
      - PN 751A0000-02 Amdt. ABC.
    - (1) Replace the VALVE-FLOW CTL (8HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
    - (2) If the fault continues:
      - do a leakage check of the sense-line between the FCW (8HB) and the pressure-sensor (9HB), and replace if necessary.
    - (3) If the fault continues:
      - replace the SENSOR-PRESSURE (9HB) (Ref. AMM TASK 21-51-11-000-001) (Ref. AMM TASK 21-51-11-400-001)
    - (4) If the fault continues:
      - do a leakage check of the sense-line between the CPNOH (11HM9) and the FCV (8HB), and replace if necessary.
    - (5) If the fault continues:
      - replace the SENSOR-COMPRESSOR PNEUMATIC OVHT (11HM9) (Ref. AMM TASK 21-61-18-000-001) (Ref. AMM TASK 21-61-18-400-001).
    - (6) If the fault continues:
      - replace the REHEATER (11HM3) (Ref. AMM TASK 21-52-31-000-001) and (Ref. AMM TASK 21-52-31-400-001).

#### TROUBLE SHOOTING MANUAL

R \*\*ON A/C 209-225, 247-253, 285-299, 429-475, 479-499, 503-549, 551-599, R 701-749,

- **B.** If the pack 2 flow indicator on the **ECAM BLEED** page is stuck in the low position:
  - NOTE : Do the following step only if the FCV is of the standard: PN 1303A0000-02
  - (1) Do a leakage check of the sense line between the in-line-connector of the pressure-sensor (9HB) and the upstream port at the FCV (8HB), and replace if necessary.
  - (2) If the fault continues:
    - replace the SENSOR-PRESSURE (10HB) (Ref. AMM TASK 21-51-11-000-001) (Ref. AMM TASK 21-51-11-400-001)
  - (3) If the fault continues:
    - replace the P2 FLOW CTL VALVE (8HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
  - (4) If the fault continues:
    - do a check of the sense-line between the CPNOH (11HM9) and the FCV (8HB), and replace if necessary.
  - (5) If the fault continues:
    - replace the SENSOR-COMPRESSOR PNEUMATIC OVHT (11HM9) (Ref. AMM TASK 21-61-18-000-001) (Ref. AMM TASK 21-61-18-400-001)
  - (6) If the fault continues:
    - Replace the REHEATER (11HM3) (Ref. AMM TASK 21-52-31-000-001) and (Ref. AMM TASK 21-52-31-400-001).

\*\*ON A/C 202-202,

Post SB 21-1119 For A/C 202-202,

- **B.** If the pack 2 flow indicator on the **ECAM BLEED** page is stuck in the low position:
  - <u>NOTE</u>: The following step is only to be performed if the FCV is of the standard:
    - PN 751A0000-07 Amdt. ABC or,
    - PN 751A0000-07 Amdt. BC or,
    - PN 751A0000-02 Amdt. ABC.
  - (1) Replace the VALVE-FLOW CTL (8HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
  - (2) If the fault continues:
    - do a leakage check of the sense-line between the FCV (8HB) and the pressure-sensor (9HB), and replace if necessary.

EFF: 202-202, 209-225, 247-253, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

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- (3) If the fault continues:
  - replace the SENSOR-PRESSURE (9HB) (Ref. AMM TASK 21-51-11-000-001)
     (Ref. AMM TASK 21-51-11-400-001)
- (4) If the fault continues:
  - do a leakage check of the sense-line between the CPNOH (11HM9) and the FCV (8HB), and replace if necessary.
- (5) If the fault continues:
  - replace the SENSOR-COMPRESSOR PNEUMATIC OVHT (11HM9) (Ref. AMM TASK 21-61-18-000-001) (Ref. AMM TASK 21-61-18-400-001).
- (6) If the fault continues:
  - replace the P2 OZONE FILTER (101HM) (Ref. AMM TASK 21-51-41-000-001) and (Ref. AMM TASK 21-51-41-400-001).
- (7) If the fault continues:
  - replace the REHEATER (11HM3) (Ref. AMM TASK 21-52-31-000-001) and (Ref. AMM TASK 21-52-31-400-001).

\*\*ON A/C 254-275, 564-599,

Post SB 21-1119 For A/C 564-599,

- **B.** If the pack 2 flow indicator on the **ECAM BLEED** page is stuck in the low position:
  - NOTE : Do the following step only if the FCV is of the standard: PN 1303A0000-02
  - (1) Do a leakage check of the sense line between the in-line-connector of the pressure-sensor (9HB) and the upstream port at the FCV (8HB), and replace if necessary.
  - (2) If the fault continues:
    - replace the SENSOR-PRESSURE (10HB) (Ref. AMM TASK 21-51-11-000-001) (Ref. AMM TASK 21-51-11-400-001)
  - (3) If the fault continues:
    - replace the P2 FLOW CTL VALVE (8HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
  - (4) If the fault continues:
    - do a check of the sense-line between the CPNOH (11HM9) and the FCV (8HB), and replace if necessary.
  - (5) If the fault continues:
    - replace the SENSOR-COMPRESSOR PNEUMATIC OVHT (11HM9) (Ref. AMM TASK 21-61-18-000-001) (Ref. AMM TASK 21-61-18-400-001)

EFF: 202-202, 254-275, 564-599,

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**SROS** 

R

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\*\*ON A/C ALL

R

C. Do the test as given in the Para. 3.E.

(Ref. AMM TASK 21-52-31-400-001).

### 5. Close-up

A. Stop the engines (Ref. AMM TASK 71-00-00-710-028) or the preconditioning through the HP ground connection (Ref. AMM TASK 12-33-21-618-001) (as applicable).

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#### TROUBLE SHOOTING MANUAL

R \*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, R 701-749,

TASK 21-51-00-810-815

Pack 1 High Flow Indication

- 1. Possible Causes
  - P2 FLOW CTL VALVE (8HB)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE            | DESIGNATION   |  |
|----------------------|---|--|
| 21-51-00-810-813     | Pack 1 Flow Indication Fault  |  |
| AMM 12-33-21-618-001 | Pre-conditioning through the HP Ground Connection                   |  |
| AMM 21-51-51-000-001 | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit      |  |
| AMM 21-51-51-400-001 | Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit |  |
| AMM 71-00-00-710-003 | Engine Automatic Start  |  |
| ASM 21-51/01         |   |  |
| ASM 21-51/02         |   |  |

#### 3. Fault Confirmation

- A. Bleed Air Supply Source from the HP Ground Connection
  - NOTE: The HP ground supply source must be able to give a pack inlet pressure of 24 PSI minimum. If it can not do this then you must get the bleed air supply from the engines.

    The work steps which follow show the conditions necessary before you get the minimum pack-inlet pressure.
  - (1) Do the pre-conditioning through the HP ground connection (Ref. AMM TASK 12-33-21-618-001).
  - (2) On the AIR COND panel 30VU:
    - push the HOT AIR pushbutton switch to the on position (the OFF legend goes off),
    - turn the COCKPIT, FWD CABIN and the AFT CABIN temperature selectors to the HOT positions and,
    - make sure that the PACK 1 and the PACK 2 pushbutton switches are in the on position (the OFF legends are off).

EFF: 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

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#### TROUBLE SHOOTING MANUAL

- (3) On the ECAM BLEED page:
  - make sure that the pack 1 inlet pressure indication shows a minimum of 24 PSI.

NOTE: If the indication shows less than 24 PSI you must:

- increase the ground pressure supply until the indication shows a minimum of 24 PSI.
- B. Start the engines (Ref. AMM TASK 71-00-00-710-003) if necessary.

#### 4. Fault Isolation

- A. This procedure is only applicable for the Flow Control Valves P/N 751 series.
  - (1) When the pack flow selector is at the LO or NORM position:
    - on the upper ECAM DU if the pack 1 flow shows in the HI flow position and both pack flow-control valve indications show green,
    - replace the P2 FLOW CTL VALVE (8HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
  - (2) If the fault continues:
    - do the trouble shooting procedures for the pack 1 flow indication fault (Ref. TASK 21-51-00-810-813).
- R \*\*ON A/C 209-225, 247-275, 285-299, 429-455, 479-499, 503-549, 551-599, R 701-749,
  - B. This procedure is only applicable for the Flow Control Valves P/N 1303 series.
    - (1) When the pack flow selector is at the LO or NORM position:
      - on the upper ECAM DU if the pack 1 flow shows in the HI flow position and both pack flow-control valve indications show green,
      - (a) do a check of the wiring (Ref. ASM 21-51/01) and (Ref. ASM 21-51/02) from:
        - the FCV (8HB/A) pin C to the PACK1 TEMP CONTROLLER (7HH/AA) pin 7B,
        - the FCV (8HB/A) pin B to ground.
      - (b) If the fault continues:
        - do a check for continuity between pin A/B and pin A/C of the P2 FLOW CTL VALVE (8HB).
        - 1 If there is no continuity:
          - <u>a</u> replace the P2 FLOW CTL VALVE (8HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).

EFF: 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

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- (2) If the fault continues:
  - do the trouble shooting procedures for the pack 1 flow indication fault (Ref. TASK 21-51-00-810-813).
- R \*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, R 701-749,
  - 5. Close-up
- R \*\*ON A/C 209-225, 247-275, 285-299, 429-455, 479-499, 503-549, 551-599, R 701-749,
  - A. This procedure is only necessary after you do the work step Para. 4. B. (a).
    - Do the procedures given in para. 3.

\*\*ON A/C 456-475,

A. Not applicable

#### TROUBLE SHOOTING MANUAL

R \*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, R 701-749,

TASK 21-51-00-810-816

Pack 2 High Flow Indication

- 1. Possible Causes
  - P1 FLOW CTL VALVE (11HB)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE            | DESIGNATION   |  |
|----------------------|---|--|
| 21-51-00-810-814     | Pack 2 Flow Indication Fault  |  |
| AMM 12-33-21-618-001 | Pre-conditioning through the HP Ground Connection                   |  |
| AMM 21-51-51-000-001 | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit      |  |
| AMM 21-51-51-400-001 | Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit |  |
| AMM 71-00-00-710-003 | Engine Automatic Start  |  |
| ASM 21-51/01         | -   |  |
| ASM 21-51/01         |   |  |

#### 3. Fault Confirmation

- A. Bleed Air Supply Source from the HP Ground Connection
  - NOTE: The HP ground supply source must be able to give a pack inlet pressure of 24 PSI minimum. If it can not do this then you must get the bleed air supply from the engines.

    The work steps which follow show the conditions necessary before you get the minimum pack-inlet pressure.
  - (1) Do the pre-conditioning through the HP ground connection (Ref. AMM TASK 12-33-21-618-001).
  - (2) On the AIR COND panel 30VU:
    - push the HOT AIR pushbutton switch to the on position (the OFF legend goes off),
    - turn the COCKPIT, FWD CABIN and the AFT CABIN temperature selectors to the HOT positions and,
    - make sure that the PACK 1 and the PACK 2 pushbutton switches are in the on position (the OFF legends are off).

EFF: 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

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#### TROUBLE SHOOTING MANUAL

- (3) On the ECAM BLEED page:
  - make sure that the pack 1 inlet pressure indication shows a minimum of 24 PSI.

NOTE: If the indication shows less than 24 PSI you must:

- increase the ground pressure supply until the indication shows a minimum of 24 PSI.
- B. Start the engines (Ref. AMM TASK 71-00-00-710-003) if necessary.

#### 4. Fault Isolation

- A. When the pack flow selector is at the LO or NORM position:
  - on the upper ECAM DU if the pack 2 flow shows in the HI flow position and both pack flow-control valve indications show green,
  - replace the P1 FLOW CTL VALVE (11HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
  - (1) If the fault continues:
    - do the trouble shooting procedures for the pack 2 flow indication fault (Ref. TASK 21-51-00-810-814).
- R \*\*ON A/C 209-225, 247-275, 285-299, 429-455, 479-499, 503-549, 551-599, R 701-749,
  - B. This procedure is only applicable for the Flow Control Valves P/N 1303 series.
    - (1) When the pack flow selector is at the LO or NORM position:
      - on the upper ECAM DU if the pack 2 flow shows in the HI flow position and both pack flow-control valve indications show green,
      - (a) do a check of the wiring (Ref. ASM 21-51/01) and (Ref. ASM 21-51/01) from:
        - the FCV (11HB/A) pin C to the PACK1 TEMP CONTROLLER (27HH/AA) pin 7B,
        - the FCV (11HB/A) pin B to ground.
      - (b) If the fault continues:
        - do a check for continuity between pin A/B and pin A/C of the P1 FLOW CTL VALVE (11HB).
        - 1 If there is no continuity:
          - a replace the P1 FLOW CTL VALVE (11HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
    - (2) If the fault continues:
      - do the trouble shooting procedures for the pack 2 flow indication fault (Ref. TASK 21-51-00-810-814).

EFF: 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

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- R \*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, R 701-749,
  - 5. Close-up
- R \*\*ON A/C 209-225, 247-275, 285-299, 429-455, 479-499, 503-549, 551-599, R 701-749,
  - A. This procedure is only necessary after you do the work step Para. 4. B. (a).
    - Do the procedures given in para. 3.

\*\*ON A/C 456-475,

A. Not applicable

### TROUBLE SHOOTING MANUAL

\*\*ON A/C ALL

TASK 21-51-00-810-819

Crossbleed Relay Fault

- 1. Possible Causes
  - RELAY 7HV
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION            |
|-----------|------------------|------------------------|
|           |                  |                        |
| AMM       | 31-60-00-860-001 | EIS Start Procedure    |
| AMM       | 31-60-00-860-002 | EIS Stop Procedure     |
| AMM       | 71-00-00-710-003 | Engine Automatic Start |
| AMM       | 71-00-00-710-028 | Engine Shutdown        |
| ASM       | 21-51/02         | -<br>-                 |

- 3. Fault Confirmation
  - A. Aircraft Maintenance Configuration
    - (1) Do the EIS start procedure (Upper ECAM DU and lower ECAM DU only) (Ref. AMM TASK 31-60-00-860-001).
    - (2) Make sure that:
      - on the ECAM lower display unit the BLEED page shows,
      - on the AIR COND panel 30VU make sure that the PACK 1 and the PACK 2 pushbutton switches are in the OFF position (the FAULT and the OFF legends are off).
  - B. Start the engines (Ref. AMM TASK 71-00-00-710-003).

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## TROUBLE SHOOTING MANUAL

## 4. Fault Isolation

- A. If 30 sec after engine start on the BLEED page a flow control valve opens:
  - stop the engines (Ref. AMM TASK 71-00-00-710-028),
  - replace the RELAY 7HV.
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-51/02) between
    - the RELAY (7HV) and RELAY (16HB),
    - the RELAY (7HV) and RELAY (17HB),
    - the RELAY (7HV) and BMC1 (1HA1).
- B. Do the test as given in the Para. 3.A.

## 5. Close-up

- A. Put the aircraft back to its initial configuration.
  - (1) Do the EIS stop procedure (Ref. AMM TASK 31-60-00-860-002).
  - (2) De-energize the aircraft electrical circuits

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### TROUBLE SHOOTING MANUAL

### EMERGENCY RAM AIR INLET - FAULT ISOLATION PROCEDURES

TASK 21-55-00-810-801

Emergency Ram Air Inlet Fault

### 1. Possible Causes

- ACTUATOR-EMERGENCY RAM AIR INLET (7HZ)
- RAM AIR pushbutton switch (4HZ)
- wiring
- RELAY-RAM AIR OPENING CTL (5HZ)
- RELAY-RAM AIR CLOSE CTL (3HZ)

### 2. Job Set-up Information

A. Referenced Information

|        | REFERENCE |                  | DESIGNATION  |
|--------|-----------|------------------|--|
|        | A M M     | 21-55-00-710-001 | Operational Test of the Emergency Ram-Air Inlet            |
| R      |           | 21-55-51-000-001 | Removal of the Emergency Ram Air Inlet Actuator (7HZ)      |
| R<br>R |           | 21-55-51-400-001 | Installation of the Emergency Ram Air Inlet Actuator (7HZ) |
| K      | ASM       | 21-55/01         | (1112)   |
|        | _         | 31-54-52         |  |

### 3. Fault Confirmation

A. Do the operational test of the emergency ram air inlet (Ref. AMM TASK 21-55-00-710-001).

#### 4. Fault Isolation

- A. If during the test on the lower ECAM display the ram air symbol is replaced by amber XX:
  - do a check for 28VDC at the ACTUATOR-EMERGENCY RAM AIR INLET (7HZ).
  - (1) If the voltage is correct:
    - replace the ACTUATOR-EMERGENCY RAM AIR INLET (7HZ) (Ref. AMM TASK 21-55-51-000-001) and (Ref. AMM TASK 21-55-51-400-001).
    - (a) If the fault continues:
      - replace the RAM AIR pushbutton switch (4HZ).
    - (b) If the fault continues:
      - do a check and repair the wiring from:

         the ACTUATOR-EMERGENCY RAM AIR INLET (7HZ) A/B, F to the
         SDAC-1 (1WV1) AA/9F, 10F,

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- the ACTUATOR-EMERGENCY RAM AIR INLET (7HZ) A/B, F to the SDAC-2 (1WV2) AA/9F, 10F,
- the ACTUATOR-EMERGENCY RAM AIR INLET (7HZ) A/D, H to the GND, the RAM AIR pushbutton switch (4HZ) A/J to the SDAC-1 (1VW1) AA/9G,
- . the RAM AIR pushbutton switch (4HZ) A/J to the SDAC-2 (1WV2) AA/9G,
- . the RAM AIR pushbutton switch (4HZ) A/D3 to the GND, (Ref. ASM 21-55/01) and (Ref. AWM 31-54-52).
- (2) If the voltage is not correct:
  - replace the RAM AIR pushbutton switch (4HZ).
  - (a) If the fault continues:
    - replace the RELAY-RAM AIR OPENING CTL (5HZ).
  - (b) If the fault continues:
    - replace the RELAY-RAM AIR CLOSE CTL (3HZ).
  - (c) If the fault continues:
    - do a check and repair the wiring from the ACTUATOR-EMERGENCY RAM AIR INLET (7HZ) to the circuit breaker (1HZ), via the relay (5HZ), the RAM AIR pushbutton switch (4HZ) and the relay (3HZ) (Ref. ASM 21-55/01).
- R B. Do the test given in para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-55-00-810-802

Emergency Ram Air Inlet does not close in Ditching Configuration

#### 1. Possible Causes

- RELAY-RAM AIR CLOSE CTL (3HZ)
- DITCHING pushbutton switch (13HL)
- wiring

## 2. Job Set-up Information

A. Referenced Information

| REFERENCE                                | DESIGNATION   |
|--|---|
| 21-55-00-810-801<br>AMM 21-55-00-710-002 | Emergency Ram Air Inlet Fault Operational Test of the Emergency Ram-Air Inlet |
| ASM 21-55/01                             | System-Closing in Ditching Configuration                                      |

## 3. Fault Confirmation

A. Do the operational test of the emergency ram air inlet system-closing in ditching configuration (Ref. AMM TASK 21-55-00-710-002).

### 4. Fault Isolation

- A. If during the test on the lower ECAM display the ram air symbol is replaced by an amber XX:
  - do the trouble shooting of the emergency ram air inlet fault (Ref. TASK 21-55-00-810-801).
- **B.** If during the test the emergency ram air inlet does not close in ditching configuration:
  - replace the RELAY-RAM AIR CLOSE CTL (3HZ).
  - (1) If the fault continues:
    - replace the DITCHING pushbutton switch (13HL).
  - (2) If the fault continues:
    - do a check and repair the wiring from the DITCHING pushbutton switch (13HL) to the circuit breaker (1HZ), via the the relay (3HZ) (Ref. ASM 21-55/01).
- R C. Do the test given in para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-55-00-810-803

Emergency Ram Air Inlet Fault

#### 1. Possible Causes

- ACTUATOR-EMERGENCY RAM AIR INLET (7HZ)
- RAM AIR pushbutton switch (4HZ)
- RELAY-RAM AIR OPENING CTL (5HZ)
- RELAY-RAM AIR CLOSE CTL (3HZ)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE         |  | DESIGNATION  |
|-------------------|--|--|
| AMM<br>AMM<br>AMM | 21-55-00-710-001<br>21-55-51-000-001<br>21-55-51-400-001 | Operational Test of the Emergency Ram-Air Inlet Removal of the Emergency Ram Air Inlet Actuator (7HZ) Installation of the Emergency Ram Air Inlet Actuator (7HZ) |
| _                 | 21-55/01<br>31-54-52                                     | (1112)   |

## 3. Fault Confirmation

A. Do the operational test of the emergency ram air inlet (Ref. AMM TASK 21-55-00-710-001).

### 4. Fault Isolation

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- A. If during the test the ram air symbol does not change from GREEN (CLOSED) to AMBER (OPEN) within the maximum operation time of 20 seconds:

   replace the RAM AIR pushbutton switch (4HZ).

  - (3) If the fault continues:
    - replace the ACTUATOR-EMERGENCY RAM AIR INLET (7HZ) (Ref. AMM TASK 21-55-51-000-001) and (Ref. AMM TASK 21-55-51-400-001).

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- (4) If the fault continues:
  - do a check and repair the wiring:
  - from the EMERG RAM AIR ACTUATOR A/B, F to the SDAC-1 (1WV1) AA/9F, 10F,
  - from the EMERG RAM AIR ACTUATOR A/B, F to the SDAC-2 (1WV2) AA/9F, 10F,
  - from the EMERG RAM AIR ACTUATOR A/D, H to the GND,
  - from the RAM AIR pushbutton switch (4HZ) A/J to the SDAC-1 (1VW1) AA/9G,
  - from the RAM AIR pushbutton switch (4HZ) A/J to the SDAC-2 (1WV2) AA/9G,
  - from the RAM AIR pushbutton switch (4HZ) A/D3 to the GND,
  - from the EMERG RAM AIR ACTUATOR to the circuit breaker (1HZ), via the relay (5HZ), the RAM AIR pushbutton switch (4HZ) and the relay (3HZ).

(Ref. ASM 21-55/01) and (Ref. AWM 31-54-52).

R B. Do the test given in para. 3.

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## TROUBLE SHOOTING MANUAL

## PACK TEMPERATURE CONTROL - FAULT ISOLATION PROCEDURES

TASK 21-61-00-810-801

#### Pack 1 Overheat

### 1. Possible Causes

- VALVE-FLOW CTL (11HB)
- SENSOR-COMPRESSOR TEMPERATURE (12HH)
- SENSOR-COMPRESSOR OVHT (15HH)
- RELAY-WHEEL 1 SPEED (25GG)
- BSCU (10GG)
- CONTROLLER-PACK 1 TEMP (7HH)
- MACHINE-AIR CYCLE (10HM1)
- SENSOR-PACK OUTLET TEMP (13HH)
- PLENUM CHAMBER (10HM5)
- VALVE-ANTI ICE (17HH)
- water injector nozzle
- clogged main heat exchanger (10HM7)
- clogged primary heat exchanger 10HM6
- clogged reheater (10HM3)
- clogged condensor

## 2. Job Set-up Information

#### A. Referenced Information

|        | REFERENCE |                  | DESIGNATION  |  |
|--------|-----------|------------------|--|--|
|        | AMM       | 12-33-21-618-001 | Pre-conditioning through the HP Ground Connection  |  |
|        | AMM       | 12-33-21-618-001 | Pre-conditioning with the APU  |  |
| R<br>R | AMM       | 21-51-51-000-001 | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit   |  |
| R<br>R | AMM       | 21-51-51-400-001 | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre>                                       |  |
|        | AMM       | 21-52-00-100-001 | Cleaning of the Air Conditioning Pack-Primary Heat Exchanger 10HM6 (11HM6) and the Main Heat Exchanger 10HM7 (11HM7) |  |
|        | AMM       | 21-52-00-100-002 | Cleaning of the Air Conditioning Pack-Reheater 10HM3 (11HM3)   |  |
|        | AMM       | 21-52-00-100-003 | Cleaning of the Air Conditioning Pack-Condensor 10HM2 (11HM2)  |  |
|        | AMM       | 21-52-00-200-001 | Detailed Inspection of Interior and Exterior of Plenum Chamber (10HM5 and 11HM5) for Signs of Delamination           |  |
|        | AMM       | 21-52-00-780-001 | Pressure Drop Test of the Reheater 10HM3 (11HM3)   |  |
|        | AMM       | 21-52-00-960-001 | Replacement of the Water Injector Nozzle   |  |
|        | AMM       | 21-52-21-000-001 | Removal of the Air Cycle Machine 10HM1 (11HM1)   |  |
|        | AMM       |                  | Installation of the Air Cycle Machine 10HM1 (11HM1)  |  |

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| REFERENCE |                  | DESIGNATION   |  |
|-----------|------------------|---|--|
|           |                  |   |  |
| AMM       | 21-52-22-000-001 | Removal of the Fan Plenum Chamber 10HM5 (11HM5).                                  |  |
| AMM       |                  | Installation of the Fan Plenum Chamber 10HM5 (11HM5)                              |  |
| AMM       | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System                           |  |
| AMM       | 21-61-11-000-001 | Removal of the Compressor Outlet - Temperature Sensor 12HH (32HH)                 |  |
| AMM       | 21-61-11-400-001 | <pre>Installation of the Compressor Outlet - Temperature Sensor 12HH (32HH)</pre> |  |
| AMM       | 21-61-12-000-001 | Removal of the Compressor Overheat - Temperature Sensor 15HH (35HH)               |  |
| AMM       | 21-61-12-400-001 | Installation of the Compressor Overheat - Temperature Sensor 15HH (35HH)          |  |
| AMM       | 21-61-15-000-001 | Removal of the Pack Outlet - Temperature Sensors 13HH and 34HH                    |  |
| AMM       | 21-61-15-400-001 | Installation of the Pack Outlet - Temperature Sensors 13HH and 34HH               |  |
| AMM       | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)  |  |
| AMM       | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)                                   |  |
| AMM       | 21-61-41-000-001 | Removal of the Anti-Ice Valve 17HH (37HH)   |  |
| AMM       | 21-61-41-400-001 | Installation of the Anti-Ice Valve 17HH (37HH)                                    |  |
| AMM       | 32-42-34-400-001 | <pre>Installation of the Braking/Steering Control Unit (BSCU) (10GG)</pre>        |  |
| ASM       | 21-61/03         |   |  |
| ASM       | •                |   |  |
| ASM       | 21-61/04         |   |  |

## 3. Fault Confirmation

- A. APU Bleed-Air Pressure Check
  - (1) Do the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618-001).
  - (2) Make sure that the APU bleed-air pressure is higher than 12 psi (0.8273 bar).
  - (3) Stop the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618-001).
  - (4) If the APU bleed-air pressure is lower than or equal to 12 psi (0.8273 bar), do the trouble shooting of the APU (ref. to the fault symptom list / 49-OBSV, APU BLEED FAULT No, Low or Fluctuating APU Bleed-Air Pressure) before you continue with the subsequent procedure.

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- B. Test
  - (1) Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

- (2) Do the pre-conditioning through the HP ground connection (Ref. AMM TASK 12-33-21-618-001).
- (3) Do a check that the pack 1 inlet-pressure indication on the ECAM BLEED page is > 20 PSI.
- (4) Do a check of the pack 1 flow indicator, the compressor discharge and pack outlet temperature on the ECAM BLEED page.
- (5) Do a check to see that there is airflow at the pack 1 ram-air outlet.

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- 4. Fault Isolation
  - A. If the pack 1 inlet-pressure indication on the ECAM BLEED page is < 20PSI:
    - increase the pressure to > 25 PSI.

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- B. For a Compressor Discharge Overheat Condition:
  - (1) If you select on the panel 30VU low airflow and the pack 1 flow indicator on the ECAM BLEED page moves to the HI indication:
    - replace the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
  - (2) If the fault continues:
    - do a check that the resistance of the compressor temperature sensor (12HH) measured between connector A/A and A/B is in these limits (Ref. ASM 21-61/04):

| Τe | emp (Deg.C) | OHMS          |
|----|-------------|---------------|
|    |             |               |
| +  | 10          | 103.9 +/- 0.5 |
| +  | 20          | 107.8 +/- 0.5 |
| +  | 30          | 111.7 +/- 0.5 |
| +  | 50          | 119.4 +/- 0.5 |
| +  | 70          | 127.1 +/- 0.5 |
| +  | 100         | 138.5 +/- 0.5 |

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- (a) If the resistance values are out of the specified limits:
  - replace the SENSOR-COMPRESSOR TEMPERATURE (12HH) (Ref. AMM TASK 21-61-11-000-001) and (Ref. AMM TASK 21-61-11-400-001).
- (3) If the fault continues:
  - do a check that the resistance of the compressor overheat sensor (15HH) measured between connector A/A and A/B is in these limits (Ref. ASM 21-61/04):

| Τe | emp (Deg.C) | OHMS     |           |
|----|-------------|----------|-----------|
|    | 10          | 103.9 +/ | <br>- N 5 |
|    | 20          | 107.8 +/ |           |
| +  | 30          | 111.7 +/ | - 0.5     |
| +  | 50          | 119.4 +/ | - 0.5     |
| +  | 70          | 127.1 +/ | - 0.5     |
| +  | 100         | 138.5 +/ | - 0.5     |

- (a) If the resistance values are out of the specified limits:
  - replace the SENSOR-COMPRESSOR OVHT (15HH) (Ref. AMM TASK 21-61-12-000-001) and (Ref. AMM TASK 21-61-12-400-001).
- (4) If the fault continues:
  - do a check that the pack 1 ram-air inlet-flap is in the open position.
- (5) If the pack 1 ram-air inlet-flap is closed:
  - do a check for a ground signal at the pack controller 1 (7HH) connector AA/10A (Ref. ASM 21-61/03).
  - (a) If there is a ground signal:
    - do a check of the RELAY-WHEEL 1 SPEED (25GG) and replace it if necessary (Ref. ASM 21-61/03).
  - (b) If the fault continues:
    - do the test for the BSCU (10GG) as given in the AMM TASK 32-42-34-400-001 para. 5.A (Ref. AMM TASK 32-42-34-400-001).
  - (c) If the fault continues:
    - 1 If the test gives a different maintenance message refer to the fault symptom list.
      - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
- C. For a Pack Outlet Overheat Condition
  - (1) If there is no airflow at the pack 1 ram-air outlet:
    - replace the MACHINE-AIR CYCLE (10HM1), (Ref. AMM TASK 21-52-21-000-001) and (Ref. AMM TASK 21-52-21-400-001).

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- (2) If the fault continues:
  - do a check that the resistance of the pack outlet temperature sensor (13HH) measured between connector A/A and A/B is in these limits (Ref. ASM 21-61/04):

| + 10                                     | Te | emp (Deg.C) | OHMS      |     |
|--|----|-------------|-----------|-----|
| + 30                                     | +  | 10          | 103.9 +/- | 0.5 |
| + 50 119.4 +/- 0.5<br>+ 70 127.1 +/- 0.5 | +  | 20          | 107.8 +/- | 0.5 |
| + 70 127.1 +/- 0.5                       | +  | 30          | 111.7 +/- | 0.5 |
|  | +  | 50          | 119.4 +/- | 0.5 |
| + 100 138.5 +/- 0.5                      | +  | 70          | 127.1 +/- | 0.5 |
|  | +  | 100         | 138.5 +/- | 0.5 |

- (a) If the resistance values are out of the specified limits:
  - replace the SENSOR-PACK OUTLET TEMP (13HH) (Ref. AMM TASK 21-61-15-000-001) and (Ref. AMM TASK 21-61-15-400-001).
- (3) If the fault continues:
  - (a) Remove the inspection panel from the pack 1 ram-air inlet plenum (10HM14).
  - (b) Do a check of the water injector nozzle for damage or wear:

     if the water injector nozzle is worn or damaged replace it
     (Ref. AMM TASK 21-52-00-960-001).
  - (c) Do a check of the main heat exchanger (10HM7) for contamination: - if the main heat exchanger is clogged do the cleaning of the clogged main heat exchanger (10HM7) and the clogged primary heat exchanger 10HM6 (Ref. AMM TASK 21-52-00-100-001).
  - (d) Install the inspection panel on the pack 1 ram-air inlet plenum (10HM14).
- (4) If the fault continues:
  - do a check of the reheater (10HM3) for contamination (Ref. AMM TASK 21-52-00-780-001).
  - NOTE: This sub-paragraph (4) is only applicable to reheaters with the P/N 755A0000-04 and previous.

    It is not applicable to reheaters with the P/N's 755A0000-04 Amendment A or subsequent.
  - (a) If the reheater is cloqued:
    - do the cleaning of the clogged reheater (10HM3) (Ref. AMM TASK 21-52-00-100-002),
- (5) If the fault continues:
  - do the cleaning of the clogged condensor (Ref. AMM TASK 21-52-00-100-003),

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- (6) If the fault continues:
  - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
- (7) If the fault continues:
  - (a) Do a visual inspection of the plenum chamber of the air cycle machine (Ref. AMM TASK 21-52-00-200-001).
  - (b) If the plenum chamber is damaged:
    - replace the PLENUM CHAMBER (10HM5) (Ref. AMM TASK 21-52-22-000-001) and (Ref. AMM TASK 21-52-22-400-001).
- (8) If the fault continues:
  - (a) Replace the VALVE-ANTI ICE (17HH) (Ref. AMM TASK 21-61-41-000-001) and (Ref. AMM TASK 21-61-41-400-001).

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- D. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

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## TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-802

### Pack 2 Overheat

### 1. Possible Causes

- VALVE-FLOW CTL (8HB)
- SENSOR-COMPRESSOR TEMPERATURE (32HH)
- SENSOR-COMPRESSOR OVHT (35HH)
- RELAY-WHEEL 3 SPEED (24GG)
- BSCU (10GG)
- CONTROLLER-PACK 2 TEMP (27HH)
- MACHINE-AIR CYCLE (11HM1)
- SENSOR-PACK OUTLET TEMP (34HH)
- PLENUM CHAMBER (11HM5)
- VALVE-ANTI-ICE (37HH)
- water injector nozzle
- clogged main heat exchanger (11HM7)
- clogged primary heat exchanger (11HM6)
- clogged reheater (11HM3)
- clogged condenser (11HM2)

### 2. Job Set-up Information

### A. Referenced Information

| REFERENCE |     | RENCE            | DESIGNATION  |  |
|-----------|-----|------------------|--|--|
|           |     |                  |  |  |
|           | AMM | 12-33-21-618-001 | Pre-conditioning through the HP Ground Connection  |  |
|           | AMM | 12-33-21-618-001 | Pre-conditioning with the APU  |  |
| R<br>R    | AMM | 21-51-51-000-001 | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit   |  |
| R<br>R    | AMM | 21-51-51-400-001 | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre>                                       |  |
|           | AMM | 21-52-00-100-001 | Cleaning of the Air Conditioning Pack-Primary Heat Exchanger 10HM6 (11HM6) and the Main Heat Exchanger 10HM7 (11HM7) |  |
|           | AMM | 21-52-00-100-002 | Cleaning of the Air Conditioning Pack-Reheater 10HM3 (11HM3)   |  |
|           | AMM | 21-52-00-100-003 | Cleaning of the Air Conditioning Pack-Condensor 10HM2 (11HM2)  |  |
|           | AMM | 21-52-00-200-001 | Detailed Inspection of Interior and Exterior of Plenum Chamber (10HM5 and 11HM5) for Signs of Delamination           |  |
|           | AMM | 21-52-00-780-001 | Pressure Drop Test of the Reheater 10HM3 (11HM3)   |  |
|           | AMM | 21-52-00-960-001 | Replacement of the Water Injector Nozzle   |  |
|           | AMM | 21-52-21-000-001 | Removal of the Air Cycle Machine 10HM1 (11HM1)   |  |
|           | AMM | 21-52-21-400-001 | Installation of the Air Cycle Machine 10HM1 (11HM1)  |  |
|           | AMM | 21-52-22-000-001 | Removal of the Fan Plenum Chamber 10HM5 (11HM5).   |  |
|           | AMM | 21-52-22-400-001 | Installation of the Fan Plenum Chamber 10HM5 (11HM5)   |  |

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| REFERENCE |                  | DESIGNATION   |  |
|-----------|------------------|---|--|
| AMM       | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control                                    |  |
| ΔΜΜ       | 21-61-11-000-001 | System Removal of the Compressor Outlet - Temperature Sensor                        |  |
| Ailii     | 21 01 11 000 001 | 12HH (32HH)   |  |
| AMM       | 21-61-11-400-001 | <pre>Installation of the Compressor Outlet - Temperature Sensor 12HH (32HH)</pre>   |  |
| AMM       | 21-61-12-000-001 | Removal of the Compressor Overheat - Temperature Sensor 15HH (35HH)                 |  |
| AMM       | 21-61-12-400-001 | <pre>Installation of the Compressor Overheat - Temperature Sensor 15HH (35HH)</pre> |  |
| AMM       | 21-61-15-000-001 | Removal of the Pack Outlet - Temperature Sensors 13HH and 34HH                      |  |
| AMM       | 21-61-15-400-001 | Installation of the Pack Outlet - Temperature Sensors 13HH and 34HH                 |  |
| AMM       | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)  |  |
| AMM       | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)                                     |  |
| AMM       | 21-61-41-000-001 | Removal of the Anti-Ice Valve 17HH (37HH)   |  |
| AMM       | 21-61-41-400-001 | Installation of the Anti-Ice Valve 17HH (37HH)                                      |  |
| AMM       | 32-42-34-400-001 | <pre>Installation of the Braking/Steering Control Unit (BSCU) (10GG)</pre>          |  |
| ASM       | 21-61/01         |   |  |
| ASM       | 21-61/02         |   |  |
| ASM       | 21-61/02         |   |  |

### 3. Fault Confirmation

- A. APU Bleed-Air Pressure Check
  - (1) Do the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618-001).
  - (2) Make sure that the APU bleed-air pressure is higher than 12 psi (0.8273 bar).
  - (3) Stop the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618-001).
  - (4) If the APU bleed-air pressure is lower than or equal to 12 psi (0.8273 bar), do the trouble shooting of the APU (refer to the fault symptom list / 49-OBSV, APU BLEED FAULT No, Low or Fluctuating APU Bleed-Air Pressure) before you continue with the subsequent procedure.

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#### B. Test

(1) Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

- (2) Do the pre-conditioning through the HP ground connection (Ref. AMM TASK 12-33-21-618-001).
- (3) Do a check that the pack 2 inlet-pressure indication on the ECAM BLEED page is > 20 PSI.
- (4) Do a check of the pack 2 flow indicator, the compressor discharge and pack outlet temperature on the ECAM BLEED page.
- (5) Do a check to see that there is airflow at the pack 2 ram-air outlet.

#### 4. Fault Isolation

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- A. If the pack 2 inlet-pressure indication on the ECAM BLEED page is < 20
  - increase the pressure to > 25 PSI.
- B. For a Compressor Discharge Overheat Condition:
  - (1) If you select on the panel 30VU low airflow and the pack 2 flow indicator on the ECAM BLEED page moves to the HI indication:
    - replace the VALVE-FLOW CTL (8HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
  - (2) If the fault continues:
    - do a check that the resistance of the compressor temperature sensor (32HH) measured between connector A/A and A/B is in these limits (Ref. ASM 21-61/02):

| Te | emp (Deg.C) | OHMS    |             |     |
|----|-------------|---------|-------------|-----|
| +  | 10          | 103.9 + | <br>⊦/-     | 0.5 |
| +  | 20          | 107.8 + | -/-         | 0.5 |
| +  | 30          | 111.7 + | -/-         | 0.5 |
| +  | 50          | 119.4 + | <b>-/</b> - | 0.5 |
| +  | 70          | 127.1 + | <b>-/</b> - | 0.5 |
| +  | 100         | 138.5 + | -/-         | 0.5 |

- (a) If the resistance values are out of the specified limits:
  - replace the SENSOR-COMPRESSOR TEMPERATURE (32HH) (Ref. AMM TASK 21-61-11-000-001) and (Ref. AMM TASK 21-61-11-400-001).

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- (3) If the fault continues:
  - do a check that the resistance of the compressor overheat sensor (35HH) measured between connector A/A and A/B is in these limits (Ref. ASM 21-61/02):

| Τe | emp (Deg.C) | OHMS     |           |
|----|-------------|----------|-----------|
|    | 10          | 103.9 +/ | <br>- N 5 |
|    | 20          | 107.8 +/ |           |
| +  | 30          | 111.7 +/ | - 0.5     |
| +  | 50          | 119.4 +/ | - 0.5     |
| +  | 70          | 127.1 +/ | - 0.5     |
| +  | 100         | 138.5 +/ | - 0.5     |

- (a) If the resistance values are out of the specified limits:
  - replace the SENSOR-COMPRESSOR OVHT (35HH) (Ref. AMM TASK 21-61-12-000-001) and (Ref. AMM TASK 21-61-12-400-001).
- (4) If the fault continues:
  - do a check that the pack 2 ram-air inlet-flap is in the open position.
- (5) If the pack 2 ram-air inlet-flap is closed:
  - do a check for a ground signal at the pack controller 2 (27HH) connector AA/10A (Ref. ASM 21-61/01).
  - (a) If there is a ground signal:
    - do a check of the RELAY-WHEEL 3 SPEED (24GG) and replace it if necessary (Ref. ASM 21-61/01).
  - (b) If the fault continues:
    - do the test for the BSCU (10GG) as given in the AMM TASK 32-42-34-400-001 para. 5.A (Ref. AMM TASK 32-42-34-400-001).
    - 1 If the test gives a different maintenance message, refer to the Fault Symptom List.
  - (c) If the fault continues:
    - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
- C. For a Pack Outlet Overheat Condition
  - (1) If there is no airflow at the pack 2 ram-air outlet:
    - replace the MACHINE-AIR CYCLE (11HM1) (Ref. AMM TASK 21-52-21-000-001) and (Ref. AMM TASK 21-52-21-400-001).
  - (2) If the fault continues:
    - do a check that the resistance of the pack outlet temperature sensor (34HH) measured between connector A/A and A/B is in these limits (Ref. ASM 21-61/02):

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| lemp (Deg.C) | OHMS          |
|--------------|---------------|
| + 10         | 103.9 +/- 0.5 |
| + 20         | 107.8 +/- 0.5 |
| + 30         | 111.7 +/- 0.5 |
| + 50         | 119.4 +/- 0.5 |
| + 70         | 127.1 +/- 0.5 |
| + 100        | 138.5 +/- 0.5 |
|              |               |

- (a) If the resistance values are out of the specified limits: - replace the SENSOR-PACK OUTLET TEMP (34HH) (Ref. AMM TASK 21-61-15-000-001) and (Ref. AMM TASK 21-61-15-400-001).
- (3) If the fault continues:
  - (a) Remove the inspection panel from the pack 2 ram-air inlet plenum (11HM14),
  - (b) Do a check of the water injector nozzle for damage or wear:
     if the water injector nozzle is worn or damaged replace it
     (Ref. AMM TASK 21-52-00-960-001).
  - (c) Do a check of the main heat exchanger (11HM7) for contamination: - if the main heat exchanger is clogged do the cleaning of the clogged main heat exchanger (11HM7) and the clogged primary heat exchanger (11HM6) (Ref. AMM TASK 21-52-00-100-001).
  - (d) Install the inspection panel in the pack 2 ram-air inlet plenum (11HM14).
- (4) If the fault continues:
  - do a check of the reheater (11HM3) for contamination (Ref. AMM TASK 21-52-00-780-001).
  - NOTE: This sub-paragraph (4) is only applicable to reheaters with the P/N 755A0000-04 and previous.

    It is not applicable to reheaters with the P/N's 755A0000-04 Amendment A or subsequent.
  - (a) If the reheater is clogged:
    - do the cleaning of the clogged reheater (11HM3) (Ref. AMM TASK 21-52-00-100-002),
- (5) If the fault continues:
  - do the cleaning of the clogged condenser (11HM2) (Ref. AMM TASK 21-52-00-100-003),
- (6) If the fault continues:
  - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).

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- (7) If the fault continues:
  - (a) Do a visual inspection of the plenum chamber of the air cycle machine (Ref. AMM TASK 21-52-00-200-001).
- (8) If the fault continues:
  - (a) Replace the VALVE-ANTI-ICE (37HH) (Ref. AMM TASK 21-61-41-000-001) and (Ref. AMM TASK 21-61-41-400-001).
- D. Do the test as given in the Para. 3.A.

## 5. Close-up

A. Put the aircraft back to its initial configuration.

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## TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-803

Pack 1 Fault

### 1. Possible Causes

- VALVE-FLOW CTL (11HB)
- SENSOR-COMPRESSOR TEMPERATURE (12HH)
- SENSOR-PRESSURE (10HB)
- BOARD-ANN LT TEST & INTFC (8LP)
- CONTROLLER-PACK 1 TEMP (7HH)
- pressure sense line
- SENSOR-COMPRESSOR PNEUMATIC OVERHEAT (10HM9)

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- SENSOR-COMPRESSOR OVERHEAT (15HH)
- SENSOR-COMPRESSOR TEMPERATURE (12HH)
  - PUSHBUTTON SWITCH-AIR COND/PACK 1 (7HB)
  - wiring

## 2. Job Set-up Information

A. Referenced Information

| REFERENCE        |                  | DESIGNATION  |
|------------------|------------------|--|
|                  |                  |  |
| 21-51-00-810-803 |                  | Pack 1 Flow Control Valve (Pack 1 Flow Control Unit) Fault                     |
| AMM              | 12-33-21-618-001 | Pre-conditioning through the HP Ground Connection                              |
| AMM              | 21-51-00-200-001 | Delta P Sense Lines Torque Check and Inspection                                |
| AMM              | 21-51-11-000-001 | Removal of the Differential Pressure Sensor 9HB (10HB)                         |
| AMM              | 21-51-11-400-001 | <pre>Installation of the Differential Pressure Sensor 9HB (10HB)</pre>         |
| AMM              | 21-51-51-000-001 | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit                 |
| AMM              | 21-51-51-400-001 | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre> |
| AMM              | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System                        |
| AMM              | 21-61-11-000-001 | Removal of the Compressor Outlet - Temperature Sensor 12HH (32HH)              |
| AMM              | 21-61-11-400-001 | Installation of the Compressor Outlet - Temperature Sensor 12HH (32HH)         |
| AMM              | 21-61-12-000-001 | Removal of the Compressor Overheat - Temperature Sensor 15HH (35HH)            |
| AMM              | 21-61-12-400-001 | Installation of the Compressor Overheat - Temperature Sensor 15HH (35HH)       |
| AMM              | 21-61-18-000-001 | Removal of the Compressor Pneumatic Overheat-Sensor 10HM9 (11HM9)              |

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| REFERENCE |                  | DESIGNATION   |  |
|-----------|------------------|---|--|
| AMM       | 21-61-18-400-001 | <pre>Installation of the Compressor Pneumatic Overheat-Sensor 10HM9 (11HM9)</pre> |  |
| AMM       | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)  |  |
| AMM       | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)                                   |  |
| AMM       | 33-14-00-710-001 | Operational Test of the Lights  |  |
| ASM       | 21-51/02         | •   |  |
| ASM       | 21-61/04         |   |  |
| ASM       | 21-61/04         |   |  |

## 3. Fault Confirmation

#### A. Test

NOTE: If the PACK 1 FAULT warning has appeared during engine start or the flow control valve did not close during engine start (Ref. TASK 21-51-00-810-803).

- (1) Do the pre-conditioning through the HP ground connection (Ref. AMM TASK 12-33-21-618-001).
- (2) Do a check to make sure that the pack 1 inlet-pressure indication on the ECAM BLEED page is > 20 PSI.
- (3) Do a check to make sure that the pack 1 flow control-valve symbol on the ECAM BLEED page is shown in the open position.
- (4) Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

#### 4. Fault Isolation

- A. If the pack 1 inlet-pressure indication on the ECAM BLEED page is < 20 PSI:
  - increase the pressure to > 25 PSI.
- **B.** If the pack 1 flow control-valve symbol on the **ECAM BLEED** page is shown in the closed position:
  - do a check of the pressure sense line between the FCV (11HB) and the SENSOR (10HM9) for leaks.
  - if leaks are found, tighten the connection or repair the line (Ref. AMM TASK 21-51-11-000-001), (Ref. AMM TASK 21-51-11-400-001), (Ref. AMM TASK 21-61-18-400-001).

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- (1) If the fault continues:
  - replace the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
- (2) If the fault continues:
  - replace the SENSOR-COMPRESSOR PNEUMATIC OVERHEAT (10HM9) (Ref. AMM TASK 21-61-18-000-001) and (Ref. AMM TASK 21-61-18-400-001).
- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - C. If the test confirms the fault:
    - do a check that the resistance of the compressor temperature sensor (12HH) measured between connector A/A and A/B is in these limits (Ref. ASM 21-61/04):

| Te | emp (Deg.C) | OHMS          |
|----|-------------|---------------|
| +  | 10          | 103.9 +/- 0.5 |
| +  | 20          | 107.8 +/- 0.5 |
| +  | 30          | 111.7 +/- 0.5 |
| +  | 50          | 119.4 +/- 0.5 |
| +  | 70          | 127.1 +/- 0.5 |
| +  | 100         | 138.5 +/- 0.5 |

- (1) If the resistance values are out of the specified limits:
  - replace the SENSOR-COMPRESSOR TEMPERATURE (12HH) (Ref. AMM TASK 21-61-11-000-001) and (Ref. AMM TASK 21-61-11-400-001).
- (2) If the fault continues:
  - do a check that the resistance of the compressor overheat sensor (15HH) measured between connector A/A and A/B is in these limits (Ref. ASM 21-61/04):

| Τe | emp (Deg.C) | OHMS          |
|----|-------------|---------------|
| +  | 10          | 103.9 +/- 0.5 |
| +  | 20          | 107.8 +/- 0.5 |
| +  | <b>3</b> 0  | 111.7 +/- 0.5 |
| +  | 50          | 119.4 +/- 0.5 |
| +  | 70          | 127.1 +/- 0.5 |
| +  | 100         | 138.5 +/- 0.5 |

- (a) If the resistance values are out of the specified limits:
  - replace the SENSOR-COMPRESSOR OVERHEAT (15HH) (Ref. AMM TASK 21-61-12-000-001) and (Ref. AMM TASK 21-61-12-400-001).
- (3) If the fault continues:
  - (a) Swap the SDAC's (1WV1 and 1WV2).(Ref.AMM Task 31-55-34-401)
  - (b) If this action has solved the problem:
    - replace the SDAC which formerly was SDAC#1.

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- (4) If the fault continues:
  - (a) Open the CB's for the Pack Controller 1+2.
  - (b) Disconnect the Pack Controller's. ( Ref.AMM Task 21-61-34-401)
  - (c) Diconnect the electrical connectors at the FCV#1 (11HB) and FCV#2 (8HB). (Ref.AMM Task 21-51-51-401)
  - (d) Disconnect the SDAC#1.
  - (e) Do a check for GND at the SDAC#1 connector AA pin 10D.
  - (f) Do a check for GND at the SDAC#1 connector AA pin 13B.

NOTE: There should be no GND contact

- (g) If there is no GND contact, reconnect the SDAC#1.
- (h) If there is **GND** contact do a check of the wiring and repair if nessesary.

\*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

- C. If the test confirms the fault:
  - do a check that the resistance of the compressor temperature sensor (12HH) measured between connector A/A and A/B is in these limits (Ref. ASM 21-61/04):

| Temp (Deg.C) | OHMS          |
|--------------|---------------|
| + 10         | 103.9 +/- 0.5 |
| + 20         | 107.8 +/- 0.5 |
| + 30         | 111.7 +/- 0.5 |
| + 50         | 119.4 +/- 0.5 |
| + 70         | 127.1 +/- 0.5 |
| + 100        | 138.5 +/- 0.5 |
|              |               |

- (1) If the resistance values are out of the specified limits:
  - replace the SENSOR-COMPRESSOR TEMPERATURE (12HH) (Ref. AMM TASK 21-61-11-000-001) and (Ref. AMM TASK 21-61-11-400-001).
- (2) If the fault continues:
  - do a check that the resistance of the compressor overheat sensor (15HH) measured between connector A/A and A/B is in these limits (Ref. ASM 21-61/04):

201-225, 227-227, 229-245, 247-299,

426-499, 503-549, 551-599, 701-749,

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| Te | emp (Deg.C) | OHMS          |
|----|-------------|---------------|
| +  | <br>10      | 103.9 +/- 0.5 |
| +  | 20          | 107.8 +/- 0.5 |
| +  | 30          | 111.7 +/- 0.5 |
| +  | 50          | 119.4 +/- 0.5 |
| +  | 70          | 127.1 +/- 0.5 |
| +  | 100         | 138.5 +/- 0.5 |

- (a) If the resistance values are out of the specified limits:
   replace the SENSOR-COMPRESSOR OVERHEAT (15HH) (Ref. AMM TASK 21-61-12-400-001).
- (3) If the fault continues: Do the inspection of the delta P sense lines (Ref. AMM TASK 21-51-00-200-001).
- (4) If the fault continues:

  Replace the SENSOR-PRESSURE (10HB) (Ref. AMM TASK 21-51-11-000-001)

  and (Ref. AMM TASK 21-51-11-400-001).
- (5) If the fault continues:
  - (a) Swap the SDAC's (1WV1 and 1WV2).(Ref.AMM Task 31-55-34-401)
  - (b) If this action has solved the problem:replace the SDAC which formerly was SDAC#1.
- (6) If the fault continues:
  - (a) Open the CB's for the Pack Controller 1+2.
  - (b) Disconnect the Pack Controller's. ( Ref.AMM Task 21-61-34-401)
  - (c) Diconnect the electrical connectors at the FCV#1 (11HB) and FCV#2 (8HB). (Ref.AMM Task 21-51-51-401)
  - (d) Disconnect the SDAC#1.
  - (e) Do a check for GND at the SDAC#1 connector AA pin 10D.
  - (f) Do a check for GND at the SDAC#1 connector AA pin 13B.

NOTE: There should be no GND contact

- (g) If there is no GND contact, reconnect the SDAC#1.
- (h) If there is GND contact do a check of the wiring and repair if nessesary.

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- D. If the test gives the maintenance message TEST OK, but the FAULT legend on the pushbutton switch AIR COND/PACK 1, which is installed on the panel 30VU, comes on:
  - do the operational test of the annunciator light test system (Ref. AMM TASK 33-14-00-710-001).
  - (1) If the test gives a different maintenance message refer to the Fault Symptom List.
  - (2) If the fault continues:
    - do a check of the PUSHBUTTON SWITCH-AIR COND/PACK 1 (7HB) and replace it if necessary (Ref. ASM 21-51/02).
  - (3) If the fault continues:
    - do a check of the BOARD-ANN LT TEST & INTFC (8LP) and replace it if necessary (Ref. ASM 21-51/02).
  - (4) If the fault continues:
    - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - (5) If the fault continues:
    - do a check and repair the wiring between:

RELAY (8LP) connector A/30 and SW (7HB) connector A/7,

RELAY (8LP) connector A/41 and GND,

RELAY (8LP) connector A/27 and PC 1 (7HH) connector AB/7A

RELAY (8LP) connector A/27 and RELAY (15HB) connector B/A2,

RELAY (8LP) connector A/29 and CB (1HB) (Ref. ASM 21-51/02).

E. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

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## TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-804

Pack 2 Fault

### 1. Possible Causes

- VALVE-FLOW CTL (8HB)
- SENSOR-COMPRESSOR PNEUMATIC OVHT (11HM9)
- SENSOR-COMPRESSOR TEMPERATURE (32HH)
- SENSOR-COMPRESSOR OVHT (35HH)
- SENSOR-PRESSURE (9HB)
- BOARD-ANN LT TEST & INTFC (20LP)
- CONTROLLER-PACK 2 TEMP (27HH)
- pressure sense line
- PUSHBUTTON SWITCH-AIR COND/PACK 2 (6HB)
- wiring

## 2. Job Set-up Information

#### A. Referenced Information

| REFERENCE            | DESIGNATION   |
|----------------------|---|
|                      |   |
| 21-51-00-810-804     | <pre>Pack 2 Flow Control Valve (Pack 2 Flow Control Unit) Fault</pre>               |
| AMM 12-33-21-618-001 | Pre-conditioning through the HP Ground Connection                                   |
| AMM 21-51-00-200-001 | Delta P Sense Lines Torque Check and Inspection                                     |
| AMM 21-51-11-000-001 | Removal of the Differential Pressure Sensor 9HB (10HB)                              |
| AMM 21-51-11-400-001 | <pre>Installation of the Differential Pressure Sensor 9HB (10HB)</pre>              |
| AMM 21-51-51-000-001 | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit                      |
| AMM 21-51-51-400-001 | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre>      |
| AMM 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System                             |
| AMM 21-61-11-000-001 | Removal of the Compressor Outlet - Temperature Sensor 12HH (32HH)                   |
| AMM 21-61-11-400-001 | <pre>Installation of the Compressor Outlet - Temperature Sensor 12HH (32HH)</pre>   |
| AMM 21-61-12-000-001 | Removal of the Compressor Overheat - Temperature Sensor 15HH (35HH)                 |
| AMM 21-61-12-400-001 | <pre>Installation of the Compressor Overheat - Temperature Sensor 15HH (35HH)</pre> |
| AMM 21-61-18-000-001 | Removal of the Compressor Pneumatic Overheat-Sensor 10HM9 (11HM9)                   |
| AMM 21-61-18-400-001 | Installation of the Compressor Pneumatic Overheat-Sensor 10HM9 (11HM9)              |
| AMM 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)  |

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REFERENCE

#### **DESIGNATION**

AMM 21-61-34-400-001

R AMM 33-14-00-710-001

Installation of the Pack Controller (7HH, 27HH)
Operational Test of the Lights

ASM 21-51/02

ASM 21-61/02

ASM 21-61/02

### 3. Fault Confirmation

#### A. Test

NOTE: If the PACK 2 FAULT warning has appeared during engine start or the flow control valve did not close during engine start (Ref. TASK 21-51-00-810-804).

- (1) Do the pre-conditioning through the HP ground connection (Ref. AMM TASK 12-33-21-618-001).
- (2) Do a check to make sure that the pack 2 inlet-pressure indication on the ECAM BLEED page is > 20 PSI.
- (3) Do a check to make sure that the pack 2 flow control-valve symbol on the ECAM BLEED page is shown in the open pointion.
- (4) Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

### 4. Fault Isolation

- A. If the pack 2 inlet-pressure indication on the ECAM BLEED page is < 20 PSI:</p>
  - increase the pressure to > 25 PSI.
- **B.** If the pack 2 flow control-valve symbol on the **ECAM BLEED** page is shown in the closed position:
  - do a check of the pressure sense line between the FCV (8HB) and the SENSOR (11HM9) for leaks.
  - if leaks are found, tighten the connection or repair the line (Ref. AMM TASK 21-51-11-000-001), (Ref. AMM TASK 21-51-11-400-001), (Ref. AMM TASK 21-61-18-400-001).

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- (1) If the fault continues:
  - replace the VALVE-FLOW CTL (8HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
- (2) If the fault continues:
  - replace the SENSOR-COMPRESSOR PNEUMATIC OVHT (11HM9) (Ref. AMM TASK 21-61-18-000-001) and (Ref. AMM TASK 21-61-18-400-001).
- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - C. If the test confirms the fault:
    - do a check that the resistance of the compressor temperature sensor (32HH) measured between connector A/A and A/B is in these limits (Ref. ASM 21-61/02):

| Τe | emp (Deg.C) | OHMS          |
|----|-------------|---------------|
| +  | 10          | 103.9 +/- 0.5 |
| +  | 20          | 107.8 +/- 0.5 |
| +  | 30          | 111.7 +/- 0.5 |
| +  | 50          | 119.4 +/- 0.5 |
| +  | 70          | 127.1 +/- 0.5 |
| +  | 100         | 138.5 +/- 0.5 |

- (1) If the resistance values are out of the specified limits:
  - replace the SENSOR-COMPRESSOR TEMPERATURE (32HH) (Ref. AMM TASK 21-61-11-000-001) and (Ref. AMM TASK 21-61-11-400-001).
- (2) If the fault continues:
  - do a check that the resistance of the compressor overheat sensor (35HH) measured between connector A/A and A/B is in these limits (Ref. ASM 21-61/02):

| T | emp (Deg.C) | OHMS          |  |
|---|-------------|---------------|--|
|   |             |               |  |
| + | 10          | 103.9 +/- 0.5 |  |
| + | 20          | 107.8 +/- 0.5 |  |
| + | 30          | 111.7 +/- 0.5 |  |
| + | 50          | 119.4 +/- 0.5 |  |
| + | 70          | 127.1 +/- 0.5 |  |
| + | 100         | 138.5 +/- 0.5 |  |

- (3) If the resistance values are out of the specified limits:
  - replace the SENSOR-COMPRESSOR OVHT (35HH) (Ref. AMM TASK 21-61-12-000-001) and (Ref. AMM TASK 21-61-12-400-001).
- (4) If the fault continues:
  - (a) Swap the SDAC's (1WV1 and 1WV2). (Ref.AMM Task 31-55-34-401)
  - (b) If this action has solved the problem:
    - replace the SDAC which formerly was SDAC#1.

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- (5) If the fault continues:
  - (a) Open the CB's for the Pack Controller #1 + #2.
  - (b) Disconnect the Pack Controller's. (Ref.AMM Task 21-61-34-401)
  - (c) Disconnect the electrical connectors at the FCV#1(11HB) and FCV#2(8HB).
    - (Ref.AMM Task 21-51-51-401).
  - (d) Disconnect the SDAC#1.
  - (e) Do a check for GND at the SDAC#1 connector AA pin 10D.
  - (f) Do a check for GND at the SDAC#1 connector AA pin 13B.

NOTE: there should be no GND contact

- (g) If there is no GND contact, reconnect the SDAC#1.
- (h) If there is GND contact, do a check of the wiring and repair if nessesary.

\*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

- C. If the test confirms the fault:
  - do a check that the resistance of the compressor temperature sensor (32HH) measured between connector A/A and A/B is in these limits (Ref. ASM 21-61/02):

| Temp (Deg.C) |            | OHMS          |  |  |
|--------------|------------|---------------|--|--|
|              |            |               |  |  |
| +            | 10         | 103.9 +/- 0.5 |  |  |
| +            | 20         | 107.8 +/- 0.5 |  |  |
| +            | <b>3</b> 0 | 111.7 +/- 0.5 |  |  |
| +            | 50         | 119.4 +/- 0.5 |  |  |
| +            | 70         | 127.1 +/- 0.5 |  |  |
| +            | 100        | 138.5 +/- 0.5 |  |  |

- (1) If the resistance values are out of the specified limits:
  - replace the SENSOR-COMPRESSOR TEMPERATURE (32HH) (Ref. AMM TASK 21-61-11-000-001) and (Ref. AMM TASK 21-61-11-400-001).
- (2) If the fault continues:
  - do a check that the resistance of the compressor overheat sensor (35HH) measured between connector A/A and A/B is in these limits (Ref. ASM 21-61/02):

201-225, 227-227, 229-245, 247-299,

426-499, 503-549, 551-599, 701-749,

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| Τe | emp (Deg.C) | OHMS          |
|----|-------------|---------------|
| +  | <br>10      | 103.9 +/- 0.5 |
| +  | 20          | 107.8 +/- 0.5 |
| +  | 30          | 111.7 +/- 0.5 |
| +  | 50          | 119.4 +/- 0.5 |
| +  | 70          | 127.1 +/- 0.5 |
| +  | 100         | 138.5 +/- 0.5 |

- (a) If the resistance values are out of the specified limits:
   replace the SENSOR-COMPRESSOR OVHT (35HH) (Ref. AMM TASK 21-61-
  - replace the SENSOR-COMPRESSOR OVHT (35HH) (Ref. AMM TASK 21-61 12-000-001) and (Ref. AMM TASK 21-61-12-400-001).
- (3) If the fault continues: Do the inspection of the delta P sense lines (Ref. AMM TASK 21-51-00-200-001)
- (4) If the fault continues:

  Replace the SENSOR-PRESSURE (9HB) (Ref. AMM TASK 21-51-11-000-001)

  and (Ref. AMM TASK 21-51-11-400-001).
- (5) If the fault continues:
  - (a) Swap the SDAC's (1WV1 and 1WV2). (Ref.AMM Task 31-55-34-401)
  - (b) If this action has solved the problem:replace the SDAC which formerly was SDAC#1.
- (6) If the fault continues:
  - (a) Open the CB's for the Pack Controller #1 + #2.
  - (b) Disconnect the Pack Controller's. (Ref.AMM Task 21-61-34-401)
  - (c) Disconnect the electrical connectors at the FCV#1(11HB) and
    FCV#2(8HB).
     (Ref.AMM Task 21-51-51-401).
  - (d) Disconnect the SDAC#1.
  - (e) Do a check for GND at the SDAC#1 connector AA pin 10D.
  - (f) Do a check for GND at the SDAC#1 connector AA pin 13B.

NOTE: there should be no GND contact

- (g) If there is no GND contact, reconnect the SDAC#1.
- (h) If there is GND contact, do a check of the wiring and repair if nessesary.

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### TROUBLE SHOOTING MANUAL

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#### \*\*ON A/C ALL

- D. If the test gives the maintenance message TEST OK, but the FAULT legend on the pushbutton switch AIR COND/PACK 2, which is installed on the panel 30VU, comes on:
  - do the operational test of the annunciator light test system (Ref. AMM TASK 33-14-00-710-001).
  - (1) If the test gives a different maintenance message refer to the Fault Symptom List.
  - (2) If the fault continues:
    - do a check of the PUSHBUTTON SWITCH-AIR COND/PACK 2 (6HB) and replace it if necessary (Ref. ASM 21-51/02).
  - (3) If the fault continues:
    - do a check of the BOARD-ANN LT TEST & INTFC (20LP) and replace it if necessary (Ref. ASM 21-51/02).
  - (4) If the fault continues:
    - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - (5) If the fault continues:
    - do a check and repair the wiring between:

      RELAY (20LP) connector A/30 and SW (6HB) connector A/7,

      RELAY (20LP) connector A/41 and GND,

      RELAY (20LP) connector A/27 and PC 2 (27HH) connector AB/7A

      RELAY (20LP) connector A/27 and RELAY (14HB) connector B/A2,

      RELAY (20LP) connector A/29 and CB (2HB) (Ref. ASM 21-51/02).
- E. Do the test as given in the Para. 3.A.

#### 5. Close-up

A. Put the aircraft back to its initial configuration.

EFF: ALL 21-61-00

#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-805

Pack Controller 1 (ACSC1) Fault

- 1. Possible Causes
  - CONTROLLER-PACK 1 TEMP (7HH)
  - P1 FLOW CTL VALVE (11HB)
  - wiring
- R sens line
  - 2. Job Set-up Information
    - A. Referenced Information

|        | REFE | RENCE            | DESIGNATION   |
|--------|------|------------------|---|
|        | 21-6 | 1-00-810-820     | Pack 1 Electrical Component with Short Circuit (AIR PACK 1 REGUL FAULT)                                       |
| R<br>R | AMM  | 21-51-11-400-001 | Installation of the Differential Pressure Sensor 9HB (10HB)   |
|        | AMM  | 21-51-51-000-001 | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit  |
|        | AMM  | 21-51-51-400-001 | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre>                                |
|        | AMM  | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System   |
|        | AMM  | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)  |
|        | AMM  | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)   |
|        | AMM  | 32-69-00-740-001 | BITE Check Landing Gear Control Interface Unit (LGCIU) using MCDU to Ensure that Continuous BITE is Operative |
|        | ASM  | 21-51/01         |   |
|        | ASM  | 21-61/03         |   |
|        | ASM  | 21-63/02         |   |

#### 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

EFF: ALL 21-61-00

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#### TROUBLE SHOOTING MANUAL

#### 4. Fault Isolation

- A. If the test gives the maintenance message TEST FAILED with the fault code (6D):
  - do a check for a ground signal at the PC 1 (7HH) connector AA/9B (Ref. ASM 21-61/03).
  - (1) If there is no ground signal:
    - do the BITE test of the landing gear (Ref. AMM TASK 32-69-00-740-001).
    - (a) If the test gives a different maintenance message refer to the Fault Symptom List.
    - (b) If the fault continues:
      - do a check and repair the wiring if necessary between:
         PC 1 (7HH) connector AA/9B and LGCIU 2 (5GA2) connector AB/G1 (Ref. ASM 21-61/03).
  - (2) If the fault continues:
    - do a check and repair the wiring between:
      - PC 1 (7HH) connector AB/6B and FCV (11HB) connector A/D,
      - PC 1 (7HH) connector AA/1D and FCV (11HB) connector A/E,
      - PC 1 (7HH) connector AA/1C and FCV (11HB) connector A/F,
      - PC 1 (7HH) connector AA/1B and FCV (11HB) connector A/G,
      - PC 1 (7HH) connector AA/1A and FCV (11HB) connector A/V,
      - PC 1 (7HH) connector AA/11C and FCV (11HB) connector A/J,
      - PC 1 (7HH) connector AA/11B and FCV (11HB) connector A/K,
      - PC 1 (7HH) connector AA/11A and FCV (11HB) connector A/L (Ref. ASM 21-51/01).
- B. If the test gives the maintenance message P1 CONT:
  - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring if necessary between:
      - PC 1 (7HH) connector AA/5A and CB (1HH),
      - PC 1 (7HH) connector AA/5B and GND,
      - PC 1 (7HH) connector AB/13D and CB (2HH),
      - PC 1 (7HH) connector AB/14A and GND (Ref. ASM 21-61/03).
  - (2) If the fault continues:
    - do a check and repair if necessary the wiring of the signal: ARINC 429 XTR (P) from the ZC (8HK) to the PC 1 (7HH), ARINC 429 XTR (S) from the ZC (8HK) to the PC 1 (7HH), ARINC 429 RCV (S) from the ZC (8HK) to the PC 1 (7HH) (Ref. ASM 21-63/02).

EFF: ALL

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#### TROUBLE SHOOTING MANUAL

- R (3) If the fault continues:
- R torque the sens line connectors between the sensor (10HB) and the FCV (11HB)(Ref. AMM TASK 21-51-11-400-001) (Ref. AMM TASK 21-51-51-400-001).
- R (4) If the fault continues:
  - do the trouble shooting procedures for the pack 1 electrical component with short circuit (Ref. TASK 21-61-00-810-820).
- R (5) If the fault continues:
  - do a check that the resistance of the torque motor of the FCV (11HB) measured between pin A/F and A/V is more than 30 ohm (Ref. ASM 21-51/01).
  - (a) If the resistance value is less than the limit, replace the P1 FLOW CTL VALVE (11HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
  - C. If the test gives the maintenance message NO 28V ON PACK 1 MAIN:
    - do a check and repair the wiring between:
      - PC 1 (7HH) connector AA/8C and CB (3HH),
      - PC 1 (7HH) connector AA/8D and GND (Ref. ASM 21-61/03).
  - D. If the test gives the maintenance message NO 28V ON PACK 1 SECD:
    - do a check and repair the wiring between:
      - PC 1 (7HH) connector AB/9A and CB (4HH),
      - PC 1 (7HH) connector AB/9B and GND (Ref. ASM 21-61/03).
  - E. Do the test as given in the Para. 3.A.
  - 5. Close-up
    - A. Put the aircraft back to its initial configuration.

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EFF: ALL

#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-806

Pack Controller 2 (ACSC2) Fault

- 1. Possible Causes
  - CONTROLLER-PACK 2 TEMP (27HH)
  - P2 FLOW CTL VALVE (8HB)
  - wiring
- R sense line
  - 2. Job Set-up Information
    - A. Referenced Information

|        | REFE | RENCE            | DESIGNATION   |
|--------|------|------------------|---|
|        |      |                  |   |
|        | 21-6 | 1-00-810-821     | Pack 2 Electrical Component with Short Circuit (AIR PACK 2 REGUL FAULT)                                       |
| R<br>R | AMM  | 21-51-11-400-001 | Installation of the Differential Pressure Sensor 9HB (10HB)   |
|        | AMM  | 21-51-51-000-001 | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit  |
|        | AMM  | 21-51-51-400-001 | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre>                                |
|        | AMM  | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System   |
|        | AMM  | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)  |
|        | AMM  | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)   |
|        | AMM  | 32-69-00-740-001 | BITE Check Landing Gear Control Interface Unit (LGCIU) using MCDU to Ensure that Continuous BITE is Operative |
|        | ASM  | 21-51/01         | ·   |
|        | ASM  | 21-61/01         |   |
|        | ASM  | 21-63/02         |   |
|        |      |                  |   |

#### 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

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#### TROUBLE SHOOTING MANUAL

#### 4. Fault Isolation

- A. If the test gives the maintenance message TEST FAILED with the fault code (6E):
  - do a check for a ground signal at the PC 2 (27HH) connector AA/9B (Ref. ASM 21-61/01).
  - (1) If there is no ground signal:
    - do the BITE test of the landing gear (Ref. AMM TASK 32-69-00-740-001).
  - (2) If test gives a different maintenance message refer to the Fault Symptom List.
    - (a) If the fault continues:
      - do a check and repair the wiring if necessary between:
         PC 2 (27HH) connector AA/9B and LGCIU 2 (5GA2) connector AB/3J (Ref. ASM 21-61/01).
  - (3) If the fault continues:
    - do a check and repair the wiring between:
      - PC 2 (27HH) connector AB/6B and FCV (8HB) connector A/D,
      - PC 2 (27HH) connector AA/1D and FCV (8HB) connector A/E,
      - PC 2 (27HH) connector AA/1C and FCV (8HB) connector A/F,
      - PC 2 (27HH) connector AA/1B and FCV (8HB) connector A/G,
      - PC 2 (27HH) connector AA/1A and FCV (8HB) connector A/V,
      - PC 2 (27HH) connector AA/11C and FCV (8HB) connector A/J,
      - PC 2 (27HH) connector AA/11B and FCV (8HB) connector A/K,
      - PC 2 (27HH) connector AA/11A and FCV (8HB) connector A/L (Ref. ASM 21-51/01).
- B. If the test gives the maintenance message P2 CONT:
  - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring if necessary between:
      - PC 2 (27HH) connector AA/5A and CB (21HH),
      - PC 2 (27HH) connector AA/5B and GND,
      - PC 2 (27HH) connector AB/13D and CB (22HH),
      - PC 2 (27HH) connector AB/14A and GND (Ref. ASM 21-61/01).
  - (2) If the fault continues:
    - a check and repair if necessary the wiring of the signal: ARINC 429 XTR (P) from the ZC (8HK) to the PC 2 (27HH), ARINC 429 XTR (S) from the ZC (8HK) to the PC 2 (27HH), ARINC 429 RCV (S) from the ZC (8HK) to the PC 2 (27HH) (Ref. ASM 21-63/02).

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#### TROUBLE SHOOTING MANUAL

R (3) If the fault continues:

R

R

- torque the sense line connectors between the sensor (9HB) and the FCV (8HB) (Ref. AMM TASK 21-51-11-400-001) (Ref. AMM TASK 21-51-51-400-001).
- R (4) If the fault continues:
  - do the trouble shooting procedures for the pack 2 electrical component with short circuit (Ref. TASK 21-61-00-810-821).
- R (5) If the fault continues:
  - do a check that the resistance of the torque motor of the FCV (8HB) measured between pin A/F and A/V is more than 30 ohm (Ref. ASM 21-51/01).
  - (a) If the resistance value is less than the limit, replace the P2 FLOW CTL VALVE (8HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
  - C. If the test gives the maintenance message NO 28V ON PACK 2 MAIN:
    - do a check and repair the wiring between:
      - PC 2 (27HH) connector AA/8C and CB (23HH),
      - PC 2 (27HH) connector AA/8D and GND (Ref. ASM 21-61/01).
  - D. If the test gives the maintenance message NO 28V ON PACK 2 SECD:
    - do a check and repair the wiring between:
      - PC 2 (27HH) connector AB/9A and CB (24HH),
      - PC 2 (27HH) connector AB/9B and GND (Ref. ASM 21-61/01).
  - E. Do the test as given in the Para. 3.A.
  - 5. Close-up
    - A. Put the aircraft back to its initial configuration.

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EFF: ALL



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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-807

Pack 1 and Pack 2 Inoperative

- 1. Possible Causes
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE  | DESIGNATION   |
|--|---|
| 21-61-00-810-801<br>21-61-00-810-802<br>21-61-00-810-803<br>21-61-00-810-804<br>AMM 21-61-00-710-001 | Pack 1 Overheat Pack 2 Overheat Pack 1 Fault Pack 2 Fault Operational Test of the Pack Temperature-Control System |

#### 3. Fault Confirmation

R

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

R

#### 4. Fault Isolation

- A. If the FAULT legend on the pushbutton switch PACK 1 and the OFF legend on the pushbutton switch PACK 2, which are installed on the panel 30VU, come
  - do the trouble shooting procedures for the pack 1 fault (Ref. TASK 21-61-00-810-803).
  - make sure that the pushbutton switch PACK 2, which is installed on the panel 30VU, is in the on position (with the FAULT and OFF legends off).
  - (1) If the OFF legend on the pushbutton switch PACK 2, which is installed on the panel 30VU, goes off, but on the ECAM upper DU the warning AIR PACK 2 OVHT comes on:
    - do the trouble shooting procedures for the pack 2 overheat (Ref. TASK 21-61-00-810-802).

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#### TROUBLE SHOOTING MANUAL

- B. If the FAULT legend on the pushbutton switch PACK 2 and the OFF legend on the pushbutton switch PACK 1, which are installed on the panel 30VU, come on:
  - do the trouble shooting procedures for the pack 2 fault (Ref. TASK 21-61-00-810-804).
  - make sure that the pushbutton switch PACK 1, which is installed on the panel 30VU, is in the on position (with the FAULT and OFF legends off).
  - (1) If the OFF legend on the pushbutton switch PACK 1, which is installed on the panel 30VU, goes off, but on the ECAM upper DU the warning AIR PACK 1 OVHT comes on:
    - do the trouble shooting procedures for the pack 1 overheat (Ref. TASK 21-61-00-810-801).
- C. Do the test as given in the Para. 3.A.

#### 5. Close-up

EFF:

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A. Put the aircraft back to its initial configuration.

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-808

Pack 1 is incorrectly off

- 1. Possible Causes
  - P/BSW-AIR COND/PACK 1 (7HB)
- 2. Job Set-up Information
  - A. Referenced Information

**DESIGNATION** 

AMM 21-61-00-710-001

Operational Test of the Pack Temperature-Control System

3. Fault Confirmation

R

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

R

#### 4. Fault Isolation

- A. If the ECAM upper DU gives the warning AIR PACK 1 OFF, but no maintenance message comes on:
  - make sure that the P/BSW-AIR COND/PACK 1 (7HB) (pushbutton switch PACK 1), which is installed on the panel 30VU, is in the on position (with the FAULT and OFF legends off).
- B. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

21-61-00 EFF: ALL

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-809

Pack 2 is incorrectly off

- 1. Possible Causes
  - P/BSW-AIR COND/PACK 2 (6HB)
- 2. Job Set-up Information
  - A. Referenced Information

DEFENDING

REFERENCE

**DESIGNATION** 

AMM 21-61-00-710-001

Operational Test of the Pack Temperature-Control System

3. Fault Confirmation

R

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

R

#### 4. Fault Isolation

- A. If the ECAM upper DU gives the warning AIR PACK 2 OFF, but no maintenance message comes on:
  - make sure that the P/BSW-AIR COND/PACK 2 (6HB) (pushbutton switch PACK 2), which is installed on the panel 30VU, is in the on position (with the FAULT and OFF legends off).
- B. Do the test as given in the Para. 3.A.
- 5. Close-up

A. Put the aircraft back to its initial configuration.

EFF: ALL

21-61-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-810

Pack 1 Water Extractor Temperature Sensor Fault

- 1. Possible Causes
  - SENSOR-WATER EXTRACTOR TEMPERATURE (11HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE            | DESIGNATION   |  |
|----------------------|---|--|
| AMM 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System               |  |
| AMM 21-61-13-000-001 | Removal of the Water-Extractor Temperature Sensors 11HH and 31HH      |  |
| AMM 21-61-13-400-001 | Installation of the Water-Extractor Temperature Sensors 11HH and 31HH |  |
| ASM 21-61/04         |   |  |
| 1 (1                 |   |  |

3. Fault Confirmation

R

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

R

4. Fault Isolation

R

- A. If the test gives the maintenance message P1 WATER EX TEMP SENSOR: - replace the SENSOR-WATER EXTRACTOR TEMPERATURE (11HH) (Ref. AMM TASK 21-61-13-000-001) and (Ref. AMM TASK 21-61-13-400-001).
  - (1) If the fault continues:
    - do a check of the wiring (Ref. ASM 21-61/04) from:
    - the SENSOR (11HH) to the PC 1 (7HH) and,
    - the SENSOR (11HH) to ground.

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EFF: ALL **SROS** 

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### TROUBLE SHOOTING MANUAL

B. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

EFF: ALL SROS 21-61-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-811

Pack 2 Water Extractor Temperature Sensor Fault

- 1. Possible Causes
  - SENSOR-WATER EXTRACTOR TEMPERATURE (31HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE            | DESIGNATION   |
|----------------------|---|
|                      |   |
| AMM 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System               |
| AMM 21-61-13-000-001 | Removal of the Water-Extractor Temperature Sensors 11HH and 31HH      |
| AMM 21-61-13-400-001 | Installation of the Water-Extractor Temperature Sensors 11HH and 31HH |
| ASM 21-61/02         | Selisors rinn allu Sinn   |
| 7 Fault Castianatian |   |

3. Fault Confirmation

R

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

R

4. Fault Isolation

R

- A. If the test gives the maintenance message P2 WATER EX TEMP SENSOR: - replace the SENSOR-WATER EXTRACTOR TEMPERATURE (31HH) (Ref. AMM TASK 21-61-13-000-001) and (Ref. AMM TASK 21-61-13-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-61/02) from:
    - the SENSOR (31HH) to the PC 2 (27HH) and,
    - the SENSOR (31HH) to ground.

R

EFF: ALL **SROS** 

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### TROUBLE SHOOTING MANUAL

B. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

EFF: ALL SROS 21-61-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-812

Pack 1 Air Inlet Flap Actuator Fault

CAUTION: DO NOT SWAP THE PACK/ACS CONTROLLERS. THIS CAN CAUSE DAMAGE TO THEM IF THERE IS AN ELECTRICAL FAULT IN THE ACTUATOR.

- 1. Possible Causes
  - ACTUATOR-AIR INLET FLAP (8HH)
  - CONTROLLER-PACK 1 TEMP (7HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

|   | REFE | RENCE            | DESIGNATION  |
|---|------|------------------|--|
| R |      |                  |  |
|   | AMM  | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System  |
|   | AMM  | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)               |
|   | AMM  | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)          |
|   | AMM  | 21-61-51-000-001 | Removal of the Air-Inlet Flap Actuator 8HH and 28HH      |
|   | AMM  | 21-61-51-400-001 | Installation of the Air-Inlet Flap Actuator 8HH and 28HH |
|   | ASM  | 21-61/04         |  |

3. Fault Confirmation

R

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

R

EFF: ALL 21-61-00

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#### TROUBLE SHOOTING MANUAL

#### 4. Fault Isolation

R

- A. If the test gives the maintenance message TEST OK, but the POST FLIGHT REPORT and/or the PREVIOUS LEG REPORT gives the maintenance message P1 RAM AIR IN ACTUATOR:
  - replace the ACTUATOR-AIR INLET FLAP (8HH) (Ref. AMM TASK 21-61-51-000-001) and (Ref. AMM TASK 21-61-51-400-001).

R

- B. If the pack 1 ram-air inlet-actuator does not operate correctly on the ground with the pushbutton switch PACK 1, which is installed on the panel 30VU, in the OFF position:
  - replace the ACTUATOR-AIR INLET FLAP (8HH) (Ref. AMM TASK 21-61-51-000-001) and (Ref. AMM TASK 21-61-51-400-001).

R

- C. If the test gives the maintenance message P1 RAM AIR IN ACTUATOR:
  - replace the ACTUATOR-AIR INLET FLAP (8HH) (Ref. AMM TASK 21-61-51-000-001) and (Ref. AMM TASK 21-61-51-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-61/04) from:
    - the ACTUATOR (8HH) to the PC 1 (7HH) and,
    - the ACTUATOR (8HH) to ground.
  - (2) If the fault continues:
    - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).

R

- D. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

EFF: ALL

21-61-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-813

Pack 2 Air Inlet Flap Actuator Fault

R CAUTION: DO NOT SWAP THE PACK/ACS CONTROLLERS. THIS CAN CAUSE DAMAGE TO THEM IF THERE IS AN ELECTRICAL FAULT IN THE ACTUATOR.

#### 1. Possible Causes

- ACTUATOR-AIR INLET FLAP (28HH)
- P2 CONTROLLER (27HH)
  - wiring

#### 2. Job Set-up Information

A. Referenced Information

|   |     | RENCE<br>        | DESIGNATION  |
|---|-----|------------------|--|
|   |     |                  |  |
|   |     |                  |  |
| , | AMM | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System  |
| R | AMM | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)               |
| R | AMM | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)          |
|   | AMM | 21-61-51-000-001 | Removal of the Air-Inlet Flap Actuator 8HH and 28HH      |
|   | AMM | 21-61-51-400-001 | Installation of the Air-Inlet Flap Actuator 8HH and 28HH |
|   | ASM | 21-61/02         |  |

#### 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

#### 4. Fault Isolation

- A. If the test gives the maintenance message TEST OK, but the POST FLIGHT REPORT and/or the PREVIOUS LEG REPORT gives the maintenance message P2 RAM AIR IN ACTUATOR:
  - replace the ACTUATOR-AIR INLET FLAP (28HH) (Ref. AMM TASK 21-61-51-000-001) and (Ref. AMM TASK 21-61-51-400-001).
- B. If the pack 2 ram-air inlet-actuator does not operate correctly on the ground with the pushbutton switch PACK 2, which is installed on the panel 30VU, in the OFF position:
  - replace the ACTUATOR-AIR INLET FLAP (28HH) (Ref. AMM TASK 21-61-51-000-001) and (Ref. AMM TASK 21-61-51-400-001).

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#### TROUBLE SHOOTING MANUAL

- C. If the test gives the maintenance message P2 RAM AIR IN ACTUATOR:
  - replace the ACTUATOR-AIR INLET FLAP (28HH) (Ref. AMM TASK 21-61-51-000-001) and (Ref. AMM TASK 21-61-51-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-61/02) from:
    - the ACTUATOR (28HH) to the PC 2 (27HH) and,
    - the ACTUATOR (28HH) to ground.
- R (2) If the fault continues:
  - replace the P2 CONTROLLER (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - D. Do the test as given in the Para. 3.A.
  - 5. Close-up

R

A. Put the aircraft back to its initial configuration.

EFF: ALL 21-61-00

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#### TROUBLE SHOOTING MANUAL

R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,

TASK 21-61-00-810-814

Pack 1 Air Outlet Flap Actuator Fault

<u>CAUTION</u>: DO NOT SWAP THE PACK/ACS CONTROLLERS. THIS CAN CAUSE DAMAGE TO THEM IF THERE IS AN ELECTRICAL FAULT IN THE ACTUATOR.

#### 1. Possible Causes

- ACTUATOR-AIR OUTLET FLAP (9HH)
- CONTROLLER-PACK 1 TEMP (7HH)
- wiring

#### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           | 24 (4 00 740 004 |  |
| AMM       | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System            |
| AMM       | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)                         |
| AMM       | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)                    |
| AMM       | 21-61-52-000-001 | Removal of the Air-Outlet Flap Actuator 9HH (29HH)                 |
| AMM       | 21-61-52-400-001 | <pre>Installation of the Air-Outlet Flap Actuator 9HH (29HH)</pre> |
| ASM       | 21-61/04         |  |

#### 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

#### 4. Fault Isolation

- A. If the test gives the maintenance message TEST OK, but the POST FLIGHT REPORT and/or the PREVIOUS LEG REPORT gives the maintenance message P1 RAM AIR OUT ACTUATOR:
  - replace the ACTUATOR-AIR OUTLET FLAP (9HH) (Ref. AMM TASK 21-61-52-000-001) and (Ref. AMM TASK 21-61-52-400-001).

EFF: 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,

21-61-00

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#### TROUBLE SHOOTING MANUAL

- B. If the pack 1 ram-air outlet-actuator does not operate correctly on the ground with the pushbutton switch PACK 1, which is installed on the panel 30VU, in the OFF position:
  - replace the ACTUATOR-AIR OUTLET FLAP (9HH) (Ref. AMM TASK 21-61-52-000-001) and (Ref. AMM TASK 21-61-52-400-001).
- C. If the test gives the maintenance message P1 RAM AIR OUT ACTUATOR:
  - replace the ACTUATOR-AIR OUTLET FLAP (9HH) (Ref. AMM TASK 21-61-52-000-001) and (Ref. AMM TASK 21-61-52-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-61/04) from:
    - the ACTUATOR (9HH) to the PC 1 (7HH) and,
    - the ACTUATOR (9HH) to ground.
  - (2) If the fault continues:
    - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
- D. Do the test as given in the Para. 3.A.

#### 5. Close-up

A. Put the aircraft back to its initial configuration.

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-815

Pack 2 Air Outlet Flap Actuator Fault

CAUTION: DO NOT SWAP THE PACK/ACS CONTROLLERS. THIS CAN CAUSE DAMAGE TO THEM IF THERE IS AN ELECTRICAL FAULT IN THE ACTUATOR.

#### 1. Possible Causes

- ACTUATOR-AIR OUTLET FLAP (29HH)
- CONTROLLER-PACK 2 TEMP (27HH)
- wiring

#### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION   |  |
|-----------|------------------|---|--|
| AMM       | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System |  |
| AMM       | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)              |  |
| AMM       | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)         |  |
| AMM       | 21-61-52-000-001 | Removal of the Air-Outlet Flap Actuator 9HH (29HH)      |  |
| AMM       | 21-61-52-400-001 | Installation of the Air-Outlet Flap Actuator 9HH (29HH) |  |
| ASM       | 21-61/02         |   |  |

#### 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

#### 4. Fault Isolation

- A. If the test gives the maintenance message TEST OK, but the POST FLIGHT REPORT and/or the PREVIOUS LEG REPORT gives the maintenance message P2 RAM AIR OUT ACTUATOR:
  - replace the ACTUATOR-AIR OUTLET FLAP (29HH) (Ref. AMM TASK 21-61-52-000-001) and (Ref. AMM TASK 21-61-52-400-001).
- B. If the pack 2 ram-air outlet-actuator does not operate correctly on the ground with the pushbutton switch PACK 2, which is installed on the panel 30VU, in the OFF position:
  - replace the ACTUATOR-AIR OUTLET FLAP (29HH) (Ref. AMM TASK 21-61-52-000-001) and (Ref. AMM TASK 21-61-52-400-001).

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#### TROUBLE SHOOTING MANUAL

- C. If the test gives the maintenance message P2 RAM AIR OUT ACTUATOR: - replace the ACTUATOR-AIR OUTLET FLAP (29HH) (Ref. AMM TASK 21-61-52-000-001) and (Ref. AMM TASK 21-61-52-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-61/02) from:
    - the ACTUATOR (29HH) to the PC 2 (27HH) and,
    - the ACTUATOR (29HH) to ground.
  - (2) If the fault continues:
    - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
- D. Do the test as given in the Para. 3.A.

#### 5. Close-up

A. Put the aircraft back to its initial configuration.

201-208, 227-227, 229-245, 276-284,

426-428, 476-478,

SROS

EFF:

21-61-00

#### TROUBLE SHOOTING MANUAL

\*\*ON A/C ALL

TASK 21-61-00-810-816

Pack 1 Turbine Bypass Valve Fault

- 1. Possible Causes
  - VALVE-TURBINE BYPASS (10HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE         |                  | DESIGNATION   |
|-------------------|------------------|---|
| AMM               | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control  |
| AMM<br>AMM<br>ASM | 21-61-53-400-001 | System Removal of the Bypass Valve 10HH (30HH) Installation of the Bypass Valve 10HH (30HH) |
| , . <b>.</b>      | 2. 3., 3.        |   |

- 3. Fault Confirmation
  - A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

- 4. Fault Isolation
  - A. If the test gives the maintenance message TEST OK, but the POST FLIGHT REPORT and/or the PREVIOUS LEG REPORT gives the maintenance message P1 BYPASS VALVE:
    - no further maintenance action is necessary.

<u>NOTE</u>: If it is reported that a bypass valve fault has ocurred several times in flight:

- replace the VALVE-TURBINE BYPASS (10HH) (Ref. AMM TASK 21-61-53-000-001) and (Ref. AMM TASK 21-61-53-400-001).

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#### TROUBLE SHOOTING MANUAL

- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - B. If the test gives the maintenance message P1 BYPASS VALVE:
    - replace the VALVE-TURBINE BYPASS (10HH) (Ref. AMM TASK 21-61-53-000-001) and (Ref. AMM TASK 21-61-53-400-001).
    - (1) If the fault continues:
      - do a check and repair the wiring (Ref. ASM 21-61/04) from:
      - the VALVE (10HH) to the PC 1 (7HH) and,
      - the VALVE (10HH) to ground.

\*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

- B. If the test gives the maintenance message P1 BYPASS VALVE:
  - replace the VALVE-TURBINE BYPASS (10HH) (Ref. AMM TASK 21-61-53-000-001) and (Ref. AMM TASK 21-61-53-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-61/04) from:
    - the VALVE (10HH) to the PC 1 (7HH) and,
    - the VALVE (10HH) to ground.

\*\*ON A/C ALL

- C. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

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EFF: ALL

#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-817

Pack 2 Turbine Bypass Valve Fault

- 1. Possible Causes
  - VALVE-TURBINE BYPASS (30HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFE | RENCE  | DESIGNATION  |
|------|--|--|
| AMM  | 21-61-00-710-001                                 | Operational Test of the Pack Temperature-Control System                              |
| AMM  | 21-61-53-000-001<br>21-61-53-400-001<br>21-61/02 | Removal of the Bypass Valve 10HH (30HH) Installation of the Bypass Valve 10HH (30HH) |

#### 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

#### 4. Fault Isolation

- A. If the test gives the maintenance message TEST OK, but the POST FLIGHT REPORT and/or the PREVIOUS LEG REPORT gives the maintenance message P2 BYPASS VALVE:
  - no further maintenance action is necessary.
  - NOTE : If it is reported that a bypass valve fault has occured several times in flight:
    - replace the VALVE-TURBINE BYPASS (30HH) (Ref. AMM TASK 21-61-53-000-001) and (Ref. AMM TASK 21-61-53-400-001).

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#### TROUBLE SHOOTING MANUAL

- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - B. If the test gives the maintenance message P2 BYPASS VALVE:
    - replace the VALVE-TURBINE BYPASS (30HH) (Ref. AMM TASK 21-61-53-000-001) and (Ref. AMM TASK 21-61-53-400-001).
    - (1) If the fault continues:
      - do a check and repair the wiring (Ref. ASM 21-61/02) from:
      - the VALVE (30HH) to the PC 2 (27HH) and,
      - the VALVE (30HH) to ground.

\*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

- B. If the test gives the maintenance message P2 BYPASS VALVE:
  - replace the VALVE-TURBINE BYPASS (30HH) (Ref. AMM TASK 21-61-53-000-001) and (Ref. AMM TASK 21-61-53-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-61/02) from:
    - the VALVE (30HH) to the PC 2 (27HH) and,
    - the VALVE (30HH) to ground.

\*\*ON A/C ALL

- C. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

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EFF: ALL

#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-818

Pack 1 Anti Ice Valve Fault

- 1. Possible Causes
  - CONTROLLER-PACK 1 TEMP (7HH)
  - VALVE-ANTI ICE (17HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

|             | REFE       | RENCE                                | DESIGNATION  |
|-------------|------------|--------------------------------------|--|
|             | AMM        | 21-61-00-710-001                     | Operational Test of the Pack Temperature-Control System                                  |
| R<br>R<br>R | AMM        | 21-61-34-000-001                     | Removal of the Pack Controller (7HH, 27HH)   |
|             | AMM        | 21-61-34-400-001                     | Installation of the Pack Controller (7HH, 27HH)  |
|             | AMM<br>AMM | 21-61-41-000-001<br>21-61-41-400-001 | Removal of the Anti-Ice Valve 17HH (37HH) Installation of the Anti-Ice Valve 17HH (37HH) |
|             | ASM        | 21-61/04                             |  |
|             | 3 F        | ault Confirmation                    |  |

3. Fault Confirmation

R

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

R

EFF: ALL 21-61-00

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#### TROUBLE SHOOTING MANUAL

#### 4. Fault Isolation

R

- A. If the test gives the maintenance message P1 CONT OR ANTI ICE VALVE: - swap the PC 1 (7HH) and the PC 2 (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - (1) If the fault moves with the PC 1:
    - swap back the PC 1 (7HH) and the PC 2 (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
    - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - (2) If the fault does not move with the PC 1:
    - swap back the PC 1 (7HH) and the PC 2 (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
    - replace the VALVE-ANTI ICE (17HH) (Ref. AMM TASK 21-61-41-000-001) and (Ref. AMM TASK 21-61-41-400-001).
  - (3) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-61/04) from:
    - the VALVE (17HH)A pin A and the PC 1 (7HH)AB pin 8A and,
    - the VALVE (17HH)A pins B and C to ground.

R

- B. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

EFF: ALL 21-61-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-819

Pack 2 Anti Ice Valve Fault

- 1. Possible Causes
  - CONTROLLER-PACK 2 TEMP (27HH)
  - VALVE-ANTI-ICE (37HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

|             | REFE       | RENCE                                | DESIGNATION  |
|-------------|------------|--------------------------------------|--|
|             | AMM        | 21-61-00-710-001                     | Operational Test of the Pack Temperature-Control System                                  |
| _           | AMM        | 21-61-34-000-001                     | Removal of the Pack Controller (7HH, 27HH)   |
| R<br>R<br>R | AMM        | 21-61-34-400-001                     | Installation of the Pack Controller (7HH, 27HH)  |
|             | AMM<br>AMM | 21-61-41-000-001<br>21-61-41-400-001 | Removal of the Anti-Ice Valve 17HH (37HH) Installation of the Anti-Ice Valve 17HH (37HH) |
|             | ASM        | 21-61/02                             |  |
|             | 3 F        | ault Confirmation                    |  |

3. Fault Confirmation

R

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

R

EFF: ALL 21-61-00

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#### TROUBLE SHOOTING MANUAL

#### 4. Fault Isolation

R

- A. If the test gives the maintenance message P2 CONT OR ANTI ICE VALVE: - swap the PC 2 (27HH) and the PC 1 (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - (1) If the fault moves with the PC 2:
    - swap back the PC 2 (27HH) and the PC 1 (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
    - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - (2) If the fault does not move with the PC 2:
    - swap back the PC 2 (27HH) and the PC 1 (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
    - replace the VALVE-ANTI-ICE (37HH) (Ref. AMM TASK 21-61-41-000-001) and (Ref. AMM TASK 21-61-41-400-001).
  - (3) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-61/02) from:
    - the VALVE (37HH)A pin A and the PC 2 (27HH)AB pin 8A and,
    - the VALVE (37HH)A pins B and C to ground.

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- B. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

EFF: ALL

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### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-820

Pack 1 Electrical Component with Short Circuit (AIR PACK 1 REGUL FAULT)

#### 1. Possible Causes

- ACTUATOR-AIR INLET FLAP (8HH)
- ACTUATOR-AIR OUTLET FLAP (9HH)
- CONTROLLER-PACK 1 TEMP (7HH)
- SENSOR-WATER EXTRACTOR TEMPERATURE (11HH)
- VALVE-TURBINE BYPASS (10HH)
- SENSOR-COMPRESSOR TEMPERATURE (12HH)
- VALVE-FLOW CTL (11HB)
- SENSOR-PACK INLET PRESSURE (16HH)
- wiring

#### 2. Job Set-up Information

A. Referenced Information

|                  | REFERENCE  |                              | DESIGNATION  |
|------------------|------------|------------------------------|--|
| R<br>R<br>R<br>R | AMM        | 21-51-51-000-001             | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit         |
|                  | AMM        | 21-51-51-400-001             | Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit    |
|                  | AMM        | 21-61-00-710-001             | Operational Test of the Pack Temperature-Control System                |
|                  | AMM        | 21-61-11-000-001             | Removal of the Compressor Outlet - Temperature Sensor 12HH (32HH)      |
|                  | AMM        | 21-61-11-400-001             | Installation of the Compressor Outlet - Temperature Sensor 12HH (32HH) |
|                  | AMM        | 21-61-13-000-001             | Removal of the Water-Extractor Temperature Sensors 11HH and 31HH       |
|                  | AMM        | 21-61-13-400-001             | Installation of the Water-Extractor Temperature Sensors 11HH and 31HH  |
|                  | AMM        | 21-61-16-000-001             | Removal of the Pack-Inlet Pressure Sensor 16HH (36HH)                  |
|                  | AMM        | 21-61-16-400-002             | Installation of the Pack-Inlet Pressure Sensor 16HH (36HH)             |
|                  | AMM        | 21-61-34-000-001             | Removal of the Pack Controller (7HH, 27HH)                             |
|                  | AMM        | 21-61-34-400-001             | Installation of the Pack Controller (7HH, 27HH)                        |
|                  | AMM        | 21-61-51-000-001             | Removal of the Air-Inlet Flap Actuator 8HH and 28HH                    |
|                  | AMM        | 21-61-51-400-001             | <pre>Installation of the Air-Inlet Flap Actuator 8HH and 28HH</pre>    |
|                  | AMM        | 21-61-52-000-001             | Removal of the Air-Outlet Flap Actuator 9HH (29HH)                     |
|                  | AMM        | 21-61-52-400-001             | Installation of the Air-Outlet Flap Actuator 9HH (29HH)                |
|                  | AMM        | 21-61-53-000-001             | Removal of the Bypass Valve 10HH (30HH)                                |
|                  | AMM<br>ASM | 21-61-53-400-001<br>21-51/01 | Installation of the Bypass Valve 10HH (30HH)                           |

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EFF:

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#### TROUBLE SHOOTING MANUAL

REFERENCE DESIGNATION

ASM 21-61/02 ASM 21-61/04 AWM 21-61-09

- 3. Fault Confirmation
- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - A. Warning Confirmation

NOTE: This Para. and the Paras. B, C and D which follow are work steps necessary to confirm the nature (spurious or actual) of the ECAM warning AIR PACK1 REGUL FAULT.

- (1) On the panel 130VU push the MASTER CAUT pushbutton switch.
- B. Open this(these) circuit breaker(s):

PANEL DESIGNATION IDENT. LOCATION

122VU AIR COND/PACK TEMP/CTL SYS1/1/115VAC 1HH X22
122VU AIR COND/PACK TEMP CTL SYS2/1/115VAC 2HH Y18

C. Close this(these) circuit breaker(s):

PANEL DESIGNATION IDENT. LOCATION

122VU AIR COND/PACK TEMP/CTL SYS1/1/115VAC 1HH X22

122VU AIR COND/PACK TEMP CTL SYS2/1/115VAC 2HH Y18

D. Wait for a minimum of 60 seconds.

\*\*ON A/C ALL

- E. Test
  - (1) Do a read out of the post flight report and do the operational test of the pack-temperature control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If the test finds a fault the PC gives a fault code for shop maintenance and also the related CFDS message(s) (refer to chapter 21-63-00 page block 301).

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### 4. Fault Isolation

- A. \* If the post flight report gives the warning AIR PACK 1 REGUL FAULT without a maintenance message and,
  - \* no AIR PACK 1 REGUL FAULT warning shows on the ECAM upper DU and,
  - \* no maintenance message shows:
  - no further action is necessary.
    - \*\* If the post flight report gives the warning AIR PACK 1 REGUL FAULT and.
    - \*\* the ECAM upper DU shows the warning AIR PACK 1 REGUL FAULT or,
    - \*\*\* If the post flight report gives the warning AIR PACK 1 REGUL FAULT with,
    - \*\*\* the maintenance message NO DATA FROM P1 CONT and,
    - \*\*\* the operational test of the pack-temperature control system gives the maintenance message NO TEST RECEPTION FROM P1 CONT:
  - do the work steps which follow.

NOTE: Additional Information

For wiring and pin identification used in this procedure:

(Ref. ASM 21-51/01),

(Ref. ASM 21-61/02),

(Ref. ASM 21-61/04) and,

(Ref. AWM 21-61-09).

For disconnection/reconnection of electrical connectors refer to the applicable work step AMM TASK reference in the applicable paras. 4. A, B, C and D.

- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - B. Check for Short Circuit at the ACTUATOR-AIR INLET FLAP (8HH) and ACTUATOR-AIR OUTLET FLAP (9HH) 115VAC Supply Lines
    - (1) Remove the CONTROLLER-PACK 1 TEMP (7HH), (Ref. AMM TASK 21-61-34-000-001):
      - at the electrical connector (7HH/AB) do a check for a short circuit between,
        - \* pins 15A and 14B and,
        - \* GND and pins 15A and 14B.
      - at the electrical connector (7HH/AA) do a check for a short circuit between,
        - \* pins 4B and 4C and,
        - \* GND and pins 4B and 4C.
      - (a) If there is no short circuit install the CONTROLLER-PACK 1 TEMP (7HH)

(Ref. AMM TASK 21-61-34-400-001).

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### TROUBLE SHOOTING MANUAL

- (b) If there is a short circuit at the connector (7HH/AB) disconnect the electrical connector (8HH/A) from the ACTUATOR-AIR INLET FLAP (8HH):
  - at the electrical connector (8HH/A) do a check for a short circuit between,
    - \* pins J and N and,
    - \* GND and pins J and N.
  - if there is a short circuit repair the related wiring between,
    - \* connector (8HH/A) pin J and PC connector (7HH/AB) pin 15A,
    - \* connector (8HH/A) pin N and PC connector (7HH/AB) pin 14B.
  - if there is no short circuit in the wiring replace the ACTUATOR-AIR INLET FLAP (8HH),

(Ref. AMM TASK 21-61-51-000-001) and,

(Ref. AMM TASK 21-61-51-400-001).

- (c) If there is a short circuit at the connector (7HH/AA) disconnect the electrical connector (9HH/A) from the ACTUATOR-AIR OUTLET FLAP (9HH):
  - at the electrical connector (9HH/A) do a check for a short circuit between,
    - \* pins J and N and,
    - \* GND and pins J and N.
  - if there is a short circuit repair the related wiring between,
    - \* connector (9HH/A) pin J and PC connector (7HH/AB) pin 4B,
    - \* connector (9HH/A) pin N and PC connector (7HH/AB) pin 4C.
  - if there is no short circuit in the wiring replace the ACTUATOR-AIR OUTLET FLAP (9HH),

(Ref. AMM TASK 21-61-52-000-001) and,

(Ref. AMM TASK 21-61-52-400-001).

- install the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-400-001).

\*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

- B. Check for short circuit at the ACTUATOR-AIR INLET FLAP (8HH) 115VAC supply lines
  - (1) Remove the CONTROLLER-PACK 1 TEMP (7HH), (Ref. AMM TASK 21-61-34-000-001):
    - at the electrical connector (7HH/AB) do a check for a short circuit between,
      - \* pins 15A and 14B and,
      - \* GND and pins 15A and 14B.
    - (a) If there is no short circuit install the CONTROLLER-PACK 1 TEMP (7HH)

(Ref. AMM TASK 21-61-34-400-001).

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### TROUBLE SHOOTING MANUAL

- (b) If there is a short circuit at the connector (7HH/AB) disconnect the electrical connector (8HH/A) from the ACTUATOR-AIR INLET FLAP (8HH):
  - do a check for a short circuit between,
    - \* pins J and N and,
    - \* GND and pins J and N.
  - if there is a short circuit repair the related wiring between,
    - \* connector (8HH/A) pin J and PC connector (7HH/AB) pin 15A,
    - \* connector (8HH/A) pin N and PC connector (7HH/AB) pin 14B.
  - if there is no short circuit in the wiring replace the ACTUATOR-AIR INLET FLAP (8HH),

(Ref. AMM TASK 21-61-51-000-001) and,

(Ref. AMM TASK 21-61-51-400-001).

- install the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-400-001).

#### \*\*ON A/C ALL

- C. If the fault continues:
  - (1) Swap the PC 1 (7HH) and the PC 2 (27HH) (Ref. AMM TASK 21-61-34-000-001) and, (Ref. AMM TASK 21-61-34-400-001).
    - (a) If the fault moves with the PC 1:
      - swap back the PC 1 (7HH) and the PC 2 (27HH) (Ref. AMM TASK 21-61-34-000-001) and,

(Ref. AMM TASK 21-61-34-400-001).

- replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and, (Ref. AMM TASK 21-61-34-400-001).
- (2) If the fault does not move with the PC 1:
  - swap back the PC 1 (7HH) and the PC 2 (27HH) (Ref. AMM TASK 21-61-34-000-001) and, (Ref. AMM TASK 21-61-34-400-001).
- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - D. If the fault continues:
    - (1) Disconnect the electrical connector (11HH/A) from the SENSOR-WATER EXTRACTOR TEMPERATURE (11HH),
      - make sure that the electrical connector is clean and in the correct condition,
      - at the electrical connector (11HH/A) do a check for voltage between,

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\* pins E and F.

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- (a) If the voltage is between 4.8VDC and 5.2VDC: - replace the SENSOR-WATER EXTRACTOR TEMPERATURE (11HH) (Ref. AMM TASK 21-61-13-000-001) and, (Ref. AMM TASK 21-61-13-400-001).
- (b) If the voltage is not between 4.8VDC and 5.2VDC:
  - disconnect the electrical connector (8HH/A) from the ACTUATOR-AIR INLET FLAP (8HH),
  - make sure that the electrical connector is clean and in the correct condition,
  - at the electrical connector (11HH/A) do a check for voltage again.
  - 1 If the voltage is between 4.8VDC and 5.2VDC:
    - replace the ACTUATOR-AIR INLET FLAP (8HH)
       (Ref. AMM TASK 21-61-51-000-001) and,
       (Ref. AMM TASK 21-61-51-400-001).
    - connect the electrical connector (11HH/A).
  - 2 If the voltage is not between 4.8VDC and 5.2VDC:
    - connect the electrical connector (8HH/A),
    - repeat para. 4.D.(1).(b) for,
      - \* connector (9HH/A) and the ACTUATOR-AIR OUTLET FLAP (9HH)

(Ref. AMM TASK 21-61-52-000-001) and

(Ref. AMM TASK 21-61-52-400-001),

\* connector (10HH/A) and the VALVE-TURBINE BYPASS (10HH)

(Ref. AMM TASK 21-61-53-000-001) and,

(Ref. AMM TASK 21-61-53-400-001),

\* connector (12HH/A) and the SENSOR-COMPRESSOR TEMPERATURE (12HH)

(Ref. AMM TASK 21-61-11-000-001) and,

(Ref. AMM TASK 21-61-11-400-001),

\* connector (11HB/A) and the VALVE-FLOW CTL (11HB)

(Ref. AMM TASK 21-51-51-000-001) and,

(Ref. AMM TASK 21-51-51-400-001).

\*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

- D. If the fault continues:
  - (1) Disconnect the electrical connector (11HH/A) from the SENSOR-WATER EXTRACTOR TEMPERATURE (11HH),
    - make sure that the electrical connector is clean and in the correct condition,
    - at the electrical connector (11HH/A) do a check for voltage between,
      - \* pins E and F.

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- (a) If the voltage is between 9.6VDC and 10.4VDC:
  - replace the SENSOR-WATER EXTRACTOR TEMPERATURE (11HH) (Ref. AMM TASK 21-61-13-000-001) and, (Ref. AMM TASK 21-61-13-400-001).
- (b) If the voltage is not between 9.6VDC and 10.4VDC:
  - disconnect the electrical connector (8HH/A) from the ACTUATOR-AIR INLET FLAP (8HH),
  - make sure that the electrical connector is clean and in the correct condition,
  - at the electrical connector (11HH/A) do a check for voltage again.
  - 1 If the voltage is between 9.6VDC and 10.4VDC:
    - replace the ACTUATOR-AIR INLET FLAP (8HH) (Ref. AMM TASK 21-61-51-000-001) and, (Ref. AMM TASK 21-61-51-400-001).
    - connect the electrical connector (11HH/A).
  - 2 If the voltage is not between 9.6VDC and 10.4VDC:
    - connect the electrical connector (8HH/A),
      - repeat para. 4.D.(1).(b) for,
        - \* connector (10HH/A) and the VALVE-TURBINE BYPASS (10HH)

(Ref. AMM TASK 21-61-53-000-001) and,

(Ref. AMM TASK 21-61-53-400-001),

\* connector (12HH/A) and the SENSOR-COMPRESSOR TEMPERATURE (12HH)

(Ref. AMM TASK 21-61-11-000-001) and,

(Ref. AMM TASK 21-61-11-400-001),

\* connector (11HB/A) and the VALVE-FLOW CTL (11HB)

(Ref. AMM TASK 21-51-51-000-001) and,

(Ref. AMM TASK 21-51-51-400-001).

#### \*\*ON A/C ALL

- E. If the fault continues:
  - (1) disconnect the electrical connector (7559VC/A) from the SENSOR-PACK INLET PRESSURE (16HH).
    - make sure that the electrical connector is clean and in the correct condition.
    - at the electrical connector (7559VC) do a check for 15VDC from pack controller primary channel between,
      - \* pins A and C (+15VDC) and,
      - \* D and C (-15VDC).
    - (a) If the voltage is correct:
      - replace the SENSOR-PACK INLET PRESSURE (16HH)
         (Ref. AMM TASK 21-61-16-000-001) and,
         (Ref. AMM TASK 21-61-16-400-002).
      - connect the electrical connector (7559VC/A).

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- (2) If the fault continues:
  - Remove the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001),
  - disconnect the electrical connector (11HH/A) from the SENSOR-WATER EXTRACTOR TEMPERATURE (11HH),
  - at the electrical connector (11HH/A) do a check for a short circuit between,
    - \* pins E and F and,
    - \* GND and pins E and F.
  - (a) If there is no short circuit connect the electrical connector (11HH/A).
  - (b) If there is a short circuit repair the related wiring between,
    - \* connector (11HH/A) pin E and PC 1 connector (7HH/AA) pin 14A,
      - \* connector (11HH/A) pin F and PC 1 connector (7HH/AA) pin 14B.
      - connect the electrical connector (11HH/A).
- (3) If the fault continues:
  - disconnect the electrical connector (8HH/A) from the ACTUATOR-AIR INLET FLAP (8HH),
  - at the electrical connector (8HH/A) do a check for a short circuit between,
    - \* pins A and B, A and C, B and C and,
    - \* GND and pins A, B and C.
  - (a) If there is no short circuit connect the electrical connector (8HH/A).
  - (b) If there is a short circuit repair the related wiring between,
    - \* connector (8HH/A) pin A and PC 1 connector (7HH/AA) pin 11D,
    - \* connector (8HH/A) pin B and PC 1 connector (7HH/AA) pin 12A,
    - \* connector (8HH/A) pin C and PC 1 connector (7HH/AA) pin 12B:
    - connect the electrical connector (8HH/A).
- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - F. If the fault continues:
    - (1) Disconnect the electrical connector (9HH/A) from the ACTUATOR-AIR OUTLET FLAP (9HH),
      - at the electrical connector (9HH/A) do a check for a short circuit between,
        - \* pins A and B, A and C, B and C and,
        - \* GND and pins A, B and C.
      - (a) If there is no short circuit connect the electrical connector (9HH/A).

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- (b) If there is a short circuit repair the related wiring between,
  - \* connector (9HH/A) pin A and PC 1 connector (7HH/AA) pin 12C,
  - \* connector (9HH/A) pin B and PC 1 connector (7HH/AA) pin 12D,
  - \* connector (9HH/A) pin C and PC 1 connector (7HH/AA) pin 13A.
  - connect the electrical connector (9HH/A).

#### G. If the fault continues:

- (1) Disconnect the electrical connector (10HH/A) from the VALVE-TURBINE BYPASS (10HH),
  - at the electrical connector (10HH/A) do a check for a short circuit between,
    - \* pins N and P, N and R, P and R and,
    - \* GND and pins N, P and R.
  - (a) If there is no short circuit connect the electrical connector (10HH/A).
  - (b) If there is a short circuit repair the related wiring between,
    - \* connector (10HH/A) pin N and PC 1 connector (7HH/AA) pin 13B,
    - \* connector (10HH/A) pin P and PC 1 connector (7HH/AA) pin 13C,
    - \* connector (10HH/A) pin R and PC 1 connector (7HH/AA) pin 13D.
    - connect the electrical connector (10HH/A).

\*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

#### G. If the fault continues:

- (1) Disconnect the electrical connector (10HH/A) from the VALVE-TURBINE BYPASS (10HH),
  - at the electrical connector (10HH/A) do a check for a short circuit between,
    - $\star$  pins U and J, U and K, U and L, J and K, J and L, K and L, C and D and.
    - \* GND and pins U, J, K, L and C.
  - (a) If there is no short circuit connect the electrical connector (10HH/A).
  - (b) If there is a short circuit repair the related wiring between,
    - \* connector (10HH/A) pin U and PC 1 connector (7HH/AA) pin 2A,
    - \* connector (10HH/A) pin J and PC 1 connector (7HH/AA) pin 2B,
    - \* connector (10HH/A) pin K and PC 1 connector (7HH/AA) pin 2C,
    - \* connector (10HH/A) pin L and PC 1 connector (7HH/AA) pin 2D,
    - \* connector (10HH/A) pin C and PC 1 connector (7HH/AB) pin 5B.
    - connect the electrical connector (10HH/A).

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- H. If the fault continues:
  - (1) Disconnect the electrical connector (12HH/A) from the SENSOR-COMPRESSOR TEMPERATURE (12HH),
    - at the electrical connector (12HH/A) do a check for a short circuit between,
      - \* pins A and B, A and C, B and C and,
      - \* GND and pins A, B and C.
    - (a) If there is no short circuit connect the electrical connector (12HHA).
    - (b) If there is a short circuit repair the related wiring between,
      - \* connector (12HH/A) pin A and PC 1 connector (7HH/AA) pin 15A,
      - \* connector (12HH/A) pin B and PC 1 connector (7HH/AA) pin 14D,
      - \* connector (12HH/A) pin C and PC 1 connector (7HH/AA) pin 14C.
      - connect the electrical connector (12HH/A).
  - (2) If the fault continues:
    - disconnect the electrical connector (7559VC/A),
    - at the connector (7559VC) do a check for a short circuit between,
      - \* pins A and B, A and C, A and D, B and C, B and D, C and D and,
      - \* GND and pins A, B, C and D.
    - (a) If there is no short circuit connect the electrical connector (7559VC/A).
    - (b) If there is a short circuit repair the related wiring between,
      - \* connector (7559VC) pin A and PC 1 connector (7HH/AB) pin 15C,
      - \* connector (7559VC) pin D and PC 1 connector (7HH/AB) pin 15D,
      - \* connector (7559VC) pin C and PC 1 connector (7HH/AA) pin 10C,
      - \* connector (7559VC) pin B and PC 1 connector (7HH/AA) pin 10D.
      - connect the electrical connector (7559VC/A).
  - (3) If the fault continues:
    - disconnect the electrical connector (11HB/A) from the VALVE-FLOW CTL (11HB),
    - at the electrical connector (11HB/A) do a check for a short circuit between,
      - \* pins J and K, J and L, K and L and,
      - \* GND and pins J, K and L.
    - (a) If there is no short circuit connect the electrical connector (11HB/A).
    - (b) If there is a short circuit repair the related wiring between,
      - \* connector (11HB/A) pin J and PC 1 connector (7HH/AA) pin 11C,
      - \* connector (11HB/A) pin K and PC 1 connector (7HH/AA) pin 11B,
      - \* connector (11HB/A) pin L and PC 1 connector (7HH/AA) pin 11A.

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- connect the electrical connector (11HB/A).

- (4) Install the CONTROLLER-PACK 1 TEMP (7HH), (Ref. AMM TASK 21-61-34-400-001).
- J. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

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## TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-821

Pack 2 Electrical Component with Short Circuit (AIR PACK 2 REGUL FAULT)

### 1. Possible Causes

- ACTUATOR-AIR INLET FLAP (28HH)
- ACTUATOR-AIR OUTLET FLAP (29HH)
- CONTROLLER-PACK 2 TEMP (27HH)
- SENSOR-WATER EXTRACTOR TEMPERATURE (31HH)
- VALVE-TURBINE BYPASS (30HH)
- SENSOR-COMPRESSOR TEMPERATURE (32HH)
- VALVE-FLOW CTL (8HB)
- SENSOR-PACK INLET PRESSURE (36HH)
- wiring

### 2. Job Set-up Information

A. Referenced Information

|        | REFERENCE D |                              | DESIGNATION  |
|--------|-------------|------------------------------|--|
|        |             |                              |  |
| R<br>R | AMM         | 21-51-51-000-001             | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit         |
| R<br>R | AMM         | 21-51-51-400-001             | Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit    |
|        | AMM         | 21-61-00-710-001             | Operational Test of the Pack Temperature-Control System                |
|        | AMM         | 21-61-11-000-001             | Removal of the Compressor Outlet - Temperature Sensor 12HH (32HH)      |
|        | AMM         | 21-61-11-400-001             | Installation of the Compressor Outlet - Temperature Sensor 12HH (32HH) |
|        | AMM         | 21-61-13-000-001             | Removal of the Water-Extractor Temperature Sensors 11HH and 31HH       |
|        | AMM         | 21-61-13-400-001             | Installation of the Water-Extractor Temperature Sensors 11HH and 31HH  |
|        | AMM         | 21-61-16-000-001             | Removal of the Pack-Inlet Pressure Sensor 16HH (36HH)                  |
|        | AMM         | 21-61-16-400-002             | Installation of the Pack-Inlet Pressure Sensor 16HH (36HH)             |
|        | AMM         | 21-61-34-000-001             | Removal of the Pack Controller (7HH, 27HH)                             |
|        | AMM         | 21-61-34-400-001             | Installation of the Pack Controller (7HH, 27HH)                        |
|        | AMM         | 21-61-51-000-001             | Removal of the Air-Inlet Flap Actuator 8HH and 28HH                    |
|        | AMM         | 21-61-51-400-001             | Installation of the Air-Inlet Flap Actuator 8HH and 28HH               |
|        | AMM         | 21-61-52-000-001             | Removal of the Air-Outlet Flap Actuator 9HH (29HH)                     |
|        | AMM         | 21-61-52-400-001             | Installation of the Air-Outlet Flap Actuator 9HH (29HH)                |
|        | AMM         | 21-61-53-000-001             | Removal of the Bypass Valve 10HH (30HH)                                |
|        |             | 21-61-53-400-001<br>21-51/01 | Installation of the Bypass Valve 10HH (30HH)                           |

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EFF:

#### TROUBLE SHOOTING MANUAL

REFERENCE DESIGNATION

ASM 21-61/02 ASM 21-61/04 AWM 21-61-09

- 3. Fault Confirmation
- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - A. Warning Confirmation

NOTE: This Para. and the Paras. B, C and D which follow are work steps necessary to confirm the nature (spurious or actual) of the ECAM warning AIR PACK2 REGUL FAULT.

- (1) On the panel 130VU push the MASTER CAUT pushbutton switch.
- B. Open this(these) circuit breaker(s):

PANEL DESIGNATION IDENT. LOCATION

122VU AIR COND/PACK TEMP/CTL SYS1/2/115VAC 21HH W22
122VU AIR COND/PACK TEMP CTL SYS2/2/115VAC 22HH Y20

C. Close this(these) circuit breaker(s):

PANEL DESIGNATION IDENT. LOCATION

122VU AIR COND/PACK TEMP/CTL SYS1/2/115VAC 21HH W22
122VU AIR COND/PACK TEMP CTL SYS2/2/115VAC 22HH Y20

D. Wait for a minimum of 60 seconds.

\*\*ON A/C ALL

- E. Test
  - (1) Do a read out of the post flight report and do the operational test of the pack-temperature control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If the test finds a fault the PC gives a fault code for shop maintenance and also the related CFDS message(s) (refer to chapter 21-63-00 page block 301).

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### TROUBLE SHOOTING MANUAL

### 4. Fault Isolation

- A. \* If the post flight report gives the warning AIR PACK 2 REGUL FAULT without a maintenance message and,
  - \* no AIR PACK 2 REGUL FAULT shows on the ECAM upper DU and,
  - no further action is necessary.
    - \*\* If the post flight report gives the warning AIR PACK 2 REGUL FAULT and,
    - \*\* the ECAM upper DU gives the warning AIR PACK 2 REGUL FAULT or,
    - \*\*\* If the post flight report gives the warning AIR PACK 2 REGUL FAULT with,
    - \*\*\* the maintenance message NO DATA FROM P2 CONT and,
    - \*\*\* the operational test of the pack-temperature control system gives the maintenance message NO TEST RECEPTION FROM P2 CONT:
  - do the work steps which follow.

NOTE: Additional Information

For wiring and pin identification used in this procedure:

(Ref. ASM 21-51/01),

(Ref. ASM 21-61/02),

(Ref. ASM 21-61/04) and,

(Ref. AWM 21-61-09).

For disconnection/reconnection of electrical connectors refer to the applicable work step AMM TASK reference in the applicable paras. 4. A, B, C and D.

- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - B. Check for Short Circuit at the ACTUATOR-AIR INLET FLAP (28HH) and ACTUATOR-AIR OUTLET FLAP (29HH) 115VAC Supply Lines
    - (1) Remove the CONTROLLER-PACK 2 TEMP (27HH)

(Ref. AMM TASK 21-61-34-000-001):

- at the electrical connector (27HH/AB) do a check for a short circuit between,
  - \* pins 15A and 14B and,
  - \* GND and pins 15A and 14B,
- at the electrical connector (27HH/AA) do a check for a short circuit between,
  - \* pins 4B and 4C and,
  - \* GND and pins 4B and 4C.
- (a) If there is no short circuit install the CONTROLLER-PACK 2 TEMP (27HH)

(Ref. AMM TASK 21-61-34-400-001).

- (b) If there is a short circuit at the connector (27HH/AB) disconnect the electrical connector (28HH/A) from the ACTUATOR-AIR INLET FLAP (28HH):
  - at the electrical connector (28HH/A) do a check for a short circuit between,

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- \* pins J and N and,
- \* GND and pins J and N,
- if there is a short circuit repair the related wiring between,
   \* connector (28HH/A) pin J and PC connector (27HH/AB) pin 15A,
   \* connector (28HH/A) pin N and PC connector (27HH/AB) pin 14B.
- if there is no short circuit in the wiring replace the

ACTUATOR-AIR INLET FLAP (28HH) (Ref. AMM TASK 21-61-51-000-001) and, (Ref. AMM TASK 21-61-51-400-001).

- (c) If there is a short circuit at the electrical connector (27HH/AA) disconnect the electrical connector (29HH/A) from the ACTUATOR-AIR OUTLET FLAP (29HH):
  - at the electrical connector (29HH/A) do a check for a short circuit between,
    - \* pins J and N and,
    - \* GND and pins J and N,
  - if there is a short circuit repair the related wiring between,
     \* connector (29HH/A) pin J and PC connector (27HH/AA) pin 4B,
    - \* connector (29HH/A) pin N and PC connector (27HH/AA) pin 4C.
  - if there is no short circuit in the wiring replace the ACTUATOR-AIR OUTLET FLAP (29HH)

    (Pef AMM TASK 21-61-52-000-001) and

(Ref. AMM TASK 21-61-52-000-001) and, (Ref. AMM TASK 21-61-52-400-001).

- install the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-400-001).

\*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

- B. Check for Short Circuit at the ACTUATOR-AIR INLET FLAP (28HH) 115VAC Supply Lines
  - (1) Remove the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001):
    - at the electrical connector (27HH/AB) do a check for a short circuit between,
      - \* pins 15A and 14B and,
      - \* GND and pins 15A and 14B,
    - (a) If there is no short circuit install the CONTROLLER-PACK 2 TEMP (27HH)

      (Ref. AMM TASK 21-61-34-400-001).
    - (b) If there is a short circuit at the connector (27HH/AB) disconnect the electrical connector (28HH/A) from the ACTUATOR-AIR INLET FLAP (28HH):
      - at the electrical connector (28HH/A) do a check for a short circuit between,
        - \* pins J and N and,
        - \* GND and pins J and N,
      - if there is a short circuit repair the related wiring between,

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- \* connector (28HH/A) pin J and PC connector (27HH/AB) pin 15A,
- \* connector (28HH/A) pin N and PC connector (27HH/AB) pin 14B.
- if there is no short circuit in the wiring replace the ACTUATOR-AIR INLET FLAP (28HH) (Ref. AMM TASK 21-61-51-000-001) and,

(Ref. AMM TASK 21-61-51-000-001) and,

- install the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-400-001).

#### \*\*ON A/C ALL

- C. If the fault continues:
  - (1) Swap the PC 2 (27HH) and the PC 1 (7HH) (Ref. AMM TASK 21-61-34-000-001) and, (Ref. AMM TASK 21-61-34-400-001).
  - (2) If the fault moves with the PC 2:
    - swap back the PC 2 (27HH) and the PC 1 (7HH) (Ref. AMM TASK 21-61-34-000-001) and, (Ref. AMM TASK 21-61-34-400-001).
    - replace the CONTROLLER-PACK 2 TEMP (27HH)
       (Ref. AMM TASK 21-61-34-000-001) and,
       (Ref. AMM TASK 21-61-34-400-001).
  - (3) If the fault does not move with the PC 2:
     swap back the PC 2 (27HH) and the PC 1 (7HH)
    (Ref. AMM TASK 21-61-34-000-001) and,
    (Ref. AMM TASK 21-61-34-400-001).
- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - D. If the fault continues:
    - (1) Disconnect the electrical connector (31HH/A) from the SENSOR-WATER EXTRACTOR TEMPERATURE (31HH),
      - make sure that the electrical connector is clean and in the correct condition,
      - at the electrical connector (31HH/A) do a check for voltage between,
        - \* pins E and F.
      - (a) If the voltage is between 4.8VDC and 5.2VDC:
        - replace the SENSOR-WATER EXTRACTOR TEMPERATURE (31HH)
           (Ref. AMM TASK 21-61-13-000-001) and,
           (Ref. AMM TASK 21-61-13-400-001).

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### TROUBLE SHOOTING MANUAL

- (b) If the voltage is not between 4.8VDC and 5.2VDC:
  - disconnect the electrical connector (28HH/A) from the ACTUATOR-AIR INLET FLAP (28HH),
  - make sure that the electrical connector is clean and in the correct condition.
  - at the electrical connector (31HH/A) do a check for voltage again.
  - 1 If the voltage is between 4.8VDC and 5.2VDC:
    - replace the ACTUATOR-AIR INLET FLAP (28HH) (Ref. AMM TASK 21-61-51-000-001) and, (Ref. AMM TASK 21-61-51-400-001).
    - connect the electrical connector (31HH/A).
  - 2 If the voltage is not between 4.8VDC and 5.2VDC:
    - connect the electrical connector (28HHA) (Ref. AMM TASK 21-61-51-400-001).
    - repeat para. 4.D.(1).(b) for:
      - \* connector (29HH/A) and the ACTUATOR-AIR OUTLET FLAP (29HH)

(Ref. AMM TASK 21-61-52-000-001) and,

(Ref. AMM TASK 21-61-52-400-001),

\* connector (30HH/A) and the VALVE-TURBINE BYPASS (30HH)

(Ref. AMM TASK 21-61-53-000-001) and,

(Ref. AMM TASK 21-61-53-400-001),

 $\star$  connector (32HH/A) and the SENSOR-COMPRESSOR TEMPERATURE (32HH)

(Ref. AMM TASK 21-61-11-000-001) and,

(Ref. AMM TASK 21-61-11-400-001),

\* connector (8HB/A) and the VALVE-FLOW CTL (8HB)

(Ref. AMM TASK 21-51-51-000-001) and,

(Ref. AMM TASK 21-51-51-400-001).

- connect the electrical connector (31HH/A).

\*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

- D. If the fault continues:
  - (1) Disconnect the electrical connector (31HH/A) from the SENSOR-WATER EXTRACTOR TEMPERATURE (31HH),
    - make sure that the electrical connector is clean and in the correct condition,
    - at the electrical connector (31HH/A) do a check for voltage between,
      - \* pins E and F.
    - (a) If the voltage is between 9.6VDC and 10.4VDC:
      - replace the SENSOR-WATER EXTRACTOR TEMPERATURE (31HH) (Ref. AMM TASK 21-61-13-000-001) and, (Ref. AMM TASK 21-61-13-400-001).

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- (b) If the voltage is not between 9.6VDC and 10.4VDC:
  - disconnect the electrical connector (28HH/A) from the ACTUATOR-AIR INLET FLAP (28HH),
  - make sure that the electrical connector is clean and in the correct condition.
  - at the electrical connector (31HH/A) do a check for voltage again.
  - 1 If the voltage is between 9.4VDC and 10.4VDC:
    - replace the ACTUATOR-AIR INLET FLAP (28HH) (Ref. AMM TASK 21-61-51-000-001) and, (Ref. AMM TASK 21-61-51-400-001).
    - connect the electrical connector (31HH/A).
  - 2 If the voltage is not between 9.6VDC and 10.4VDC:
    - connect the electrical connector (28HHA) (Ref. AMM TASK 21-61-51-400-001).
    - repeat para. 4.D.(1).(b) for:
      - \* connector (30HH/A) and the VALVE-TURBINE BYPASS (30HH)

(Ref. AMM TASK 21-61-53-000-001) and,

(Ref. AMM TASK 21-61-53-400-001),

\* connector (32HH/A) and the SENSOR-COMPRESSOR TEMPERATURE (32HH)

(Ref. AMM TASK 21-61-11-000-001) and,

(Ref. AMM TASK 21-61-11-400-001),

\* connector (8HB/A) and the VALVE-FLOW CTL (8HB)

(Ref. AMM TASK 21-51-51-000-001) and,

(Ref. AMM TASK 21-51-51-400-001).

- connect the electrical connector (31HH/A).

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- E. If the fault continues:
  - (1) Disconnect the electrical connector (7560VC/A) (Ref. AMM TASK 21-61-16-000-001).
    - make sure that the electrical connector is clean and in the correct condition.
    - at the electrical connector (7560VC) do a check for 15VDC from the pack controller primary channel between,
      - \* pins A and C (+15VDC) and,
      - \* pins D and C (-15VDC).
    - (a) If the voltage is correct:
      - replace the SENSOR-PACK INLET PRESSURE (36HH)
         (Ref. AMM TASK 21-61-16-000-001) and,
         (Ref. AMM TASK 21-61-16-400-002).

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- (2) If the fault continues:
  - remove the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001),
  - disconnect the electrical connector (31HH/A) from the SENSOR-WATER EXTRACTOR TEMPERATURE (31HH),
  - at the electrical connector (31HH/A) do a check for a short circuit between,
    - \* pins E and F and,
    - \* GND and pins E and F.
  - (a) If there is no short circuit connect the electrical connector (31HH/A).
  - (b) If there is a short circuit repair the related wiring between,
    - \* connector (31HH/A) pin E and PC 2 connector (27HH/AA) pin 14A,
    - \* connector (31HH/A) pin F and PC 2 connector (27HH/AA) pin 14B.
    - connect the electrical connector (31HH/A).
- (3) If the fault continues:
  - disconnect the electrical connector (28HH/A) from the ACTUATOR-AIR INLET FLAP (28HH),
  - at the electrical connector (28HH/A) do a check for a short circuit between,
    - \* pins A and B, A and C, B and C and,
    - \* GND and pins A, B and C.
  - (a) If there is no short circuit connect the electrical connector (28HH/A).
  - (b) If there is a short circuit repair the related wiring between,
    - \* connector (28HH/A) pin A and PC 2 connector (27HH/AA) pin 11D,
    - \* connector (28HH/A) pin B and PC 2 connector (27HH/AA) pin 12A,
    - \* connector (28HH/A) pin C and PC 2 connector (27HH/AA) pin 12B.
    - connect the electrical connector (28HH/A).
- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - F. If the fault continues:
    - (1) Disconnect the electrical connector (29HH/A) from the ACTUATOR-AIR OUTLET FLAP (29HH),
      - at the electrical connector (29HH/A) do a check for a short circuit between,
        - \* pins A and B, B and C and,
        - \* GND and pins A, B and C.
      - (a) If there is no short circuit connect the electrical connector (29HH/A).

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### TROUBLE SHOOTING MANUAL

- (b) If there is a short circuit repair the related wiring between,
  - \* connector (29HH/A) pin A and PC 2 connector (27HH/AA) pin 12C,
  - \* connector (29HH/A) pin B and PC 2 connector (27HH/AA) pin 12D,
  - \* connector (29HH/A) pin C and PC 2 connector (27HH/AA) pin 13A.
  - connect the electrical connector (29HH/A).

#### G. If the fault continues:

- (1) Disconnect the electrical connector (30HH/A) from the VALVE-TURBINE BYPASS (30HH),
  - at the electrical connector (30HH/A) do a check for a short circuit between,
    - \* pins N and P, N and R, P and R and,
    - \* GND and pins N, P and R.
  - (a) If there is no short circuit connect the electrical connector (30HH/A).
  - (b) If there is a short circuit repair the related wiring between,
    - \* connector (30HH/A) pin N and PC 2 connector (27HH/AA) pin 13B,
    - \* connector (30HH/A) pin P and PC 2 connector (27HH/AA) pin 13C,
    - \* connector (30HH/A) pin R and PC 2 connector (27HH/AA) pin 13D.
    - connect the electrical connector (30HH/A).

\*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

#### G. If the fault continues:

- (1) Disconnect the electrical connector (30HH/A) from the VALVE-TURBINE BYPASS (30HH),
  - at the electrical connector (30HH/A) do a check for a short circuit between,
    - \* pins U and J, U and K, U and L, J and K, J and L, K and L,
    - \* pins C and D and,
    - \* GND and pins U, J, K, L and C.
  - (a) If there is no short circuit connect the electrical connector (30HH/A).
  - (b) If there is a short circuit repair the related wiring between,
    - \* connector (30HH/A) pin U and PC 2 connector (27HH/AA) pin 2A,
    - \* connector (30HH/A) pin J and PC 2 connector (27HH/AA) pin 2B,
    - \* connector (30HH/A) pin K and PC 2 connector (27HH/AA) pin 2C,
    - \* connector (30HH/A) pin L and PC 2 connector (27HH/AA) pin 2D,
    - \* connector (30HH/A) pin C and PC 2 connector (27HH/AA) pin 5B:
    - connect the electrical connector (30HH/A).

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- H. If the fault continues:
  - (1) Disconnect the electrical connector (32HH/A),
    - at the electrical connector (32HH/A) do a check for a short circuit between,
      - \* pins A and B, B and C and,
      - \* GND and pins A, B and C.
    - (a) If there is no short circuit connect the electrical connector (32HH/A).
    - (b) If there is a short circuit repair the related wiring between,
      - \* connector (32HH/A) pin A and PC 2 connector (27HH/AA) pin 15A,
      - \* connector (32HH/A) pin B and PC 2 connector (27HH/AA) pin 14D,
      - \* connector (32HH/A) pin C and PC 2 connector (27HH/AA) pin 14C.
      - connect the electrical connector (32HH/A).
  - (2) If the fault continues:
    - disconnect the electrical connector (7560VC/A),
    - at the electrical connector (7560VC) do a check for a short circuit between,
      - \* pins A and B, A and C, A and D, B and C, B and D, C and D and,
      - \* GND and pins A, B, C and D.
    - (a) If there is no short circuit connect the electrical connector (7560VC/A).
    - (b) If there is a short circuit repair the related wiring between,
      - \* connector (7560VC) pin A and PC 2 connector (27HH/AB) pin 15C,
      - \* connector (7560VC) pin B and PC 2 connector (27HH/AA) pin 10D,
      - \* connector (7560VC) pin C and PC 2 connector (27HH/AA) pin 10C,
      - \* connector (7560VC) pin D and PC 2 connector (27HH/AB) pin 15D.
      - connect the electrical connector (7560VC/A).
  - (3) If the fault continues:
    - disconnect the electrical connector (8HB/A) from the VALVE-FLOW CTL (8HB).
    - at the electrical connector (8HB/A) do a check for a short circuit between,
      - \* pins J and K, J and L, K and L and,
      - \* GND and pins J, K and L.
    - (a) If there is no short circuit connect the electrical connector (8HB/A).
    - (b) If there is a short circuit repair the related wiring between,
      - \* connector (8HB/A) pin J and PC 2 connector (27HH/AA) pin 11C,
      - \* connector (8HB/A) pin K and PC 2 connector (27HH/AA) pin 11B,
      - \* connector (8HB/A) pin L and PC 2 connector (27HH/AA) pin 11A.

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- connect the electrical connector (8HB/A).

- (4) Install the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-400-001).
- J. Do the test as given in the Para. 3.A.

## 5. Close-up

A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

R

TASK 21-61-00-810-822

Pack 1 Pressure Inlet Sensor Fault

- 1. Possible Causes
  - SENSOR-PACK INLET PRESSURE (16HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFE | RENCE            | DESIGNATION   |  |  |  |  |
|------|------------------|---|--|--|--|--|
| AMM  | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System               |  |  |  |  |
| AMM  | 21-61-16-000-001 | Removal of the Pack-Inlet Pressure Sensor 16HH (36HH)                 |  |  |  |  |
| AMM  | 21-61-16-400-002 | <pre>Installation of the Pack-Inlet Pressure Sensor 16HH (36HH)</pre> |  |  |  |  |
| AWM  | 21-61-04         |   |  |  |  |  |
| AWM  | 21-61-04         |   |  |  |  |  |

### 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

- 4. Fault Isolation
  - A. If the test gives the maintenance message P1 PRESS INL SENSOR:
    - replace the SENSOR-PACK INLET PRESSURE (16HH) (Ref. AMM TASK 21-61-16-000-001) and (Ref. AMM TASK 21-61-16-400-002).
      - (1) If the fault continues:
        - do a check and repair the wiring between: CONNECTOR (7559VC) pin C and PC 1 (7HH) connector AA/10C, CONNECTOR (7559VC) pin B and PC 1 (7HH) connector AA/10D, CONNECTOR (7559VC) pin A and PC 1 (7HH) connector AB/15C, CONNECTOR (7559VC) pin D and PC 1 (7HH) connector AB/15D (Ref. AWM 21-61-04) and (Ref. AWM 21-61-04).

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B. Do the test as given in the Para. 3.A.

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| _  | _ |         |   |
|----|---|---------|---|
| 5. | r | lose-up | ١ |
| J. | · | LUSE-UL | J |

A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-823

Pack 2 Pressure Inlet Sensor Fault

- 1. Possible Causes
  - SENSOR-PACK INLET PRESSURE (36HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFE | RENCE            | DESIGNATION   |  |  |  |  |  |
|------|------------------|---|--|--|--|--|--|
| AMM  | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System               |  |  |  |  |  |
| AMM  | 21-61-16-000-001 | Removal of the Pack-Inlet Pressure Sensor 16HH (36HH)                 |  |  |  |  |  |
| AMM  | 21-61-16-400-002 | <pre>Installation of the Pack-Inlet Pressure Sensor 16HH (36HH)</pre> |  |  |  |  |  |
| AWM  | 21-61-09         |   |  |  |  |  |  |
| AWM  | 21-61-09         |   |  |  |  |  |  |

- 3. Fault Confirmation
  - A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

- 4. Fault Isolation
  - A. If the test gives the maintenance message P2 PRESS INL SENSOR:
     replace the SENSOR-PACK INLET PRESSURE (36HH) (Ref. AMM TASK 21-61-16-000-001) and (Ref. AMM TASK 21-61-16-400-002).
    - (1) If the fault continues:
      - do a check and repair the wiring between: CONNECTOR (7560VC) pin C and PC 2 (27HH) connector AA/10C, CONNECTOR (7560VC) pin B and PC 2 (27HH) connector AA/10D, CONNECTOR (7560VC) pin A and PC 2 (27HH) connector AB/15C, CONNECTOR (7560VC) pin D and PC 2 (27HH) connector AB/15D (Ref. AWM 21-61-09) and (Ref. AWM 21-61-09).
  - B. Do the test as given in the Para. 3.A.

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## TROUBLE SHOOTING MANUAL

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A. Put the aircraft back to its initial configuration.

EFF: ALL

21-61-00

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### TROUBLE SHOOTING MANUAL

R

TASK 21-61-00-810-824

Pack 1 Compressor Temperature Sensor Fault

- 1. Possible Causes
  - SENSOR-COMPRESSOR TEMPERATURE (12HH))
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFE | RENCE            | DESIGNATION   |  |  |  |  |
|------|------------------|---|--|--|--|--|
| AMM  | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System                           |  |  |  |  |
| AMM  | 21-61-11-000-001 | Removal of the Compressor Outlet - Temperature Sensor 12HH (32HH)                 |  |  |  |  |
| AMM  | 21-61-11-400-001 | <pre>Installation of the Compressor Outlet - Temperature Sensor 12HH (32HH)</pre> |  |  |  |  |
| ASM  | 21-61/04         |   |  |  |  |  |

3. Fault Confirmation

R

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

R

4. Fault Isolation

R

- A. If the test gives the maintenance message P1 COMP TEMP SENSOR:
  - replace the SENSOR-COMPRESSOR TEMPERATURE (12HH)) (referred to as SENSOR (12HH)) (Ref. AMM TASK 21-61-11-000-001) and (Ref. AMM TASK 21-61-11-400-001).

EFF: ALL

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## TROUBLE SHOOTING MANUAL

(1) If the fault continues:

- do a check and repair the wiring between: SENSOR (12HH) connector A/C and PC 1 (7HH) connector AA/14C, SENSOR (12HH) connector A/B and PC 1 (7HH) connector AA/14D, SENSOR (12HH) connector A/A and PC 1 (7HH) connector AA/15A (Ref. ASM 21-61/04).

R

B. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

EFF : ALL SROS

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### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-825

Pack 2 Compressor Temperature Sensor Fault

1. Possible Causes

R

- SENSOR-COMPRESSOR TEMPERATURE (32HH))
- wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE             | DESIGNATION   |  |  |  |  |
|-----------------------|---|--|--|--|--|
| AMM 21-61-00-710-001  | Operational Test of the Pack Temperature-Control System                           |  |  |  |  |
| AMM 21-61-11-000-001  | Removal of the Compressor Outlet - Temperature Sensor 12HH (32HH)                 |  |  |  |  |
| AMM 21-61-11-400-001  | <pre>Installation of the Compressor Outlet - Temperature Sensor 12HH (32HH)</pre> |  |  |  |  |
| ASM 21-61/02          |   |  |  |  |  |
| 3. Fault Confirmation |   |  |  |  |  |

3. Fault Confirmation

R

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

R

4. Fault Isolation

R

- A. If the test gives the maintenance message P2 COMP TEMP SENSOR:
  - replace the SENSOR-COMPRESSOR TEMPERATURE (32HH)) (referred to as SENSOR (32HH)) (Ref. AMM TASK 21-61-11-000-001) and (Ref. AMM TASK 21-61-11-400-001).

EFF: ALL **SROS** 

21-61-00

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## TROUBLE SHOOTING MANUAL

- (1) If the fault continues:
  - do a check and repair the wiring between: SENSOR (32HH) connector A/C and PC 2 (27HH) connector AA/14C, SENSOR (32HH) connector A/B and PC 2 (27HH) connector AA/14D, SENSOR (32HH) connector A/A and PC 2 (27HH) connector AA/15A (Ref. ASM 21-61/02).

R

- B. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

EFF : ALL SROS Printed in France 21-61-00

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### TROUBLE SHOOTING MANUAL

R \*\*ON A/C 227-227, 229-237, 276-281, 476-478,

TASK 21-61-00-810-826

Pack 1 Bleed Temperature Sensor Fault

- 1. Possible Causes
  - SENSOR-BLEED TEMPERATURE (18HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE            | DESIGNATION   |  |  |  |  |
|----------------------|---|--|--|--|--|
|                      |   |  |  |  |  |
| AMM 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System                 |  |  |  |  |
| AMM 21-61-17-000-001 | Removal of the Bleed Air Temperature Sensor 18HH (38HH)                 |  |  |  |  |
| AMM 21-61-17-400-001 | <pre>Installation of the Bleed Air Temperature Sensor 18HH (38HH)</pre> |  |  |  |  |
| ASM 21-61/04         |   |  |  |  |  |

### 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

- 4. Fault Isolation
  - A. If the test gives the maintenance message P1 BLEED TEMP SENSOR:
    - replace the SENSOR-BLEED TEMPERATURE (18HH) (referred to as SENSOR (18HH)) (Ref. AMM TASK 21-61-17-000-001) and (Ref. AMM TASK 21-61-17-400-001).
    - (1) If the fault continues:
      - do a check and repair the wiring between: SENSOR (18HH) connector A/C and PC 1 (7HH) connector AB/2B, SENSOR (18HH) connector A/B and PC 1 (7HH) connector AB/2A, SENSOR (18HH) connector A/A and PC 1 (7HH) connector AB/1D (Ref. ASM 21-61/04).
  - B. Do the test as given in the Para. 3.A.

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## TROUBLE SHOOTING MANUAL

| _  | _ |         |   |
|----|---|---------|---|
| 5. | r | lose-up | ١ |
| J. | · | LUSE-UL | J |

A. Put the aircraft back to its initial configuration.

21-61-00

R

227-227, 229-237, 276-281, 476-478,

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### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-827

Pack 2 Bleed Temperature Sensor Fault

- 1. Possible Causes
  - SENSOR-BLEED TEMPERATURE (38HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE           | DESIGNATION   |
|---------------------|---|
| AMM 21-61-00-710-00 | <pre>1    Operational Test of the Pack Temperature-Control System</pre>         |
| AMM 21-61-17-000-00 | ,   |
| AMM 21-61-17-400-00 | <pre>1 Installation of the Bleed Air Temperature Sensor 18HH       (38HH)</pre> |
| ASM 21-61/02        |   |

### 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

### 4. Fault Isolation

- A. If the test gives the maintenance message P2 BLEED TEMP SENSOR:
  - replace the SENSOR-BLEED TEMPERATURE (38HH) (referred to as SENSOR (38HH)) (Ref. AMM TASK 21-61-17-000-001) and (Ref. AMM TASK 21-61-17-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring between:
       SENSOR (38HH) connector A/C and PC 2 (27HH) connector AB/2B,
       SENSOR (38HH) connector A/B and PC 2 (27HH) connector AB/2A,
       SENSOR (38HH) connector A/A and PC 2 (27HH) connector AB/1D (Ref. ASM 21-61/02).
- B. Do the test as given in the Para. 3.A.

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**SROS** 

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## TROUBLE SHOOTING MANUAL

| _        | _ |   |        |   |   |   |    |        |
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| <i>-</i> | ~ | • | v      | J | · |   | u  | $\sim$ |

A. Put the aircraft back to its initial configuration.

21-61-00

227-227, 229-237, 276-281, 476-478,

### TROUBLE SHOOTING MANUAL

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TASK 21-61-00-810-828

Pack 1 Compressor Overheat Temperature Sensor Fault

1. Possible Causes

R

- SENSOR-COMPRESSOR OVERHEAT (15HH)
- wiring
- 2. Job Set-up Information
  - A. Referenced Information

|   | REFERENCE |                   | DESIGNATION  |  |  |  |  |  |
|---|-----------|-------------------|--|--|--|--|--|--|
|   | AMM       | 21-61-00-710-001  | Operational Test of the Pack Temperature-Control System                  |  |  |  |  |  |
| R | AMM       | 21-61-12-000-001  | Removal of the Compressor Overheat - Temperature Sensor 15HH (35HH)      |  |  |  |  |  |
|   | AMM       | 21-61-12-400-001  | Installation of the Compressor Overheat - Temperature Sensor 15HH (35HH) |  |  |  |  |  |
|   | ASM       | 21-61/04          |  |  |  |  |  |  |
|   | 3. F      | ault Confirmation |  |  |  |  |  |  |

R

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

R

4. Fault Isolation

R

- A. If the test gives the maintenance message P1 COMP OVHT SENSOR: - replace the SENSOR-COMPRESSOR OVERHEAT (15HH) (referred to as SENSOR (15HH)) (Ref. AMM TASK 21-61-12-000-001) and (Ref. AMM TASK 21-61-12-
  - 400-001).

EFF: ALL **SROS** 

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## TROUBLE SHOOTING MANUAL

(1) If the fault continues:

- do a check and repair the wiring between: SENSOR (15HH) connector A/C and PC 1 (7HH) connector AB/1C, SENSOR (15HH) connector A/B and PC 1 (7HH) connector AB/1B, SENSOR (15HH) connector A/A and PC 1 (7HH) connector AB/1A (Ref. ASM 21-61/04).

R

B. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

EFF: ALL SROS

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### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-829

Pack 2 Compressor Overheat Temperature Sensor Fault

1. Possible Causes

R

- SENSOR-COMPRESSOR OVERHEAT (35HH)
- wiring
- 2. Job Set-up Information
  - A. Referenced Information

|   | REFERENCE |                  | DESIGNATION   |
|---|-----------|------------------|---|
| R | AMM       | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System                             |
|   | AMM       | 21-61-12-000-001 | Removal of the Compressor Overheat - Temperature Sensor 15HH (35HH)                 |
|   | AMM       | 21-61-12-400-001 | <pre>Installation of the Compressor Overheat - Temperature Sensor 15HH (35HH)</pre> |
| R | ASM       | 21-61/02         |   |

3. Fault Confirmation

R

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

R

4. Fault Isolation

R

- A. If the test gives the maintenance message P2 COMP OVHT SENSOR:
  - replace the SENSOR-COMPRESSOR OVERHEAT (35HH) (referred to as SENSOR (35HH)) (Ref. AMM TASK 21-61-12-000-001) and (Ref. AMM TASK 21-61-12-400-001).

EFF: ALL

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## TROUBLE SHOOTING MANUAL

(1) If the fault continues:

- do a check and repair the wiring between: SENSOR (35HH) connector A/C and PC 2 (27HH) connector AB/1C, SENSOR (35HH) connector A/B and PC 2 (27HH) connector AB/1B, SENSOR (35HH) connector A/A and PC 2 (27HH) connector AB/1A (Ref. ASM 21-61/02).

R

B. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

EFF : ALL

SROS

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-830

Pack 1 Outlet Temperature Sensor Fault

1. Possible Causes

R

- SENSOR-PACK OUTLET TEMPERATURE (13HH)
- wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION   |  |  |  |
|-----------|------------------|---|--|--|--|
|           |                  |   |  |  |  |
| AMM       | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System   |  |  |  |
| AMM       | 21-61-15-000-001 | Removal of the Pack Outlet - Temperature Sensors 13HH and 34HH                                      |  |  |  |
| AMM       | 21-61-15-400-001 | Installation of the Pack Outlet - Temperature Sensors 13HH and 34HH                                 |  |  |  |
| AMM       | 21-63-42-210-001 | <pre>Detailed Visual Inspection of Trim-Air Check-Valves Flappers for Condition and Operation</pre> |  |  |  |
| ASM       | 21-61/04         |   |  |  |  |

R

3. Fault Confirmation

R

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

R

4. Fault Isolation

R

- A. If the test gives the maintenance message P1 OUTLET TEMP SENSOR: - replace the SENSOR-PACK OUTLET TEMPERATURE (13HH) (referred to as
  - SENSOR (13HH)) (Ref. AMM TASK 21-61-15-000-001) and (Ref. AMM TASK 21-61-15-400-001).

EFF: ALL 21-61-00

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### TROUBLE SHOOTING MANUAL

- (1) If the fault continues:
  - do a check and repair the wiring between: SENSOR (13HH) connector A/C and PC 1 (7HH) connector AB/12A, SENSOR (13HH) connector A/B and PC 1 (7HH) connector AB/12B, SENSOR (13HH) connector A/A and PC 1 (7HH) connector AB/11D (Ref. ASM 21-61/04).
- (2) If the fault continues:
  - do a visiual inspection of the trim-air check-valve flappers (Ref. AMM TASK 21-63-42-210-001) and replace this valve if nessesary.

R

- B. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

EFF: ALL SROS

21-61-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-831

Pack 2 Outlet Temperature Sensor Fault

1. Possible Causes

R

- SENSOR-PACK OUTLET TEMPERATURE (34HH)
- wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |  |  |
|-----------|------------------|--|--|--|--|
|           |                  |  |  |  |  |
| AMM       | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System                                  |  |  |  |
| AMM       | 21-61-15-000-001 | Removal of the Pack Outlet - Temperature Sensors 13HH and 34HH                           |  |  |  |
| AMM       | 21-61-15-400-001 | Installation of the Pack Outlet - Temperature Sensors 13HH and 34HH                      |  |  |  |
| AMM       | 21-63-42-210-001 | Detailed Visual Inspection of Trim-Air Check-Valves Flappers for Condition and Operation |  |  |  |
| ASM       | 21-61/02         |  |  |  |  |

R

3. Fault Confirmation

R

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

R

4. Fault Isolation

R

A. If the test gives the maintenance message P2 OUTLET TEMP SENSOR: - replace the SENSOR-PACK OUTLET TEMPERATURE (34HH) (referred to as SENSOR (34HH)) (Ref. AMM TASK 21-61-15-000-001) and (Ref. AMM TASK 21-61-15-400-001).

EFF: ALL 21-61-00

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### TROUBLE SHOOTING MANUAL

- (1) If the fault continues:
  - do a check and repair the wiring between: SENSOR (34HH) connector A/C and PC 2 (27HH) connector AB/12A, SENSOR (34HH) connector A/B and PC 2 (27HH) connector AB/12B, SENSOR (34HH) connector A/A and PC 2 (27HH) connector AB/11D (Ref. ASM 21-61/02).
- (2) If the fault continues:
  - do a visiual inspection of the trim-air check-valve flappers (Ref. AMM TASK 21-63-42-210-001), and replace this valve if nessesary.

R

- B. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

EFF: ALL **SROS** 

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-832

Pack 1 High Discharge Temperature

#### 1. Possible Causes

- MACHINE-AIR CYCLE (10HM1)
- SENSOR-WATER EXTRACTOR TEMPERATURE (11HH)
- CONTROLLER-PACK 1 TEMP (7HH)
- SENSOR-PACK OUTLET PNEUMATIC (10HM10)
- VALVE-ANTI ICE (17HH)
- R VALVE-TURBINE BYPASS (10HH)
  - VALVE-FLOW CTL (11HB)
- R VALVE-TURBINE BYPASS (30HH)
  - SENSOR-PACK INLET PRESSURE (16HH)
  - ram-air inlet door mechanism
  - ram-air outlet
  - water injector nozzle
  - clogged main heat exchanger
  - clogged primary heat exchanger
  - wiring
  - clogged reheater (10HM3)
  - clogged condensor (10HM2)
  - water drain line
  - clogged main heat exchanger (10HM7)
  - clogged primary heat exchanger (10HM6)
  - clogged condenser (10HM2)

#### 2. Job Set-up Information

#### A. Referenced Information

|   | REFERENCE |                  | DESIGNATION  |  |  |  |  |
|---|-----------|------------------|--|--|--|--|--|
| R | AMM       | 21615300000100   |  |  |  |  |  |
| R | AMM       | 21615340000100   |  |  |  |  |  |
|   | AMM       | 12-33-21-618-001 | Pre-conditioning with the APU  |  |  |  |  |
|   | AMM       | 21-51-51-000-001 | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit   |  |  |  |  |
|   | AMM       | 21-51-51-400-001 | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre>                                       |  |  |  |  |
|   | AMM       | 21-52-00-100-001 | Cleaning of the Air Conditioning Pack-Primary Heat Exchanger 10HM6 (11HM6) and the Main Heat Exchanger 10HM7 (11HM7) |  |  |  |  |
|   | AMM       | 21-52-00-100-002 | Cleaning of the Air Conditioning Pack-Reheater 10HM3 (11HM3)   |  |  |  |  |
|   | AMM       | 21-52-00-100-003 | Cleaning of the Air Conditioning Pack-Condensor 10HM2 (11HM2)  |  |  |  |  |
|   | AMM       | 21-52-00-780-001 | Pressure Drop Test of the Reheater 10HM3 (11HM3)   |  |  |  |  |
|   | AMM       | 21-52-00-960-001 | Replacement of the Water Injector Nozzle   |  |  |  |  |

EFF: ALL

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### TROUBLE SHOOTING MANUAL

| REFERENCE |  | DESIGNATION   |
|-----------|--|---|
|           |  |   |
| AMM       | 21-52-16-000-001                         | Removal of the Water Extractor 10HM8 (11HM8)                          |
| AMM       | 21-52-16-400-001                         | Installation of the Water Extractor 10HM8 (11HM8)                     |
| AMM       | 21-52-21-000-001                         | Removal of the Air Cycle Machine 10HM1 (11HM1)                        |
| AMM       | 21-52-21-400-001                         | Installation of the Air Cycle Machine 10HM1 (11HM1)                   |
| AMM       | 21-52-42-000-001                         | Removal of the Water Injector 20HM (21HM)                             |
| AMM       | 21-52-42-400-001                         | Installation of the Water Injector 20HM (21HM)                        |
| AMM       | 21-61-13-000-001                         | Removal of the Water-Extractor Temperature Sensors 11HH and 31HH      |
| AMM       | 21-61-13-400-001                         | Installation of the Water-Extractor Temperature Sensors 11HH and 31HH |
| AMM       | 21-61-16-000-001                         | Removal of the Pack-Inlet Pressure Sensor 16HH (36HH                  |
| AMM       | 21-61-16-400-002                         | <pre>Installation of the Pack-Inlet Pressure Sensor 16HH (36HH)</pre> |
| AMM       | 21-61-19-000-001                         | Removal of the Pack-Outlet Pneumatic Sensor 10HM10 (11HM10)           |
| AMM       | 21-61-19-400-002                         | Installation of the Pack-Outlet Pneumatic Sensor 10HM10 (11HM10)      |
| AMM       | 21-61-34-000-001                         | Removal of the Pack Controller (7HH, 27HH)                            |
| AMM       | 21-61-34-400-001                         | Installation of the Pack Controller (7HH, 27HH)                       |
| AMM       | 21-61-41-000-001                         | Removal of the Anti-Ice Valve 17HH (37HH)                             |
| AMM       | 21-61-41-400-001                         | Installation of the Anti-Ice Valve 17HH (37HH)                        |
| AMM       | 21-61-51-000-003                         | Removal of the Air-Inlet Flap Mechanism                               |
| AMM       | 21-61-51-400-003                         | Installation of the Air-Inlet Flap Mechanism                          |
| AMM       | 21-61-52-000-003                         | Removal of the Ram-Air Outlet   |
| AMM       | 21-61-52-400-003                         | Installation of the Ram-Air Outlet                                    |
| AMM       | 21-63-00-720-001                         | Functional Test of the Cockpit and Cabin Temperature                  |
|           | _, _, _, _, _, _, _, _, _, _, _, _, _, _ | Control without CFDS/MCDU.  |
| AMM       | 32-69-00-740-001                         | BITE Check Landing Gear Control Interface Unit                        |
|           |  | (LGCIU) using MCDU to Ensure that Continuous BITE is                  |
|           |  | Operative   |
| ASM       | 21-61/03                                 | -p  |
| ASM       | 21-61/04                                 |   |
| ASM       | 21-61/04                                 |   |

### 3. Fault Confirmation

R \*\*ON A/C 201-208, 227-227, 229-245, 426-428,

#### A. Test

NOTE : Do the steps (6) and (7) in less than 120 s, if not, the control of the zone temperature stabilizes.

(1) Do the check of the ram-air inlet door mechanism for excessive backlash and of the ram-air outlet door mechanism for damage.

EFF: ALL

21-61-00

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#### TROUBLE SHOOTING MANUAL

- (2) Do the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618-001).
- (3) Make sure that the pack 1 inlet-pressure indication on the ECAM BLEED page is > 20 PSI.
- (4) Set the selectors COCKPIT, FWD CABIN and AFT CABIN, which are installed on the panel 30VU, to HOT for 10 minutes.
- (5) Check of ram-air outlet airflow

WARNING : THE AIRFLOW CAN BE HOT.
-HOT AIR CAN CAUSE BURNS.

- (a) Do a check to see that there is airflow at the pack 1 ram-air outlet.
- (6) Set the selectors COCKPIT, FWD CABIN and AFT CABIN to COLD.
- (7) On the ECAM BLEED page do a check of the pack 1 discharge temperature (referred to as PDT 1).

<u>NOTE</u>: The PDT 1 increases regularly (because of the pack de-icing operation).

\*\*ON A/C 209-225, 247-275, 429-475, 551-599, 701-749,

#### A. Test

NOTE : Do the steps (6) and (7) in less than 120 s, if not, the control of the zone temperature stabilizes.

- (1) Do the check of the ram-air inlet door mechanism for excessive backlash.
- (2) Do the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618-001).
- (3) Make sure that the pack 1 inlet-pressure indication on the ECAM BLEED page is > 20 PSI.
- (4) Set the selectors COCKPIT, FWD CABIN and AFT CABIN, which are installed on the panel 30VU, to HOT for 10 minutes.
- (5) Check of ram-air outlet airflow

WARNING : THE AIRFLOW CAN BE HOT.
-HOT AIR CAN CAUSE BURNS.

(a) Do a check to see that there is airflow at the pack 1 ram-air outlet.

EFF: 201-225, 227-227, 229-245, 247-275, 426-475, 551-599, 701-749,

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- (6) Set the selectors COCKPIT, FWD CABIN and AFT CABIN to COLD.
- (7) On the ECAM BLEED page do a check of the pack 1 discharge temperature (referred to as PDT 1).

<u>NOTE</u>: The PDT 1 increases regularly (because of the pack de-icing operation).

\*\*ON A/C 276-284, 476-478,

#### A. Test

NOTE : Do the steps (6) and (7) in less than 120 s, if not, the control of the zone temperature stabilizes.

- (1) Do the check of the ram-air inlet door mechanism for excessive backlash and of the ram-air outlet door mechanism for damage.
- (2) Do the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618-001).
- (3) Make sure that the pack 1 inlet-pressure indication on the ECAM BLEED page is > 20 PSI.
- (4) Set the selectors COCKPIT, FWD CABIN and AFT CABIN, which are installed on the panel 30VU, to HOT for 10 minutes.
- (5) Check of ram-air outlet airflow

WARNING : THE AIRFLOW CAN BE HOT.
-HOT AIR CAN CAUSE BURNS.

- (a) Do a check to see that there is airflow at the pack 1 ram-air outlet.
- (6) Set the selectors COCKPIT, FWD CABIN and AFT CABIN to COLD.
- (7) On the ECAM BLEED page do a check of the pack 1 discharge temperature (referred to as PDT 1).

\*\*ON A/C 285-299, 479-499, 503-549,

#### A. Test

NOTE : Do the steps (6) and (7) in less than 120 s, if not, the control of the zone temperature stabilizes.

(1) Do the check of the ram-air inlet door mechanism for excessive backlash.

EFF: 209-225, 247-299, 429-499, 503-549, 551-599, 701-749,

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#### TROUBLE SHOOTING MANUAL

- (2) Do the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618-001).
- (3) Make sure that the pack 1 inlet-pressure indication on the ECAM BLEED page is > 20 PSI.
- (4) Set the selectors COCKPIT, FWD CABIN and AFT CABIN, which are installed on the panel 30VU, to HOT for 10 minutes.
- (5) Check of ram-air outlet airflow

WARNING : THE AIRFLOW CAN BE HOT.
-HOT AIR CAN CAUSE BURNS.

- (a) Do a check to see that there is airflow at the pack 1 ram-air outlet.
- (6) Set the selectors COCKPIT, FWD CABIN and AFT CABIN to COLD.
- (7) On the ECAM BLEED page do a check of the pack 1 discharge temperature (referred to as PDT 1).

\*\*ON A/C ALL

#### 4. Fault Isolation

R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,

- A. If the ram-air inlet doors are closed and the ram-air inlet door-mechanism has more than 20mm backlash:
  - replace the ram-air inlet door mechanism (Ref. AMM TASK 21-61-51-000-003) and (Ref. AMM TASK 21-61-51-400-003).
  - (1) If the ram-air outlet door mechanism is damaged:
    - replace the ram-air outlet (Ref. AMM TASK 21-61-52-000-003) and (Ref. AMM TASK 21-61-52-400-003).
  - (2) If the ram air inlet and outlet door mechanism are in the correct condition and there is no airflow at the pack 1 ram-air outlet (on the BLEED page the flow control valve is open):
    - replace the MACHINE-AIR CYCLE (10HM1) (Ref. AMM TASK 21-52-21-000-001) and (Ref. AMM TASK 21-52-21-400-001).

\*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

- A. If the ram-air inlet doors are closed and the ram-air inlet door-mechanism has more than 20mm backlash:
  - replace the ram-air inlet door mechanism (Ref. AMM TASK 21-61-51-000-003) and (Ref. AMM TASK 21-61-51-400-003).

EFF: ALL

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#### TROUBLE SHOOTING MANUAL

- (1) If the ram air inlet door mechanism is in the correct condition and there is no airflow at the pack 1 ram-air outlet (on the BLEED page the flow control valve is open):
  - replace the MACHINE-AIR CYCLE (10HM1) (Ref. AMM TASK 21-52-21-000-001) and (Ref. AMM TASK 21-52-21-400-001).

\*\*ON A/C ALL

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- B. If the PDT 1 is below 10 Deg.C (during the test para. 3.A.(4), (6), (7)):
   no other maintenance action is necessary.
- R \*\*ON A/C 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,
  - C. If the PDT 1 is above 10 Deg.C for less than 11 minutes, with the selectors COCKPIT, FWD CABIN and AFT CABIN, which are installed on the panel 30VU, set to COLD:
    - no other maintenance action is necessary.
  - D. If the PDT 1 is above 10 Deg.C for more than 11 minutes, with the selectors COCKPIT, FWD CABIN and AFT CABIN, which are installed on the panel 30VU, set to COLD:
    - open and close the CBs 1HH, 2HH, 3HH, and 4HH.
    - (1) If the PDT 1 goes below 10 Deg.C:
      - do the functional test of the cockpit and cabin temperature control system (Ref. AMM TASK 21-63-00-720-001).
    - (2) If the fault continues:
      - do a check that the resistance of the water extractor temperature sensor (11HH) measured between connector A/E and A/F and connector A/C and A/D is in these limits (Ref. ASM 21-61/04):

| Temp (Deg.C) | OHMS          |
|--------------|---------------|
| + 10         | 18820 +/- 5 % |
| + 18         | 13340 +/- 5 % |
| + 25         | 10000 +/- 5 % |
| + 30         | 8197 +/- 5 %  |
| + 40         | 5598 +/- 5 %  |
| + 50         | 3903 +/- 5 %  |

- (a) If the resistance values are out of the specified limits:
  - replace the SENSOR-WATER EXTRACTOR TEMPERATURE (11HH) (Ref. AMM TASK 21-61-13-000-001) and (Ref. AMM TASK 21-61-13-400-001).
- (3) If the fault continues:
  - (a) Remove the inspection panel from the pack 1 ram-air inlet plenum (10HM14),

EFF: ALL

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#### TROUBLE SHOOTING MANUAL

- (b) Do a check of the water injector nozzle for damage or wear:
   replace the water injector nozzle if it is worn or damaged
  (Ref. AMM TASK 21-52-00-960-001).
- (c) Do a check of the main heat exchanger (10HM7) for contamination: - if the main heat exchanger is clogged do the cleaning of the clogged main heat exchanger and the clogged primary heat exchanger (Ref. AMM TASK 21-52-00-100-001).
- (d) Install the inspection panel on the pack 1 ram-air inlet plenum (10HM14).
- (4) If the fault continues:
  - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
- (5) If the fault continues:
  - do a check of the position of the manual override lever of the pack
     1 anti-ice valve (17HH).
  - (a) If the valve is not closed:
    - disconnect the electrical connector (17HHA) (Ref. AMM TASK 21-61-41-000-001).
    - do a check for 28 VDC at the electrical connector (17HHA)
       between pins A and B (Ref. ASM 21-61/04).
    - 1 If the voltage is correct:
      - replace the SENSOR-PACK OUTLET PNEUMATIC (10HM10) (Ref. AMM TASK 21-61-19-000-001) and (Ref. AMM TASK 21-61-19-400-002).
    - 2 If the fault continues:
      - replace the VALVE-ANTI ICE (17HH) (Ref. AMM TASK 21-61-41-000-001) and (Ref. AMM TASK 21-61-41-400-001).
    - 3 If the voltage is not correct:
      - do a check and repair the wiring if necessary between: VALVE (17HH) connector A/A and PC 1 (7HH) connector AB/8A, VALVE (17HH) connector A/B and GND, VALVE (17HH) connector A/C and GND (Ref. ASM 21-61/04).
- (6) If the fault continues:
  - replace the VALVE-TURBINE BYPASS (10HH) (Ref. AMM 21615300000100) and (Ref. AMM 21615340000100).
- (7) If the fault continues:
  - do a check of the reheater (10HM3) for contamination (Ref. AMM TASK 21-52-00-780-001).
  - NOTE: This sub-paragraph is only applicable to reheaters with the P/N 755A0000-04 and previous.
- R It is not applicable to reheaters with the P/N's 755A0000-04 mendment A or subsequent.

EFF: 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,

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#### TROUBLE SHOOTING MANUAL

- (a) If the reheater is clogged:
  - do the cleaning of the clogged reheater (10HM3) (Ref. AMM TASK 21-52-00-100-002),
- R (8) If the fault continues:
  - do the cleaning of the clogged condensor (10HM2) (Ref. AMM TASK 21-52-00-100-003),
- R (9) If the fault continues:
  - do a check of the position of the manual override lever of the pack
     1 flow control-valve (11HB).
  - (a) If the valve is not fully open:
    - replace the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
- R (10) If the fault continues:
  - do a check of the water drain line between the extractor (10HM8) and the injector (20HM) and the injector nozzle (20HM) for contamination and clean it if necessary (Ref. AMM TASK 21-52-16-000-001), (Ref. AMM TASK 21-52-16-400-001), (Ref. AMM TASK 21-52-42-400-001).

\*\*ON A/C 276-299, 476-499, 503-549,

- D. If the PDT 1 is above 10 Deg.C with the selectors COCKPIT, FWD CABIN and AFT CABIN, which are installed on the panel 30VU, set to COLD:
  - open and close the CBs 1HH, 2HH, 3HH and 4HH.
  - (1) If the PDT 1 goes below 10 Deg.C:
    - do the functional test of the cockpit and cabin temperature control system (Ref. AMM TASK 21-63-00-720-001).
  - (2) If the fault continues:
    - (a) Remove the inspection panel on the pack 1 ram-air inlet plenum (10HM14).
    - (b) Do a check of the water injector nozzle for damage or wear:replace the water injector nozzle if it is worn or damaged(Ref. AMM TASK 21-52-00-960-001).
    - (c) Do a check of the main heat exchanger (10HM7) for contamination: - if the main heat exchanger is clogged do the cleaning of the clogged main heat exchanger (10HM7) and the clogged primary heat exchanger (10HM6) (Ref. AMM TASK 21-52-00-100-001).
    - (d) Install the inspection panel on the pack 1 ram-air inlet plenum (10HM14).

EFF: ALL 21-61-00

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#### TROUBLE SHOOTING MANUAL

#### (3) If the fault continues:

- do a check that the resistance of the water extractor temperature sensor (11HH) measured between connector A/E and A/F and connector A/C and A/D is in these limits (Ref. ASM 21-61/04):

| Temp (Deg.C) | OHMS          |
|--------------|---------------|
| + 10         | 18820 +/- 5 % |
| + 18         | 13340 +/- 5 % |
| + 25         | 10000 +/- 5 % |
| + 30         | 8197 +/- 5 %  |
| + 40         | 5598 +/- 5 %  |
| + 50         | 3903 +/- 5 %  |

- (a) If the resistance values are out of the specified limits:
  - replace the SENSOR-WATER EXTRACTOR TEMPERATURE (11HH) (Ref. AMM TASK 21-61-13-000-001) and (Ref. AMM TASK 21-61-13-400-001).
- (4) If the fault continues:
  - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
- (5) If the fault continues:
  - do a check of the position of the manual override lever of the pack
     1 anti-ice valve (17HH).
  - (a) If the valve is not closed:
    - disconnect the electrical connector (17HHA) (Ref. AMM TASK 21-61-41-000-001).
    - do a check for 28 VDC at the electrical connector (17HHA) between pins A and B (Ref. ASM 21-61/04).
    - 1 If the voltage is correct:
      - replace the SENSOR-PACK OUTLET PNEUMATIC (10HM10) (Ref. AMM TASK 21-61-19-000-001) and (Ref. AMM TASK 21-61-19-400-002).
    - 2 If the fault continues:
      - replace the VALVE-ANTI ICE (17HH) (Ref. AMM TASK 21-61-41-000-001) and (Ref. AMM TASK 21-61-41-400-001).
    - 3 If the voltage is not correct:
      - do a check and repair the wiring if necessary between: VALVE (17HH) connector A/A and PC 1 (7HH) connector AB/8A, VALVE (17HH) connector A/B and GND, VALVE (17HH) connector A/C and GND (Ref. ASM 21-61/04).
- (6) If the fault continues:
  - replace the VALVE-TURBINE BYPASS (30HH) (Ref. AMM 21615300000100)
     and (Ref. AMM 21615340000100).

EFF: 276-299, 476-499, 503-549,

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#### TROUBLE SHOOTING MANUAL

- R (7) If the fault continues:
  - do a check of the reheater (10HM3) for contamination (Ref. AMM TASK 21-52-00-780-001).
- R NOTE: This sub-paragraph is only applicable to reheaters with the P/N 755A0000-04 and previous.
  R It is not applicable to reheaters with the P/N's 755A0000-04 amendment A or subsequent.
  - (a) If the reheater is clogged:
    - do the cleaning of the clogged reheater (10HM3) (Ref. AMM TASK 21-52-00-100-002),
- R (8) If the fault continues:
  - do the cleaning of the clogged condenser (10HM2) (Ref. AMM TASK 21-52-00-100-003),
- R (9) If the fault continues:
  - do a check of the position of the manual override lever of the pack
     1 flow control-valve (11HB).
  - (a) If the valve is not fully open:
    - replace the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
- R (10) If the fault continues:
  - do a check of the water drain line between the extractor (10HM8) and the injector (20HM) and the injector nozzle (20HM) for contamination and clean it if necessary (Ref. AMM TASK 21-52-16-000-001), (Ref. AMM TASK 21-52-16-400-001), (Ref. AMM TASK 21-52-42-400-001).

#### \*\*ON A/C ALL

- E. If you cannot confirm this fault on the ground, but during the last flight a high PDT 1 (above 10 Deg.C) was reported:
  - replace the SENSOR-PACK INLET PRESSURE (16HH) (Ref. AMM TASK 21-61-16-000-001) and (Ref. AMM TASK 21-61-16-400-002).
  - (1) If the fault continues:
    - do a check for a ground signal at the PC 1 (7HH) connector AA/9B (Ref. ASM 21-61/03).
    - (a) If there is no ground signal:
      - do a check and repair the wiring if necessary between:
         PC 1 (7HH) connector AA/9B and LGCIU 2 (5GA2) connector AB/G1 (Ref. ASM 21-61/03).
      - 1 If the fault continues:
        - do the BITE test of the landing gear (Ref. AMM TASK 32-69-00-740-001).

EFF: ALL

21-61-00

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### TROUBLE SHOOTING MANUAL

- $\underline{a}$  . If the test gives a different maintenance message refer to the Fault Symptom List.
- (b) If there is a ground signal:
  - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
- F. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

EFF: ALL

21-61-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-833

Pack 2 High Discharge Temperature

#### 1. Possible Causes

- MACHINE-AIR CYCLE (11HM1)
- SENSOR-WATER EXTRACTOR TEMPERATURE (31HH)
- CONTROLLER-PACK 2 TEMP (27HH)
- SENSOR-PACK OUTLET PNEUMATIC (11HM10)
- VALVE-ANTI-ICE (37HH)
- R VALVE-TURBINE BYPASS (30HH)
  - VALVE-FLOW CTL (8HB)
  - SENSOR-PACK INLET PRESSURE (36HH)
  - ram-air inlet door mechanism
  - ram-air outlet
  - water injector nozzle
  - clogged main heat exchanger (11HM7)
  - clogged primary heat exchanger (11HM6)
  - wiring
  - clogged reheater (11HM3)
  - clogged condenser (11HM2)
  - water drain line

### 2. Job Set-up Information

A. Referenced Information

|   | REFE | RENCE            | DESIGNATION  |
|---|------|------------------|--|
|   |      |                  |  |
| R | AMM  | 21615300000100   |  |
| R | AMM  | 21615340000100   |  |
|   | AMM  | 12-33-21-618-001 | Pre-conditioning with the APU  |
|   | AMM  | 21-51-51-000-001 | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit   |
|   | AMM  | 21-51-51-400-001 | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre>                                       |
|   | AMM  | 21-52-00-100-001 | Cleaning of the Air Conditioning Pack-Primary Heat Exchanger 10HM6 (11HM6) and the Main Heat Exchanger 10HM7 (11HM7) |
|   | AMM  | 21-52-00-100-002 | Cleaning of the Air Conditioning Pack-Reheater 10HM3 (11HM3)   |
|   | AMM  | 21-52-00-100-003 | Cleaning of the Air Conditioning Pack-Condensor 10HM2 (11HM2)  |
|   | AMM  | 21-52-00-780-001 | Pressure Drop Test of the Reheater 10HM3 (11HM3)   |
|   | AMM  | 21-52-00-960-001 | Replacement of the Water Injector Nozzle   |
|   | AMM  | 21-52-16-000-001 | Removal of the Water Extractor 10HM8 (11HM8)   |
|   | AMM  | 21-52-16-400-001 | Installation of the Water Extractor 10HM8 (11HM8)  |
|   | AMM  | 21-52-21-000-001 | Removal of the Air Cycle Machine 10HM1 (11HM1)   |
|   | AMM  | 21-52-21-400-001 | Installation of the Air Cycle Machine 10HM1 (11HM1)  |

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### TROUBLE SHOOTING MANUAL

| REFERENCE |                  | DESIGNATION   |  |  |  |
|-----------|------------------|---|--|--|--|
|           |                  |   |  |  |  |
| AMM       | 21-52-42-000-001 | Removal of the Water Injector 20HM (21HM)   |  |  |  |
| AMM       | 21-52-42-400-001 | Installation of the Water Injector 20HM (21HM)  |  |  |  |
| AMM       | 21-61-13-000-001 | Removal of the Water-Extractor Temperature Sensors 11HH and 31HH  |  |  |  |
| AMM       | 21-61-13-400-001 | Installation of the Water-Extractor Temperature Sensors 11HH and 31HH   |  |  |  |
| AMM       | 21-61-16-000-001 | Removal of the Pack-Inlet Pressure Sensor 16HH (36HH)   |  |  |  |
| AMM       | 21-61-16-400-002 | <pre>Installation of the Pack-Inlet Pressure Sensor 16HH (36HH)</pre>   |  |  |  |
| AMM       | 21-61-19-000-001 | Removal of the Pack-Outlet Pneumatic Sensor 10HM10 (11HM10)   |  |  |  |
| AMM       | 21-61-19-400-002 | <pre>Installation of the Pack-Outlet Pneumatic Sensor 10HM10 (11HM10)</pre>                                   |  |  |  |
| AMM       | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)  |  |  |  |
| AMM       | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)   |  |  |  |
| AMM       | 21-61-41-000-001 | Removal of the Anti-Ice Valve 17HH (37HH)   |  |  |  |
| AMM       | 21-61-41-400-001 | Installation of the Anti-Ice Valve 17HH (37HH)  |  |  |  |
| AMM       | 21-61-51-000-003 | Removal of the Air-Inlet Flap Mechanism   |  |  |  |
| AMM       | 21-61-51-400-003 | Installation of the Air-Inlet Flap Mechanism  |  |  |  |
| AMM       | 21-61-52-000-003 | Removal of the Ram-Air Outlet   |  |  |  |
| AMM       | 21-61-52-400-003 | Installation of the Ram-Air Outlet  |  |  |  |
| AMM       | 21-63-00-720-001 | Functional Test of the Cockpit and Cabin Temperature Control without CFDS/MCDU.                               |  |  |  |
| AMM       | 32-69-00-740-001 | BITE Check Landing Gear Control Interface Unit (LGCIU) using MCDU to Ensure that Continuous BITE is Operative |  |  |  |
| ASM       | 21-61/01         |   |  |  |  |
| ASM       | 21-61/02         |   |  |  |  |
| ASM       | 21-61/02         |   |  |  |  |

### 3. Fault Confirmation

R \*\*ON A/C 201-208, 227-227, 229-245, 426-428,

### A. Test

NOTE : Do the steps (6) and (7) in less than 120 s, if not, the control of the zone temperature stabilizes.

- (1) Do the check of the ram-air inlet door mechanism for excessive backlash and of the ram-air outlet door mechanism for damage.
- (2) Do the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618-001).
- (3) Make sure that the pack 2 inlet-pressure indication on the ECAM BLEED page is > 20 PSI.

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### TROUBLE SHOOTING MANUAL

- (4) Set the selectors COCKPIT, FWD CABIN and AFT CABIN, which are installed on the panel 30VU, to HOT for 10 minutes.
- (5) Check of ram-air outlet airflow

WARNING : THE AIRFLOW CAN BE HOT.
-HOT AIR CAN CAUSE BURNS.

- (a) Do a check to see that there is airflow at the pack 2 ram-air outlet.
- (6) Set the selectors COCKPIT, FWD CABIN and AFT CABIN to COLD.
- (7) On the ECAM BLEED page do a check of the pack 2 discharge temperature (referred to as PDT 2).

NOTE: The PDT 2 increases regularly (because of the pack de-icing operation).

\*\*ON A/C 209-225, 247-275, 429-475, 551-599, 701-749,

#### A. Test

NOTE : Do the steps (6) and (7) in less than 120 s, if not, the control of the zone temperature stabilizes.

- (1) Do the check of the ram-air inlet door mechanism for excessive backlash.
- (2) Do the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618-001).
- (3) Make sure that the pack 2 inlet-pressure indication on the ECAM BLEED page is > 20 PSI.
- (4) Set the selectors COCKPIT, FWD CABIN and AFT CABIN, which are installed on the panel 30VU, to HOT for 10 minutes.
- (5) Check of ram-air outlet airflow

WARNING: THE AIRFLOW CAN BE HOT.
-HOT AIR CAN CAUSE BURNS.

- (a) Do a check to see that there is airflow at the pack 2 ram-air outlet.
- (6) Set the selectors COCKPIT, FWD CABIN and AFT CABIN to COLD.

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#### TROUBLE SHOOTING MANUAL

(7) On the ECAM BLEED page do a check of the pack 2 discharge temperature (referred to as PDT 2).

NOTE: The PDT 2 increases regularly (because of the pack de-icing operation).

\*\*ON A/C 276-284, 476-478,

#### A. Test

NOTE: Do the steps (6) and (7) in less than 120 s, if not, the control of the zone temperature stabilizes.

- (1) Do the check of the ram-air inlet door mechanism for excessive backlash and of the ram-air outlet door mechanism for damage.
- (2) Do the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618-001).
- (3) Make sure that the pack 2 inlet-pressure indication on the ECAM BLEED page is > 20 PSI.
- (4) Set the selectors COCKPIT, FWD CABIN and AFT CABIN, which are installed on the panel 30VU, to HOT for 10 minutes.
- (5) Check of ram-air outlet airflow

WARNING: THE AIRFLOW CAN BE HOT. -HOT AIR CAN CAUSE BURNS.

- (a) Do a check to see that there is airflow at the pack 2 ram-air outlet.
- (6) Set the selectors COCKPIT, FWD CABIN and AFT CABIN to COLD.
- (7) On the ECAM BLEED page do a check of the pack 2 discharge temperature (referred to as PDT 2).

\*\*ON A/C 285-299, 479-499, 503-549,

#### A. Test

NOTE: Do the steps (6) and (7) in less than 120 s, if not, the control of the zone temperature stabilizes.

- (1) Do the check of the ram-air inlet door mechanism for excessive backlash.
- (2) Do the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618-001).

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209-225, 247-299, 429-499, 503-549, 551-599, 701-749,

#### TROUBLE SHOOTING MANUAL

- (3) Make sure that the pack 2 inlet-pressure indication on the ECAM BLEED page is > 20 PSI.
- (4) Set the selectors COCKPIT, FWD CABIN and AFT CABIN, which are installed on the panel 30VU, to HOT for 10 minutes.
- (5) Check of ram-air outlet airflow

WARNING : THE AIRFLOW CAN BE HOT.
-HOT AIR CAN CAUSE BURNS.

- (a) Do a check to see that there is airflow at the pack 2 ram-air outlet.
- (6) Set the selectors COCKPIT, FWD CABIN and AFT CABIN to COLD.
- (7) On the ECAM BLEED page do a check of the pack 2 discharge temperature (referred to as PDT 2).

\*\*ON A/C ALL

### 4. Fault Isolation

R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,

- A. If the ram-air inlet doors are closed and the ram-air inlet door-mechanism has more than 20mm backlash:
  - replace the ram-air inlet door mechanism (Ref. AMM TASK 21-61-51-000-003) and (Ref. AMM TASK 21-61-51-400-003).
  - (1) If the ram-air outlet door mechanism is damaged:
    - replace the ram-air outlet (Ref. AMM TASK 21-61-52-000-003) and (Ref. AMM TASK 21-61-52-400-003).
  - (2) If the ram air inlet and outlet door mechanism are in the correct condition and there is no airflow at the pack 2 ram-air outlet (on the BLEED page the flow control valve is open):
    - replace the MACHINE-AIR CYCLE (11HM1) (Ref. AMM TASK 21-52-21-000-001) and (Ref. AMM TASK 21-52-21-400-001).

\*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749,

- A. If the ram-air inlet doors are closed and the ram-air inlet door-mechanism has more than 20mm backlash:
  - replace the ram-air inlet door mechanism (Ref. AMM TASK 21-61-51-000-003) and (Ref. AMM TASK 21-61-51-400-003).

EFF: ALL

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#### TROUBLE SHOOTING MANUAL

- (1) If the ram air inlet door mechanism is in the correct condition and there is no airflow at the pack 2 ram-air outlet (on the BLEED page the flow control valve is open):
  - replace the MACHINE-AIR CYCLE (11HM1) (Ref. AMM TASK 21-52-21-000-001) and (Ref. AMM TASK 21-52-21-400-001).

#### \*\*ON A/C ALL

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- B. If the PDT 2 is below 10 Deg.C (during the test para. 3.A.(4), (6), (7)):
   no other maintenance action is necessary.
- R \*\*ON A/C 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,
  - C. If the PDT 2 is above 10 Deg.C for less than 11 minutes, with the selectors COCKPIT, FWD CABIN and AFT CABIN, which are installed on the panel 30VU, set to COLD:
    - no other maintenance action is necessary.
  - D. If the PDT 2 is above 10 Deg.C for more than 11 minutes, with the selectors COCKPIT, FWD CABIN and AFT CABIN, which are installed on the panel 30VU, set to COLD:
    - open and close the CBs 21HH, 22HH, 23HH, and 24HH.
    - (1) If the PDT 2 goes below 10 Deg.C:
      - do the functional test of the cockpit and cabin temperature control system (Ref. AMM TASK 21-63-00-720-001).
    - (2) If the fault continues:
      - (a) Remove the inspection panel from the pack 2 ram-air inlet plenum (11HM14).
      - (b) Do a check of the water injector nozzle for damage or wear:
         replace the water injector nozzle if it is worn or damaged
        (Ref. AMM TASK 21-52-00-960-001).
      - (c) Do a check of the main heat exchanger (11HM7) for contamination:

        If the main heat exchanger is clogged do the cleaning of the clogged main heat exchanger (11HM7) and the clogged primary heat exchanger (11HM6) (Ref. AMM TASK 21-52-00-100-001).
      - (d) Install the inspection panel on the pack 2 ram-air inlet plenum (11HM14).
    - (3) If the fault continues:
      - do a check that the resistance of the water extractor temperature sensor (31HH) measured between connector A/E and A/F and connector A/C and A/D is in these limits (Ref. ASM 21-61/02):

EFF: ALL

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#### TROUBLE SHOOTING MANUAL

| Temp (Deg.C) | OHMS          |
|--------------|---------------|
| + 10         | 18820 +/- 5 % |
| + 18         | 13340 +/- 5 % |
| + 25         | 10000 +/- 5 % |
| + 30         | 8197 +/- 5 %  |
| + 40         | 5598 +/- 5 %  |
| + 50         | 3903 +/- 5 %  |

- (a) If the resistance values are out of the specified limits:
  - replace the SENSOR-WATER EXTRACTOR TEMPERATURE (31HH) (Ref. AMM TASK 21-61-13-000-001) and (Ref. AMM TASK 21-61-13-400-001).
- (4) If the fault continues:
  - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
- (5) If the fault continues:
  - do a check of the position of the manual override lever of the pack
     2 anti-ice valve (37HH).
  - (a) If the valve is not closed:
    - disconnect the electrical connector (37HHA) (Ref. AMM TASK 21-61-41-000-001).
    - do a check for 28 VDC at the electrical connector (37HHA) between pins A and B (Ref. ASM 21-61/02).
    - 1 If the voltage is correct:
      - replace the SENSOR-PACK OUTLET PNEUMATIC (11HM10) (Ref. AMM TASK 21-61-19-000-001) and (Ref. AMM TASK 21-61-19-400-002).
    - 2 If the fault continues:
      - replace the VALVE-ANTI-ICE (37HH) (Ref. AMM TASK 21-61-41-000-001) and (Ref. AMM TASK 21-61-41-400-001).
    - 3 If the voltage is not correct:
      - do a check and repair the wiring (Ref. ASM 21-61/02) from:
      - the VALVE (37HH) to the PC 2 (27HH) and,
      - the VALVE (37HH) to ground.
- (6) If the fault continues:
  - replace the VALVE-TURBINE BYPASS (30HH) (Ref. AMM 21615300000100) and (Ref. AMM 21615340000100).
- R (7) If the fault continues:
  - (a) Do a check of the reheater (11HM3) for contamination (Ref. AMM TASK 21-52-00-780-001).
- R  $\underline{\text{NOTE}}$ : This sub-paragraph is only applicable to reheaters with the P/N 755A0000-04 and previous.

EFF: 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,

21-61-00

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#### TROUBLE SHOOTING MANUAL

It is not applicable to reheaters with the P/N's 755A0000-04 Amendment A or subsequent.

- (b) If the reheater is clogged:
  - do the cleaning of the clogged reheater (11HM3) (Ref. AMM TASK 21-52-00-100-002),
- R (8) If the fault continues:
  - do the cleaning of the clogged condenser (11HM2) (Ref. AMM TASK 21- 52-00-100-003),
- R (9) If the fault continues:
  - do a check of the position of the manual override lever of the pack
     2 flow control-valve (8HB).
  - (a) If the valve is not fully open:
    - replace the VALVE-FLOW CTL (8HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
- R (10) If the fault continues:
  - do a check of the water drain line between the extractor (11HM8) and the injector (21HM) and the injector nozzle (21HM) for contamination and clean it if necessary (Ref. AMM TASK 21-52-16-000-001), (Ref. AMM TASK 21-52-16-400-001), (Ref. AMM TASK 21-52-42-400-001).

\*\*ON A/C 276-299, 476-499, 503-549,

- D. If the PDT 2 is above 10 Deg.C with the selectors COCKPIT, FWD CABIN and AFT CABIN, which are installed on the panel 30VU, set to COLD:

   open and close the CBs 21HH, 22HH, 23HH and 24HH.
  - (1) If the PDT 2 goes below 10 Deg.C:
    - do the functional test of the cockpit and cabin temperature control system (Ref. AMM TASK 21-63-00-720-001).
  - (2) If the fault continues:
    - (a) Remove the inspection panel from the pack 2 ram-air inlet plenum (11HM14).
    - (b) Do a check of the water injector nozzle for damage or wear:

       replace the water injector nozzle if it is worn or damaged
       (Ref. AMM TASK 21-52-00-960-001).
    - (c) Do a check of the main heat exchanger (11HM7) for contamination: - if the main heat exchanger is clogged do the cleaning of the clogged main heat exchanger (11HM7) and the clogged primary heat exchanger (11HM6) (Ref. AMM TASK 21-52-00-100-001).

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**SROS** 

#### TROUBLE SHOOTING MANUAL

- (d) Install the inspection panel on the pack 2 ram-air inlet plenum (11HM14).
- (3) If the fault continues:
  - do a check that the resistance of the water extractor temperature sensor (31HH) measured between connector A/E and A/F and connector A/C and A/D is in these limits (Ref. ASM 21-61/02):

| Temp (Deg.C) | OHMS          |  |
|--------------|---------------|--|
| + 10         | 18820 +/- 5 % |  |
| + 18         | 13340 +/- 5 % |  |
| + 25         | 10000 +/- 5 % |  |
| + 30         | 8197 +/- 5 %  |  |
| + 40         | 5598 +/- 5 %  |  |
| + 50         | 3903 +/- 5 %  |  |

- (a) If the resistance values are out of the specified limits:
  - replace the SENSOR-WATER EXTRACTOR TEMPERATURE (31HH) (Ref. AMM TASK 21-61-13-000-001) and (Ref. AMM TASK 21-61-13-400-001).
- (4) If the fault continues:
  - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
- (5) If the fault continues:
  - do a check of the position of the manual override lever of the pack
     2 anti-ice valve (37HH).
  - (a) If the valve is not closed:
    - disconnect the electrical connector (37HHA) (Ref. AMM TASK 21-61-41-000-001).
    - do a check for 28 VDC at the electrical connector (37HHA) between pins A and B (Ref. ASM 21-61/02).
    - 1 If the voltage is correct:
      - replace the SENSOR-PACK OUTLET PNEUMATIC (11HM10) (Ref. AMM TASK 21-61-19-000-001) and (Ref. AMM TASK 21-61-19-400-002).
    - 2 If the fault continues:
      - replace the VALVE-ANTI-ICE (37HH) (Ref. AMM TASK 21-61-41-000-001) and (Ref. AMM TASK 21-61-41-400-001).
    - 3 If the voltage is not correct:
      - do a check of the wiring (Ref. ASM 21-61/02) from:
      - the VALVE (37HH) to the PC 2 (27HH) and,
      - the VALVE (37HH) to ground.
- (6) If the fault continues:
  - replace the VALVE-TURBINE BYPASS (30HH) (Ref. AMM 21615300000100) and (Ref. AMM 21615340000100).

EFF: 276-299, 476-499, 503-549,

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#### TROUBLE SHOOTING MANUAL

R (7) If the fault continues:

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- (a) Do a check of the reheater (11HM3) for contamination (Ref. AMM TASK 21-52-00-780-001).
- NOTE: This sub-paragraph is only applicable to reheaters with the P/N 755A0000-04 and previous.
  It is not applicable to reheaters with the P/N's 755A0000-04 Amendment A or subsequent.
  - (b) If the reheater is clogged:
    - do the cleaning of the clogged reheater (11HM3) (Ref. AMM TASK 21-52-00-100-002),
- R (8) If the fault continues:
  - do the cleaning of the clogged condenser (11HM2) (Ref. AMM TASK 21-52-00-100-003),
- R (9) If the fault continues:
  - do a check of the position of the manual override lever of the pack
     2 flow control-valve (8HB).
  - (a) If the valve is not fully open:
    - replace the VALVE-FLOW CTL (8HB) (Ref. AMM TASK 21-51-51-000-001) and (Ref. AMM TASK 21-51-51-400-001).
- R (10) If the fault continues:
  - do a check of the water drain line between the extractor (11HM8) and the injector (21HM) and the injector nozzle (21HM) for contamination and clean it if necessary (Ref. AMM TASK 21-52-16-000-001), (Ref. AMM TASK 21-52-16-400-001), (Ref. AMM TASK 21-52-42-400-001).

#### \*\*ON A/C ALL

- E. If you cannot confirm this fault on the ground, but during the last flight a high PDT 2 (above 10 Deg.C) was reported:
  - replace the SENSOR-PACK INLET PRESSURE (36HH) (Ref. AMM TASK 21-61-16-000-001) and (Ref. AMM TASK 21-61-16-400-002).
  - (1) If the fault continues:
    - do a check for a ground signal at the PC 2 (27HH) connector AA/9B (Ref. ASM 21-61/01).
    - (a) If there is no ground signal:
      - do a check and repair the wiring if necessary between:
         PC 2 (27HH) connector AA/9B and LGCIU 2 (5GA2) connector AB/3J (Ref. ASM 21-61/01).

EFF: ALL 21-61-00

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### TROUBLE SHOOTING MANUAL

- 1 If the fault continues:
  - do the BITE test of the landing gear (Ref. AMM TASK 32-69-00-740-001).
- (b) If the test gives a different maintenance message refer to the Fault Symptom List.
- (c) If there is a ground signal:
  - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
- F. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

EFF: ALL

21-61-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-834

DMU receives no Data from the PC 1 (ACSC 1)

- 1. Possible Causes
  - DMU (1TV)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
|           |                  |   |
| AMM       | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System |
| AMM       | 31-36-00-710-001 | Test of the DMU (1TV)                                   |
| AMM       | 31-36-34-000-001 | Removal of the Data Management Unit (DMU) (1TV)         |
| AMM       | 31-36-34-400-001 | Installation of the Data Management Unit (DMU) (1TV)    |
| ASM       | 21-61/03         |   |
| ASM       | 31-37/01         |   |

- 3. Fault Confirmation
  - A. Do the Test of the DMU (Ref. AMM TASK 31-36-00-710-001).

NOTE: Make sure that the circuit breakers 1HH, 2HH, 3HH and 4HH are closed during the test.

4. Fault Isolation

R

- A. If the test gives the maintenance message NO PACK CONTROL LH DATA:
  - do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).
    - (1) If the fault continues:
      - replace the DMU (1TV) (Ref. AMM TASK 31-36-34-000-001) and (Ref. AMM TASK 31-36-34-400-001).
    - (2) If the fault continues:
      - do a check and repair the wiring of the signal ARINC 429 XTR EXT from the PC 1 (7HH) to the DMU (1TV) (Ref. ASM 21-61/03) and (Ref. ASM 31-37/01).

R

B. Do the test given in para. 3.

EFF: ALL **SROS** 

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### TROUBLE SHOOTING MANUAL

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|-----|-----|-----|---|---|---|---|---|---|
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A. Put the aircraft back to its initial configuration.

EFF: ALL
SROS

21-61-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-835

DMU receives no Data from the PC 2 (ACSC 2)

- 1. Possible Causes
  - DMU (1TV)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
|           |                  |   |
| AMM       | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System |
| AMM       | 31-36-00-710-001 | Test of the DMU (1TV)                                   |
| AMM       | 31-36-34-000-001 | Removal of the Data Management Unit (DMU) (1TV)         |
| AMM       | 31-36-34-400-001 | Installation of the Data Management Unit (DMU) (1TV)    |
| ASM       | 21-61/01         |   |
| ASM       | 31-37/01         |   |

- 3. Fault Confirmation
  - A. Do the Test of the DMU (Ref. AMM TASK 31-36-00-710-001).

NOTE: Make sure that the circuit breakers 21HH, 22HH, 23HH and 24HH are closed during the test.

4. Fault Isolation

R

- A. If the test gives the maintenance message NO PACK CONTROL RH DATA:
  - do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).
    - (1) If the fault continues:
      - replace the DMU (1TV) (Ref. AMM TASK 31-36-34-000-001) and (Ref. AMM TASK 31-36-34-400-001).
    - (2) If the fault continues:
      - do a check and repair the wiring of the signal ARINC 429 XTR EXT from the PC 2 (27HH) to the DMU (1TV) (Ref. ASM 21-61/01) and (Ref. ASM 31-37/01).

R

B. Do the test given in para. 3.

EFF: ALL **SROS** 

21-61-00

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### TROUBLE SHOOTING MANUAL

| _  | _ |         |   |
|----|---|---------|---|
| 5. | r | lose-up | ١ |
| J. | · | LUSE-UL | J |

A. Put the aircraft back to its initial configuration.

EFF: ALL
SROS

21-61-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-838

Pack 1 Controller (ACSC 1) Pin Program Mismatch

- 1. Possible Causes
  - CONTROLLER-PACK 1 TEMP (7HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE            | DESIGNATION  |  |
|----------------------|--|--|
|                      |  |  |
| AMM 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)                                   |  |
| AMM 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)                              |  |
| AMM 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |  |
| ASM 21-61/03         |  |  |

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- 3. Fault Confirmation
  - A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).
- 4. Fault Isolation
- R \*\*ON A/C 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,
  - A. If the test gives the maintenance message P1 PIN PROGRAM MISMATCH:
     replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).

\*\*ON A/C 276-299, 476-499, 503-549,

- A. If the test gives the maintenance message P1 PIN PROGRAM MISMATCH:
  - do a check and repair the wiring at the PC 1 (7HH): connector AA/6D to the GND and connector AB/7B to the GND (Ref. ASM 21-61/03).
  - (1) If the fault continues:
    - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).

EFF: ALL 21-61-00

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### TROUBLE SHOOTING MANUAL

\*\*ON A/C ALL

B. Do the test given in para. 3.

EFF: ALL | | SROS 21-61-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-839

Pack 2 Controller (ACSC 2) Pin Program Mismatch

- 1. Possible Causes
  - CONTROLLER-PACK 2 TEMP (27HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE            | DESIGNATION  |  |
|----------------------|--|--|
| AMM 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)                                   |  |
| AMM 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)                              |  |
| AMM 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |  |
| ASM 21-61/01         |  |  |

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- 3. Fault Confirmation
  - A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).
- 4. Fault Isolation
- R \*\*ON A/C 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,
  - A. If the test gives the maintenance message P2 PIN PROGRAM MISMATCH: - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).

\*\*ON A/C 276-299, 476-499, 503-549,

- A. If the test gives the maintenance message P2 PIN PROGRAM MISMATCH:
  - do a check and repair the wiring at the PC 2 (27HH): connector AA/6D to the GND and connector AB/7B to the GND (Ref. ASM 21-61/01).
  - (1) If the fault continues:
    - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).

EFF: ALL 21-61-00

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### TROUBLE SHOOTING MANUAL

\*\*ON A/C ALL

B. Do the test given in para. 3.

EFF: ALL SROS 21-61-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-843

Pack 1 Compressor Temperature Sensor / Compressor Overheat Sensor Disagree

#### 1. Possible Causes

- CONTROLLER-PACK 1 TEMP (7HH)
- SENSOR-COMPRESSOR OVERHEAT (15HH))
- SENSOR-COMPRESSOR TEMPERATURE (12HH)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION   |  |  |
|-----------|------------------|---|--|--|
| AMM       | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control                                    |  |  |
|           |                  | System  |  |  |
| AMM       | 21-61-11-000-001 | Removal of the Compressor Outlet - Temperature Sensor 12HH (32HH)                   |  |  |
| AMM       | 21-61-11-400-001 | <pre>Installation of the Compressor Outlet - Temperature Sensor 12HH (32HH)</pre>   |  |  |
| AMM       | 21-61-12-000-001 | Removal of the Compressor Overheat - Temperature Sensor 15HH (35HH)                 |  |  |
| AMM       | 21-61-12-400-001 | <pre>Installation of the Compressor Overheat - Temperature Sensor 15HH (35HH)</pre> |  |  |
| AMM       | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)  |  |  |
| AMM       | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)                                     |  |  |
| ASM       | 21-61/04         |   |  |  |

### 3. Fault Confirmation

\*\*ON A/C ALL

- R Post SB 21-1104 For A/C 227-227,229-237,276-281,476-478,
  - A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

EFF: ALL 21-61-00

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#### TROUBLE SHOOTING MANUAL

\*\*ON A/C ALL

#### 4. Fault Isolation

\*\*ON A/C ALL

- R Post SB 21-1104 For A/C 227-227,229-237,276-281,476-478,
  - A. If the test gives the maintenance message P1 COMP TEMP/OVHT SENSOR DISAGREE:
    - replace the SENSOR-COMPRESSOR OVERHEAT (15HH)) (Ref. AMM TASK 21-61-12-000-001) and (Ref. AMM TASK 21-61-12-400-001).
    - (1) If the fault continues:
      - replace the SENSOR-COMPRESSOR TEMPERATURE (12HH) (Ref. AMM TASK 21-61-11-000-001) and (Ref. AMM TASK 21-61-11-400-001).
    - (2) If the fault continues:
      - do a check and repair the wiring (Ref. ASM 21-61/04) between: SENSOR (15HH) connector A/C and PC 1 (7HH) connector AB/1C, SENSOR (15HH) connector A/B and PC 1 (7HH) connector AB/1B, SENSOR (15HH) connector A/A and PC 1 (7HH) connector AB/1A.
    - (3) If the fault continues:
      - do a check and repair the wiring (Ref. ASM 21-61/04) between: SENSOR (12HH) connector A/C and PC 1 (7HH) connector AA/14C, SENSOR (12HH) connector A/B and PC 1 (7HH) connector AA/14D, SENSOR (12HH) connector A/A and PC 1 (7HH) connector AA/15A,
    - (4) If the fault continues:
      - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - B. Do the test as given in the Para. 3.A.

EFF: ALL 21-61-00

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## TROUBLE SHOOTING MANUAL

\*\*ON A/C ALL

TASK 21-61-00-810-844

Pack 2 Compressor Temperature Sensor / Compressor Overheat Sensor Disagree

- 1. Possible Causes
  - CONTROLLER-PACK 2 TEMP (27HH)
  - SENSOR-COMPRESSOR OVERHEAT (35HH))
  - SENSOR-COMPRESSOR TEMPERATURE (32HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
| AMM       | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System  |
| AMM       | 21-61-11-000-001 | Removal of the Compressor Outlet - Temperature Sensor 12HH (32HH)  |
| AMM       | 21-61-11-400-001 | <pre>Installation of the Compressor Outlet - Temperature Sensor 12HH (32HH)</pre>                              |
| AMM       | 21-61-12-000-001 | Removal of the Compressor Overheat - Temperature Sensor 15HH (35HH)  |
| AMM       | 21-61-12-400-001 | <pre>Installation of the Compressor Overheat - Temperature Sensor 15HH (35HH)</pre>                            |
| AMM       | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)   |
| AMM       | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)  |
| ASM       | 21-61/02         | , and the second se |

#### 3. Fault Confirmation

\*\*ON A/C ALL

**SROS** 

- R Post SB 21-1104 For A/C 227-227,229-237,276-281,476-478,
  - A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

EFF: ALL 21-6

**21-61-00** 

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## TROUBLE SHOOTING MANUAL

\*\*ON A/C ALL

#### 4. Fault Isolation

\*\*ON A/C ALL

- R Post SB 21-1104 For A/C 227-227,229-237,276-281,476-478,
  - A. If the test gives the maintenance message P2 COMP TEMP/OVHT SENSOR DISAGREE:
    - replace the SENSOR-COMPRESSOR OVERHEAT (35HH)) (Ref. AMM TASK 21-61-12-000-001) and (Ref. AMM TASK 21-61-12-400-001).
    - (1) If the fault continues:
      - replace the SENSOR-COMPRESSOR TEMPERATURE (32HH) (Ref. AMM TASK 21-61-11-000-001) and (Ref. AMM TASK 21-61-11-400-001).
    - (2) If the fault continues:
      - do a check and repair the wiring (Ref. ASM 21-61/02) between: SENSOR (35HH) connector A/C and PC 2 (27HH) connector AB/1C, SENSOR (35HH) connector A/B and PC 2 (27HH) connector AB/1B, SENSOR (35HH) connector A/A and PC 2 (27HH) connector AB/1A.
    - (3) If the fault continues:
      - do a check and repair the wiring (Ref. ASM 21-61/02) between: SENSOR (32HH) connector A/C and PC 2 (27HH) connector AA/14C, SENSOR (32HH) connector A/B and PC 2 (27HH) connector AA/14D, SENSOR (32HH) connector A/A and PC 2 (27HH) connector AA/15A.
    - (4) If the fault continues:
      - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - B. Do the test as given in the Para. 3.A.

EFF: ALL 21-61-00

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**SROS** 

## TROUBLE SHOOTING MANUAL

R \*\*ON A/C 227-227, 229-237, 276-281, 476-478,

TASK 21-61-00-810-845

Pack 1 Bleed Temperature is above 280 deg.C or above 320 deg.C

- 1. Possible Causes
  - CONTROLLER-PACK 1 TEMP (7HH)
  - BLEED TEMPERATURE SENSOR (18HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE  |                              | DESIGNATION   |
|------------|------------------------------|---|
| AMM        | 21-61-17-000-001             | Removal of the Bleed Air Temperature Sensor 18HH (38HH)                 |
| AMM        | 21-61-17-400-001             | <pre>Installation of the Bleed Air Temperature Sensor 18HH (38HH)</pre> |
| AMM        | 21-61-34-000-001             | Removal of the Pack Controller (7HH, 27HH)                              |
| AMM<br>ASM | 21-61-34-400-001<br>21-61/04 | Installation of the Pack Controller (7HH, 27HH)                         |

- 3. Fault Confirmation
  - A. Do a read-out of the class 3 faults of the air conditioning system.
- 4. Fault Isolation
  - A. If the read-out of the class 3 faults shows the maintenance message P1 BLEED TEMP > 280 C or P1 BLEED TEMP > 320 C:
    - replace the BLEED TEMPERATURE SENSOR (18HH) (Ref. AMM TASK 21-61-17-000-001) and (Ref. AMM TASK 21-61-17-400-001).
    - (1) If the fault continues:
      - do a check and repair the wiring (Ref. ASM 21-61/04) between: the BLEED TEMPERATURE SENSOR (18HH)A/A and the PACK 1 CONTROLLER (7HH)AB/1D,

the BLEED TEMPERATURE SENSOR (18HH)A/B and the PACK 1 CONTROLLER (7HH)AB/2A,

the BLEED TEMPERATURE SENSOR (18HH)A/C and the PACK 1 CONTROLLER (7HH)AB/2B.

- (2) If the fault continues:
  - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).

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## TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-846

Pack 2 Bleed Temperature is above 280 deg.C or above 320 deg.C

#### 1. Possible Causes

- CONTROLLER-PACK 2 TEMP (27HH)
- BLEED TEMPERATURE SENSOR (38HH)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE  |                              | DESIGNATION  |
|------------|------------------------------|--|
| AMM        | 21-61-17-000-001             | Removal of the Bleed Air Temperature Sensor 18HH (38HH)      |
| AMM        | 21-61-17-400-001             | Installation of the Bleed Air Temperature Sensor 18HH (38HH) |
| AMM        | 21-61-34-000-001             | Removal of the Pack Controller (7HH, 27HH)                   |
| AMM<br>ASM | 21-61-34-400-001<br>21-61/02 | Installation of the Pack Controller (7HH, 27HH)              |

#### 3. Fault Confirmation

A. Do a read-out of the class 3 faults of the air conditioning system.

#### 4. Fault Isolation

- A. If the read-out of the class 3 faults shows the maintenance message P2 BLEED TEMP > 280 C or P2 BLEED TEMP > 320 C:
  - replace the BLEED TEMPERATURE SENSOR (38HH) (Ref. AMM TASK 21-61-17-000-001) and (Ref. AMM TASK 21-61-17-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-61/02) between: the BLEED TEMPERATURE SENSOR (38HH)A/A and the PACK 2 CONTROLLER (27HH)AB/1D,

the BLEED TEMPERATURE SENSOR (38HH)A/B and the PACK 2 CONTROLLER (27HH)AB/2A,

the BLEED TEMPERATURE SENSOR (38HH)A/C and the PACK 2 CONTROLLER (27HH)AB/2B.

- (2) If the fault continues:
  - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).

21-61-00

EFF: 227-227, 229-237, 276-281, 476-478,

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## TROUBLE SHOOTING MANUAL

\*\*ON A/C ALL

TASK 21-61-00-810-849

Pack 1 Air Inlet Actuator Fault

CAUTION: DO NOT SWAP THE PACK/ACS CONTROLLERS. THIS CAN CAUSE DAMAGE TO THEM IF THERE IS AN ELECTRICAL FAULT IN THE ACTUATOR.

- 1. Possible Causes
  - ACTUATOR-AIR INLET FLAP (8HH)
  - CONTROLLER-PACK 1 TEMP (7HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFE       | RENCE             | DESIGNATION   |
|------------|-------------------|---|
| AMM<br>AMM |                   | Pre-conditioning through the HP Ground Connection Pre-conditioning with the APU |
| AMM        | 21-61-00-710-001  | Operational Test of the Pack Temperature-Control System                         |
| AMM        | 21-61-34-000-001  | Removal of the Pack Controller (7HH, 27HH)                                      |
| AMM        | 21-61-34-400-001  | Installation of the Pack Controller (7HH, 27HH)                                 |
| AMM        | 21-61-51-000-001  | Removal of the Air-Inlet Flap Actuator 8HH and 28HH                             |
| AMM        | 21-61-51-400-001  | Installation of the Air-Inlet Flap Actuator 8HH and 28HH                        |
| ASM        | 21-61/04          |   |
| 3. F       | ault Confirmation |   |

R

- A. Test
  - (1) Do the pre-conditioning through the HP ground connection (Ref. AMM TASK 12-33-21-618-001) or with the APU (Ref. AMM TASK 12-33-21-618-001).

EFF: ALL 21-61-00

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SROS

## TROUBLE SHOOTING MANUAL

(2) Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

R

4. Fault Isolation

R

- A. If the test gives the maintenance message P1 RAM AIR IN ACTUATOR:
  - replace the ACTUATOR-AIR INLET FLAP (8HH) (referred to as ACTUATOR (8HH)) (Ref. AMM TASK 21-61-51-000-001) and (Ref. AMM TASK 21-61-51-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-61/04) from:
    - the ACTUATOR (8HH) to the PC 1 (7HH) and,
    - the ACTUATOR (8HH) to ground.
  - (2) If the fault continues:
    - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).

R

B. Do the test as given in the Para. 3.A.

EFF: ALL

21-61-00

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## TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-850

Pack 2 Air Inlet Actuator Fault

CAUTION: DO NOT SWAP THE PACK/ACS CONTROLLERS. THIS CAN CAUSE DAMAGE TO THEM IF THERE IS AN ELECTRICAL FAULT IN THE ACTUATOR.

- 1. Possible Causes
  - ACTUATOR-AIR INLET FLAP (28HH)
  - CONTROLLER-PACK 2 TEMP (27HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFE | RENCE            | DESIGNATION   |
|------|------------------|---|
| AMM  | 12-33-21-618-001 | Pre-conditioning through the HP Ground Connection       |
| AMM  | 12-33-21-618-001 | Pre-conditioning with the APU                           |
| AMM  | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System |
| AMM  | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)              |
| AMM  | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)         |
| ΔММ  | 21-61-51-000-001 | Removal of the Air-Inlet Flap Actuator 8HH and 28H      |
| AMM  |                  | Installation of the Air-Inlet Flap Actuator 8HH ar 28HH |
| ASM  | 21-61/02         |   |

3. Fault Confirmation

R

A. Test

**SROS** 

- (1) Do the pre-conditioning through the HP ground connection (Ref. AMM TASK 12-33-21-618-001) or with the APU (Ref. AMM TASK 12-33-21-618-001).
- (2) Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

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NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

R EFF: ALL

21-61-00

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## TROUBLE SHOOTING MANUAL

R

4. Fault Isolation

R

- A. If the test gives the maintenance message P2 RAM AIR IN ACTUATOR:
  - replace the ACTUATOR-AIR INLET FLAP (28HH) (referred to as ACTUATOR (8HH)) (Ref. AMM TASK 21-61-51-000-001) and (Ref. AMM TASK 21-61-51-400-001).
    - (1) If the fault continues:
      - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
    - (2) If the fault continues:
      - do a check and repair the wiring between: ACTUATOR (28HH) connector A/D and PC 2 (27HH) connector AB/3D, ACTUATOR (28HH) connector A/E and PC 2 (27HH) connector AB/4A, ACTUATOR (28HH) connector A/F and PC 2 (27HH) connector AB/4B, ACTUATOR (28HH) connector A/A and PC 2 (27HH) connector AA/11D, ACTUATOR (28HH) connector A/B and PC 2 (27HH) connector AA/12A, ACTUATOR (28HH) connector A/C and PC 2 (27HH) connector AA/12B, ACTUATOR (28HH) connector A/J and PC 2 (27HH) connector AB/15A, ACTUATOR (28HH) connector A/K and PC 2 (27HH) connector AB/14D, ACTUATOR (28HH) connector A/L and PC 2 (27HH) connector AB/14C, ACTUATOR (28HH) connector A/N and PC 2 (27HH) connector AB/14B, ACTUATOR (28HH) connector A/U and PC 2 (27HH) connector AB/6D, ACTUATOR (28HH) connector A/V and PC 2 (27HH) connector AB/13C, ACTUATOR (28HH) connector A/H and GND, ACTUATOR (28HH) connector A/T and GND, ACTUATOR (28HH) connector A/M and GND (Ref. ASM 21-61/02).

R

B. Do the test as given in the Para. 3.A.

EFF: ALL **SROS** 

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## TROUBLE SHOOTING MANUAL

R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,

TASK 21-61-00-810-851

Pack 1 Air Outlet Actuator Fault

- 1. Possible Causes
  - ACTUATOR-AIR OUTLET FLAP (9HH)
  - CONTROLLER-PACK 1 TEMP (7HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| AMM       | 12-33-21-618-001 | Pre-conditioning through the HP Ground Connection  |
| AMM       | 12-33-21-618-001 | Pre-conditioning with the APU                      |
| AMM       | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control   |
|           |                  | System   |
| AMM       | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)         |
| AMM       | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)    |
| AMM       | 21-61-52-000-001 | Removal of the Air-Outlet Flap Actuator 9HH (29HH) |
| AMM       | 21-61-52-400-001 | Installation of the Air-Outlet Flap Actuator 9HH   |
|           |                  | (29HH)   |
| ASM       | 21-61/04         |  |

## 3. Fault Confirmation

- A. Test
  - (1) Do the pre-conditioning through the HP ground connection (Ref. AMM TASK 12-33-21-618-001) or with the APU (Ref. AMM TASK 12-33-21-618-001).
  - (2) Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

EFF: 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,

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21-61-00

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## TROUBLE SHOOTING MANUAL

## 4. Fault Isolation

- A. If the test gives the maintenance message P1 RAM AIR OUT ACTUATOR:
  - replace the ACTUATOR-AIR OUTLET FLAP (9HH) (referred to as ACTUATOR (9HH)) (Ref. AMM TASK 21-61-52-000-001) and (Ref. AMM TASK 21-61-52-400-001).
  - (1) If the fault continues:
    - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - (2) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-61/04) from:
    - the ACTUATOR (9HH/A) to the PC 1 (7HH/AB),
    - the ACTUATOR (9HH/A) to the PC 1 (7HH/AA) and,
    - the ACTUATOR (9HH/A) to ground.
- B. Do the test as given in the Para. 3.A.

21-61-00

## TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-852

Pack 2 Air Outlet Actuator Fault

## 1. Possible Causes

- ACTUATOR-AIR OUTLET FLAP (29HH)
- CONTROLLER-PACK 2 TEMP (27HH)
- wiring

## 2. Job Set-up Information

A. Referenced Information

| REFERENCE                                    | DESIGNATION   |  |
|--|---|--|
| AMM 42 77 24 449 004                         | Dec anditioning through the UD Conved Consection                                |  |
| AMM 12-33-21-618-001<br>AMM 12-33-21-618-001 | Pre-conditioning through the HP Ground Connection Pre-conditioning with the APU |  |
| AMM 21-61-00-710-001                         | Operational Test of the Pack Temperature-Control System                         |  |
| AMM 21-61-34-000-001                         | Removal of the Pack Controller (7HH, 27HH)                                      |  |
| AMM 21-61-34-400-001                         | Installation of the Pack Controller (7HH, 27HH)                                 |  |
| AMM 21-61-52-000-001                         | Removal of the Air-Outlet Flap Actuator 9HH (29HH)                              |  |
| AMM 21-61-52-400-001                         | Installation of the Air-Outlet Flap Actuator 9HH (29HH)                         |  |
| ASM 21-61/02                                 |   |  |

## 3. Fault Confirmation

## A. Test

- (1) Do the pre-conditioning through the HP ground connection (Ref. AMM TASK 12-33-21-618-001) or with the APU (Ref. AMM TASK 12-33-21-618-001).
- (2) Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

201-208, 227-227, 229-245, 276-284,

426-428, 476-478,

**SROS** 

21-61-00

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## TROUBLE SHOOTING MANUAL

## 4. Fault Isolation

- A. If the test gives the maintenance message P2 RAM AIR OUT ACTUATOR:
  - replace the ACTUATOR-AIR OUTLET FLAP (29HH) (referred to as ACTUATOR (29HH)) (Ref. AMM TASK 21-61-52-000-001) and (Ref. AMM TASK 21-61-52-400-001).
  - (1) If the fault continues:
    - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - (2) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-61/02) from:
    - the ACTUATOR (29HH/A) to the PC 2 (27HH/AB),
    - the ACTUATOR (29HH/A) to the PC 2 (27HH/AA) and,
    - the ACTUATOR (29HH/A) to ground.
- B. Do the test as given in the Para. 3.A.

21-61-00

## TROUBLE SHOOTING MANUAL

\*\*ON A/C ALL

TASK 21-61-00-810-853

Pack 1 Controller (ACSC 1) Fault - Outlet Temperature / Compressor Outlet Temperature Indication replaced by Amber XX

- 1. Possible Causes
  - CONTROLLER-PACK 1 TEMP (7HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE  | DESIGNATION  |
|--|--|
| 21-61-00-810-820   | Pack 1 Electrical Component with Short Circuit (AIR PACK 1 REGUL FAULT)                    |
| AMM 21-61-00-710-001   | Operational Test of the Pack Temperature-Control System                                    |
| AMM 21-61-34-000-001<br>AMM 21-61-34-400-001<br>ASM 21-61/03<br>ASM 21-63/02 | Removal of the Pack Controller (7HH, 27HH) Installation of the Pack Controller (7HH, 27HH) |

### 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

## 4. Fault Isolation

- A. If the test gives the maintenance message P1 CONT:
  - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring if necessary between:
      - PC 1 (7HH) connector AA/5A and CB (1HH),
      - PC 1 (7HH) connector AA/5B and GND,
      - PC 1 (7HH) connector AB/13D and CB (2HH),
      - PC 1 (7HH) connector AB/14A and GND (Ref. ASM 21-61/03).

EFF: ALL 21-61-00

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## TROUBLE SHOOTING MANUAL

(2) If the fault continues:

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- do a check and repair if necessary the wiring of the signal: ARINC 429 XTR (M) from the ZC (8HK) to the PC 1 (7HH), ARINC 429 XTR (S) from the ZC (8HK) to the PC 1 (7HH), ARINC 429 RCV (S) from the ZC (8HK) to the PC 1 (7HH) (Ref. ASM 21-63/02).

- (3) If the fault continues:
  - do the trouble shooting procedures for the pack 1 electrical component with short circuit (Ref. TASK 21-61-00-810-820).
- B. Do the test as given in the Para. 3.A.

EFF: ALL

21-61-00

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## TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-854

Pack 2 Controller (ACSC 2) Fault - Outlet Temperature / Compressor Outlet Temperature Indication replaced by Amber XX

## 1. Possible Causes

- CONTROLLER-PACK 2 TEMP (27HH)
- wiring

#### 2. Job Set-up Information

A. Referenced Information

| REFERENCE  | DESIGNATION  |
|--|--|
| 21-61-00-810-821   | Pack 2 Electrical Component with Short Circuit (AIR PACK 2 REGUL FAULT)                    |
| AMM 21-61-00-710-001   | Operational Test of the Pack Temperature-Control System                                    |
| AMM 21-61-34-000-001<br>AMM 21-61-34-400-001<br>ASM 21-61/01<br>ASM 21-63/02 | Removal of the Pack Controller (7HH, 27HH) Installation of the Pack Controller (7HH, 27HH) |

#### 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

#### 4. Fault Isolation

- A. If the test gives the maintenance message P2 CONT:
  - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring if necessary between:
      - PC 2 (27HH) connector AA/5A and CB (21HH),
      - PC 2 (27HH) connector AA/5B and GND,
      - PC 2 (27HH) connector AB/13D and CB (22HH),
      - PC 2 (27HH) connector AB/14A and GND (Ref. ASM 21-61/01).

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## TROUBLE SHOOTING MANUAL

(2) If the fault continues:

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- a check and repair if necessary the wiring of the signal:
  ARINC 429 XTR (M) from the ZC (8HK) to the PC 2 (27HH),
  ARINC 429 XTR (S) from the ZC (8HK) to the PC 2 (27HH),
  ARINC 429 RCV (S) from the ZC (8HK) to the PC 2 (27HH) (Ref. ASM 21-63/02).
- (3) If the fault continues:
  - do the trouble shooting procedures for the pack 2 electrical component with short circuit (Ref. TASK 21-61-00-810-821).
- B. Do the test as given in the Para. 3.A.

EFF: ALL
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## TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-863

Pack 1 Control - No Test Result

- 1. Possible Causes
  - VALVE-FLOW CTL (11HB)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

|        | REFE | RENCE            | DESIGNATION  |
|--------|------|------------------|--|
|        |      |                  |  |
| R<br>R | AMM  | 21-51-51-000-001 | Removal of the Pack Flow-Control Valve/ Pack Flow-Control Unit                 |
| R<br>R | AMM  | 21-51-51-400-001 | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre> |
|        | AMM  | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System                        |
|        | ASM  | 21-51/01         | •  |

- 3. Fault Confirmation
  - A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).
- 4. Fault Isolation
  - A. If the test gives the message NO TEST RESULT RECEPTION FROM P1 CONT:
     replace the VALVE-FLOW CTL (11HB) (Ref. AMM TASK 21-51-51-000-001) and
    (Ref. AMM TASK 21-51-51-400-001).
    - (1) If the fault continues:
      - do a check and the repair the wiring (Ref. ASM 21-51/01): from the PC1 (7HH)AB/6B to the FCV (11HB)A/D, from the PC1 (7HH)AA/7B to the FCV (8HB)A/C, from the FCV (11HB)A/B to the ground.
  - B. Do the test as given in the Para. 3.A.

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## TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-864

Pack 2 Control - No Test Result

- 1. Possible Causes
  - VALVE-FLOW CTL (8HB)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

|        | REFE | RENCE            | DESIGNATION  |
|--------|------|------------------|--|
|        |      |                  |  |
|        | AMM  | 21-51-51-000-001 | Removal of the Pack Flow-Control Valve/ Pack                                   |
| R      |      |                  | Flow-Control Unit  |
| R<br>R | AMM  | 21-51-51-400-001 | <pre>Installation of the Pack Flow-Control Valve/ Pack Flow-Control Unit</pre> |
|        | AMM  | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System                        |
|        | ASM  | 21-51/02         |  |

- 3. Fault Confirmation
  - A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).
- 4. Fault Isolation
  - A. If the test gives the message NO TEST RESULT RECEPTION FROM P2 CONT:
     replace the VALVE-FLOW CTL (8HB) (Ref. AMM TASK 21-51-51-000-001) and
    (Ref. AMM TASK 21-51-51-400-001).
    - (1) If the fault continues:
      - do a check and the repair the wiring (Ref. ASM 21-51/02): from the PC2 (27HH)AB/6B to the FCV (8HB)A/D, from the PC2 (27HH)AA/7B to the FCV (11HB)A/C, from the FCV (8HB)A/B to the ground.
  - B. Do the test as given in the Para. 3.A.

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## TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-865

High Difference in Pack Discharge Temperatures

#### 1. Possible Causes

- SENSOR-WATER EXTRACTOR TEMPERATURE (11HH)
- SENSOR-WATER EXTRACTOR TEMPERATURE (31HH)

## 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
|           |                  |   |
| AMM       | 12-33-21-618-001 | Pre-conditioning with the APU   |
| AMM       | 21-61-13-000-001 | Removal of the Water-Extractor Temperature Sensors 11HH and 31HH      |
| AMM       | 21-61-13-400-001 | Installation of the Water-Extractor Temperature Sensors 11HH and 31HH |

## 3. Fault Confirmation

#### A. Test

- (1) Do the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618-001).
- (2) Make sure that the pack 1 inlet-pressure indication on the ECAM BLEED page is > 20 PSI.
- (3) On the AIR COND panel 30VU:
  - put the COCKPIT, the FWD CABIN and the AFT CABIN selectors to the HOT position,
  - wait for 10 minutes,
  - put the COCKPIT, the FWD CABIN and the AFT CABIN selectors to the COLD position.
- (4) Do a read out of the CLASS 3 FAULTS of the pack temperature-control system.

## 4. Fault Isolation

- A. Safety Precautions
  - (1) Before you do any corrective actions you must stop the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618-001).

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- B. If the read out of the CLASS 3 FAULTS gives the message P1 WATER EX TEMP SENSOR:
  - replace the SENSOR-WATER EXTRACTOR TEMPERATURE (11HH) (Ref. AMM TASK 21-61-13-000-001) and (Ref. AMM TASK 21-61-13-400-001).
- C. If the read out of the CLASS 3 FAULTS gives the message P2 WATER EX TEMP SENSOR:
  - replace the SENSOR-WATER EXTRACTOR TEMPERATURE (31HH) (Ref. AMM TASK 21-61-13-000-001) and (Ref. AMM TASK 21-61-13-400-001).

## 5. Close-up

A. Do the test given in para. 3.

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## TROUBLE SHOOTING MANUAL

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TASK 21-61-00-810-866

Pack 1 Electrical Component with Short Circuit (AIR PACK 1)

## 1. Possible Causes

- CONTROLLER-PACK 1 TEMP (7HH)
- ACTUATOR-AIR INLET FLAP (8HH)
- ACTUATOR-AIR OUTLET FLAP (9HH)
- VALVE-TURBINE BYPASS (10HH)
- SENSOR-COMPRESSOR OVHT (15HH)
- SENSOR-PACK OUTLET TEMP (13HH)
   SENSOR-BLEED TEMPERATURE (18HH)
- SENSOR-WATER EXTRACTOR TEMPERATURE (11HH)
- SENSOR-PRESSURE (10HB)
- SENSOR-PACK INLET PRESSURE (16HH)
- wiring

## 2. Job Set-up Information

## A. Referenced Information

| REFERENCE |                  | DESIGNATION   |  |
|-----------|------------------|---|--|
|           |                  |   |  |
| AMM       | 21-51-11-000-001 | Removal of the Differential Pressure Sensor 9HB (10HB)                              |  |
| AMM       | 21-51-11-400-001 | <pre>Installation of the Differential Pressure Sensor 9HB (10HB)</pre>              |  |
| AMM       | 21-61-12-000-001 | Removal of the Compressor Overheat - Temperature Sensor 15HH (35HH)                 |  |
| AMM       | 21-61-12-400-001 | <pre>Installation of the Compressor Overheat - Temperature Sensor 15HH (35HH)</pre> |  |
| AMM       | 21-61-13-000-001 | Removal of the Water-Extractor Temperature Sensors 11HH and 31HH                    |  |
| AMM       | 21-61-13-400-001 | Installation of the Water-Extractor Temperature Sensors 11HH and 31HH               |  |
| AMM       | 21-61-15-000-001 | Removal of the Pack Outlet - Temperature Sensors 13HH and 34HH                      |  |
| AMM       | 21-61-15-400-001 | Installation of the Pack Outlet - Temperature Sensors 13HH and 34HH                 |  |
| AMM       | 21-61-16-000-001 | Removal of the Pack-Inlet Pressure Sensor 16HH (36HH)                               |  |
| AMM       | 21-61-16-400-002 | <pre>Installation of the Pack-Inlet Pressure Sensor 16HH (36HH)</pre>               |  |
| AMM       | 21-61-17-000-001 | Removal of the Bleed Air Temperature Sensor 18HH (38HH)                             |  |
| AMM       | 21-61-17-400-001 | Installation of the Bleed Air Temperature Sensor 18HH (38HH)                        |  |
| AMM       | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)  |  |

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| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
| AMM       | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)          |
| AMM       | 21-61-51-000-001 | Removal of the Air-Inlet Flap Actuator 8HH and 28HH      |
| AMM       | 21-61-51-400-001 | Installation of the Air-Inlet Flap Actuator 8HH and 28HH |
| AMM       | 21-61-52-000-001 | Removal of the Air-Outlet Flap Actuator 9HH (29HH)       |
| AMM       | 21-61-52-400-001 | Installation of the Air-Outlet Flap Actuator 9HH (29HH)  |
| AMM       | 21-61-53-000-001 | Removal of the Bypass Valve 10HH (30HH)                  |
| AMM       | 21-61-53-400-001 | Installation of the Bypass Valve 10HH (30HH)             |
| ASM       | 21-51/01         | •  |
| ASM       | 21-51/01         |  |
| ASM       | 21-61/04         |  |
| ASM       | 21-61/04         |  |

## 3. Fault Confirmation

A. Do a read out of the post flight report.

<u>NOTE</u>: The fault cannot be reproduced on the ground. You must fly the aircraft to see if the corrective action has been succesfull or not.

#### 4. Fault Isolation

A. Restricted Pack Controller Fault Isolation

NOTE: This paragraph is only applicable for:

- Pack Controller Part Number 759A0000-xx
- Pack Controller Part Number 759C0000-xx
- (1) If the post flight report gives the warning PACK 1 without a maintenance message:
  - swap the PC 1 (7HH) and the PC 2 (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - (a) If the fault moves with the PC 1:
    - swap back the PC 1 (7HH) and the PC 2 (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
    - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
- (2) If the fault does not move with the PC 1:
  - swap back the PC 1 (7HH) and the PC 2 (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - disconnect the electrical connector (11HHA) (Ref. AMM TASK 21-61-13-000-001).
  - make sure that the electrical connector is clean and in the correct condition.

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- do a check for voltage at the electrical connector (11HHA) between pins C and D (Ref. ASM 21-61/04).
- (a) If the voltage is not between 4.8VDC and 5.2VDC:
  - disconnect the electrical connector (8HHA) (Ref. AMM TASK 21-61-51-000-001).
  - make sure that the electrical connector is clean and in the correct condition.
  - do a check for voltage again.
  - 1 If the voltage is between 4.8VDC and 5.2VDC:
    - replace the ACTUATOR-AIR INLET FLAP (8HH) (Ref. AMM TASK 21-61-51-000-001) and (Ref. AMM TASK 21-61-51-400-001).
    - connect the electrical connector (8HHA) (Ref. AMM TASK 21-61-51-400-001).
  - 2 If the voltage is not between 4.8VDC and 5.2VDC:
    - connect the electrical connector (8HHA) (Ref. AMM TASK 21-61-51-400-001).
    - repeat para. 4.A.(2).(a) for: connector (9HHA) and the ACTUATOR-AIR OUTLET FLAP (9HH) (Ref. AMM TASK 21-61-52-000-001) and (Ref. AMM TASK 21-61-52-400-001),

connector (10HHA) and the VALVE-TURBINE BYPASS (10HH) (Ref. AMM TASK 21-61-53-000-001) and (Ref. AMM TASK 21-61-53-400-001),

connector (15HHA) and the SENSOR-COMPRESSOR OVHT (15HH) (Ref. AMM TASK 21-61-12-000-001) and (Ref. AMM TASK 21-61-12-400-001),

connector (13HHA) and the SENSOR-PACK OUTLET TEMP (13HH) (Ref. AMM TASK 21-61-15-000-001) and (Ref. AMM TASK 21-61-15-400-001),

connector (18HHA) and the SENSOR-BLEED TEMPERATURE (18HH) (Ref. AMM TASK 21-61-17-000-001) and (Ref. AMM TASK 21-61-17-400-001).

- (b) If the voltage is between 4.8VDC and 5.2VDC:
  - replace the SENSOR-WATER EXTRACTOR TEMPERATURE (11HH) (Ref. AMM TASK 21-61-13-000-001) and (Ref. AMM TASK 21-61-13-400-001).
  - connect the electrical connector (11HHA) (Ref. AMM TASK 21-61-13-400-001).
- B. If the fault continues:
  - (1) Disconnect the electrical connector (7558VCA) (Ref. AMM TASK 21-51-11-000-001) and,
    - make sure that the electrical connectors (7558VC) and (7558VCA) are clean and in a good condition.

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- (a) At the electrical connector (7558VC) do a check for 15VDC at:
  - pins A and C and D and C, (15VDC from pack controller secondary channel).

(Ref. ASM 21-51/01).

- 1 If the voltage is correct:
  - replace the SENSOR-PRESSURE (10HB). (Ref. AMM TASK 21-51-11-000-001) and (Ref. AMM TASK 21-51-11-400-001).
  - connect the electrical connector (7558VCA). (Ref. AMM TASK 21-51-11-400-001).
- (2) If the fault continues:
  - replace the SENSOR-PACK INLET PRESSURE (16HH) (Ref. AMM TASK 21-61-16-000-001) and (Ref. AMM TASK 21-61-16-400-002).
- (3) If the fault continues:
  - open the CB's 1HH (X22), 2HH (Y18), 3HH (X21) and 4HH (Y19),
  - remove the CONTROLLER-PACK 1 TEMP (7HH)

(Ref. AMM TASK 21-61-34-000-001),

- disconnect the electrical connector (11HHA) (Ref. AMM TASK 21-61-13-000-001) and,
- at the electrical connector (11HHA) do a check for a short circuit between:
  - \* pins C and D and,
  - \* GND and pins C and D.

(Ref. ASM 21-61/04).

- (a) If there is a short circuit repair the related wiring between:
  - connector (11HHA) pin C and PC 1 connector (7HHAB) pin 2C,
  - connector (11HHA) pin D and PC 1 connector (7HHAB) pin 2D.
     (Ref. ASM 21-61/04),
  - connect the electrical connector (11HHA). (Ref. AMM TASK 21-61-13-400-001).
- (b) If there is no short circuit connect the electrical connector (11HHA).

(Ref. AMM TASK 21-61-13-400-001).

- (4) If the fault continues:
  - disconnect the electrical connector (8HHA) (Ref. AMM TASK 21-61-51-000-001) and,
  - at the electrical connector (8HHA) do a check for a short circuit between:
    - \* pins D and E, D and F, E and F and,
    - \* GND and pins D, E and F.

(Ref. ASM 21-61/04).

- (a) If there is a short circuit repair the related wiring between:
  - connector (8HHA) pin D and PC 1 connector (7HHAB) pin 3D,
  - connector (8HHA) pin E and PC 1 connector (7HHAB) pin 4A,
  - connector (8HHA) pin F and PC 1 connector (7HHAB) pin 4B.

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(Ref. ASM 21-61/04).

- connect the electrical connector (8HHA). (Ref. AMM TASK 21-61-51-400-001).
- (b) If there is no short circuit connect the electrical connector (8HHA). (Ref. AMM TASK 21-61-51-400-001).
- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - C. If the fault continues:
    - (1) Disconnect the electrical connector (9HHA) (Ref. AMM TASK 21-61-52-000-001) and,
      - at the electrical connector (9HHA) do a check for a short circuit between:
        - \* pins D and E, D and F, E and F and,
        - \* GND and pins D, E and F.

(Ref. ASM 21-61/04).

- (a) If there is a short circuit repair the related wiring between:
  - connector (9HHA) pin D and PC 1 connector (7HHAB) pin 4C,
  - connector (9HHA) pin E and PC 1 connector (7HHAB) pin 4D,
  - connector (9HHA) pin F and PC 1 connector (7HHAB) pin 5A. (Ref. ASM 21-61/04).
  - connect the electrical connector (9HHA). (Ref. AMM TASK 21-61-52-400-001).
- (b) If there is no short circuit connect the electrical connector (9HHA).

(Ref. AMM TASK 21-61-52-400-001).

- (2) If the fault continues:
  - disconnect the electrical connector (10HHA) (Ref. AMM TASK 21-61-53-000-001) and,
  - at the electrical connector (10HHA) do a check for a short circuit between:
    - \* pins S and T, S and V, T and V and,
    - \* GND and pins S, T and V.

(Ref. ASM 21-61/04).

- (a) If there is a short circuit repair the related wiring between:
  - connector (10HHA) pin S and PC 1 connector (7HHAB) pin 3A,
  - connector (10HHA) pin T and PC 1 connector (7HHAB) pin 3B,
  - connector (10HHA) pin V and PC 1 connector (7HHAB) pin 3C. (Ref. ASM 21-61/04).
  - connect the electrical connector (10HHA). (Ref. AMM TASK 21-61-53-400-001).

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(b) If there is no short circuit connect the electrical connector (10HHA).

(Ref. AMM TASK 21-61-53-400-001).

R \*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, R 701-749,

- C. If the fault continues:
  - (1) disconnect the electrical connector (10HHA) (Ref. AMM TASK 21-61-53-000-001) and,
    - at the electrical connector (10HHA) do a check for a short circuit between:
      - $\star$  pins U and J, U and K, U and L, J and K, J and L, K and L, C and D and,
      - \* GND and pins U, J, K, L and C. (Ref. ASM 21-61/04).
    - (a) If there is a short circuit repair the related wiring between:
      - connector (10HHA) pin U and PC 1 connector (7HHAA) pin 2A,
      - connector (10HHA) pin J and PC 1 connector (7HHAA) pin 2B,
      - connector (10HHA) pin K and PC 1 connector (7HHAA) pin 2C,
      - connector (10HHA) pin L and PC 1 connector (7HHAA) pin 2D,
      - connector (10HHA) pin C and PC 1 connector (7HHAA) pin 5B. (Ref. ASM 21-61/04).
      - connect the electrical connector (10HHA). (Ref. AMM TASK 21-61-53-400-001).
    - (b) If there is no short circuit connect the electrical connector (10HHA).

(Ref. AMM TASK 21-61-53-400-001).

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- D. If the fault continues:
  - (1) Disconnect the electrical connector (15HHA)

(Ref. AMM TASK 21-61-12-000-001) and,

- at the electrical connector (15HHA) do a check for a short circuit between:
  - \* pins A and B, A and C, B and C and,
  - \* GND and pins A, B and C.

(Ref. ASM 21-61/04).

- (a) If there is a short circuit repair the related wiring between:
  - connector (15HHA) pin A and PC 1 connector (7HHAB) pin 1A,
  - connector (15HHA) pin B and PC 1 connector (7HHAB) pin 1B,
  - connector (15HHA) pin C and PC 1 connector (7HHAB) pin 1C. (Ref. ASM 21-61/04).
  - connect the electrical connector (15HHA). (Ref. AMM TASK 21-61-12-400-001).

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(b) If there is no short circuit connect the electrical connector (15HHA).

(Ref. AMM TASK 21-61-12-400-001).

- (2) If the fault continues:
  - disconnect the electrical connector (7558VCA) (Ref. AMM TASK 21-51-11-000-001) and,
  - at the electrical connector (7558VC) do a check for a short circuit between:
    - \* pins C and B, C and A, C and D, B and A, B and D, A and D and, \* GND and pins A, B, C and D. (Ref. ASM 21-51/01).
  - (a) If there is a short circuit repair the related wiring between:
    - connector (7558VC) pin C and PC 1 connector (7HHAB) pin 10B,
    - connector (7558VC) pin B and PC 1 connector (7HHAB) pin 9D,
    - connector (7558VC) pin A and PC 1 connector (7HHAB) pin 9C,
    - connector (7558VC) pin D and PC 1 connector (7HHAB) pin 10C. (Ref. ASM 21-51/01).
    - connect the electrical connector (7558VCA). (Ref. AMM TASK 21-51-11-400-001).
  - (b) If there is no short circuit connect the electrical connector (7558VCA).

(Ref. AMM TASK 21-51-11-400-001).

- (3) If the fault continues:
  - disconnect the electrical connector (13HHA) (Ref. AMM TASK 21-61-15-000-001) and,
  - at the electrical connector (13HHA) do a check for a short circuit between:
    - \* pins A and B, A and C, B and C and,
    - \* GND and pins A, B and C.

(Ref. ASM 21-61/04).

- (a) If there is a short circuit repair the related wiring between:
  - connector (13HHA) pin A and PC 1 connector (7HHAB) pin 11D,
  - connector (13HHA) pin B and PC 1 connector (7HHAB) pin 12B,
  - connector (13HHA) pin C and PC 1 connector (7HHAB) pin 12A. (Ref. ASM 21-61/04).
  - connect the electrical connector (13HHA). (Ref. AMM TASK 21-61-15-400-001).
- (b) If there is no short circuit connect the electrical connector (13HHA).

(Ref. AMM TASK 21-61-15-400-001).

- (4) If the fault continues:
  - disconnect the electrical connector (18HHA) (Ref. AMM TASK 21-61-17-000-001) and,
  - at the electrical connector (18HHA) do a check for a short circuit between:

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\* pins A and B, A and C, B and C and, \*GND and pins A, B and C. (Ref. ASM 21-61/04).

- (a) If there is a short circuit repair the related wiring between:
  - connector (18HHA) pin A and PC 1 connector (7HHAB) pin 1D,
  - connector (18HHA) pin B and PC 1 connector (7HHAB) pin 2A,
  - connector (18HHA) pin C and PC 1 connector (7HHAB) pin 2B. (Ref. ASM 21-61/04).
  - connect the electrical connector (18HHA). (Ref. AMM TASK 21-61-17-400-001).
- (b) If there is no short circuit connect the electrical connector (18HHA).

(Ref. AMM TASK 21-61-17-400-001).

- install the removed CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-400-001) and,
- close the CB's 1HH (X22), 2HH (Y18), 3HH (X21) and 4HH (Y19).

## 5. Close-up

A. Put the aircraft back to its initial configuration.

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## TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-867

Pack 2 Electrical Component with Short Circuit (AIR PACK 2)

## 1. Possible Causes

- CONTROLLER-PACK 2 TEMP (27HH)
- ACTUATOR-AIR INLET FLAP (28HH)
- ACTUATOR-AIR OUTLET FLAP (29HH)
- VALVE-TURBINE BYPASS (30HH)
- SENSOR-COMPRESSOR OVHT (35HH)
- SENSOR-PACK OUTLET TEMP (34HH)
- SENSOR-BLEED TEMPERATURE (38HH)
- SENSOR-WATER EXTRACTOR TEMPERATURE (31HH)
- SENSOR-PRESSURE (9HB)
- SENSOR-PACK INLET PRESSURE (36HH)
- wiring

## 2. Job Set-up Information

#### A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
|           |                  |   |
| AMM       | 21-51-11-000-001 | Removal of the Differential Pressure Sensor 9HB (10HB)                              |
| AMM       | 21-51-11-400-001 | <pre>Installation of the Differential Pressure Sensor 9HB (10HB)</pre>              |
| AMM       | 21-61-12-000-001 | Removal of the Compressor Overheat - Temperature Sensor 15HH (35HH)                 |
| AMM       | 21-61-12-400-001 | <pre>Installation of the Compressor Overheat - Temperature Sensor 15HH (35HH)</pre> |
| AMM       | 21-61-13-000-001 | Removal of the Water-Extractor Temperature Sensors 11HH and 31HH                    |
| AMM       | 21-61-13-400-001 | Installation of the Water-Extractor Temperature Sensors 11HH and 31HH               |
| AMM       | 21-61-15-000-001 | Removal of the Pack Outlet - Temperature Sensors 13HH and 34HH                      |
| AMM       | 21-61-15-400-001 | Installation of the Pack Outlet - Temperature Sensors 13HH and 34HH                 |
| AMM       | 21-61-16-000-001 | Removal of the Pack-Inlet Pressure Sensor 16HH (36HH)                               |
| AMM       | 21-61-16-400-002 | Installation of the Pack-Inlet Pressure Sensor 16HH (36HH)                          |
| AMM       | 21-61-17-000-001 | Removal of the Bleed Air Temperature Sensor 18HH (38HH)                             |
| AMM       | 21-61-17-400-001 | Installation of the Bleed Air Temperature Sensor 18HH (38HH)                        |
| AMM       | 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)  |
| AMM       | 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)                                     |
| AMM       | 21-61-51-000-001 | Removal of the Air-Inlet Flap Actuator 8HH and 28HH                                 |

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| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| AMM       | 21-61-51-400-001 | Installation of the Air-Inlet Flap Actuator 8HH and 28HH |
| AMM       | 21-61-52-000-001 | Removal of the Air-Outlet Flap Actuator 9HH (29HH)       |
| AMM       | 21-61-52-400-001 | Installation of the Air-Outlet Flap Actuator 9HH (29HH)  |
| AMM       | 21-61-53-000-001 | Removal of the Bypass Valve 10HH (30HH)                  |
| AMM       | 21-61-53-400-001 | Installation of the Bypass Valve 10HH (30HH)             |
| ASM       | 21-51/01         | •  |
| ASM       | 21-61/02         |  |
| ASM       | 21-61/02         |  |

### 3. Fault Confirmation

A. Do a read out of the post flight report.

NOTE: The fault cannot be reproduced on the ground. You must fly the aircraft to see if the corrective action has been successfull or not.

### 4. Fault Isolation

A. Restricted Pack Controller Fault Isolation

NOTE: This procedure is only applicable for:

- Pack Controller Part Number 759A0000-xx
- Pack Controller Part Number 759C0000-xx
- (1) If the post flight report gives the warning PACK 2 without a maintenance message:
  - swap the PC 2 (27HH) and the PC 1 (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - (a) If the fault moves with the PC 2:
    - swap back the PC 2 (27HH) and the PC 1 (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
    - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
- (2) If the fault does not move with the PC 2:
  - swap back the PC 2 (27HH) and the PC 1 (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).
  - disconnect the electrical connector (31HHA) (Ref. AMM TASK 21-61-13-000-001).
  - make sure that the electrical connector is clean and in the correct condition.
  - do a check for voltage at the electrical connector (31HHA) between pins C and D (Ref. ASM 21-61/02).

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- (a) If the voltage is not between 4.8VDC and 5.2VDC:
  - disconnect the electrical connector (28HHA) (Ref. AMM TASK 21-61-51-000-001).
  - make sure that the electrical connector is clean and in the correct condition.
  - do a check for voltage again.
  - 1 If the voltage is between 4.8VDC and 5.2VDC:
    - replace the ACTUATOR-AIR INLET FLAP (28HH) (Ref. AMM TASK 21-61-51-000-001) and (Ref. AMM TASK 21-61-51-400-001).
    - connect the electrical connector (28HHA) (Ref. AMM TASK 21-61-51-400-001).
  - 2 If the voltage is not between 4.8VDC and 5.2VDC:
    - connect the electrical connector (28HHA) (Ref. AMM TASK 21-61-51-400-001).
    - repeat para. 4.B.(2).(a) for:
       connector (29HHA) and the ACTUATOR-AIR OUTLET FLAP (29HH)
       (Ref. AMM TASK 21-61-52-000-001) and (Ref. AMM TASK 21-6152-400-001),

connector (30HHA) and the VALVE-TURBINE BYPASS (30HH) (Ref. AMM TASK 21-61-53-000-001) and (Ref. AMM TASK 21-61-53-400-001),

connector (35HHA) and the SENSOR-COMPRESSOR OVHT (35HH) (Ref. AMM TASK 21-61-12-000-001) and (Ref. AMM TASK 21-61-12-400-001),

connector (34HHA) and the SENSOR-PACK OUTLET TEMP (34HH) (Ref. AMM TASK 21-61-15-000-001) and (Ref. AMM TASK 21-61-15-400-001),

connector (38HHA) and the SENSOR-BLEED TEMPERATURE (38HH) (Ref. AMM TASK 21-61-17-000-001) and (Ref. AMM TASK 21-61-17-400-001).

- (b) If the voltage is between 4.8VDC and 5.2VDC:
  - replace the SENSOR-WATER EXTRACTOR TEMPERATURE (31HH) (Ref. AMM TASK 21-61-13-000-001) and (Ref. AMM TASK 21-61-13-400-001).
  - connect the electrical connector (31HHA) (Ref. AMM TASK 21-61-13-400-001).
- B. If the fault continues:
  - (1) Disconnect the electrical connector (7557VCA) (Ref. AMM TASK 21-51-11-000-001) and,
    - make sure that the electrical connectors (7557VC) and (7557VCA) are clean and in a good condition.
    - (a) At the electrical connector (7557VC) do a check for 15VDC at:
      - pins A and C and pins D and C, (15VDC from pack controller secondary channel).
         (Ref. ASM 21-51/01).

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- 1 If the voltage is correct:
  - replace the SENSOR-PRESSURE (9HB). (Ref. AMM TASK 21-51-11-000-001) and (Ref. AMM TASK 21-51-11-400-001).
  - connect the electrical connector (7557VCA). (Ref. AMM TASK 21-51-11-400-001).
- (2) If the fault continues:
  - replace the SENSOR-PACK INLET PRESSURE (36HH) (Ref. AMM TASK 21-61-16-000-001) and (Ref. AMM TASK 21-61-16-400-002).
- (3) If the fault continues:
  - open the CB's 21HH (W22), 22HH (Y20), 23HH (W21) and 24HH (Y21),
  - remove the CONTROLLER-PACK 2 TEMP (27HH)

(Ref. AMM TASK 21-61-34-000-001),

- disconnect the electrical connector (31HHA) (Ref. AMM TASK 21-61-13-000-001) and,
- at the electrical connector (31HHA) do a check for a short circuit between:
  - \* pins C and D and,
  - \* GND and pins C and D.

(Ref. ASM 21-61/02).

- (a) If there is a short circuit repair the related wiring between:
  - connector (31HHA) pin C and PC 2 connector (27HHAB) pin 2C,
  - connector (31HHA) pin D and PC 2 connector (27HHAB) pin 2D. (Ref. ASM 21-61/02).
  - connect the electrical connector (31HHA). (Ref. AMM TASK 21-61-13-400-001).
- (b) If there is no short circuit connect the electrical connector (31HHA). (Ref. AMM TASK 21-61-13-400-001).
- (4) If the fault continues:
  - disconnect the electrical connector (28HHA)

(Ref. AMM TASK 21-61-51-000-001) and,

- at the electrical connector (28HHA) do a check for a short circuit between:
  - \* pins D and E, D and F, E and F and,
  - \* GND and pins D, E and F.

(Ref. ASM 21-61/02).

- (a) If there is a short circuit repair the related wiring between:
  - connector (28HHA) pin D and PC 2 connector (27HHAB) pin 3D,
  - connector (28HHA) pin E and PC 2 connector (27HHAB) pin 4A,
  - connector (28HHA) pin F and PC 2 connector (27HHAB) pin 4B. (Ref. ASM 21-61/02).
  - connect the electrical connector (28HHA). (Ref. AMM TASK 21-61-51-400-001).

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(b) If there is no short circuit connect the electrical connector (28HHA).

(Ref. AMM TASK 21-61-51-400-001).

- R \*\*ON A/C 201-208, 227-227, 229-245, 276-284, 426-428, 476-478,
  - C. If the fault continues:
    - (1) Disconnect the electrical connector (29HHA) (Ref. AMM TASK 21-61-52-000-001) and,
      - at the electrical connector (29HHA) do a check for a short circuit between:
        - \* pins D and E, D and F, E and F and,
        - \* GND and pins D, E and F.

(Ref. ASM 21-61/02).

- (a) If there is a short circuit repair the related wiring between:
  - connector (29HHA) pin D and PC 2 connector (27HHAB) pin 4C,
  - connector (29HHA) pin E and PC 2 connector (27HHAB) pin 4D,
  - connector (29HHA) pin F and PC 2 connector (27HHAB) pin 5A. (Ref. ASM 21-61/02).
  - connect the electrical connector (29HHA). (Ref. AMM TASK 21-61-52-400-001).
- (b) If there is no short circuit connect the electrical connector (29HHA).

  (Ref. AMM TASK 21-61-52-400-001).
- (2) If the fault continues:
  - disconnect the electrical connector (30HHA)
     (Ref. AMM TASK 21-61-53-000-001) and,
  - at the electrical connector (30HHA) do a check for a short circuit between:
    - \* pins S and T, S and V, T and V and,
    - \* GND and pins S, T and V.

(Ref. ASM 21-61/02).

- (a) If there is a short circuit repair the related wiring between:
  - connector (30HHA) pin S and PC 2 connector (27HHAB) pin 3A,
  - connector (30HHA) pin T and PC 2 connector (27HHAB) pin 3B,
  - connector (30HHA) pin V and PC 2 connector (27HHAB) pin 3C.
     (Ref. ASM 21-61/02).
  - connect the electrical connector (30HHA). (Ref. AMM TASK 21-61-53-400-001).
- (b) If there is no short circuit connect the electrical connector (30HHA).

(Ref. AMM TASK 21-61-53-400-001).

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R \*\*ON A/C 209-225, 247-275, 285-299, 429-475, 479-499, 503-549, 551-599, R 701-749,

- C. If the fault continues:
  - (1) Disconnect the electrical connector (30HHA) (Ref. AMM TASK 21-61-53-000-001) and,
    - at the electrical connector (30HHA) do a check for a short circuit between:
      - $\star$  pins U and J, U and K, U and L, J and K, J and L, K and L, C and D and,
      - \* GND and pins U, J, K, L and C. (Ref. ASM 21-61/02).
    - (a) If there is a short circuit repair the related wiring between:
      - connector (30HHA) pin U and PC 2 connector (27HHAA) pin 2A,
      - connector (30HHA) pin J and PC 2 connector (27HHAA) pin 2B,
      - connector (30HHA) pin K and PC 2 connector (27HHAA) pin 2C, connector (30HHA) pin L and PC 2 connector (27HHAA) pin 2D,
      - connector (30HHA) pin C and PC 2 connector (27HHAA) pin 5B. (Ref. ASM 21-61/02).
      - connect the electrical connector (30HHA). (Ref. AMM TASK 21-61-53-400-001).
    - (b) If there is no short circuit connect the electrical connector (30HHA). (Ref. AMM TASK 21-61-53-400-001).

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- D. If the fault continues:
  - (1) Disconnect the electrical connector (35HHA) (Ref. AMM TASK 21-61-12-000-001) and,
    - at the electrical connector (35HHA) do a check for a short circuit between:
      - \* pins A and B, A and C, B and C and,
      - \* GND and pins A, B and C.

(Ref. ASM 21-61/02).

- (a) If there is a short circuit repair the related wiring between:
  - connector (35HHA) pin A and PC 2 connector (27HHAB) pin 1A,
  - connector (35HHA) pin B and PC 2 connector (27HHAB) pin 1B,
  - connector (35HHA) pin C and PC 2 connector (27HHAB) pin 1C. (Ref. ASM 21-61/02).
  - connect the electrical connector (35HHA). (Ref. AMM TASK 21-61-12-400-001).
- (b) If there is no short circuit connect the electrical connector (35HHA).

(Ref. AMM TASK 21-61-12-400-001).

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- (2) If the fault continues:
  - disconnect the electrical connector (7557VCA) (Ref. AMM TASK 21-51-11-000-001) and,
  - at the electrical connector (7557VC) do a check for a short circuit between:
    - \* pins C and B, C and A, C and D, B and A, B and D, A and D and, \* GND and pins A, B, C and D.

(Ref. ASM 21-51/01).

- (a) If there is a short circuit repair the related wiring between:
  - connector (7557VC) pin C and PC 2 connector (27HHAB) pin 10B,
  - connector (7557VC) pin B and PC 2 connector (27HHAB) pin 9D,
  - connector (7557VC) pin A and PC 2 connector (27HHAB) pin 9C,
  - connector (7557VC) pin D and PC 2 connector (27HHAB) pin 10C. (Ref. ASM 21-51/01).
  - connect the electrical connector (7557VCA). (Ref. AMM TASK 21-51-11-400-001).
- (b) If there is no short circuit connect the electrical connector (7557VCA). (Ref. AMM TASK 21-51-11-400-001).
- (3) If the fault continues:
  - disconnect the electrical connector (34HHA) (Ref. AMM TASK 21-61-15-000-001) and,
  - at the electrical connector (34HHA) do a check for a short circuit between:
    - \* pins A and B, A and C, B and C and,
    - \* GND and pins A, B and C.

(Ref. ASM 21-61/02).

- (a) If there is a short circuit repair the related wiring between:
  - connector (34HHA) pin A and PC 2 connector (27HHAB) pin 11D, connector (34HHA) pin B and PC 2 connector (27HHAB) pin 12B, connector (34HHA) pin C and PC 2 connector (27HHAB) pin 12A. (Ref. ASM 21-61/02).
    - connect the electrical connector (34HHA). (Ref. AMM TASK 21-61-15-400-001).
- (b) If there is no short circuit connect the electrical connector (34HHA).

(Ref. AMM TASK 21-61-15-400-001).

- (4) If the fault continues:
  - disconnect the electrical connector (38HHA)

(Ref. AMM TASK 21-61-17-000-001) and,

- at the electrical connector (38HHA) do a check for a short circuit between:
  - \* pins A and B, A and C, B and C and,
  - \* GND and pins A, B and C.

(Ref. ASM 21-61/02).

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- (a) If there is a short circuit repair the related wiring between:
  - connector (38HHA) pin A and PC 2 connector (27HHAB) pin 1D,
  - connector (38HHA) pin B and PC 2 connector (27HHAB) pin 2A,
  - connector (38HHA) pin C and PC 2 connector (27HHAB) pin 2B. (Ref. ASM 21-61/02).
  - connect the electrical connector (38HHA). (Ref. AMM TASK 21-61-17-400-001).
- (b) If there is no short circuit connect the electrical connector (38HHA),

(Ref. AMM TASK 21-61-17-400-001).

- install the removed CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-400-001).
- close the CB's 21HH (W22), 22HH (Y20), 23HH (W21) and 24HH (Y21).

## 5. Close-up

A. Put the aircraft back to its initial configuration.

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-870

Pack 1/2 Compressor Outlet Temperature Fault

WARNING: PUT ON PROTECTIVE GOGGLES AND THERMAL GLOVES WHEN YOU GO NEAR AN AIR-CONDITIONING PACK WHEN IT OPERATES. THERE CAN BE LEAKAGE OF HOT AIR, WHICH CAN CAUSE INJURIES.

- 1. Possible Causes
  - heat exchanger unit
  - seals
- 2. Job Set-up Information
  - A. Referenced Information

REFERENCE **DESIGNATION** 

\_\_\_\_\_\_

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AMM 12-33-21-618-001 Pre-conditioning with the APU

- 3. Fault Confirmation
  - A. Access
    - (1) Get access to the heat exchanger areas for both packs.
  - B. Test

NOTE: The fault indications cannot be reproduced on the ground.

(1) Do the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618-001).

- 4. Fault Isolation
  - A. Leak Check
    - (1) In each heat exchanger unit area do a check for hot air leaks at: - the duct connections, the welded joints and all component surfaces.
    - (2) Leaks must be removed either by replacement of the applicable seals or by replacement of the faulty component.

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### TROUBLE SHOOTING MANUAL

### 5. Close-up

A. Aircraft Maintenance Configuration

R (1) Stop the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618- R 001).

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-871

Several Pack 1 'XX' indications on ECAM

- 1. Possible Causes
  - CONTROLLER-PACK 1 TEMP (7HH)
  - circuit breaker (1HH)
  - circuit breaker (2HH)
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE                                    | DESIGNATION  |
|--|--|
| AMM 21-61-00-710-001                         | Operational Test of the Pack Temperature-Control System                                    |
| AMM 21-61-34-000-001<br>AMM 21-61-34-400-001 | Removal of the Pack Controller (7HH, 27HH) Installation of the Pack Controller (7HH, 27HH) |

#### 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

#### 4. Fault Isolation

- A. If the test gives the maintenance message P1 CONT and the Pack 1 indications which follow,
  - pack flow,

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- pack outlet temperature,
- temperature control valve position,
- pack compressor outlet temperature, show amber XX on the ECAM BLEED page:
- (1) Open and then close the circuit breaker (1HH) and the circuit breaker (2HH).

NOTE: This will do a reset of the Pack 1 controller.

- (a) If, after the reset has been done, some of the indications still show amber XX on the ECAM BLEED page:
  - do the related trouble shooting procedure of the applicable XX indication/s refer to the Fault Symptom List.

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### TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
  - replace the CONTROLLER-PACK 1 TEMP (7HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).

### 5. Close-up

A. Do the test as given in the Para. 3.A.

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-872

Several Pack 2 'XX' indications on ECAM

- 1. Possible Causes
  - CONTROLLER-PACK 2 TEMP (27HH)
  - circuit breaker (21HH)
  - circuit breaker (22HH)
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE            | DESIGNATION   |
|----------------------|---|
|                      |   |
| AMM 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System |
| AMM 21-61-34-000-001 | Removal of the Pack Controller (7HH, 27HH)              |
| AMM 21-61-34-400-001 | Installation of the Pack Controller (7HH, 27HH)         |
|                      |   |

#### 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

NOTE: If a fault is detected, the PC gives a fault code for shop maintenance in addition to the related CFDS message(s) (refer to TSM chapter 21-63-00, page block 301).

#### 4. Fault Isolation

- A. If the test gives the maintenance message P2 CONT and the Pack 2 indications which follow,
  - pack flow,
  - pack outlet temperature,
  - temperature control valve position,
  - pack compressor outlet temperature, show amber XX on the ECAM BLEED page:
  - (1) Open and then close the circuit breaker (21HH) and the circuit breaker (22HH).

NOTE: This will do a reset of the Pack 2 controller.

- (a) If, after the reset has been done, some of the indications still show amber XX on the ECAM BLEED page:
  - do the related trouble shooting procedure of the applicable XX indication/s refer to the Fault Symptom List.

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- (2) If the fault continues:
  - replace the CONTROLLER-PACK 2 TEMP (27HH) (Ref. AMM TASK 21-61-34-000-001) and (Ref. AMM TASK 21-61-34-400-001).

## 5. <u>Close-up</u>

A. Do the test as given in the Para. 3.A.

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#### TROUBLE SHOOTING MANUAL

\*\*ON A/C 209-225, 451-475, 551-599,

TASK 21-61-00-810-903

Pack 1 Regulation Fault with Amber XX Bypass Valve Indication

- 1. Possible Causes
  - VALVE-TURBINE BYPASS (10HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |  | DESIGNATION  |
|-----------|--|--|
| AMM       | 21-61-00-710-001                                 | Operational Test of the Pack Temperature-Control System                              |
| AMM       | 21-61-53-000-001<br>21-61-53-400-001<br>21-61/04 | Removal of the Bypass Valve 10HH (30HH) Installation of the Bypass Valve 10HH (30HH) |

- 3. Fault Confirmation
  - A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).
- 4. Fault Isolation
  - A. If the test does not confirm the fault:
    - (1) Do the reset procedure for the ACSC1 as follows,
      - open the circuit breakers 49HH, 50HH, 51HH and 52HH.
      - wait for a minimum of 5 seconds.
      - close the circuit breakers 49HH, 50HH, 51HH and 52HH.
    - (2) No further trouble shooting is necessary.
  - B. If on the ECAM BLEED page the pack 1 bypass valve shows AMBER XX: - replace the VALVE-TURBINE BYPASS (10HH) (Ref. AMM TASK 21-61-53-000-001) and (Ref. AMM TASK 21-61-53-400-001).
    - (1) If the fault continues:
      - do a check and repair the wiring (Ref. ASM 21-61/04) from:
      - the VALVE (10HH) to the ACSC1 (47HH) and,
      - the VALVE (10HH) to ground.

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#### TROUBLE SHOOTING MANUAL

TASK 21-61-00-810-904

Pack 2 Regulation Fault with Amber XX Bypass Valve Indication

- 1. Possible Causes
  - VALVE-TURBINE BYPASS (30HH)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE  | DESIGNATION  |
|--|--|
| AMM 21-61-00-710-001   | Operational Test of the Pack Temperature-Control System                              |
| AMM 21-61-53-000-001<br>AMM 21-61-53-400-001<br>ASM 21-61/02 | Removal of the Bypass Valve 10HH (30HH) Installation of the Bypass Valve 10HH (30HH) |

#### 3. Fault Confirmation

A. Do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).

#### 4. Fault Isolation

- A. If the test does not confirm the fault:
  - Do the reset procedure for the ACSC2 as follows,
    - open the circuit breakers 53HH, 54HH, 55HH and 56HH.
    - wait for a minimum of 5 seconds.
    - close the circuit breakers 53HH, 54HH, 55HH and 56HH.
  - (2) No further trouble shooting is necessary.
- B. If on the ECAM BLEED page the pack 2 bypass valve shows AMBER XX:
  - replace the VALVE-TURBINE BYPASS (30HH) (Ref. AMM TASK 21-61-53-000-001) and (Ref. AMM TASK 21-61-53-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-61/02) from:
    - the VALVE (30HH) to the ACSC2 (57HH) and,
    - the VALVE (30HH) to ground.

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#### TROUBLE SHOOTING MANUAL

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TASK 21-61-00-810-905

High Difference in Pack Discharge Temperatures (Condensor fault)

- 1. Possible Causes
  - CONDENSER (10HM2)
  - CONDENSER (11HM2)
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION                                 |
|-----------|------------------|---|
| ΔΜΜ       | 12-33-21-618-001 | Pre-conditioning with the APU               |
|           | 21-52-32-000-001 | Removal of the Condenser 10HM2 (11HM2)      |
| AMM       | 21-52-32-400-001 | Installation of the Condenser 10HM2 (11HM2) |

### 3. Fault Confirmation

- A. Test
  - (1) Do the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618-001).
  - (2) Make sure that the pack 1 inlet-pressure indication on the ECAM BLEED page is > 20 PSI.
  - (3) Compare the PACK 1 & 2 outlet temperatures on the ECAM BLEED page during the next work step.

NOTE: PACK 1 & 2 outlet temperatures must be almost equal.

- (4) On the AIR COND panel 30VU:
  - put the COCKPIT, the FWD CABIN and the AFT CABIN selectors to the HOT position,
  - wait for 10 minutes,
  - put the COCKPIT, the FWD CABIN and the AFT CABIN selectors to the COLD position.

#### 4. Fault Isolation

- A. Safety Precautions
  - (1) Before you do any corrective actions you must stop the pre-conditioning with the APU (Ref. AMM TASK 12-33-21-618-001).

EFF: ALL 21-61-00

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#### TROUBLE SHOOTING MANUAL

- B. If the test shows unequal PACK 1 & 2 outlet temperatures:
  - make a full visual inspection of the Pack 1 & 2 condensors for cracks.
- C. If the inspection shows cracks:
  - replace the damaged CONDENSER (10HM2) or CONDENSER (11HM2) (Ref. AMM TASK 21-52-32-000-001) and (Ref. AMM TASK 21-52-32-400-001).

### 5. Close-up

A. Do the test given in para. 3.

EFF: ALL 21-61-00

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### TROUBLE SHOOTING MANUAL

- R \*\*ON A/C 456-475,
- R TASK 21-61-00-810-909
- R ACSC1 Lane 1 28VDC Supply Fault
- R 1. Possible Causes
- R 2. Job Set-up Information
- R Not Applicable
- R 3. Fault Confirmation
- R A. Not applicable.
- R 4. Fault Isolation
- R A. If the GROUND REPORT gives the maintenance message TEMP CTL SYS 1 CHAN A R 28VDC SUPPLY INTERRUPT:
- do a check for 28VDC at the ACSC1 (47HH)C pin 3.
- R (1) If the fault continues:
- R do the trouble shooting of the electrical power supply (Ref. TSMR Chapter 24).

EFF: 456-475, 21-61-00

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#### TROUBLE SHOOTING MANUAL

- R TASK 21-61-00-810-910
- R ACSC1 Lane 2 28VDC Supply Fault
- R 1. Possible Causes
- R 2. Job Set-up Information
- R Not Applicable
- R 3. Fault Confirmation
- R A. Not applicable.
- R 4. Fault Isolation
- R A. If the GROUND REPORT gives the maintenance message TEMP CTL SYS 1 CHAN B 28VDC SUPPLY INTERRUPT:
- R do a check for 28VDC at the ACSC1 (47HH)C pin 2.
- R (1) If the fault continues:
- R do the trouble shooting of the electrical power supply (Ref. TSMR Chapter 24).

EFF: 456-475, 21-61-00

SROS

#### TROUBLE SHOOTING MANUAL

- R TASK 21-61-00-810-911
- R ACSC2 Lane 1 28VDC Supply Fault
- R 1. Possible Causes
- R 2. Job Set-up Information
- R Not Applicable
- R 3. Fault Confirmation
- R A. Not applicable.
- R 4. Fault Isolation

**SROS** 

- R A. If the GROUND REPORT gives the maintenance message TEMP CTL SYS 2 CHAN A R 28VDC SUPPLY INTERRUPT:
- R do a check for 28VDC at the ACSC1 (57HH)C pin 3.
- R (1) If the fault continues:
- R do the trouble shooting of the electrical power supply (Ref. TSMR Chapter 24).

EFF: 456-475, 21-61-00

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#### TROUBLE SHOOTING MANUAL

- R TASK 21-61-00-810-912
- R ACSC2 Lane 2 28VDC Supply Fault
- R 1. Possible Causes
- R 2. Job Set-up Information
- R Not Applicable
- R 3. Fault Confirmation
- R A. Not applicable.
- R 4. Fault Isolation

**SROS** 

- R A. If the GROUND REPORT gives the maintenance message TEMP CTL SYS 2 CHAN B R 28VDC SUPPLY INTERRUPT:
- R do a check for 28VDC at the ACSC1 (57HH)C pin 2.
- R (1) If the fault continues:
- R do the trouble shooting of the electrical power supply (Ref. TSMR Chapter 24).

EFF: 456-475, 21-61-00

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#### TROUBLE SHOOTING MANUAL

#### PACK TEMPERATURE CONTROL - TASK SUPPORTING DATA

R \*\*ON A/C 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, R 701-749,

#### 1. Pack Controller

A. CFDS Fault Information

Additional information about a failed component are available in the MCDU CAB TEMP CONT menu.

The related LAST LEG REPORT page shows:

- the date and time when the fault occurs,
- the ATA number of the component,
- the FIN of the component.

\*\*ON A/C 456-475,

#### 1. Air Conditioning System Controller

A. CFDS Fault Information

Additional information about a failed component is available in the MCDU CAB TEMP CONT menu.

The related LAST LEG REPORT page shows:

- the date and time when the fault occured,
- the ATA number of the component,
- the FIN of the component.

\*\*ON A/C ALL

B. Initiated PC Test Data

If a fault is detected during the PC initiated test, a fault code for shop maintenance is transmitted to the zone controller (common internal fault processing).

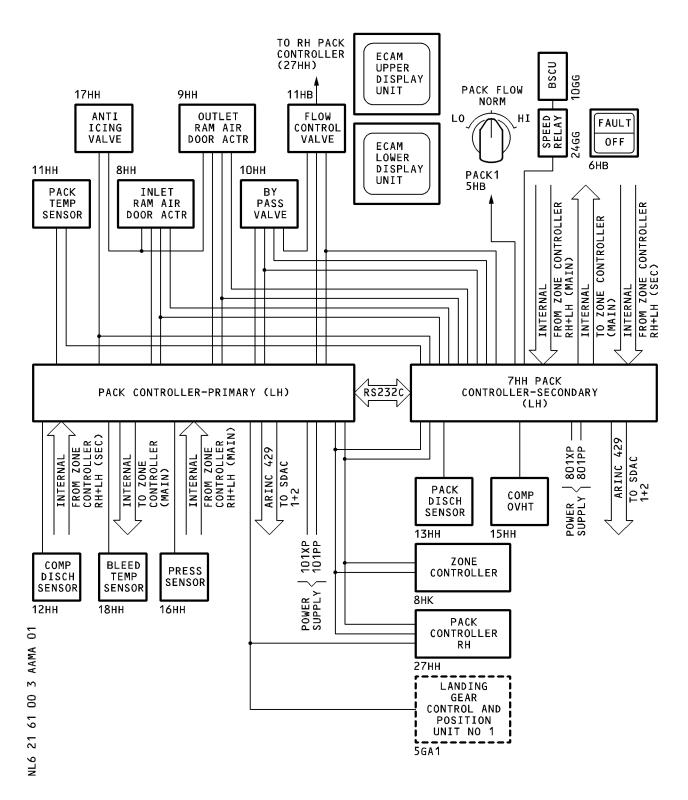
The possible fault codes with their attached fault origns are given in the cockpit and cabin temperature control task supporting data (Ref. TSM 216300, P.Block 301).

EFF: ALL

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#### TROUBLE SHOOTING MANUAL



Pack Temperature Control - Block Diagram Figure 301 (SHEET 1)

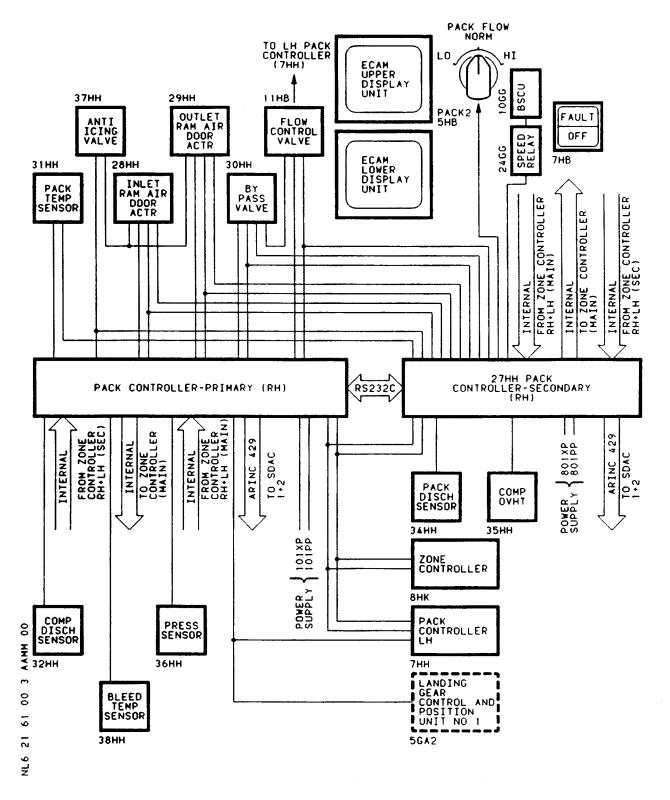
R EFF: 201-208, 227-227, 229-245, 426-428, SROS

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#### TROUBLE SHOOTING MANUAL



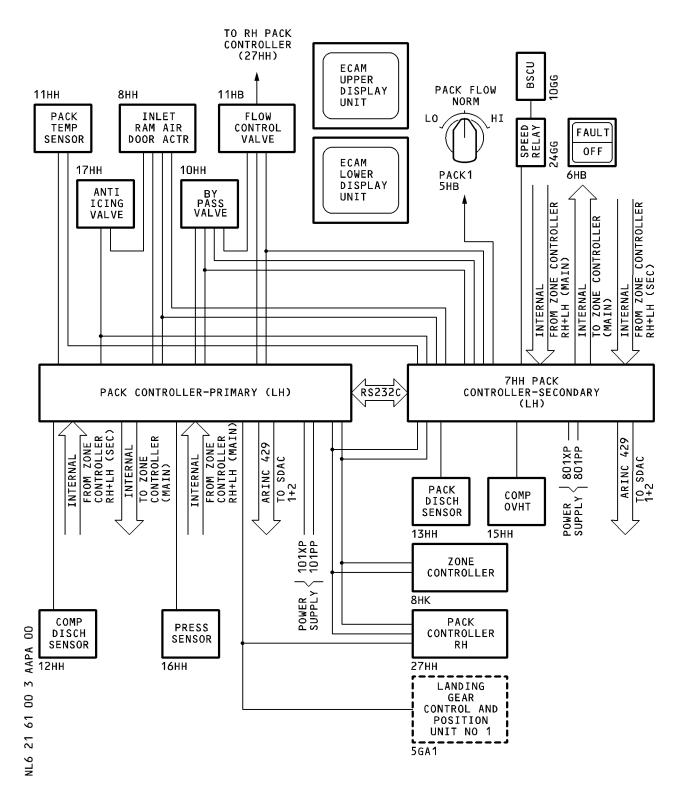
Pack Temperature Control - Block Diagram Figure 301 (SHEET 2)

R EFF: 201-208, 227-227, 229-245, 426-428, SROS

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## TROUBLE SHOOTING MANUAL



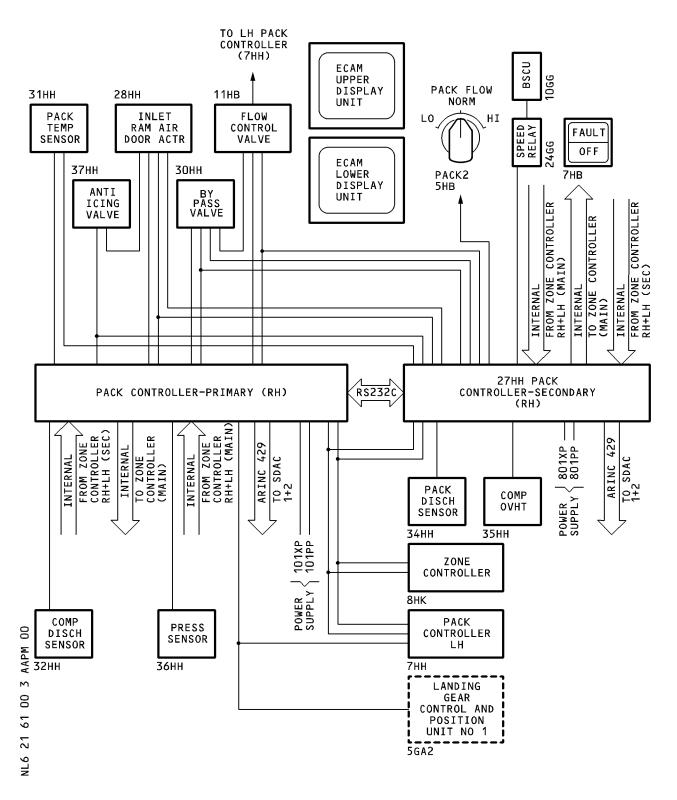
Pack Temperature Control - Block Diagram Figure 301A (SHEET 1)

R EFF: 209-225, 247-275, 429-475, 551-599, 701-749, SROS

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## TROUBLE SHOOTING MANUAL



Pack Temperature Control - Block Diagram Figure 301A (SHEET 2)

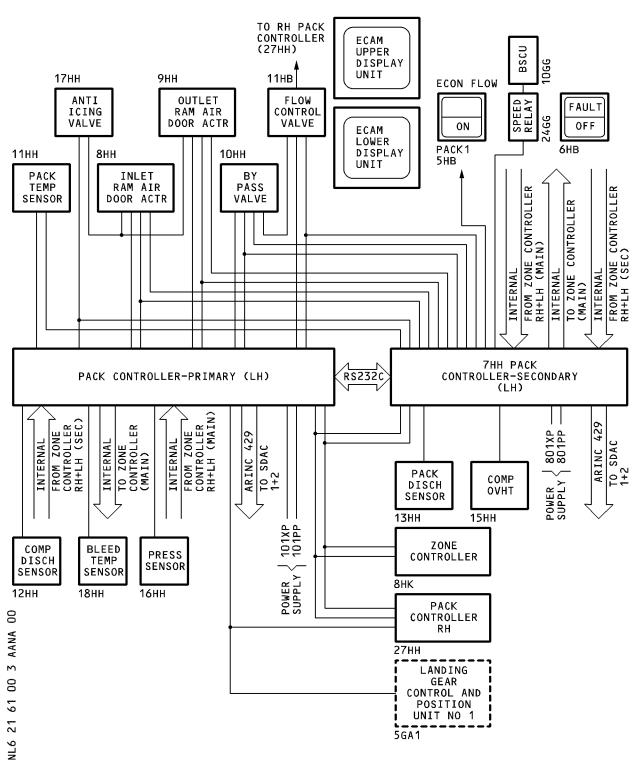
R EFF: 209-225, 247-275, 429-475, 551-599, 701-749, SROS

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## TROUBLE SHOOTING MANUAL



Pack Temperature Control - Block Diagram Figure 301B (SHEET 1)

R EFF: 276-284, 476-478,
SROS

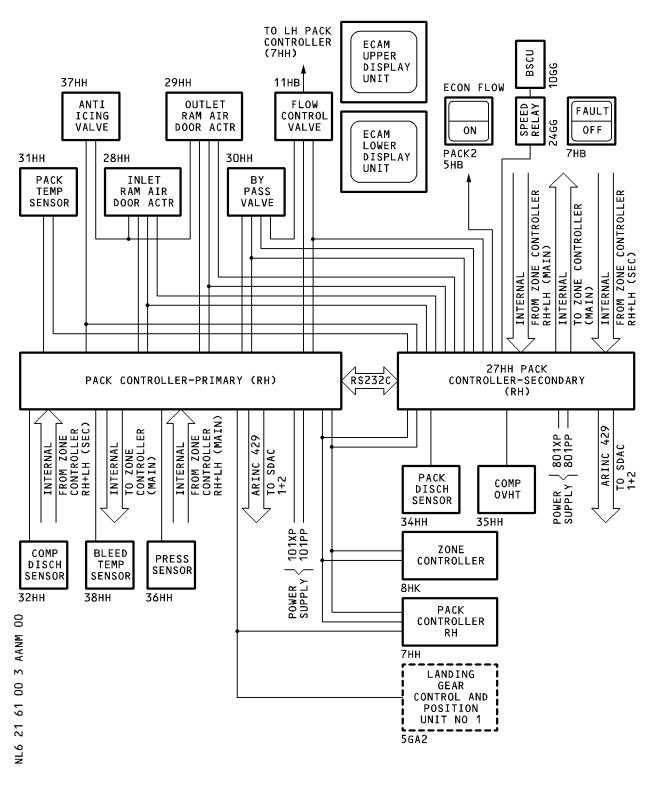
R

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## TROUBLE SHOOTING MANUAL



Pack Temperature Control - Block Diagram Figure 301B (SHEET 2)

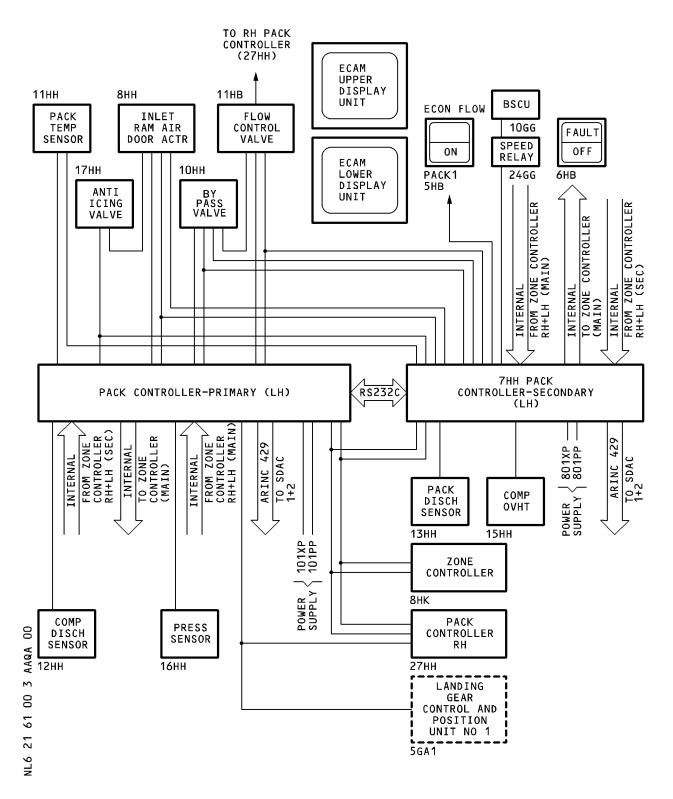
R EFF: 276-284, 476-478, SROS

R

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## TROUBLE SHOOTING MANUAL



Pack Temperature Control - Block Diagram Figure 301C (SHEET 1)

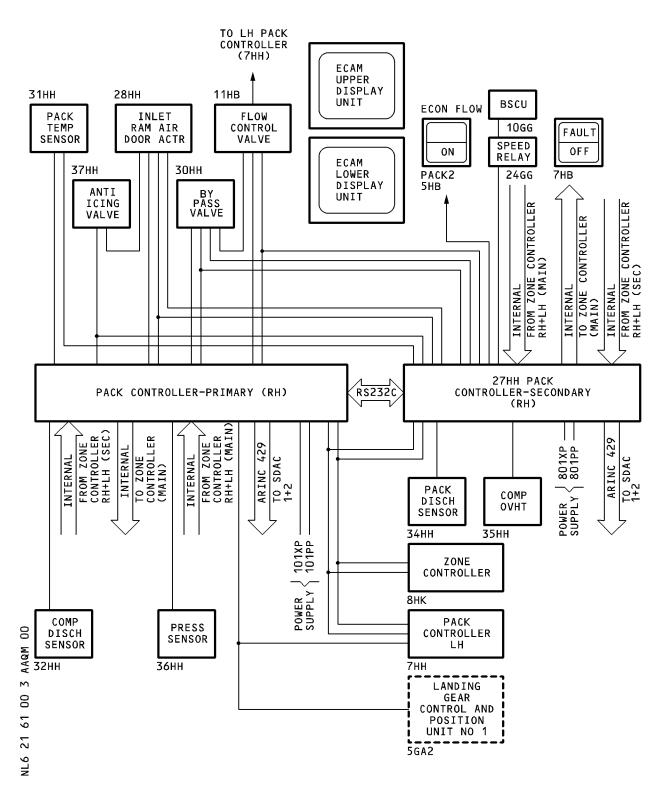
285-299, 479-499, 503-549, EFF: **SROS** 

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## TROUBLE SHOOTING MANUAL



Pack Temperature Control - Block Diagram Figure 301C (SHEET 2)

285-299, 479-499, 503-549, EFF: **SROS** 

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#### TROUBLE SHOOTING MANUAL

#### COCKPIT AND CABIN TEMPERATURE CONTROL - FAULT ISOLATION PROCEDURES

TASK 21-63-00-810-801

Zone Controller Fault

- 1. Possible Causes
  - CONT-ZONE TEMPERATURE (8HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFE | RENCE            | DESIGNATION   |
|------|------------------|---|
| 21-6 | 3-00-810-827     | <pre>Zone Cont Electrical Component with Short Circuit (Primary/Secondary Channels)</pre> |
| AMM  | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU              |
| AMM  | 21-63-34-000-001 | Removal of the Zone Controller (8HK)  |
| AMM  | 21-63-34-400-001 | Installation of the Zone Controller (8HK)   |
| ASM  | 21-63/01         |   |
| ASM  | 21-63/02         |   |

- 3. Fault Confirmation
  - A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

4. Fault Isolation

R

R

- A. If the test gives the maintenance message ZONE CONT:
  - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring if necessary between:
      - ZC (8HK) connector AC/6 and CB (1HK),
      - ZC (8HK) connector AC/4 and GND,
      - ZC (8HK) connector AC/5 and CB (2HK),
      - ZC (8HK) connector AC/1 and GND,
      - ZC (8HK) connector AC/11 and GND,

EFF: ALL **SROS** 

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ZC (8HK) connector AB/K8 and GND,
ZC (8HK) connector AB/J13 and CB (3HK) (Ref. ASM 21-63/01).

- (2) If the fault continues:
  - do a check and repair the wiring if necessary of the signal: ARINC 429 XTR INT (P) from the ZC (8HK) to the PC 1 (7HH) and the PC 2 (27HH), ARINC 429 XTR INT (S) from the ZC (8HK) to the PC 1 (7HH) and the PC 2 (27HH), ARINC 429 RCV INT (S) from the ZC (8HK) to the PC 1 (7HH), ARINC 429 RCV INT (P) from the ZC (8HK) to the PC 2 (27HH) (Ref. ASM 21-63/02).
- (3) If the fault continues:
  - do the trouble shooting procedures for the zone cont electrical component with short circuit (Ref. TASK 21-63-00-810-827).
- R B. If the test gives the maintenance message NO 28V ON ZONE MAIN:
  - do a check and repair the wiring between:
    - ZC (8HK) connector AC/10 and CB (3HK),
    - ZC (8HK) connector AC/8 and GND (Ref. ASM 21-63/01).
- R C. If the test gives the maintenance message NO 28V ON ZONE SECD:
  - do a check and repair the wiring between:
    - ZC (8HK) connector AC/9 and CB (4HK),
    - ZC (8HK) connector AC/7 and GND (Ref. ASM 21-63/01).
- R D. Do the test as given in the Para. 3.A.
  - 5. Close-up
    - A. Put the aircraft back to its initial configuration.

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EFF: ALL

**SROS** 

#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-802

Cockpit Trim-Air Valve Fault

- 1. Possible Causes
  - TRIM VALVE CKPT (11HK)
  - CONT-ZONE TEMPERATURE (8HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

|   | REFE | RENCE            | DESIGNATION  |
|---|------|------------------|--|
| R |      |                  |  |
|   | AMM  | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |
|   | AMM  | 21-63-34-000-001 | Removal of the Zone Controller (8HK)   |
|   | AMM  | 21-63-34-400-001 | Installation of the Zone Controller (8HK)                                    |
|   | AMM  | 21-63-51-000-001 | Removal of the Trim Air Valve (11HK,12HK,13HK)                               |
|   | AMM  | 21-63-51-400-001 | Installation of the Trim Air Valve (11HK,12HK,13HK)                          |
|   | ASM  | 21-63/02         | •  |

3. Fault Confirmation

R

- A. Confirmation of the Fault
  - (1) Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

(2) Do a read out of the POST FLIGHT REPORT and the PREVIOUS LEG REPORT.

R

4. Fault Isolation

R

- A. If the test gives the maintenance message TEST OK, but the POST FLIGHT REPORT and the PREVIOUS LEG REPORT give the maintenance message TRIM VALVE CKPT:
  - replace the TRIM VALVE CKPT (11HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).

EFF: ALL

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#### TROUBLE SHOOTING MANUAL

- B. If the test gives the maintenance message TRIM VALVE CKPT:
  - replace the TRIM VALVE CKPT (11HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-63/02) from:
    - the TRIM VALVE CKPT (11HK) to the ZC (8HK) and,
    - the TRIM VALVE CKPT (11HK) to ground.
- C. If the test gives the maintenance message TEST OK, but the cockpit trim-air valve symbol on the ECAM COND page is replaced by amber XX:
  - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).

R

D. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

EFF: ALL 21-63-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-803

FWD Cabin Trim-Air Valve Fault

- 1. Possible Causes
  - VALVE-TRIM AIR, FWD CABIN (12HK)
  - CONT-ZONE TEMPERATURE (8HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

|   | REFERENCE |                  | DESIGNATION  |  |
|---|-----------|------------------|--|--|
| R |           |                  |  |  |
| K | AMM       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |  |
|   | AMM       | 21-63-34-000-001 | Removal of the Zone Controller (8HK)   |  |
|   | AMM       | 21-63-34-400-001 | Installation of the Zone Controller (8HK)                                    |  |
|   | AMM       | 21-63-51-000-001 | Removal of the Trim Air Valve (11HK,12HK,13HK)                               |  |
|   | AMM       | 21-63-51-400-001 | Installation of the Trim Air Valve (11HK,12HK,13HK)                          |  |
|   | ASM       | 21-63/02         |  |  |
|   |           |                  |  |  |

3. Fault Confirmation

R

- A. Confirmation of the Fault
  - (1) Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

(2) Do a read out of the POST FLIGHT REPORT and the PREVIOUS LEG REPORT.

R

4. Fault Isolation

R

- A. If the test gives the maintenance message TEST OK, and the POST FLIGHT REPORT and the PREVIOUS LEG REPORT give the maintenance message TRIM VALVE FWD CAB:
  - replace the VALVE-TRIM AIR, FWD CABIN (12HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).

EFF: ALL

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SROS

#### TROUBLE SHOOTING MANUAL

- B. If the test gives the maintenance message TRIM VALVE FWD CAB:
  - replace the VALVE-TRIM AIR, FWD CABIN (12HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-63/02) from:
    - the VALVE-TRIM AIR, FWD CABIN (12HK) to the ZC (8HK) and,
    - the VALVE-TRIM AIR, FWD CABIN (12HK) to ground.
- C. If the test gives the maintenance message TEST OK, but the FWD cabin trim-air valve symbol on the ECAM COND page is replaced by amber XX: - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-

R

- D. Do the test as given in the Para. 3.A.
- 5. Close-up

**SROS** 

A. Put the aircraft back to its initial configuration.

001) and (Ref. AMM TASK 21-63-34-400-001).

EFF: ALL 21-63-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-804

AFT Cabin Trim-Air Valve Fault

- 1. Possible Causes
  - VALVE-TRIM AIR, AFT CABIN (13HK)
  - CONT-ZONE TEMPERATURE (8HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFI | ERENCE           | DESIGNATION  |
|------|------------------|--|
| R    |                  |  |
| AMM  | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |
| AMM  | 21-63-34-000-001 | Removal of the Zone Controller (8HK)   |
| AMM  | 21-63-34-400-001 | Installation of the Zone Controller (8HK)                                    |
| AMM  | 21-63-51-000-001 | Removal of the Trim Air Valve (11HK,12HK,13HK)                               |
| AMM  | 21-63-51-400-001 | Installation of the Trim Air Valve (11HK,12HK,13HK)                          |
| ASM  | 21-63/03         | , , , , , ,  |

3. Fault Confirmation

R

- A. Confirmation of the Fault
  - (1) Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

(2) Do a read out of the POST FLIGHT REPORT and the PREVIOS LEG REPORT.

R

4. Fault Isolation

R

- A. If the test gives the maintenance message TEST OK, but the POST FLIGHT REPORT and the PREVIOUS LEG REPORT gives the maintenance message TRIM VALVE AFT CAB:
  - replace the VALVE-TRIM AIR, AFT CABIN (13HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).

EFF: ALL

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SROS

#### TROUBLE SHOOTING MANUAL

- B. If the test gives the maintenance message TRIM VALVE AFT CAB:
  - replace the VALVE-TRIM AIR, AFT CABIN (13HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-63/03) from:
    - the VALVE-TRIM AIR, AFT CABIN (13HK) to the IC (8HK) and,
    - the VALVE-TRIM AIR, AFT CABIN (13HK) to ground.
- C. If the test gives the maintenance message TEST OK, but the AFT cabin trim-air valve symbol on the ECAM COND page is replaced by amber XX:
  - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).

R

D. Do the test as given in the Para. 3.A.

### 5. Close-up

**SROS** 

A. Put the aircraft back to its initial configuration.

EFF: ALL 21-63-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-805

Trim-Air Pressure Regulating Valve Fault

- 1. Possible Causes
  - VALVE-PRESSURE REGULATING (14HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
| AMM       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |
| AMM       | 21-63-00-920-001 | Scheduled Replace/Restore the Trim-Air Pressure-Regulating Valve Filter      |
| AMM       | 21-63-52-000-001 | Removal of the Pressure Regulating Valve 14HK                                |
| AMM       | 21-63-52-400-001 | Installation of the Pressure Regulating Valve 14HK                           |
| ASM       | 21-63/01         |  |
| ASM       | 21-63/03         |  |

3. Fault Confirmation

R

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

R

4. Fault Isolation

R

- A. If the test gives the maintenance message TRIM AIR PRESS VALVE:
  - replace the trim air pressure-regulating valve filter (Ref. AMM TASK 21-63-00-920-001).
  - (1) If the fault continues:
    - replace the VALVE-PRESSURE REGULATING (14HK) (Ref. AMM TASK 21-63-52-000-001) and (Ref. AMM TASK 21-63-52-400-001).

EFF: ALL **SROS** 

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### TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 21-63/01) and (Ref. ASM 21-63/03) from:
  - the VALVE (14HK) to the ZC (8HK),
  - the VALVE (14HK) to ground and,
  - the VALVE (14HK) to the CB (3HK) via the P/BSW (7HK).

R

B. Do the test as given in the Para. 3.A.

#### 5. Close-up

A. Put the aircraft back to its initial configuration.

EFF: ALL SROS

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-806

Cockpit Temperature Sensor Fault

- 1. Possible Causes
  - SENSOR-TEMPERATURE, COCKPIT (21HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
| АММ       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |
| AMM       | 21-63-17-000-001 | Removal of the Temperature Sensors (21HK, 22HK, 23HK)                        |
| AMM       | 21-63-17-400-001 | Installation of the Temperature Sensors (21HK, 22HK, 23HK)                   |
| АСМ       | 21_63/03         |  |

R ASM 21-63/03

3. Fault Confirmation

R

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

R

4. Fault Isolation

R

- A. If the test gives the maintenance message TEMP SENSOR CKPT:
  - replace the SENSOR-TEMPERATURE, COCKPIT (21HK) (referred to as SENSOR (21HK)) (Ref. AMM TASK 21-63-17-000-001) and (Ref. AMM TASK 21-63-17-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring if necessary between: SENSOR (21HK) connector A/A and ZC (8HK) connector AA/7A, SENSOR (21HK) connector A/B and ZC (8HK) connector AA/7B, SENSOR (21HK) connector A/E and ZC (8HK) connector AA/7J,

EFF: ALL

21-63-00

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### TROUBLE SHOOTING MANUAL

SENSOR (21HK) connector A/D and ZC (8HK) connector AA/7K (Ref. ASM 21-63/03).

R

- B. Do the test as given in the Para. 3.A.
- 5. <u>Close-up</u>
  - A. Put the aircraft back to its initial configuration.

EFF: ALL SROS

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-807

FWD Cabin Temperature Sensor Fault

- 1. Possible Causes
  - SENSOR-TEMPERATURE, FWD CABIN (22HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFE       | RENCE                                | DESIGNATION  |
|------------|--------------------------------------|--|
| AMM        | 21-63-00-710-004                     | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU                                     |
| AMM<br>AMM | 21-63-17-000-001<br>21-63-17-400-001 | Removal of the Temperature Sensors (21HK, 22HK, 23HK) Installation of the Temperature Sensors (21HK, 22HK, 23HK) |
| ASM        | 21-63/03                             |  |

3. Fault Confirmation

R

R

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

R

4. Fault Isolation

R

- A. If the test gives the maintenance message TEMP SENSOR FWD CAB:
  - replace the SENSOR-TEMPERATURE, FWD CABIN (22HK) (referred to as SENSOR (22HK)) (Ref. AMM TASK 21-63-17-000-001) and (Ref. AMM TASK 21-63-17-400-001).
    - (1) If the fault continues:
      - do a check and repair the wiring if necessary between: SENSOR (22HK) connector A/A and ZC (8HK) connector AA/7C, SENSOR (22HK) connector A/B and ZC (8HK) connector AA/7D, SENSOR (22HK) connector A/E and ZC (8HK) connector AA/7G,

EFF: ALL

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### TROUBLE SHOOTING MANUAL

SENSOR (22HK) connector A/D and ZC (8HK) connector AA/7H (Ref. ASM 21-63/03).

R

- B. Do the test as given in the Para. 3.A.
- 5. <u>Close-up</u>
  - A. Put the aircraft back to its initial configuration.

EFF: ALL
SROS

21-63-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-808

AFT Cabin Temperature Sensor Fault

- 1. Possible Causes
  - SENSOR-TEMPERATURE, AFT CABIN (23HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |  |  |  |
|-----------|------------------|--|--|--|--|--|
| AMM       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |  |  |  |  |
| AMM       | 21-63-17-000-001 | Removal of the Temperature Sensors (21HK, 22HK, 23HK)                        |  |  |  |  |
| AMM       | 21-63-17-400-001 | Installation of the Temperature Sensors (21HK, 22HK, 23HK)                   |  |  |  |  |
| ASM       | 21-63/03         |  |  |  |  |  |

3. Fault Confirmation

R

R

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

R

4. Fault Isolation

R

- A. If the test gives the maintenance message TEMP SENSOR AFT CAB:
  - replace the SENSOR-TEMPERATURE, AFT CABIN (23HK) (referred to as SENSOR (23HK)) (Ref. AMM TASK 21-63-17-000-001) and (Ref. AMM TASK 21-63-17-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring if necessary between: SENSOR (23HK) connector A/A and ZC (8HK) connector AA/8A, SENSOR (23HK) connector A/B and ZC (8HK) connector AA/8B, SENSOR (23HK) connector A/E and ZC (8HK) connector AA/8J,

**21-63-00** EFF: ALL

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**SROS** 

### TROUBLE SHOOTING MANUAL

SENSOR (23HK) connector A/D and ZC (8HK) connector AA/8K (Ref. ASM 21-63/03).

R

- B. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

EFF: ALL
SROS

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-809

Cockpit Duct Temperature Sensor Fault

- 1. Possible Causes
  - SENSOR-DUCT TEMPERATURE, COCKPIT (15HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE             | DESIGNATION  |  |  |  |  |
|-----------------------|--|--|--|--|--|
| 24 (7 00 740 00)      |  |  |  |  |  |
| AMM 21-63-00-710-004  | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |  |  |  |  |
| AMM 21-63-15-000-001  | Removal of the Duct Temperature Sensors 15HK, 16HK and 17HK                  |  |  |  |  |
| AMM 21-63-15-400-001  | Installation of the Duct Temperature Sensors 15HK, 16HK and 17HK             |  |  |  |  |
| ASM 21-63/03          |  |  |  |  |  |
| 3. Fault Confirmation |  |  |  |  |  |

3. Fault Confirmation

R

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

R

4. Fault Isolation

R

- A. If the test gives the maintenance message TEMP SENSOR CKPT DUCT:
  - replace the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK) (referred to as SENSOR (15HK)) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring if necessary between: SENSOR (15HK) connector A/E and ZC (8HK) connector AA/9A, SENSOR (15HK) connector A/F and ZC (8HK) connector AA/9B, SENSOR (15HK) connector A/C and ZC (8HK) connector AA/9K,

EFF: ALL **21-63-00** 

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### TROUBLE SHOOTING MANUAL

SENSOR (15HK) connector A/D and ZC (8HK) connector AA/9J, SENSOR (15HK) connector A/A and GND (Ref. ASM 21-63/03).

R

- B. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

EFF: ALL
SROS

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-810

FWD Cabin Duct Temperature Sensor Fault

- 1. Possible Causes
  - SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                 | DESIGNATION  |  |  |  |  |
|-----------|-----------------|--|--|--|--|--|
| AMM 2     | 1-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |  |  |  |  |
| AMM 2     | 1-63-15-000-001 | Removal of the Duct Temperature Sensors 15HK, 16HK and 17HK                  |  |  |  |  |
| AMM 2     | 1-63-15-400-001 | Installation of the Duct Temperature Sensors 15HK, 16HK and 17HK             |  |  |  |  |
| ASM 2     | 1-63/03         |  |  |  |  |  |
| 3. Fau    | lt Confirmation |  |  |  |  |  |

Fault Confirmation

R

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

R

4. Fault Isolation

R

- A. If the test gives the maintenance message TEMP SENSOR FWD CAB DUCT: - replace the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK) (referred to as SENSOR (16HK)) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring if necessary between: SENSOR (16HK) connector A/E and ZC (8HK) connector AA/9C, SENSOR (16HK) connector A/F and ZC (8HK) connector AA/9D, SENSOR (16HK) connector A/C and ZC (8HK) connector AA/9H,

EFF: ALL

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### TROUBLE SHOOTING MANUAL

SENSOR (16HK) connector A/D and ZC (8HK) connector AA/9G, SENSOR (16HK) connector A/A and GND (Ref. ASM 21-63/03).

R

B. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

EFF: ALL

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-811

AFT Cabin Duct Temperature Sensor Fault

- 1. Possible Causes
  - SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE             | DESIGNATION  |  |  |  |  |
|-----------------------|--|--|--|--|--|
|                       |  |  |  |  |  |
| AMM 21-63-00-710-004  | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |  |  |  |  |
| AMM 21-63-15-000-001  | Removal of the Duct Temperature Sensors 15HK, 16HK and 17HK                  |  |  |  |  |
| AMM 21-63-15-400-001  | Installation of the Duct Temperature Sensors 15HK, 16HK and 17HK             |  |  |  |  |
| ASM 21-63/03          |  |  |  |  |  |
| 3. Fault Confirmation |  |  |  |  |  |

Fault Confirmation

R

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

R

4. Fault Isolation

R

- A. If the test gives the maintenance message TEMP SENSOR AFT CAB DUCT: - replace the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK) (referred to as SENSOR (17HK)) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring if necessary between: SENSOR (17HK) connector A/E and ZC (8HK) connector AA/10A, SENSOR (17HK) connector A/F and ZC (8HK) connector AA/10B, SENSOR (17HK) connector A/C and ZC (8HK) connector AA/10K,

EFF: ALL

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### TROUBLE SHOOTING MANUAL

SENSOR (17HK) connector A/D and ZC (8HK) connector AA/10J, SENSOR (17HK) connector A/A and GND (Ref. ASM 21-63/03).

R

- B. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

EFF: ALL
SROS

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-812

Cockpit Duct Overheat Fault

- 1. Possible Causes
  - SENSOR-DUCT OVHT TEMPERATURE, COCKPIT (18HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION   |  |  |  |
|-----------|------------------|---|--|--|--|
| AMM       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature                     |  |  |  |
|           |                  | Control with CFDS/MCDU  |  |  |  |
| AMM       | 21-63-18-000-001 | Removal of the Duct Overheat-Temperature Sensors 18HK, 19HK and 20HK      |  |  |  |
| AMM       | 21-63-18-400-001 | Installation of the Duct Overheat-Temperature Sensors 18HK, 19HK and 20HK |  |  |  |
| ASM       | 21-63/03         | •   |  |  |  |

- 3. Fault Confirmation
  - A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

- 4. Fault Isolation
- R \*\*ON A/C 227-227, 229-237, 276-281, 476-478,
  - A. If the test gives the maintenance message CKPT DUCT OVHT SENSOR:
    - replace the SENSOR-DUCT OVHT TEMPERATURE, COCKPIT (18HK) (referred to as SENSOR (18HK)) (Ref. AMM TASK 21-63-18-000-001) and (Ref. AMM TASK 21-63-18-400-001).
      - (1) If the fault continues:
        - do a check and repair the wiring if necessary between: SENSOR (18HK) connector A/B and ZC (8HK) connector AA/11A, SENSOR (18HK) connector A/A and ZC (8HK) connector AA/11B, SENSOR (18HK) connector A/C and GND (Ref. ASM 21-63/03).
  - B. Do the test as given in the Para. 3.A.

EFF: ALL **SROS** 

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### TROUBLE SHOOTING MANUAL

\*\*ON A/C ALL

- 5. Close-up
- R \*\*ON A/C 227-227, 229-237, 276-281, 476-478,
  - A. Put the aircraft back to its initial configuration.

EFF: ALL
SROS

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-813

FWD Cabin Duct Overheat Fault

- 1. Possible Causes
  - SENSOR-DUCT OVHT TEMPERATURE, FWD CABIN (19HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE            | DESIGNATION  |  |  |  |  |
|----------------------|--|--|--|--|--|
| AMM 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |  |  |  |  |
| AMM 21-63-18-000-001 | Removal of the Duct Overheat-Temperature Sensors 18HK, 19HK and 20HK         |  |  |  |  |
| AMM 21-63-18-400-001 | Installation of the Duct Overheat-Temperature Sensors 18HK, 19HK and 20HK    |  |  |  |  |
| ASM 21-63/03         | ,  |  |  |  |  |

#### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

#### 4. Fault Isolation

- A. If the test gives the maintenance message FWD CAB DUCT OVHT SENSOR: - replace the SENSOR-DUCT OVHT TEMPERATURE, FWD CABIN (19HK) (referred to as SENSOR (19HK)) (Ref. AMM TASK 21-63-18-000-001) and (Ref. AMM TASK 21-63-18-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring if necessary between: SENSOR (19HK) connector A/B and ZC (8HK) connector AA/11C, SENSOR (19HK) connector A/A and ZC (8HK) connector AA/11D, SENSOR (19HK) connector A/C and GND (Ref. ASM 21-63/03).
- B. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

227-227, 229-237, 276-281, 476-478,

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**SROS** 

EFF:

#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-814

AFT Cabin Duct Overheat Fault

- 1. Possible Causes
  - SENSOR-DUCT TEMPERATURE, AFT CABIN (20HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE            | DESIGNATION   |
|----------------------|---|
| AMM 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature                     |
|                      | Control with CFDS/MCDU  |
| AMM 21-63-18-000-001 | Removal of the Duct Overheat-Temperature Sensors 18HK, 19HK and 20HK      |
| AMM 21-63-18-400-001 | Installation of the Duct Overheat-Temperature Sensors 18HK, 19HK and 20HK |
| ASM 21-63/03         |   |

#### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

#### 4. Fault Isolation

- A. If the test gives the maintenance message AFT CAB DUCT OVHT SENSOR: - replace the SENSOR-DUCT TEMPERATURE, AFT CABIN (20HK) (referred to as SENSOR (20HK)) (Ref. AMM TASK 21-63-18-000-001) and (Ref. AMM TASK 21-63-18-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring if necessary between: SENSOR (20HK) connector A/B and ZC (8HK) connector AA/12A, SENSOR (20HK) connector A/A and ZC (8HK) connector AA/12B, SENSOR (20HK) connector A/C and GND (Ref. ASM 21-63/03).
- B. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

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**SROS** 

EFF: 227-227, 229-237, 276-281, 476-478,

#### TROUBLE SHOOTING MANUAL

\*\*ON A/C ALL

TASK 21-63-00-810-815

Mixer Unit L/H (Cockpit) Temperature Sensor Fault

- 1. Possible Causes
  - SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |  |  |  |
|-----------|------------------|--|--|--|--|--|
|           |                  |  |  |  |  |  |
| AMM       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |  |  |  |  |
| AMM       | 21-63-16-000-001 | Removal of the Mixer Temperature Sensor 24HK (25HK)                          |  |  |  |  |
| AMM       | 21-63-16-400-001 | Installation of the Mixer Temperature Sensor 24HK (25HK)                     |  |  |  |  |
| ASM       | 21-63/03         |  |  |  |  |  |

#### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

- 4. Fault Isolation
  - A. If the test gives the maintenance message TEMP SENSOR L/H MIXER:
    - replace the SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK) (referred to as SENSOR (24HK)) (Ref. AMM TASK 21-63-16-000-001) and (Ref. AMM TASK 21-63-16-400-001).
    - (1) If the fault continues:
      - do a check and repair the wiring between: SENSOR (24HK) connector A/E and ZC (8HK) connector AA/8C, SENSOR (24HK) connector A/F and ZC (8HK) connector AA/8D, SENSOR (24HK) connector A/C and ZC (8HK) connector AA/8H, SENSOR (24HK) connector A/D and ZC (8HK) connector AA/8G, SENSOR (24HK) connector A/A and GND (Ref. ASM 21-63/03).
  - B. Do the test as given in the Para. 3.A.

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EFF :

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ALL

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| <i>-</i> |    | ·  | Ju | u  | ν |

A. Put the aircraft back to its initial configuration.

R EFF: ALL
SROS

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-816

Mixer Unit R/H (Cabin) Temperature Sensor Fault

#### 1. Possible Causes

- SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK)
- wiring

#### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |  |  |  |
|-----------|------------------|--|--|--|--|--|
| АММ       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature    |  |  |  |  |
| 7         | 21 00 00 110 001 | Control with CFDS/MCDU                                   |  |  |  |  |
| AMM       | 21-63-16-000-001 | Removal of the Mixer Temperature Sensor 24HK (25HK)      |  |  |  |  |
| AMM       | 21-63-16-400-001 | Installation of the Mixer Temperature Sensor 24HK (25HK) |  |  |  |  |
| ASM       | 21-63/03         |  |  |  |  |  |

#### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

#### 4. Fault Isolation

- A. If the test gives the maintenance message TEMP SENSOR R/H MIXER:
  - replace the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK) (referred to as SENSOR (25HK)) (Ref. AMM TASK 21-63-16-000-001) and (Ref. AMM TASK 21-63-16-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring between: SENSOR (25HK) connector A/E and ZC (8HK) connector AA/10C, SENSOR (25HK) connector A/F and ZC (8HK) connector AA/10D, SENSOR (25HK) connector A/C and ZC (8HK) connector AA/10H, SENSOR (25HK) connector A/D and ZC (8HK) connector AA/10G, SENSOR (25HK) connector A/A and GND (Ref. ASM 21-63/03).
- B. Do the test as given in the Para. 3.A.

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A. Put the aircraft back to its initial configuration.

EFF: ALL
SROS

21-63-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-817

Cockpit Temperature Selector Fault

- 1. Possible Causes
  - SEL-TEMPERATURE, AIR COND/COCKPIT (27HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFE | RENCE            | DESIGNATION  |  |  |  |  |
|------|------------------|--|--|--|--|--|
| AMM  | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |  |  |  |  |
| AMM  | 21-63-11-000-001 | Removal of the Temperature Selector (27HK, 28HK, 29HK)                       |  |  |  |  |
| AMM  | 21-63-11-400-001 | <pre>Installation of the Temperature Selector (27HK,28HK,29HK)</pre>         |  |  |  |  |
| ASM  | 21-63/02         |  |  |  |  |  |

#### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

- 4. Fault Isolation
  - A. If the test gives the maintenance message CKPT TEMP SEL:
    - replace the SEL-TEMPERATURE, AIR COND/COCKPIT (27HK) (referred to as SELECTOR (27HK)) (Ref. AMM TASK 21-63-11-000-001) and (Ref. AMM TASK 21-63-11-400-001).
    - (1) If the fault continues:
      - do a check and repair the wiring between: SELECTOR (27HK) connector A/2 and ZC (8HK) connector AA/13A, SELECTOR (27HK) connector A/3 and ZC (8HK) connector AA/14A, SELECTOR (27HK) connector A/4 and ZC (8HK) connector AA/15A, SELECTOR (27HK) connector A/7 and GND (Ref. ASM 21-63/02).
  - B. Do the test as given in the Para. 3.A.

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A. Put the aircraft back to its initial configuration.

EFF: ALL
SROS

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-818

FWD Cabin Temperature Selector Fault

- 1. Possible Causes
  - SEL-TEMPERATURE, AIR COND/FWD CABIN (28HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFE | RENCE            | DESIGNATION  |
|------|------------------|--|
| AMM  | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |
| AMM  | 21-63-11-000-001 | Removal of the Temperature Selector (27HK, 28HK, 29HK)                       |
| AMM  | 21-63-11-400-001 | <pre>Installation of the Temperature Selector (27HK,28HK,29HK)</pre>         |
| ASM  | 21-63/02         |  |

#### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

- 4. Fault Isolation
  - A. If the test gives the maintenance message FWD CAB TEMP SEL:
    - replace the SEL-TEMPERATURE, AIR COND/FWD CABIN (28HK) (referred to as SELECTOR (28HK)) (Ref. AMM TASK 21-63-11-000-001) and (Ref. AMM TASK 21-63-11-400-001).
    - (1) If the fault continues:
      - do a check and repair the wiring between: SELECTOR (28HK) connector A/2 and ZC (8HK) connector AA/13B, SELECTOR (28HK) connector A/3 and ZC (8HK) connector AA/14B, SELECTOR (28HK) connector A/4 and ZC (8HK) connector AA/15B, SELECTOR (28HK) connector A/7 and GND (Ref. ASM 21-63/02).
  - B. Do the test as given in the Para. 3.A.

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### TROUBLE SHOOTING MANUAL

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A. Put the aircraft back to its initial configuration.

EFF: ALL

21-63-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-819

AFT Cabin Temperature Selector Fault

- 1. Possible Causes
  - SEL-TEMPERATURE, AIR COND/AFT CABIN (29HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFE | RENCE            | DESIGNATION  |
|------|------------------|--|
| AMM  | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |
| AMM  | 21-63-11-000-001 | Removal of the Temperature Selector (27HK, 28HK, 29HK)                       |
| AMM  | 21-63-11-400-001 | <pre>Installation of the Temperature Selector (27HK,28HK,29HK)</pre>         |
| ASM  | 21-63/02         |  |

#### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

- 4. Fault Isolation
  - A. If the test gives the maintenance message AFT CAB TEMP SEL:
    - replace the SEL-TEMPERATURE, AIR COND/AFT CABIN (29HK) (referred to as SELECTOR (29HK)) (Ref. AMM TASK 21-63-11-000-001) and (Ref. AMM TASK 21-63-11-400-001).
    - (1) If the fault continues:
      - do a check and repair the wiring between: SELECTOR (29HK) connector A/2 and ZC (8HK) connector AA/13C, SELECTOR (29HK) connector A/3 and ZC (8HK) connector AA/14C, SELECTOR (29HK) connector A/4 and ZC (8HK) connector AA/15C, SELECTOR (29HK) connector A/7 and GND (Ref. ASM 21-63/02).
  - B. Do the test as given in the Para. 3.A.

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### TROUBLE SHOOTING MANUAL

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A. Put the aircraft back to its initial configuration.

EFF: ALL
SROS

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-820

ZC receives no Data from the ADIRS

- 1. Possible Causes
  - CONT-ZONE TEMPERATURE (8HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFE | RENCE            | DESIGNATION  |
|------|------------------|--|
| AMM  | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |
| AMM  | 21-63-34-000-001 | Removal of the Zone Controller (8HK)   |
| AMM  | 21-63-34-400-001 | Installation of the Zone Controller (8HK)                                    |
| AMM  | 34-13-00-740-002 | INTERFACE TEST of the ADR  |
| _    | 21-63/03         |  |
| ASM  | 34-13/01         |  |

- 3. Fault Confirmation
  - A. Test
    - (1) On the ADIRS CDU panel 20VU:
      - make sure that the 3 OFF/NAV/ATT switches are in the NAV position and that the ADR 1, ADR 2 and ADR 3 pushbutton switches are in the on position (with the FAULT and OFF legends off).
    - (2) Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

#### 4. Fault Isolation

- A. If the test gives the maintenance message NO DATA FROM ADIRS:
  - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring if necessary of the signal DATA BUS #4 from the ADIRS 3 (1FP3) to the ZC (8HK) (Ref. ASM 21-63/03) and (Ref. ASM 34-13/01).

EFF: ALL 21-63-00

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### TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
  - do the INTERFACE test of the ADR system (Ref. AMM TASK 34-13-00-740-002).
  - (a) If the test gives a different maintenance message, you can find the related trouble shooting procedure in the applicable Page Block 101.
- B. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

EFF: ALL
SROS

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-821

Zone Temperature Control Problems in all Zones

#### 1. Possible Causes

- SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK)
- SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK)
- FILTER-RECIRCULATION (4012HM)
- FILTER-RECIRCULATION (4013HM)
- VALVE-PRESSURE REGULATING (14HK)
- CONT-ZONE TEMPERATURE (8HK)

### 2. Job Set-up Information

A. Referenced Information

| REFE | RENCE            | DESIGNATION  |  |  |
|------|------------------|--|--|--|
|      |                  |  |  |  |
| AMM  | 21-21-41-000-001 | Removal of the Recirculation Filter 4012HM (4013HM)                          |  |  |
| AMM  | 21-21-41-400-001 | Installation of the Recirculation Filter 4012HM (4013HM)                     |  |  |
| AMM  | 21-61-00-710-001 | Operational Test of the Pack Temperature-Control System                      |  |  |
| AMM  | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |  |  |
| AMM  | 21-63-16-000-001 | Removal of the Mixer Temperature Sensor 24HK (25HK)                          |  |  |
| AMM  | 21-63-16-400-001 | Installation of the Mixer Temperature Sensor 24HK (25HK)                     |  |  |
| AMM  | 21-63-34-000-001 | Removal of the Zone Controller (8HK)   |  |  |
| AMM  | 21-63-34-400-001 | Installation of the Zone Controller (8HK)                                    |  |  |
| AMM  | 21-63-52-000-001 | Removal of the Pressure Regulating Valve 14HK                                |  |  |
| AMM  | 21-63-52-400-001 | Installation of the Pressure Regulating Valve 14HK                           |  |  |
| ASM  | 21-63/03         |  |  |  |

#### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

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#### TROUBLE SHOOTING MANUAL

### 4. Fault Isolation

- A. If the test gives a different maintenance message, you can find the related trouble shooting procedure in the applicable Page Block 101.
- B. If the test confirms the fault, with the pushbutton switch HOT AIR, which is installed on the panel 30VU, set to on (with the FAULT and OFF legends off):
  - do a check that the resistance of the mixer-unit temperature cockpit-sensor (24HK) measured between connector A/E and A/F and connector A/C and A/D is in these limits (Ref. ASM 21-63/03):

| Temp (Deg.C) | OHMS          |   |
|--------------|---------------|---|
| + 10         | 18820 +/- 5 % | · |
| + 18         | 13340 +/- 5 % | , |
| + 25         | 10000 +/- 5 % | , |
| + 30         | 8197 +/- 5 %  | , |
| + 40         | 5598 +/- 5 %  | , |
| + 50         | 3903 +/- 5 %  | , |

- (1) If the resistance values are out of the specified limits:
  - replace the SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK) (Ref. AMM TASK 21-63-16-000-001) and (Ref. AMM TASK 21-63-16-400-001).
- (2) If the fault continues:
  - do a check that the resistance of the mixer-unit temperature cabin-sensor (25HK) measured between connector A/E and A/F and connector A/C and A/D is in these limits (Ref. ASM 21-63/03):

| Temp (Deg.C) | OHMS  |     |   |       |
|--------------|-------|-----|---|-------|
| + 10         | 18820 | +/- | 5 | <br>% |
| + 18         | 13340 | +/- | 5 | %     |
| + 25         | 10000 | +/- | 5 | %     |
| + 30         | 8197  | +/- | 5 | %     |
| + 40         | 5598  | +/- | 5 | %     |
| + 50         | 3903  | +/- | 5 | %     |

- (a) If the resistance values are out of the specified limits:
  - replace the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK) (Ref. AMM TASK 21-63-16-000-001) and (Ref. AMM TASK 21-63-16-400-001).
- (3) If the fault continues:
  - do a check of the recirculation filter (4012HM) for contamination (Ref. AMM TASK 21-21-41-000-001) and (Ref. AMM TASK 21-21-41-400-001).
  - (a) If the filter is clogged:
    - replace the FILTER-RECIRCULATION (4012HM) (Ref. AMM TASK 21-21-41-000-001) and (Ref. AMM TASK 21-21-41-400-001).

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#### TROUBLE SHOOTING MANUAL

- (4) If the fault continues:
  - do a check of the recirculation filter (4013HM) for contamination (Ref. AMM TASK 21-21-41-000-001) and (Ref. AMM TASK 21-21-41-400-001).
  - (a) If the filter is clogged:
    - replace the FILTER-RECIRCULATION (4013HM) (Ref. AMM TASK 21-21-41-000-001) and (Ref. AMM TASK 21-21-41-400-001).
- (5) If the fault continues:
  - replace the VALVE-PRESSURE REGULATING (14HK) (Ref. AMM TASK 21-63-52-000-001) and (Ref. AMM TASK 21-63-52-400-001).
- (6) If the fault continues:
  - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).
- C. If the test confirms the fault, with the pushbutton switch HOT AIR, which is installed on the panel 30VU, set to on (with the FAULT and OFF legends off) or OFF:
  - do the operational test of the pack temperature-control system (Ref. AMM TASK 21-61-00-710-001).
  - (1) If the test gives a different maintenance message, you can find the related trouble shooting procedure in the applicable Page Block 101.
  - (2) If the fault continues:
    - do a check of the recirculation filter (4012HM) for contamination (Ref. AMM TASK 21-21-41-000-001) and (Ref. AMM TASK 21-21-41-400-001).
    - (a) If the filter is clogged:
      - replace the FILTER-RECIRCULATION (4012HM) (Ref. AMM TASK 21-21-41-000-001) and (Ref. AMM TASK 21-21-41-400-001).
  - (3) If the fault continues:
    - do a check of the recirculation filter (4013HM) for contamination (Ref. AMM TASK 21-21-41-000-001) and (Ref. AMM TASK 21-21-41-400-001).
    - (a) If the filter is clogged:
      - replace the FILTER-RECIRCULATION (4013HM) (Ref. AMM TASK 21-21-41-000-001) and (Ref. AMM TASK 21-21-41-400-001).
  - (4) If the fault continues:
    - replace the VALVE-PRESSURE REGULATING (14HK) (Ref. AMM TASK 21-63-52-000-001) and (Ref. AMM TASK 21-63-52-400-001).
  - (5) If the fault continues:
    - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).

EFF: ALL

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### TROUBLE SHOOTING MANUAL

D. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

EFF: ALL SROS 21-63-00

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#### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-822

Zone Temperature Control Problems in one Zone

#### 1. Possible Causes

- SENSOR-DUCT TEMPERATURE, COCKPIT (15HK)
- SENSOR-TEMPERATURE, COCKPIT (21HK)
- SEL-TEMPERATURE, AIR COND/COCKPIT (27HK)
- CONT-ZONE TEMPERATURE (8HK)
- SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK)
- SENSOR-TEMPERATURE, FWD CABIN (22HK)
- SEL-TEMPERATURE, AIR COND/FWD CABIN (28HK)
- SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK)
- SENSOR-TEMPERATURE, AFT CABIN (23HK)
- SEL-TEMPERATURE, AIR COND/AFT CABIN (29HK)
- bellows between the mixer-unit and the air-pack

### 2. Job Set-up Information

#### A. Referenced Information

| REFE | RENCE            | DESIGNATION  |
|------|------------------|--|
|      |                  |  |
| CMM  | 216312           |  |
| AMM  | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU   |
| AMM  | 21-63-11-000-001 | Removal of the Temperature Selector (27HK, 28HK, 29HK)   |
| AMM  | 21-63-11-400-001 | <pre>Installation of the Temperature Selector (27HK,28HK,29HK)</pre>   |
| AMM  | 21-63-15-000-001 | Removal of the Duct Temperature Sensors 15HK, 16HK and 17HK  |
| AMM  | 21-63-15-400-001 | Installation of the Duct Temperature Sensors 15HK, 16HK and 17HK   |
| AMM  | 21-63-17-000-001 | Removal of the Temperature Sensors (21HK, 22HK, 23HK)  |
| AMM  | 21-63-17-210-001 | Detailed Visual Inspection of the Cockpit (Cabin) Temperature Sensor 21HK (22HK, 23HK) and Ducting for Contamination |
| AMM  | 21-63-17-400-001 | <pre>Installation of the Temperature Sensors (21HK, 22HK, 23HK)</pre>  |
| AMM  | 21-63-34-000-001 | Removal of the Zone Controller (8HK)   |
| AMM  | 21-63-34-400-001 | Installation of the Zone Controller (8HK)  |
| ASM  | 21-63/03         |  |
| ASM  | 21-63/03         |  |

EFF: ALL

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#### TROUBLE SHOOTING MANUAL

### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

#### 4. Fault Isolation

- A. If the test gives a different maintenance message, you can find the related trouble shooting procedure in the applicable Page Block 101.
- B. If the test confirms the fault for the cockpit zone, with the pushbutton switch HOT AIR, which is installed on the panel 30VU, set to on (with the FAULT and OFF legends off) or OFF:
  - do a check that the resistance of the cockpit-duct temperature sensor (15HK) measured between connector A/E and A/F and connector A/C and A/D is in these limits (Ref. ASM 21-63/03):

| Temp (Deg.C) | OHMS          |  |
|--------------|---------------|--|
| + 10         | 18820 +/- 5 % |  |
| + 18         | 13340 +/- 5 % |  |
| + 25         | 10000 +/- 5 % |  |
| + 30         | 8197 +/- 5 %  |  |
| + 40         | 5598 +/- 5 %  |  |
| + 50         | 3903 +/- 5 %  |  |

- (1) If the resistance values are out of the specified limits:
  - replace the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001).
- (2) If the fault continues:
  - do a check that the cockpit temperature sensor (21HK), housing, ducts and flexible hoses are free from contamination, are not damaged and that the sense line has no leakage (Ref. AMM TASK 21-63-17-210-001).
- (3) If the fault continues:
  - do a check that the resistance of the cockpit temperature sensor (21HK) measured between connector A/A and A/B and connector A/E and A/D is in these limits (Ref. ASM 21-63/03):

| Temp (Deg.C)                         | OHMS  |
|--------------------------------------|---|
| + 10<br>+ 18<br>+ 25<br>+ 30<br>+ 40 | 18820 +/- 5 %<br>13340 +/- 5 %<br>10000 +/- 5 %<br>8197 +/- 5 %<br>5598 +/- 5 % |
| + 50                                 | 3903 +/- 5 %  |

EFF: ALL

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- (a) If the resistance values are out of the specified limits:
   replace the SENSOR-TEMPERATURE, COCKPIT (21HK) (Ref. AMM TASK 21-63-17-400-001).
- (4) If the fault continues:
  - do a potentiometer test of the cockpit temperature selector (27HK)
     (Ref. CMM 216312).
  - (a) If the test is not **OK**:
    - replace the SEL-TEMPERATURE, AIR COND/COCKPIT (27HK) (Ref. AMM TASK 21-63-11-000-001) and (Ref. AMM TASK 21-63-11-400-001).
- (5) If the fault continues:
  - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).
- C. If the test confirms the fault for the FWD cabin zone, with the pushbutton switch HOT AIR, which is installed on the panel 30VU, set to on (with the FAULT and OFF legends off) or OFF:
  - do a check that the resistance of the FWD cabin-duct temperature sensor (16HK) measured between connector A/E and A/F and connector A/C and A/D is in these limits (Ref. ASM 21-63/03):

| Temp (Deg.C) | OHMS          |
|--------------|---------------|
| + 10         | 18820 +/- 5 % |
| + 18         | 13340 +/- 5 % |
| + 25         | 10000 +/- 5 % |
| + 30         | 8197 +/- 5 %  |
| + 40         | 5598 +/- 5 %  |
| + 50         | 3903 +/- 5 %  |

- (1) If the resistance values are out of the specified limits:
  - replace the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001).
- (2) If the fault continues:
  - do a check that the FWD cabin-temperature sensor (22HK), housing, ducts and flexible hoses are free from contamination, are not damaged and the sense line has no leakage (Ref. AMM TASK 21-63-17-210-001).
- (3) If the fault continues:
  - do a check that the resistance of the FWD cabin-temperature sensor (22HK) measured between connector A/A and A/B and connector A/E and A/D is in these limits (Ref. ASM 21-63/03):

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#### TROUBLE SHOOTING MANUAL

| Temp (Deg.C) | OHMS          |
|--------------|---------------|
| + 10         | 18820 +/- 5 % |
| + 18         | 13340 +/- 5 % |
| + 25         | 10000 +/- 5 % |
| + 30         | 8197 +/- 5 %  |
| + 40         | 5598 +/- 5 %  |
| + 50         | 3903 +/- 5 %  |

- (a) If the resistance values are out of the specified limits:
  - replace the SENSOR-TEMPERATURE, FWD CABIN (22HK) (Ref. AMM TASK 21-63-17-000-001) and (Ref. AMM TASK 21-63-17-400-001).
- (4) If the fault continues:
  - do a potentiometer test of the FWD cabin-temperature selector (28HK) (Ref. CMM 216312).
  - (a) If the test is not OK:
    - replace the SEL-TEMPERATURE, AIR COND/FWD CABIN (28HK) (Ref. AMM TASK 21-63-11-000-001) and (Ref. AMM TASK 21-63-11-400-001).
- (5) If the fault continues:
  - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).
- D. If the test confirms the fault for the AFT cabin zone, with the pushbutton switch HOT AIR, which is installed on the panel 30VU, set to on (with FAULT and OFF legends off) or OFF:
  - do a check that the resistance of the AFT cabin-duct temperature sensor (17HK) measured between connector A/E and A/F and connector A/C and A/D is in these limits (Ref. ASM 21-63/03):

| Temp (Deg.C) | OHMS          |
|--------------|---------------|
| + 10         | 18820 +/- 5 % |
| + 18         | 13340 +/- 5 % |
| + 25         | 10000 +/- 5 % |
| + 30         | 8197 +/- 5 %  |
| + 40         | 5598 +/- 5 %  |
| + 50         | 3903 +/- 5 %  |

- (1) If the resistance values are out of the specified limits:
  - replace the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001).
- (2) If the fault continues:
  - do a check that the AFT cabin-temperature sensor (23HK), housing, ducts and flexible hoses are free from contamination, are not damaged and that the sense line has no leakage (Ref. AMM TASK 21-63-17-210-001).

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### (3) If the fault continues:

- do a check that the resistance of the AFT cabin-temperature sensor (23HK) measured between connector A/A and A/B and connector A/E and A/D is in these limits (Ref. ASM 21-63/03):

| lemp (veg.c) | UHMS          |
|--------------|---------------|
|              |               |
| + 10         | 18820 +/- 5 % |
| + 18         | 13340 +/- 5 % |
| + 25         | 10000 +/- 5 % |
| + 30         | 8197 +/- 5 %  |
| + 40         | 5598 +/- 5 %  |
| + 50         | 3903 +/- 5 %  |

- (a) If the resistance values are out of the specified limits:
  - replace the SENSOR-TEMPERATURE, AFT CABIN (23HK) (Ref. AMM TASK 21-63-17-000-001) and (Ref. AMM TASK 21-63-17-400-001).
- (4) If the fault continues:
  - do a potentiometer test of the AFT cabin-temperature selector (29HK) (Ref. CMM 216312).
  - (a) If the test is not OK:
    - replace the SEL-TEMPERATURE, AIR COND/AFT CABIN (29HK) (Ref. AMM TASK 21-63-11-000-001) and (Ref. AMM TASK 21-63-11-400-001).
- (5) If the fault continues:
  - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).
- E. Do the test as given in the Para. 3.A.
  - Make sure that the belly-fairing blowout-panel is closed:
  - If the belly-fairing blowout-panel is open, do a check for damage of the bellows between the mixer-unit and the air-pack.

#### 5. Close-up

A. Put the aircraft back to its initial configuration.

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### *GA319/A320/A321*

### TROUBLE SHOOTING MANUAL

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TASK 21-63-00-810-823

Cockpit Duct Overheat Detection

### 1. Possible Causes

- SENSOR-DUCT TEMPERATURE, COCKPIT (15HK)
- SENSOR-DUCT OVHT TEMPERATURE, COCKPIT (18HK)
- TRIM VALVE CKPT (11HK)
- VALVE-PRESSURE REGULATING (14HK)
- CONT-ZONE TEMPERATURE (8HK)
- TEMP SENSOR CKPT DUCT (15HK)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |  |
|-----------|------------------|--|--|--|
| AMM       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |  |  |
| AMM       | 21-63-15-000-001 | Removal of the Duct Temperature Sensors 15HK, 16HK and 17HK                  |  |  |
| AMM       | 21-63-15-400-001 | Installation of the Duct Temperature Sensors 15HK, 16HK and 17HK             |  |  |
| AMM       | 21-63-18-000-001 | Removal of the Duct Overheat-Temperature Sensors 18HK, 19HK and 20HK         |  |  |
| AMM       | 21-63-18-400-001 | Installation of the Duct Overheat-Temperature Sensors 18HK, 19HK and 20HK    |  |  |
| AMM       | 21-63-34-000-001 | Removal of the Zone Controller (8HK)   |  |  |
| AMM       | 21-63-34-400-001 | Installation of the Zone Controller (8HK)                                    |  |  |
| AMM       | 21-63-51-000-001 | Removal of the Trim Air Valve (11HK,12HK,13HK)                               |  |  |
| AMM       | 21-63-51-400-001 | Installation of the Trim Air Valve (11HK,12HK,13HK)                          |  |  |
| AMM       | 21-63-52-000-001 | Removal of the Pressure Regulating Valve 14HK                                |  |  |
| AMM       | 21-63-52-400-001 | Installation of the Pressure Regulating Valve 14HK                           |  |  |
| ASM       | 21-63/02         |  |  |  |
| ASM       | 21-63/03         |  |  |  |
| ASM       | 21-63/03         |  |  |  |

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### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

#### 4. Fault Isolation

R \*\*ON A/C 227-227, 229-237, 276-281, 476-478,

- A. If the test confirms the fault:
  - do a check that the resistance of the cockpit-duct temperature sensor (15HK) measured between connector A/E and A/F and connector A/C and A/D is in these limits (Ref. ASM 21-63/03):

| Temp (Deg.C) | OHMS          |  |
|--------------|---------------|--|
| + 10         | 18820 +/- 5 % |  |
| + 18         | 13340 +/- 5 % |  |
| + 25         | 10000 +/- 5 % |  |
| + 30         | 8197 +/- 5 %  |  |
| + 40         | 5598 +/- 5 %  |  |
| + 50         | 3903 +/- 5 %  |  |

- (1) If the resistance values are out of the specified limits:
  - replace the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001).
- (2) If the resistance values are in the specified limits:
  - do a check and repair the wiring (Ref. ASM 21-63/03) from:
  - the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK) to the ZC (8HK) and,
  - the SENSOR-DUCT TEMPERATURE, COCKPIT(15HK) to ground.
- (3) If the fault continues:
  - do a check that the resistance of the cockpit-duct overheat sensor (18HK) measured between connector A/A and A/B is in these limits (Ref. ASM 21-63/03):

| Temp | (Deg.C) | OHMS  |     |   |   |
|------|---------|-------|-----|---|---|
|      |         |       |     |   |   |
| + 10 |         | 18820 | +/- | 5 | % |
| + 18 |         | 13340 | +/- | 5 | % |
| + 25 |         | 10000 | +/- | 5 | % |
| + 30 |         | 8197  | +/- | 5 | % |
| + 40 |         | 5598  | +/- | 5 | % |
| + 50 |         | 3903  | +/- | 5 | % |

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- (a) If the resistance values are out of the specified limits: - replace the SENSOR-DUCT OVHT TEMPERATURE, COCKPIT (18HK) (Ref. AMM TASK 21-63-18-000-001) and (Ref. AMM TASK 21-63-18-400-001).
- (b) If the resistance values are in the specified limits:
  - do a check and repair the wiring (Ref. ASM 21-63/03) from:
  - the SENSOR-DUCT OVHT TEMPERATURE, COCKPIT (18HK) to the ZC (8HK) and.
  - the SENSOR-DUCT OVHT TEMPERATURE, COCKPIT (18HK) to ground.
- (4) If the fault continues:
  - replace the TRIM VALVE CKPT (11HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).
- (5) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 21-63/02) from:
  - the TRIM VALVE CKPT (11HK) to the ZC (8HK) and,
  - the TRIM VALVE CKPT (11HK) to ground.
- (6) If the fault continues:
  - replace the VALVE-PRESSURE REGULATING (14HK) (Ref. AMM TASK 21-63-52-000-001) and (Ref. AMM TASK 21-63-52-400-001).
- (7) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 21-63/03) from:
  - the VALVE-PRESSURE REGULATING (14HK) to the ZC (8HK) and,
  - the VALVE-PRESSURE REGULATING (14HK) to ground.
- (8) If the fault continues:
  - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).
- B. If the test gives the maintenance message TEST OK, but on the ECAM upper DU the warning COND CKPT DUCT OVHT comes on:
  - do a check of the cockpit inlet temperature on the ECAM COND page.
  - (1) If the temperature is below 70 Deg.C:
    - replace the SENSOR-DUCT OVHT TEMPERATURE, COCKPIT (18HK) (Ref. AMM TASK 21-63-18-000-001) and (Ref. AMM TASK 21-63-18-400-001).

\*\*ON A/C ALL

- R Post SB 21-1104 For A/C 227-227,229-237,276-281,476-478,
  - A. If the test confirms the fault:
    - do a check that the resistance of the cockpit-duct temperature sensor (15HK) measured between connector A/E and A/F and connector A/C and A/D is in these limits (Ref. ASM 21-63/03):

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| R<br>R      | Temp (Deg.C) OHMS  |
|-------------|--|
| R<br>R      | + 10   |
| R<br>R      | + 25   |
| R           | + 40 5598 +/- 5 %  |
| R           | + 50 3903 +/- 5 %  |
| R<br>R<br>R | (1) If the resistance values are out of the specified limits:<br>- replace the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK) (Ref. AMM TASK<br>21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001).                         |
| R           | (2) If the resistance values are in the specified limits:  |
| R<br>R<br>R | <ul> <li>do a check and repair the wiring (Ref. ASM 21-63/03) from:</li> <li>the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK) to the ZC (8HK) and,</li> <li>the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK) to ground.</li> </ul> |
| _           |  |
| R<br>R<br>R | (3) If the fault continues:<br>- replace the TRIM VALVE CKPT (11HK) (Ref. AMM TASK 21-63-51-000-001)<br>and (Ref. AMM TASK 21-63-51-400-001).  |
| R           | (4) If the fault continues:  |
| R<br>R      | <ul> <li>do a check and repair the wiring (Ref. ASM 21-63/02) from:</li> <li>the TRIM VALVE CKPT (11HK) to the ZC (8HK) and,</li> </ul>  |
| R           | - the TRIM VALVE CKPT (11HK) to ground.  |
| R           | (5) If the fault continues:  |
| R<br>R      | <ul><li>replace the VALVE-PRESSURE REGULATING (14HK) (Ref. AMM TASK 21-63-52-000-001) and (Ref. AMM TASK 21-63-52-400-001).</li></ul>  |
| R           | (6) If the fault continues:  |
| R<br>R      | <ul> <li>do a check and repair the wiring (Ref. ASM 21-63/03) from:</li> <li>the VALVE-PRESSURE REGULATING (14HK) to the ZC (8HK) and,</li> </ul>  |
| R           | - the VALVE-PRESSURE REGULATING (14HK) to ground.  |
| R           | (7) If the fault continues:  |
| R<br>R      | <ul><li>replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).</li></ul>   |
| R           | B. If the test gives the maintenance message TEST OK, but on the ECAM upper  |
| R<br>R      | <pre>DU the warning COND CKPT DUCT OVHT comes on: - do a check of the cockpit inlet temperature on the ECAM COND page.</pre>   |
| В           |  |
| R<br>R<br>R | (1) If the temperature is below 70 Deg.C:<br>- replace the TEMP SENSOR CKPT DUCT (15HK) (Ref. AMM TASK 21-63-15-<br>000-001) and (Ref. AMM TASK 21-63-15-400-001).   |
| R           | **ON A/C ALL   |
| R           | **ON A/C ALL   |

C. Do the test as given in the Para. 3.A.

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R

5. Close-up

R

A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-824

FWD Cabin Duct Overheat Detection

### 1. Possible Causes

- SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK)
- SENSOR-DUCT OVHT TEMPERATURE, FWD CABIN (19HK)
- VALVE-TRIM AIR, FWD CABIN (12HK)
- VALVE-PRESSURE REGULATING (14HK)
- CONT-ZONE TEMPERATURE (8HK)
- TEMP SENSOR FWD CAB DUCT (16HK)
- wiring

R

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE  |                              | DESIGNATION  |
|------------|------------------------------|--|
|            |                              |  |
| AMM        | 21-63-00-710-004             | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |
| AMM        | 21-63-15-000-001             | Removal of the Duct Temperature Sensors 15HK, 16HK and 17HK                  |
| AMM        | 21-63-15-400-001             | Installation of the Duct Temperature Sensors 15HK, 16HK and 17HK             |
| AMM        | 21-63-18-000-001             | Removal of the Duct Overheat-Temperature Sensors 18HK, 19HK and 20HK         |
| AMM        | 21-63-18-400-001             | Installation of the Duct Overheat-Temperature Sensors 18HK, 19HK and 20HK    |
| AMM        | 21-63-34-000-001             | Removal of the Zone Controller (8HK)   |
| AMM        | 21-63-34-400-001             | Installation of the Zone Controller (8HK)                                    |
| AMM        | 21-63-51-000-001             | Removal of the Trim Air Valve (11HK,12HK,13HK)                               |
| AMM        | 21-63-51-400-001             | Installation of the Trim Air Valve (11HK,12HK,13HK)                          |
| AMM        | 21-63-52-000-001             | Removal of the Pressure Regulating Valve 14HK                                |
| AMM<br>ASM | 21-63-52-400-001<br>21-63/02 | Installation of the Pressure Regulating Valve 14HK                           |
| ASM<br>ASM | 21-63/03<br>21-63/03         |  |

### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

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### 4. Fault Isolation

R \*\*ON A/C 201-208, 227-227, 229-243, 276-283, 476-478,

- A. If the test confirms the fault:
  - do a check that the resistance of the FWD cabin-duct temperature sensor (16HK) measured between connector A/E and A/F and connector A/C and A/D is in these limits (Ref. ASM 21-63/03):

| Temp | (Deg.C) | OHMS  |     |   |       |
|------|---------|-------|-----|---|-------|
| + 10 |         | 18820 | +/- | 5 | <br>% |
| + 18 |         | 13340 | +/- | 5 | %     |
| + 25 |         | 10000 | +/- | 5 | %     |
| + 30 |         | 8197  | +/- | 5 | %     |
| + 40 |         | 5598  | +/- | 5 | %     |
| + 50 |         | 3903  | +/- | 5 | %     |

- (1) If the resistance values are out of the specified limits:
  - replace the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001).
- (2) If the resistance values are in the specified limits:
  - do a check and repair the wiring (Ref. ASM 21-63/03) from:
  - the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK) to the ZC (8HK) and,
  - the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK) to ground.
- (3) If the fault continues:
  - do a check that the resistance of the FWD cabin-duct overheat sensor (19HK) measured between connector A/A and A/B is in these limits (Ref. ASM 21-63/03):

| Temp (Deg.C) | OHMS          |  |
|--------------|---------------|--|
| + 10         | 18820 +/- 5 % |  |
| + 18         | 13340 +/- 5 % |  |
| + 25         | 10000 +/- 5 % |  |
| + 30         | 8197 +/- 5 %  |  |
| + 40         | 5598 +/- 5 %  |  |
| + 50         | 3903 +/- 5 %  |  |
|              |               |  |

- (a) If the resistance values are out of the specified limits:
  - replace the SENSOR-DUCT OVHT TEMPERATURE, FWD CABIN (19HK) (Ref. AMM TASK 21-63-18-000-001) and (Ref. AMM TASK 21-63-18-400-001).
- (b) If the resistance values are in the specified limits:
  - do a check and repair the wiring (Ref. ASM 21-63/03) from:
  - the SENSOR-DUCT OVHT TEMPERATURE, FWD CABIN (19HK) to the ZC (8HK) and,
  - the SENSOR-DUCT OVHT TEMPERATURE, FWD CABIN (19HK) to ground.

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- (4) If the fault continues:
  - replace the VALVE-TRIM AIR, FWD CABIN (12HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).
- (5) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 21-63/02) from:
  - the VALVE-TRIM AIR, FWD CABIN (12HK) to the ZC (8HK) and,
  - the VALVE-TRIM AIR, FWD CABIN (12HK) to ground.
- (6) If the fault continues:
  - replace the VALVE-PRESSURE REGULATING (14HK) (Ref. AMM TASK 21-63-52-000-001) and (Ref. AMM TASK 21-63-52-400-001).
- (7) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 21-63/03) from:
  - the VALVE-PRESSURE REGULATING (14HK) to the ZC (8HK) and,
  - the VALVE-PRESSURE REGULATING (14HK) to ground.
- (8) If the fault continues:
  - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).
- B. If the test gives the maintenance message TEST OK, but on the ECAM upper DU the warning COND FWD CAB DUCT OVHT comes on:
  - do a check of the FWD cabin-duct inlet temperature on the ECAM COND page.
  - (1) If the temperature is below 70 Deg.C:
    - replace the SENSOR-DUCT OVHT TEMPERATURE, FWD CABIN (19HK) (Ref. AMM TASK 21-63-18-000-001) and (Ref. AMM TASK 21-63-18-400-001).
- R \*\*ON A/C 209-225, 244-275, 284-299, 426-475, 479-499, 503-549, 551-599, R 701-749,
  - A. If the test confirms the fault:
    - do a check that the resistance of the FWD cabin-duct temperature sensor (16HK) measured between connector A/E and A/F and connector A/C and A/D is in these limits (Ref. ASM 21-63/03):

| lemp (peg.c) | OHM2          |
|--------------|---------------|
| + 10         | 18820 +/- 5 % |
| + 18         | 13340 +/- 5 % |
| + 25         | 10000 +/- 5 % |
| + 30         | 8197 +/- 5 %  |
| + 40         | 5598 +/- 5 %  |
| + 50         | 3903 +/- 5 %  |

- (1) If the resistance values are out of the specified limits:
  - replace the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001).

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(2) If the resistance values are in the specified limits: R R - do a check and repair the wiring (Ref. ASM 21-63/03) from: - the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK) to the ZC (8HK) and, R - the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK) to ground. R R (3) If the fault continues: - replace the VALVE-TRIM AIR, FWD CABIN (12HK) (Ref. AMM TASK 21-63-R R 51-000-001) and (Ref. AMM TASK 21-63-51-400-001). (4) If the fault continues: R do a check and repair the wiring (Ref. ASM 21-63/02) from: R - the VALVE-TRIM AIR, FWD CABIN (12HK) to the ZC (8HK) and, R - the VALVE-TRIM AIR, FWD CABIN (12HK) to ground. (5) If the fault continues: R - replace the VALVE-PRESSURE REGULATING (14HK) (Ref. AMM TASK 21-63-R R 52-000-001) and (Ref. AMM TASK 21-63-52-400-001). (6) If the fault continues: R - do a check and repair the wiring (Ref. ASM 21-63/03) from: R - the VALVE-PRESSURE REGULATING (14HK) to the ZC (8HK) and, R - the VALVE-PRESSURE REGULATING (14HK) to ground. R (7) If the fault continues: - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-R 000-001) and (Ref. AMM TASK 21-63-34-400-001). R R B. If the test gives the maintenance message TEST OK, but on the ECAM upper DU the warning COND FWD CAB DUCT OVHT comes on: R R - do a check of the FWD cabin-duct inlet temperature on the ECAM COND R page. R (1) If the temperature is below 70 Deq.C: - replace the TEMP SENSOR FWD CAB DUCT (16HK) (Ref. AMM TASK 21-63-R R 15-000-001) and (Ref. AMM TASK 21-63-15-400-001).

R \*\*ON A/C ALL

C. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-825

AFT Cabin Duct Overheat Detection

### 1. Possible Causes

- SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK)
- SENSOR-DUCT TEMPERATURE, AFT CABIN (20HK)
- VALVE-TRIM AIR, AFT CABIN (13HK)
- VALVE-PRESSURE REGULATING (14HK)
- CONT-ZONE TEMPERATURE (8HK)
- R - AFT CAB DUCT OVHT SENSOR (20HK)
  - TEMP SENSOR AFT CAB DUCT (17HK)
  - wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| AMM       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |
| AMM       | 21-63-15-000-001 | Removal of the Duct Temperature Sensors 15HK, 16HK and 17HK                  |
| AMM       | 21-63-15-400-001 | Installation of the Duct Temperature Sensors 15HK, 16HK and 17HK             |
| AMM       | 21-63-18-000-001 | Removal of the Duct Overheat-Temperature Sensors 18HK, 19HK and 20HK         |
| AMM       | 21-63-18-400-001 | Installation of the Duct Overheat-Temperature Sensors 18HK, 19HK and 20HK    |
| AMM       | 21-63-34-000-001 | Removal of the Zone Controller (8HK)   |
| AMM       | 21-63-34-400-001 | Installation of the Zone Controller (8HK)                                    |
| AMM       | 21-63-51-000-001 | Removal of the Trim Air Valve (11HK,12HK,13HK)                               |
| AMM       | 21-63-51-400-001 | Installation of the Trim Air Valve (11HK,12HK,13HK)                          |
| AMM       | 21-63-52-000-001 | Removal of the Pressure Regulating Valve 14HK                                |
| AMM       | 21-63-52-400-001 | Installation of the Pressure Regulating Valve 14HK                           |
| ASM       | 21-63/03         |  |
| ASM       | 21-63/03         |  |

### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

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### 4. Fault Isolation

R \*\*ON A/C 201-208, 227-227, 229-243, 276-283, 476-478,

- A. If the test confirms the fault:
  - do a check that the resistance of the AFT cabin-duct temperature sensor (17HK) measured between connector A/E and A/F and connector A/C and A/D is in these limits (Ref. ASM 21-63/03):

| Temp | (Deg.C) | OHMS  |     |   |       |
|------|---------|-------|-----|---|-------|
| + 10 |         | 18820 | +/- | 5 | <br>% |
| + 18 |         | 13340 | +/- | 5 | %     |
| + 25 |         | 10000 | +/- | 5 | %     |
| + 30 |         | 8197  | +/- | 5 | %     |
| + 40 |         | 5598  | +/- | 5 | %     |
| + 50 |         | 3903  | +/- | 5 | %     |

- (1) If the resistance values are out of the specified limits:
  - replace the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001).
- (2) If the resistance values are in the specified limits:
  - do a check and repair the wiring (Ref. ASM 21-63/03) from:
  - the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK) to the ZC (8HK) and,
  - the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK) to ground.
- (3) If the fault continues:
  - do a check that the resistance of the AFT cabin-duct overheat sensor (20HK) measured between connector A/A and A/B is in these limits (Ref. ASM 21-63/03):

| Temp (Deg.C) | OHMS          |
|--------------|---------------|
| + 10         | 18820 +/- 5 % |
| + 18         | 13340 +/- 5 % |
| + 25         | 10000 +/- 5 % |
| + 30         | 8197 +/- 5 %  |
| + 40         | 5598 +/- 5 %  |
| + 50         | 3903 +/- 5 %  |
|              |               |

- (a) If the resistance values are out of the specified limits:
  - replace the SENSOR-DUCT TEMPERATURE, AFT CABIN (20HK) (Ref. AMM TASK 21-63-18-000-001) and (Ref. AMM TASK 21-63-18-400-001).
- (b) If the resistance values are in the specified limits:
  - do a check and repair the wiring (Ref. ASM 21-63/03) from:
  - the SENSOR-DUCT TEMPERATURE, AFT CABIN (20HK) to the ZC (8HK) and,

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- the SENSOR-DUCT TEMPERATURE, AFT CABIN (20HK) to ground.

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- (4) If the fault continues:
  - replace the VALVE-TRIM AIR, AFT CABIN (13HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).
- (5) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 21-63/03) from:
  - the VALVE-TRIM AIR, AFT CABIN (13HK) to the ZC (8HK) and,
  - the VALVE-TRIM AIR, AFT CABIN (13HK) to ground.
- (6) If the fault continues:
  - replace the VALVE-PRESSURE REGULATING (14HK) (Ref. AMM TASK 21-63-52-000-001) and (Ref. AMM TASK 21-63-52-400-001).
- (7) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 21-63/03) from:
  - the VALVE-PRESSURE REGULATING (14HK) to the ZC (8HK) and,
  - the VALVE-PRESSURE REGULATING(14HK) to ground.
- (8) If the fault continues:
  - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).
- B. If the test gives the maintenance message TEST OK, but on the ECAM upper DU the warning COND AFT CAB DUCT OVHT comes on:
  - do a check of the AFT cabin-duct inlet temperature on the ECAM COND page.
  - (1) If the temperature is below 70 Deg.C:
    - replace the AFT CAB DUCT OVHT SENSOR (20HK) (Ref. AMM TASK 21-63-18-000-001) and (Ref. AMM TASK 21-63-18-400-001).
- R \*\*ON A/C 209-225, 244-275, 284-299, 426-475, 479-499, 503-549, 551-599, R 701-749,
  - A. If the test confirms the fault:
    - do a check that the resistance of the AFT cabin-duct temperature sensor (17HK) measured between connector A/E and A/F and connector A/C and A/D is in these limits (Ref. ASM 21-63/03):

| lemp (peg.c) | OHM2          |
|--------------|---------------|
| + 10         | 18820 +/- 5 % |
| + 18         | 13340 +/- 5 % |
| + 25         | 10000 +/- 5 % |
| + 30         | 8197 +/- 5 %  |
| + 40         | 5598 +/- 5 %  |
| + 50         | 3903 +/- 5 %  |

- (1) If the resistance values are out of the specified limits:
  - replace the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001).

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- (2) If the resistance values are in the specified limits:
  - do a check and repair the wiring (Ref. ASM 21-63/03) from:
  - the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK) to the ZC (8HK) and,
  - the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK) to ground.
- (3) If the fault continues:
  - replace the VALVE-TRIM AIR, AFT CABIN (13HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).
- (4) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 21-63/03) from:
  - the VALVE-TRIM AIR, AFT CABIN (13HK) to the IC (8HK) and,
  - the VALVE-TRIM AIR, AFT CABIN (13HK) to ground.
- (5) If the fault continues:
  - replace the VALVE-PRESSURE REGULATING (14HK) (Ref. AMM TASK 21-63-52-000-001) and (Ref. AMM TASK 21-63-52-400-001).
- (6) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 21-63/03) from:
  - the VALVE-PRESSURE REGULATING (14HK) to the ZC (8HK) and,
  - the VALVE-PRESSURE REGULATING(14HK) to ground.
- (7) If the fault continues:
  - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).
- B. If the test gives the maintenance message TEST OK, but on the ECAM upper DU the warning COND AFT CAB DUCT OVHT comes on:
  - do a check of the AFT cabin-duct inlet temperature on the ECAM COND page.
  - (1) If the temperature is below 70 Deg.C:
    - replace the TEMP SENSOR AFT CAB DUCT (17HK) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001).

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- C. Do the test as given in the Para. 3.A.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

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TASK 21-63-00-810-827

Zone Cont Electrical Component with Short Circuit (Primary/Secondary Channels)

#### 1. Possible Causes

- CONT-ZONE TEMPERATURE (8HK)
- SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK)
- TRIM VALVE CKPT (11HK)
- VALVE-TRIM AIR, FWD CABIN (12HK)
- VALVE-TRIM AIR, AFT CABIN (13HK)
- SENSOR-DUCT TEMPERATURE, COCKPIT (15HK)
- SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK)
- SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK)
- SENSOR-DUCT OVHT TEMPERATURE, COCKPIT (18HK)
- SENSOR-DUCT OVHT TEMPERATURE, FWD CABIN (19HK)
- SENSOR-DUCT TEMPERATURE, AFT CABIN (20HK)
- SENSOR-TEMPERATURE, COCKPIT (21HK)
- SENSOR-TEMPERATURE, FWD CABIN (22HK)
- SENSOR-TEMPERATURE, AFT CABIN (23HK)
- SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK)
- SEL-TEMPERATURE, AIR COND/COCKPIT (27HK)
- SEL-TEMPERATURE, AIR COND/FWD CABIN (28HK)
- SEL-TEMPERATURE, AIR COND/AFT CABIN (29HK)
- wiring

### 2. Job Set-up Information

#### A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |
|-----------|------------------|--|--|
|           |                  |  |  |
| AMM       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |  |
| AMM       | 21-63-11-000-001 | Removal of the Temperature Selector (27HK, 28HK, 29HK)                       |  |
| AMM       | 21-63-11-400-001 | <pre>Installation of the Temperature Selector (27HK,28HK,29HK)</pre>         |  |
| AMM       | 21-63-15-000-001 | Removal of the Duct Temperature Sensors 15HK, 16HK and 17HK                  |  |
| AMM       | 21-63-15-400-001 | Installation of the Duct Temperature Sensors 15HK, 16HK and 17HK             |  |
| AMM       | 21-63-16-000-001 | Removal of the Mixer Temperature Sensor 24HK (25HK)                          |  |
| AMM       | 21-63-16-400-001 | Installation of the Mixer Temperature Sensor 24HK (25HK)                     |  |
| AMM       | 21-63-17-000-001 | Removal of the Temperature Sensors (21HK, 22HK, 23HK)                        |  |
| AMM       | 21-63-17-400-001 | Installation of the Temperature Sensors (21HK, 22HK, 23HK)                   |  |
| AMM       | 21-63-18-000-001 | Removal of the Duct Overheat-Temperature Sensors 18HK, 19HK and 20HK         |  |

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| REFERENCE |                  | DESIGNATION   |  |  |
|-----------|------------------|---|--|--|
| AMM       | 21-63-18-400-001 | Installation of the Duct Overheat-Temperature Sensors 18HK, 19HK and 20HK |  |  |
| AMM       | 21-63-34-000-001 | Removal of the Zone Controller (8HK)                                      |  |  |
| AMM       | 21-63-34-400-001 | Installation of the Zone Controller (8HK)                                 |  |  |
| AMM       | 21-63-51-000-001 | Removal of the Trim Air Valve (11HK,12HK,13HK)                            |  |  |
| AMM       | 21-63-51-400-001 | Installation of the Trim Air Valve (11HK,12HK,13HK)                       |  |  |
| ASM       | 21-63/02         |   |  |  |
| ASM       | 21-63/03         |   |  |  |

### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

### 4. Fault Isolation

R \*\*ON A/C 227-227, 229-237, 276-281, 476-478,

- A. If the ECAM upper DU gives the warning COND ZONE REGUL FAULT, but no maintenance message comes on:
  - replace the CONT-ZONE TEMPERATURE (8HK). (Ref. AMM TASK 21-63-34-000-001) and, (Ref. AMM TASK 21-63-34-400-001).
  - (1) For wiring connections and pin identifications used in this procedure:
    - (Ref. ASM 21-63/02) and,
    - (Ref. ASM 21-63/03).
  - (2) If the fault continues:
    - disconnect the electrical connector (25HKA) from the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK).
    - make sure that the electrical connector is clean and in the correct condition.
    - do a check for 5 VDC at the electrical connector (25HKA) between: pins E and F (5 VDC from zone controller primary channel) and between pins C and D (5 VDC from zone controller secondary channel).
    - (a) If the voltage is not between 4.8 VDC and 5.2 VDC disconnect the electrical connector (11HKA) from the TRIM VALVE CKPT (11HK).
      - make sure that the electrical connector is clear and in the correct condition,

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- do a check for 5 VDC again.
- If the voltage is between 4.8 VDC and 5.2 VDC replace the TRIM VALVE CKPT (11HK) and connect the electrical connector (11HKA).

(Ref. AMM TASK 21-63-51-000-001) and, (Ref. AMM TASK 21-63-51-400-001).

- 2 If the voltage is not between 4.8 VDC and 5.2 VDC connect the electrical connector (11HKA).
  - repeat para. 4.A.(2) (a) for:
  - connector (12HKA) and the VALVE-TRIM AIR, FWD CABIN (12HK).
     (Ref. AMM TASK 21-63-51-000-001) and,
     (Ref. AMM TASK 21-63-51-400-001).
  - connector (13HKA) and the VALVE-TRIM AIR, AFT CABIN (13HK).
     (Ref. AMM TASK 21-63-51-000-001) and,
     (Ref. AMM TASK 21-63-51-400-001).
  - connector (15HKA) and the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK).

(Ref. AMM TASK 21-63-15-000-001) and, (Ref. AMM TASK 21-63-15-400-001).

- connector (16HKA) and the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK).
  - (Ref. AMM TASK 21-63-15-000-001) and, (Ref. AMM TASK 21-63-15-400-001).
- connector (17HKA) and the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK).

(Ref. AMM TASK 21-63-15-000-001) and, (Ref. AMM TASK 21-63-15-400-001).

- connector (18HKA) and the SENSOR-DUCT OVHT TEMPERATURE, COCKPIT (18HK).
  - (Ref. AMM TASK 21-63-18-000-001) and, (Ref. AMM TASK 21-63-18-400-001).
- connector (19HKA) and the SENSOR-DUCT OVHT TEMPERATURE, FWD CABIN (19HK).

(Ref. AMM TASK 21-63-18-000-001) and,

(Ref. AMM TASK 21-63-18-400-001).

 connector (20HKA) and the SENSOR-DUCT TEMPERATURE, AFT CABIN (20HK).

(Ref. AMM TASK 21-63-18-000-001) and,

(Ref. AMM TASK 21-63-18-400-001).

- connector (21HKA) and the SENSOR-TEMPERATURE, COCKPIT (21HK). (Ref. AMM TASK 21-63-17-000-001) and,

(Ref. AMM TASK 21-63-17-400-001).

- connector (22HKA) and the SENSOR-TEMPERATURE, FWD CABIN (22HK).

(Ref. AMM TASK 21-63-17-000-001) and,

(Ref. AMM TASK 21-63-17-400-001).

- connector (23HKA) and the SENSOR-TEMPERATURE, AFT CABIN (23HK).

(Ref. AMM TASK 21-63-17-000-001) and, (Ref. AMM TASK 21-63-17-400-001).

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 connector (24HKA) and the SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK).

(Ref. AMM TASK 21-63-16-000-001) and,

(Ref. AMM TASK 21-63-16-400-001).

 connector (27HKA) and the SEL-TEMPERATURE, AIR COND/COCKPIT (27HK).

(Ref. AMM TASK 21-63-11-000-001) and, (Ref. AMM TASK 21-63-11-400-001).

 connector (28HKA) and the SEL-TEMPERATURE, AIR COND/FWD CABIN (28HK).

(Ref. AMM TASK 21-63-11-000-001) and,

(Ref. AMM TASK 21-63-11-400-001).

 connector (29HKA) and the SEL-TEMPERATURE, AIR COND/AFT CABIN (29HK).

(Ref. AMM TASK 21-63-11-000-001) and, (Ref. AMM TASK 21-63-11-400-001).

(b) If the voltage is between 4.8 VDC and 5.2 VDC replace SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK) and connect the electrical connector (25HKA).

(Ref. AMM TASK 21-63-16-000-001) and, (Ref. AMM TASK 21-63-16-400-001).

- (3) If the fault continues:
  - on the circuit breaker panel 122VU, open the CB's 1HK (V17), 2HK (V18), 3HK (V19) and 4HK (V20).
  - remove the CONT-ZONE TEMPERATURE (8HK). (Ref. AMM TASK 21-63-34-000-001).
  - disconnect the electrical connector (11HKA) from the TRIM VALVE CKPT (11HK),
  - at the electrical connector (11HKA) do a check for a short circuit:
  - between pins S and T, S and V, T and V, N and P, N and R, P and R and between GND and pins S, T, V, N, P and R.
  - (a) If there is no short circuit connect the electrical connector (11HKA).
  - (b) If there is a short circuit repair the related wiring from:
    - the TRIM VALVE CKPT (11HK) to the ZC (8HK).
    - connect the electrical connector (11HKA).
- (4) If the fault continues:
  - disconnect the electrical connector (12HKA) from the VALVE-TRIM AIR, FWD CABIN (12HK).
  - at the electrical connector (12HKA) do a check for a short circuit:
  - between pins S and T, S and V, T and V, N and P, N and R, P and R and between GND and pins S, T, V, N, P and R.
  - (a) If there is no short circuit connect the electrical connector (12HKA).

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- (b) If there is a short circuit repair the related wiring between:
  - the VALVE-TRIM AIR, FWD CABIN (12HK) to the ZC (8HK).
  - connect the electrical connector (12HKA).

#### (5) If the fault continues:

- disconnect the electrical connector (13HKA) from the VALVE-TRIM AIR, AFT CABIN (13HK).
- at the electrical connector (13HKA) do a check for a short circuit:
- between pins S and T, S and V, T and V, N and P, N and R, P and R and between GND and pins S, T, V, N, P and R.
- (a) If there is no short circuit connect the electrical connector (13HKA).
- (b) If there is a short circuit repair the related wiring between:
  - the VALVE-TRIM AIR, AFT CABIN (13HK) to the ZC (8HK).
  - connect the electrical connector (12HKA).

#### (6) If the fault continues:

- disconnect the electrical connector (15HKA) from the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK).
- at the electrical connector (15HKA) do a check for a short circuit between pins C and D, E and F and between GND and pins C, D, E and
- (a) If there is no short circuit connect the electrical connector (15HKA).
- (b) If there is a short circuit repair the related wiring between:
  - the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK) to the ZC (8HK).
  - connect the electrical connector (15HKA).

#### (7) If the fault continues:

- disconnect the electrical connector (16HKA) from the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK).
- at the electrical connector (16HKA) do a check for a short circuit between pins C and D, E and F and between GND and pins C, D, E and F.
- (a) If there is no short circuit connect the electrical connector (16HKA).
- (b) If there is a short circuit repair the related wiring between:
  - the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK) to the ZC (8HK).
  - connect the electrical connector (16HKA).

### (8) If the fault continues:

- disconnect the electrical connector (17HKA) from the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK).
- at the electrical connector (17HKA) do a check for a short circuit between pins C and D, E and F and between GND and pins C, D, E and F.

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- (a) If there is no short circuit connect the electrical connector (17HKA).
- (b) If there is a short circuit repair the related wiring between:
  - the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK) to the ZC (8HK).
  - connect the electrical connector (17HKA).
- (9) If the fault continues:
  - disconnect the electrical connector (18HKA) from the SENSOR-DUCT OVHT TEMPERATURE, COCKPIT (18HK).
  - at the electrical connector (18HKA) do a check for a short circuit between pins A and B and between GND and pins A and B.
  - (a) If there is no short circuit connect the electrical connector (18HKA).
  - (b) If there is a short circuit repair the related wiring between:
    - the SENSOR-DUCT OVHT TEMPERATURE, COCKPIT (18HK) to the ZC (8HK).
    - connect the electrical connector (18HKA).
- (10) If the fault continues:
  - disconnect the electrical connector (19HKA) from the SENSOR-DUCT OVHT TEMPERATURE, FWD CABIN (19HK).
  - at the electrical connector (19HKA) do a check for a short circuit between pins A and B and between GND and pins A and B.
  - (a) If there is no short circuit connect the electrical connector (19HKA).
  - (b) If there is a short circuit repair the related wiring between:
    - the SENSOR-DUCT OVHT TEMPERATURE, FWD CABIN (19HK) to the ZC (8HK)
    - connect the electrical connector (19HKA).
- (11) If the fault continues:
  - disconnect the electrical connector (20HKA) from the SENSOR-DUCT TEMPERATURE, AFT CABIN (20HK).
  - at the electrical connector (20HKA) do a check for a short circuit between pins A and B and between GND and pins A and B.
  - (a) If there is no short circuit connect the electrical connector (20HKA).
  - (b) If there is a short circuit repair the related wiring between:
    - the SENSOR-DUCT TEMPERATURE, AFT CABIN (20HK) to the ZC (8HK).
    - connect the electrical connector (20HKA).

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- (12) If the fault continues:
  - disconnect the electrical connector (21HKA) from the SENSOR-TEMPERATURE, COCKPIT (21HK).
  - at the electrical connector (21HKA) do a check for a short circuit between pins A and B, D and E and between GND and pins A, B, D and E.
  - (a) If there is no short circuit connect the electrical connector (21HKA).
  - (b) If there is a short circuit repair the related wiring between:
    - the SENSOR-TEMPERATURE, COCKPIT (21HK) to the ZC (8HK).
    - connect the electrical connector (21HKA).
- (13) If the fault continues:
  - disconnect the electrical connector (22HKA) from the SENSOR-TEMPERATURE, FWD CABIN (22HK).
  - at the electrical connector (22HKA) do a check for a short circuit between pins A and B, D and E and between GND and pins A, B, D and E.
  - (a) If there is no short circuit connect the electrical connector (22HKA).
  - (b) If there is a short circuit repair the related wiring between:
    - the SENSOR-TEMPERATURE, FWD CABIN (22HK) to the ZC (8HK).
    - connect the electrical connector (22HKA).
- (14) If the fault continues:
  - disconnect the electrical connector (23HKA) from the SENSOR-TEMPERATURE, AFT CABIN (23HK).
  - at the electrical connector (23HKA) do a check for a short circuit between pins A and B, D and E and between GND and pins A, B, D and E.
  - (a) If there is no short circuit connect the electrical connector (23HKA).
  - (b) If there is a short circuit repair the related wiring between:
    - the SENSOR-TEMPERATURE, AFT CABIN (23HK) to the ZC (8HK).
    - connect the electrical connector (23HKA).
- (15) If the fault continues:
  - disconnect the electrical connector (24HKA) from the SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK).
  - at the electrical connector do a check for a short circuit between pins C and D, E and F and between GND and pins C, D, E and F.
  - (a) If there is no short circuit connect the electrical connector (24HKA).

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- (b) If there is a short circuit repair the related wiring between:
  - the SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK) to the ZC (8HK).
  - connect the electrical connector (24HKA).

#### (16) If the fault continues:

- disconnect the electrical connector (25HKA) from the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK).
- at the electrical connector (25HKA) do a check for a short circuit between pins C and D, E and F and between GND and pins C, D, E and F.
- (a) If there is no short circuit connect the electrical connector (25HKA).
- (b) If there is a short circuit repair the related wiring between:
  - the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK) to the ZC (8HK).
  - connect the electrical connector (25HKA).

#### (17) If the fault continues:

- disconnect the electrical connector (27HKA) from the SEL-TEMPERATURE, AIR COND/COCKPIT (27HK).
- at the electrical connector (27HKA) do a check for a short circuit between pins 2 and 3, 2 and 4, 3 and 4 and between GND and pins 2, 3, and 4.
- (a) If there is no short circuit connect the electrical connector (27HKA).
- (b) If there is a short circuit repair the related wiring between:
  - the SEL-TEMPERATURE, AIR COND/COCKPIT (27HK) to the ZC (8HK).
  - connect the electrical connector (27HKA).

#### (18) If the fault continues:

- disconnect the electrical connector (28HKA) from the SEL-TEMPERATURE, AIR COND/FWD CABIN (28HK).
- at the electrical connector (28HKA) do a check for a short circuit between pins 2 and 3, 2 and 4, 3 and 4 and between GND and pins 2, 3 and 4.
- (a) If there is no short circuit connect the electrical connector (28HKA).
- (b) If there is a short circuit repair the related wiring between:
  - the SEL-TEMPERATURE, AIR COND/FWD CABIN (28HK) to the ZC (8HK).
  - connect the electrical connector (28HKA).

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- (19) If the fault continues:
  - disconnect the electrical connector (29HKA) from the SEL-TEMPERATURE, AIR COND/AFT CABIN (29HK).
  - at the electrical connector (29HKA) do a check for a short circuit between pins 2 and 3, 2 and 4, 3 and 4 and between GND and pins 2, 3 and 4.
  - (a) If there is no short circuit connect the electrical connector (29HKA).
  - (b) If there is a short circuit repair the related wiring between:
    - the SEL-TEMPERATURE, AIR COND/AFT CABIN (29HK) to the ZC (8HK).
    - connect the electrical connector (29HKA).
    - install the CONT-ZONE TEMPERATURE (8HK). (Ref. AMM TASK 21-63-34-000-001).
    - on the circuit breaker panle 122VU, close the CB's 1HK (V17), 2HK (V18), 3HK (V19) and 4HK (V20).

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- R Post SB 21-1104 For A/C 227-227,229-237,276-281,476-478,
  - A. If the ECAM upper DU gives the warning COND ZONE REGUL FAULT, but no maintenance message comes on:
    - replace the CONT-ZONE TEMPERATURE (8HK).
       (Ref. AMM TASK 21-63-34-000-001) and,
       (Ref. AMM TASK 21-63-34-400-001).
    - (1) For wiring connections and pin identifications used in this procedure:
      - (Ref. ASM 21-63/02) and,
      - (Ref. ASM 21-63/03).
    - (2) If the fault continues:
      - disconnect the electrical connector (25HKA) from the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK).
      - make sure that the electrical connector is clean and in the correct condition.
      - do a check for 5 VDC at the electrical connector (25HKA) between: pins E and F (5 VDC from zone controller primary channel) and between pins C and D (5 VDC from zone controller secondary channel).
      - (a) If the voltage is not between 4.8 VDC and 5.2 VDC:
        - disconnect the electrical connector (11HKA).
        - make sure that the electrical connector is clear and in the correct condition.
        - do a check for 5 VDC again.
        - If the voltage is between 4.8 VDC and 5.2 VDC replace the TRIM VALVE CKPT (11HK) and connect the electrical connector (11HKA).

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(Ref. AMM TASK 21-63-51-000-001) and, (Ref. AMM TASK 21-63-51-400-001).
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- 2 If the voltage is not between 4.8 VDC and 5.2 VDC connect the electrical connector (11HKA):
  - repeat para. 4.A.(2) (a) for:
  - connector (12HKA) and the VALVE-TRIM AIR, FWD CABIN (12HK). (Ref. AMM TASK 21-63-51-000-001) and,

(Ref. AMM TASK 21-63-51-400-001).

- connector (13HKA) and the VALVE-TRIM AIR, AFT CABIN (13HK). (Ref. AMM TASK 21-63-51-000-001) and,

(Ref. AMM TASK 21-63-51-400-001).

- connector (15HKA) and the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK).
  - (Ref. AMM TASK 21-63-15-000-001) and,

(Ref. AMM TASK 21-63-15-400-001).

- connector (16HKA) and the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK).
  - (Ref. AMM TASK 21-63-15-000-001) and,

(Ref. AMM TASK 21-63-15-400-001).

- connector (17HKA) and the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK).
  - (Ref. AMM TASK 21-63-15-000-001) and,

(Ref. AMM TASK 21-63-15-400-001).

- connector (21HKA) and the SENSOR-TEMPERATURE, COCKPIT (21HK).
  - (Ref. AMM TASK 21-63-17-000-001) and,

(Ref. AMM TASK 21-63-17-400-001).

- connector (22HKA) and the SENSOR-TEMPERATURE, FWD CABIN (22HK).
  - (Ref. AMM TASK 21-63-17-000-001) and,

(Ref. AMM TASK 21-63-17-400-001).

- connector (23HKA) and the SENSOR-TEMPERATURE, AFT CABIN (23HK).
  - (Ref. AMM TASK 21-63-17-000-001) and,

(Ref. AMM TASK 21-63-17-400-001).

- connector (24HKA) and the SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK).
  - (Ref. AMM TASK 21-63-16-000-001) and,

(Ref. AMM TASK 21-63-16-400-001).

- connector (27HKA) and the SEL-TEMPERATURE, AIR COND/COCKPIT (27HK).
  - (Ref. AMM TASK 21-63-11-000-001) and,

(Ref. AMM TASK 21-63-11-400-001).

- connector (28HKA) and the SEL-TEMPERATURE, AIR COND/FWD CABIN (28HK).
  - (Ref. AMM TASK 21-63-11-000-001) and,

(Ref. AMM TASK 21-63-11-400-001).

- connector (29HKA) and the SEL-TEMPERATURE, AIR COND/AFT CABIN (29HK).
  - (Ref. AMM TASK 21-63-11-000-001) and,

(Ref. AMM TASK 21-63-11-400-001).

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- (b) If the voltage is between 4.8 VDC and 5.2 VDC replace SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK) and connect the electrical connector (25HKA).
  - (Ref. AMM TASK 21-63-16-000-001) and, (Ref. AMM TASK 21-63-16-400-001).
- (3) If the fault continues:
  - on the circuit breaker panel 122VU, open the CB's 1HK (V17), 2HK (V18), 3HK (V19) and 4HK (V20).
  - remove the CONT-ZONE TEMPERATURE (8HK). (Ref. AMM TASK 21-63-34-000-001).
  - disconnect the electrical connector (11HKA) from the TRIM VALVE CKPT (11HK).
  - at the electrical connector (11HKA) do a check for a short circuit:
  - between pins U and J, U and K, U and L, J and K, J and L, K and L,
     C and D and,
  - between GND and pins U, J, K, L, and C.
  - (a) If there is no short circuit connect the electrical connector (11HKA).
  - (b) If there is a short circuit repair the related wiring between:
    - the TRIM VALVE CKPT (11HK) to the ZC (8HK).
    - connect the electrical connector (11HKA).
- (4) If the fault continues:
  - disconnect the electrical connector (12HKA) from the VALVE-TRIM AIR, FWD CABIN (12HK).
  - at the electrical connector (12HKA) do a check for a short circuit:
  - between pins U and J, U and K, U and L, J and K, J and L, K and L,
     C and D and,
  - between GND and pins U, J, K, L, and C.
  - (a) If there is no short circuit connect the electrical connector (12HKA).
  - (b) If there is a short circuit repair the related wiring between:
    - the VALVE-TRIM AIR, FWD CABIN (12HK) to the ZC (8HK).
    - connect the electrical connector (12HKA).
- (5) If the fault continues:
  - disconnect the electrical connector (13HKA) from the VALVE-TRIM AIR, AFT CABIN (13HK).
  - at the electrical connector (13HKA) do a check for a short circuit:
  - between pins U and J, U and K, U and L, J and K, J and L, K and L,
     C and D and,
  - between GND and pins U, J, K, L, and C.
  - (a) If there is no short circuit connect the electrical connector (13HKA).

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- (b) If there is a short circuit repair the related wiring between:
  - the VALVE-TRIM AIR, AFT CABIN (13HK) to the ZC (8HK).
  - connect the electrical connector (12HKA).
- (6) If the fault continues:
  - disconnect the electrical connector (15HKA) from the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK).
  - at the electrical connector (15HKA) do a check for a short circuit between pins C and D, E and F and between GND and pins C, D, E and F.
  - (a) If there is no short circuit connect the electrical connector (15HKA).
  - (b) If there is a short circuit repair the related wiring between:
    - the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK) to the ZC (8HK).
    - connect the electrical connector (15HKA).
- (7) If the fault continues:
  - disconnect the electrical connector (16HKA) from the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK).
  - at the electrical connector (16HKA) do a check for a short circuit between pins C and D, E and F and between GND and pins C, D, E and F.
  - (a) If there is no short circuit connect the electrical connector (16HKA).
  - (b) If there is a short circuit repair the related wiring between:
    - the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK) to the ZC (8HK).
    - connect the electrical connector (16HKA).
- (8) If the fault continues:
  - disconnect the electrical connector (17HKA) from the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK).
  - at the electrical connector (17HKA) do a check for a short circuit between pins C and D, E and F and between GND and pins C, D, E and F.
  - (a) If there is no short circuit connect the electrical connector (17HKA).
  - (b) If there is a short circuit repair the related wiring between:
    - the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK) to the ZC (8HK).
    - connect the electrical connector (17HKA).
- (9) If the fault continues:
  - disconnect the electrical connector (21HKA) from the SENSOR-TEMPERATURE, COCKPIT (21HK).
  - at the electrical connector (21HKA) do a check for a short circuit between pins A and B, D and E and between GND and pins A, B, D and E.

EFF: ALL

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- (a) If there is no short circuit connect the electrical connector (21HKA).
- (b) If there is a short circuit repair the related wiring between:
  - the SENSOR-TEMPERATURE, COCKPIT (21HK) to the ZC (8HK).
  - connect the electrical connector (21HKA).

#### (10) If the fault continues:

- disconnect the electrical connector (22HKA) from the SENSOR-TEMPERATURE, FWD CABIN (22HK).
- at the electrical connector (22HKA) do a check for a short circuit between pins A and B, D and E and between GND and pins A, B, D and E.
- (a) If there is no short circuit connect the electrical connector (22HKA).
- (b) If there is a short circuit repair the related wiring between:
  - the SENSOR-TEMPERATURE, FWD CABIN (22HK) to the ZC (8HK).
  - connect the electrical connector (22HKA).

#### (11) If the fault continues:

- disconnect the electrical connector (23HKA) from the SENSOR-TEMPERATURE, AFT CABIN (23HK).
- at the electrical connector (23HKA) do a check for a short circuit between pins A and B, D and E and between GND and pins A, B, D and E.
- (a) If there is no short circuit connect the electrical connector (23HKA).
- (b) If there is a short circuit repair the related wiring between:
  - the SENSOR-TEMPERATURE, AFT CABIN (23HK) to the ZC (8HK).
  - connect the electrical connector (23HKA).

### (12) If the fault continues:

- disconnect the electrical connector (24HKA) from the SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK).
- at the electrical connector do a check for a short circuit between pins C and D, E and F and between GND and pins C, D, E and F.
- (a) If there is no short circuit connect the electrical connector (24HKA).
- (b) If there is a short circuit repair the related wiring between:
  - the SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK) to the ZC (8HK).
  - connect the electrical connector (24HKA).

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- (13) If the fault continues:
  - disconnect the electrical connector (25HKA) from the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK).
  - at the electrical connector (25HKA) do a check for a short circuit between pins C and D, E and F and between GND and pins C, D, E and F.
  - (a) If there is no short circuit connect the electrical connector (25HKA).
  - (b) If there is a short circuit repair the related wiring between:
    - the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK) to the ZC (8HK).
    - connect the electrical connector (25HKA).
- (14) If the fault continues:
  - disconnect the electrical connector (27HKA) from the SEL-TEMPERATURE, AIR COND/COCKPIT (27HK).
  - at the electrical connector (27HKA) do a check for a short circuit between pins 2 and 3, 2 and 4, 3 and 4 and between GND and pins 2, 3, and 4.
  - (a) If there is no short circuit connect the electrical connector (27HKA).
  - (b) If there is a short circuit repair the related wiring between:
    - the SEL-TEMPERATURE, AIR COND/COCKPIT (27HK) to the ZC (8HK).
    - connect the electrical connector (27HKA).
- (15) If the fault continues:
  - disconnect the electrical connector (28HKA) from the SEL-TEMPERATURE, AIR COND/FWD CABIN (28HK).
  - at the electrical connector (28HKA) do a check for a short circuit between pins 2 and 3, 2 and 4, 3 and 4 and between GND and pins 2, 3 and 4.
  - (a) If there is no short circuit connect the electrical connector (28HKA).
  - (b) If there is a short circuit repair the related wiring between:
    - the SEL-TEMPERATURE, AIR COND/FWD CABIN (28HK) to the ZC (8HK).
    - connect the electrical connector (28HKA).
- (16) If the fault continues:
  - disconnect the electrical connector (29HKA) from the SEL-TEMPERATURE, AIR COND/AFT CABIN (29HK).
  - at the electrical connector (29HKA) do a check for a short circuit between pins 2 and 3, 2 and 4, 3 and 4 and between GND and pins 2, 3 and 4.
  - (a) If there is no short circuit connect the electrical connector (29HKA).

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- (b) If there is a short circuit repair the related wiring between:
  - the SEL-TEMPERATURE, AIR COND/AFT CABIN (29HK) to the ZC (8HK).
  - connect the electrical connector (29HKA).
  - install the CONT-ZONE TEMPERATURE (8HK). (Ref. AMM TASK 21-63-34-000-001).
  - on the circuit breaker panel 122VU, close the CB's 1HK (V17), 2HK (V18), 3HK (V19) and 4HK (V20).

### \*\*ON A/C ALL

B. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

EFF: ALL | | SROS 21-63-00

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### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-828

DMU receives no Data from the ZC

- 1. Possible Causes
  - DMU (1TV)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| AMM       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |
| AMM       | 31-36-00-710-001 | Test of the DMU (1TV)  |
| AMM       | 31-36-34-000-001 | Removal of the Data Management Unit (DMU) (1TV)                              |
| AMM       | 31-36-34-400-001 | Installation of the Data Management Unit (DMU) (1TV)                         |
| ASM       | 21-63/03         |  |
| ASM       | 31-37/01         |  |

### 3. Fault Confirmation

A. Do the Test of the DMU (Ref. AMM TASK 31-36-00-710-001).

NOTE : Make sure that the circuit breakers 1HK, 2HK, 3HK and 4HK are closed during the test.

### 4. Fault Isolation

- A. If the test gives the maintenance message NO ZONE CTRL DATA:
  - do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).
  - (1) If the test gives a different maintenance message, you can find the related trouble shooting procedure in the applicable Page Block 101.
  - (2) If the fault continues:
    - replace the DMU (1TV) (Ref. AMM TASK 31-36-34-000-001) and (Ref. AMM TASK 31-36-34-400-001).
  - (3) If the fault continues:
    - do a check and repair the wiring of the signal ARINC 429 XTR EXT from the ZC (8HK) to the DMU (1TV) (Ref. ASM 21-63/03) and (Ref. ASM 31-37/01).
- B. Do the test given in para. 3.

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| 5 | _ | C | ı | o | s | 6 | _ |   | n |
|---|---|---|---|---|---|---|---|---|---|
| _ | - | · | · | v | J | u |   | u | ν |

A. Put the aircraft back to its initial configuration.

EFF: ALL
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### TROUBLE SHOOTING MANUAL

R \*\*ON A/C 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, R 701-749,

TASK 21-63-00-810-829

ZC receives no Data from the CFDS

- 1. Possible Causes
  - CONT-ZONE TEMPERATURE (8HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| DEEE       | RENCE                                | DESIGNATION  |
|------------|--------------------------------------|--|
|            |                                      | PESIGNATION  |
| AMM        | 21-63-00-710-004                     | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU   |
| AMM<br>AMM | 21-63-34-000-001<br>21-63-34-400-001 | Removal of the Zone Controller (8HK) Installation of the Zone Controller (8HK) |
|            | 31-32-00-740-002                     | BITE Test of the Centralized Fault Display Interface                           |
| ASM<br>ASM | 21-63/02<br>31-32/04                 | Unit (CFDIU)   |

### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE : Make sure that the circuit breakers 2TW and 8TW are closed during the test.

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

#### 4. Fault Isolation

- A. If the test gives the maintenance message NO DATA FROM CFDS:
   do the BITE test of the CFDIU (Ref. AMM TASK 31-32-00-740-002).
  - (1) If the test gives a different maintenance message, you can find the related trouble shooting procedure in the applicable Page Block 101.
  - (2) If the fault continues:
    - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).

EFF: 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, 701-749,

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### TROUBLE SHOOTING MANUAL

- (3) If the fault continues:
  - do a check and repair the wiring of the signal ARINC 429 OUT (BUS 4) from the CFDIU (1TW) to the ZC (8HK) (Ref. ASM 21-63/02) and (Ref. ASM 31-32/04).
- B. Do the test given in para. 3.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

EFF: 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, 701-749,

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### TROUBLE SHOOTING MANUAL

\*\*ON A/C ALL

TASK 21-63-00-810-830

ECB receives no Data from the ECS

- 1. Possible Causes
  - ECB (59KD)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE            | DESIGNATION  |
|----------------------|--|
| 31-32-00-810-934     | Failure of the Digital Links   |
| AMM 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU     |
| AMM 49-00-00-710-001 | Self-Test of the ECB (59KD) (GTCP 36-300)  |
| AMM 49-61-34-000-001 | Removal of the Electronic Control Box (ECB) (59KD) (GTCP 36-300)                 |
| AMM 49-61-34-400-001 | <pre>Installation of the Electronic Control Box (ECB) (59KD) (GTCP 36-300)</pre> |
| ASM 21-63/03         |  |
| ASM 49-61/01         |  |
|                      |  |

- 3. Fault Confirmation
- R \*\*ON A/C 201-225, 227-227, 229-253, 276-299, 426-450, 457-499, 503-549, R 551-599, 701-749,
  - A. Do the Self Test of the ECB (Ref. AMM TASK 49-00-00-710-001).

NOTE : Make sure that the circuit breakers 1HK, 2HK, 3HK and 4HK are closed during the test.

```
R **ON A/C 201-225, 227-227, 229-244, 247-250, 252-299, 426-456, 476-499, R 503-549, 551-599, 701-749, R Post SB 49-1061 For A/C 201-225,227-227,229-244,247-250,252-253,276-299, R 426-450,476-499,503-549,551-599,701-749,
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A. Do a read out of the APU Last Leg Report.

EFF: ALL 21-63-00

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### TROUBLE SHOOTING MANUAL

\*\*ON A/C ALL

### 4. Fault Isolation

R \*\*ON A/C 201-225, 227-227, 229-250, 252-253, 276-299, 426-450, 476-499, R 503-549, 551-599, 701-749,

- A. If the test gives the maintenance message NO DATA FROM ECS:
  - do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).
  - (1) If the test gives a different maintenance message, you can find the related trouble shooting procedure in the applicable Page Block 101.
  - (2) If the fault continues:
    - replace the ECB (59KD) (Ref. AMM TASK 49-61-34-000-001) and (Ref. AMM TASK 49-61-34-400-001).
  - (3) If the fault continues:
    - do a check and repair the wiring of the signal ARINC 429 XTR EXT from the ZC (8HK) to the ECB (59KD) (Ref. ASM 21-63/03) and (Ref. ASM 49-61/01).
  - (4) If the fault continues:
    - (Ref. TASK 31-32-00-810-934).

\*\*ON A/C 251-251, 457-475,

- A. If the test gives the maintenance message NO DATA FROM ECS or NO PACK DATA FROM ECS:
  - do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).
  - (1) If the test gives a different maintenance message, you can find the related trouble shooting procedure in the applicable Page Block 101.
  - (2) If the fault continues:
    - replace the ECB (59KD) (Ref. AMM TASK 49-61-34-000-001) and (Ref. AMM TASK 49-61-34-400-001).
  - (3) If the fault continues:
    - do a check and repair the wiring of the signal ARINC 429 XTR EXT from the ZC (8HK) to the ECB (59KD) (Ref. ASM 21-63/03) and (Ref. ASM 49-61/01).
  - (4) If the fault continues:
    - (Ref. TASK 31-32-00-810-934).

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### TROUBLE SHOOTING MANUAL

R \*\*ON A/C 201-225, 227-227, 229-244, 247-250, 252-299, 426-456, 476-499, R 503-549, 551-599, 701-749, R Post SB 49-1061 For A/C 201-225,227-227,229-244,247-250,252-253,276-299, R 426-450,476-499,503-549,551-599,701-749,

- A. If the APU Last Leg Report gives the maintenance message NO DATA FROM ECS (FCN 106):
  - do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).
  - (1) If the test gives a different maintenance message, you can find the related trouble shooting procedure in the applicable Page Block 101.
  - (2) If the fault continues:
    - replace the ECB (59KD) (Ref. AMM TASK 49-61-34-000-001) and (Ref. AMM TASK 49-61-34-400-001).
  - (3) If the fault continues:
    - do a check and repair the wiring of the signal ARINC 429 XTR EXT from the ZC (8HK) to the ECB (59KD) (Ref. ASM 21-63/03) and (Ref. ASM 49-61/01).
  - (4) If the fault continues:
     (Ref. TASK 31-32-00-810-934).

\*\*ON A/C ALL

- B. Do the test given in para. 3.
- 5. Close-up
  - A. Put the aircraft back to its initial configuration.

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EFF:

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### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-831

Zone Controller Pin Program Mismatch

### 1. Possible Causes

- CONT-ZONE TEMPERATURE (8HK)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFE | RENCE            | DESIGNATION   |
|------|------------------|---|
|      |                  |   |
| AMM  | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature |
|      |                  | Control with CFDS/MCDU                                |
| AMM  | 21-63-34-000-001 | Removal of the Zone Controller (8HK)                  |
| AMM  | 21-63-34-400-001 | Installation of the Zone Controller (8HK)             |
| ASM  | 21-63/01         |   |

### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

### 4. Fault Isolation

- A. If the test gives a different maintenance message, you can find the related trouble shooting procedure in the applicable Page Block 101.
- B. If the test gives the maintenance message IC PIN PROGRAM MISMATCH:
  - do a check and repair the wiring at:
  - the ZC (8HK) connector AB/3B to the GND,
  - the ZC (8HK) connector AB/3K to the GND, (Ref. ASM 21-63/01).
  - (1) If the fault continues:
    - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).
- C. Do the test given in para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-833

Low Bleed Air from Engine 1

- 1. Possible Causes
  - wiring
  - bleed air ducts
  - bleed air duct-connections
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE | DESIGNATION |
|-----------|-------------|

ASM 21-63/02

- 3. Fault Confirmation
  - A. Not applicable, you cannot confirm this fault on the ground.
- 4. Fault Isolation
  - A. Make sure that no other failure messages related to chapter 30 and 36 occur. If other failure messages occur, do the trouble shooting of this failures before you continue with the subsequent steps.
  - B. If the operational test of the cockpit and cabin temperature control system shows the maintenance message NO BLEED AIR ENG 1 or WAI: NO BLEED AIR ENG 1:
    - (1) Do a check and repair the wiring (Ref. ASM 21-63/02):
      - from the VC (8HK)AB/H3 to the BMC 1 (1HA1)AA/13B.
    - (2) If the fault continues:
      - do a leak check of the bleed air ducts and the bleed air duct-connections from the engine 1 to the air conditioning pack 1 (10HM),
      - replace or tighten as necessary.
  - C. After the subsequent flight, make sure that the fault does not continue.

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### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-834

Low Bleed Air from Engine 2

- 1. Possible Causes
  - wiring
  - bleed air ducts
  - bleed air duct-connections
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE | DESIGNATION |
|-----------|-------------|

ASM 21-63/02

- 3. Fault Confirmation
  - A. Not applicable, you cannot confirm this fault on the ground.
- 4. Fault Isolation
  - A. Make sure that no other failure messages related to chapter 30 and 36 occur. If other failure messages occur, do the trouble shooting of this failures before you continue with the subsequent steps.
  - B. If the operational test of the cockpit and cabin temperature control system shows the maintenance message NO BLEED AIR ENG 2 or WAI: NO BLEED AIR ENG 2:
    - (1) Do a check and repair the wiring (Ref. ASM 21-63/02):
      - from the VC (8HK)AB/H2 to the BMC 2 (1HA2)AA/13B.
    - (2) If the fault continues:
      - do a leak check of the bleed air ducts and the bleed air duct-connections from the engine 2 to the air conditioning pack 2 (11HM),
      - replace or tighten as necessary.
  - C. After the subsequent flight, make sure that the fault does not continue.

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### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-835

Mixer-Unit Temperature Sensors Fault

- 1. Possible Causes
  - SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK)
  - SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK)
  - CONT-ZONE TEMPERATURE (8HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE         |  | DESIGNATION  |
|-------------------|--|--|
| AMM               | 21-63-00-710-004                                 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU                                 |
| AMM<br>AMM        | 21-63-16-000-001<br>21-63-16-400-001             | Removal of the Mixer Temperature Sensor 24HK (25HK) Installation of the Mixer Temperature Sensor 24HK (25HK) |
| AMM<br>AMM<br>ASM | 21-63-34-000-001<br>21-63-34-400-001<br>21-63/03 | Removal of the Zone Controller (8HK) Installation of the Zone Controller (8HK)                               |

### 3. Fault Confirmation

\*\*ON A/C ALL

- R Post SB 21-1104 For A/C 227-227,229-237,276-281,476-478,
  - A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

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\*\*ON A/C ALL

#### 4. Fault Isolation

\*\*ON A/C ALL

- R Post SB 21-1104 For A/C 227-227,229-237,276-281,476-478,
  - A. If the test gives the maintenance message TEMP SENSOR L/H AND R/H MIXER:
    - replace the SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK) (referred to as SENSOR (24HK)) (Ref. AMM TASK 21-63-16-000-001) and (Ref. AMM TASK 21-63-16-400-001),
    - replace the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK) (referred to as SENSOR (25HK)) (Ref. AMM TASK 21-63-16-000-001) and (Ref. AMM TASK 21-63-16-400-001).
    - (1) If the fault continues:
      - do a check and repair the wiring (Ref. ASM 21-63/03) between: SENSOR (24HK) connector A/E and ZC (8HK) connector AA/8C, SENSOR (24HK) connector A/F and ZC (8HK) connector AA/8D, SENSOR (24HK) connector A/C and ZC (8HK) connector AA/8H, SENSOR (24HK) connector A/D and ZC (8HK) connector AA/8G, SENSOR (24HK) connector A/A and GND, SENSOR (25HK) connector A/E and ZC (8HK) connector AA/10C, SENSOR (25HK) connector A/F and ZC (8HK) connector AA/10D, SENSOR (25HK) connector A/C and ZC (8HK) connector AA/10H, SENSOR (25HK) connector A/D and ZC (8HK) connector AA/10G, SENSOR (25HK) connector A/A and GND.
    - (2) If the fault continues:
      - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).
  - B. Do the test as given in the Para. 3.A.

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R \*\*ON A/C 201-208, 227-227, 229-244, 276-284, 426-428, 476-478,

TASK 21-63-00-810-842

Actual Zone Temperatures are above Selected Zone Temperatures (In Flight)

- 1. Possible Causes
  - cockpit ceiling panel 211HC
  - temperature-sensor air duct inlet-grill
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE                                    | DESIGNATION  |
|--|--|
| AMM 25-13-41-400-001<br>AMM 25-24-41-400-001 | Installation of the Ceiling Panels Installation of the Overhead Stowage Compartments |

- 3. Fault Confirmation
  - A. Not applicable.
- 4. Fault Isolation
  - A. Make sure that:
    - (1) For the cockpit temperature sensor 21HK:
      - the cockpit ceiling panel 211HC is flush with the temperature sensor housing (Ref. AMM TASK 25-13-41-400-001).
      - there is no gap between the ceiling panel and the temperature sensor housing.
    - (2) For the cabin temperature sensors 22HK and 23HK:
      - the temperature-sensor air duct inlet-grill is correctly positioned in and over the air duct inlet (Ref. AMM TASK 25-24-41-400-001).

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#### TROUBLE SHOOTING MANUAL

R \*\*ON A/C 205-205, 209-225, 232-232, 245-275, 285-299, 429-475, 479-499, R 503-549, 551-599, 701-749,

TASK 21-63-00-810-843

Actual Zone Temperatures are above Selected Zone Temperatures (In Flight)

- 1. Possible Causes
  - temperature-sensor air duct inlet-grill
- Job Set-up Information
  - A. Referenced Information

-----

#### REFERENCE

#### DESIGNATION

AMM 25-24-41-400-001 Installation of the Overhead Stowage Compartments

- 3. Fault Confirmation
- R \*\*ON A/C 205-205, 209-225, 232-232, 245-275, 285-299, 429-475, 479-499,
  R 503-549, 551-599, 701-749,
  Post SB 21-1112 For A/C 205-205,232-232,
  - A. Not applicable.
- R \*\*ON A/C 205-205, 209-225, 232-232, 245-275, 285-299, 429-475, 479-499, R 503-549, 551-599, 701-749,
  - 4. Fault Isolation
- R \*\*ON A/C 205-205, 209-225, 232-232, 245-275, 285-299, 429-475, 479-499,
  R 503-549, 551-599, 701-749,
  Post SB 21-1112 For A/C 205-205,232-232,
  - A. Make sure that:
    - (1) For the cabin temperature sensors 22HK and 23HK:
      - the temperature-sensor air duct inlet-grill is correctly positioned in and over the air duct inlet (Ref. AMM TASK 25-24-41-400-001).

EFF: 205-205, 209-225, 232-232, 245-275, 285-299, 429-475, 479-499, 503-549, 551-599, 701-749, SROS

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\*\*ON A/C ALL

TASK 21-63-00-810-844

Zone Cont Electrical Component with Short Circuit (Primary Channel)

### 1. Possible Causes

- CONT-ZONE TEMPERATURE (8HK)
- SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK)
- TRIM VALVE CKPT (11HK)
- VALVE-TRIM AIR, FWD CABIN (12HK)
- VALVE-TRIM AIR, AFT CABIN (13HK)
- SENSOR-DUCT TEMPERATURE, COCKPIT (15HK)
- SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK)
- SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK)
- SENSOR-DUCT OVHT TEMPERATURE, COCKPIT (18HK)
- SENSOR-DUCT OVHT TEMPERATURE, FWD CABIN (19HK)
- SENSOR-DUCT TEMPERATURE, AFT CABIN (20HK)
- SENSOR-TEMPERATURE, COCKPIT (21HK)
- SENSOR-TEMPERATURE, FWD CABIN (22HK)
- SENSOR-TEMPERATURE, AFT CABIN (23HK)
- SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK)
- SEL-TEMPERATURE, AIR COND/COCKPIT (27HK)
- SEL-TEMPERATURE, AIR COND/FWD CABIN (28HK)
- SEL-TEMPERATURE, AIR COND/AFT CABIN (29HK)

### 2. Job Set-up Information

#### A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
|           |                  |  |
| AMM       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |
| AMM       | 21-63-11-000-001 | Removal of the Temperature Selector (27HK, 28HK, 29HK)                       |
| AMM       | 21-63-11-400-001 | <pre>Installation of the Temperature Selector (27HK,28HK,29HK)</pre>         |
| AMM       | 21-63-15-000-001 | Removal of the Duct Temperature Sensors 15HK, 16HK and 17HK                  |
| AMM       | 21-63-15-400-001 | Installation of the Duct Temperature Sensors 15HK, 16HK and 17HK             |
| AMM       | 21-63-16-000-001 | Removal of the Mixer Temperature Sensor 24HK (25HK)                          |
| AMM       | 21-63-16-400-001 | Installation of the Mixer Temperature Sensor 24HK (25HK)                     |
| AMM       | 21-63-17-000-001 | Removal of the Temperature Sensors (21HK, 22HK, 23HK)                        |
| AMM       | 21-63-17-400-001 | Installation of the Temperature Sensors (21HK, 22HK, 23HK)                   |

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| REFERENCE |                  | DESIGNATION                                |                                   |
|-----------|------------------|--|-----------------------------------|
| AMM       | 21-63-18-000-001 | Removal of the Duct<br>18HK, 19HK and 20HK | Overheat-Temperature Sensors      |
| AMM       | 21-63-18-400-001 | Installation of the 18HK, 19HK and 20HK    | Duct Overheat-Temperature Sensors |
| AMM       | 21-63-34-000-001 | Removal of the Zone                        | Controller (8HK)                  |
| AMM       | 21-63-34-400-001 | Installation of the                        | Zone Controller (8HK)             |
| AMM       | 21-63-51-000-001 | Removal of the Trim                        | Air Valve (11HK,12HK,13HK)        |
| AMM       | 21-63-51-400-001 | Installation of the                        | Trim Air Valve (11HK, 12HK, 13HK) |
| ASM       | 21-63/02         |  |                                   |
| ASM       | 21-63/02         |  |                                   |
| ASM       | 21-63/03         |  |                                   |
| ASM       | 21-63/03         |  |                                   |
| ASM       | 21-63/03         |  |                                   |

### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

### 4. Fault Isolation

R \*\*ON A/C 227-227, 229-237, 276-281, 476-478,

- A. If the test gives the maintenance message ZONE CONT OR SENSOR SUPPLY SHORT:
  - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).
  - (1) If the fault continues:
    - disconnect the electrical connector (25HKA) from the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK) (Ref. AMM TASK 21-63-16-000-001).
    - make sure that the electrical connector is clean and in the correct condition.
    - do a check for 5 VDC at the electrical connector (25HKA) between pins E and F (5 VDC from zone controller primary channel) (Ref. ASM 21-63/03).
    - (a) If the voltage is not between 4.8 VDC and 5.2 VDC:
      - disconnect the electrical connector (11HKA) (Ref. AMM TASK 21-63-51-000-001).
      - make sure that the electrical connector is clear and in the correct condition.
      - do a check for 5 VDC again.

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- 1 If the voltage is between 4.8 VDC and 5.2 VDC:
  - replace the TRIM VALVE CKPT (11HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).
  - connect the electrical connector (11HKA) (Ref. AMM TASK 21-63-51-400-001).
- If the voltage is not between 4.8 VDC and 5.2 VDC:
  - connect the electrical connector (11HKA) (Ref. AMM TASK 21-63-51-400-001).
  - repeat para. 4.A.(1).(a) for:

connector (12HKA) and the VALVE-TRIM AIR, FWD CABIN (12HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001),

connector (13HKA) and the VALVE-TRIM AIR, AFT CABIN (13HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001),

connector (15HKA) and the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001),

connector (16HKA) and the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001),

connector (17HKA) and the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001),

connector (18HKA) and the SENSOR-DUCT OVHT

TEMPERATURE, COCKPIT (18HK) (Ref. AMM TASK 21-63-18-000-001) and (Ref. AMM TASK 21-63-18-400-001),

connector (19HKA) and the SENSOR-DUCT OVHT TEMPERATURE, FWD CABIN (19HK) (Ref. AMM TASK 21-63-18-000-001) and (Ref. AMM TASK 21-63-18-400-001),

connector (20HKA) and the SENSOR-DUCT TEMPERATURE, AFT CABIN (20HK) (Ref. AMM TASK 21-63-18-000-001) and (Ref. AMM TASK 21-63-18-400-001),

connector (21HKA) and the SENSOR-TEMPERATURE, COCKPIT (21HK) (Ref. AMM TASK 21-63-17-000-001) and (Ref. AMM TASK 21-63-17-400-001),

connector (22HKA) and the SENSOR-TEMPERATURE, FWD CABIN (22HK) (Ref. AMM TASK 21-63-17-000-001) and (Ref. AMM TASK 21-63-17-400-001),

connector (23HKA) and the SENSOR-TEMPERATURE, AFT CABIN (23HK) (Ref. AMM TASK 21-63-17-000-001) and (Ref. AMM TASK 21-63-17-400-001),

connector (24HKA) and the SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK) (Ref. AMM TASK 21-63-16-000-001) and (Ref. AMM TASK 21-63-16-400-001),

connector (27HKA) and the SEL-TEMPERATURE, AIR COND/COCKPIT (27HK) (Ref. AMM TASK 21-63-11-000-001) and (Ref. AMM TASK 21-63-11-400-001),

connector (28HKA) and the SEL-TEMPERATURE, AIR COND/FWD CABIN (28HK) (Ref. AMM TASK 21-63-11-000-001) and (Ref. AMM TASK 21-63-11-400-001),

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connector (29HKA) and the SEL-TEMPERATURE, AIR COND/AFT CABIN (29HK) (Ref. AMM TASK 21-63-11-000-001) and (Ref. AMM TASK 21-63-11-400-001).

- (b) If the voltage is between 4.8 VDC and 5.2 VDC:
  - replace SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK) (Ref. AMM TASK 21-63-16-000-001) and (Ref. AMM TASK 21-63-16-400-001).
  - connect the electrical connector (25HKA) (Ref. AMM TASK 21-63-16-400-001).
- (2) If the fault continues:
  - open the CB's 1HK (V17), 2HK (V18), 3HK (V19) and 4HK (V20).
  - remove the CONT-ZONE TEMPERATURE (8HK) and (Ref. AMM TASK 21-63-34-000-001).
  - disconnect the electrical connector (11HKA) from the TRIM VALVE CKPT (11HK) (Ref. AMM TASK 21-63-51-000-001).
  - at the electrical connector (11HKA) do a check for a short circuit: between pins S and T, S and V, T and V and, between GND and pins S, T and V (Ref. ASM 21-63/02).
  - (a) If there is no short circuit:
    - connect the electrical connector (11HKA) (Ref. AMM TASK 21-63-51-400-001).
  - (b) If there is a short circuit:
    - repair the related wiring between: connector (11HKA) pin S and ZC connector (8HKAA) pin 4A, connector (11HKA) pin T and ZC connector (8HKAA) pin 4B, connector (11HKA) pin V and ZC connector (8HKAA) pin 4C (Ref. ASM 21-63/02).
    - connect the electrical connector (11HKA) (Ref. AMM TASK 21-63-51-400-001).
- (3) If the fault continues:
  - disconnect the electrical connector (12HKA) from the VALVE-TRIM AIR, FWD CABIN (12HK) (Ref. AMM TASK 21-63-51-000-001).
  - at the electrical connector (12HKA) do a check for a short circuit: between pins S and T, S and V, T and V and, between GND and pins S, T and V (Ref. ASM 21-63/02).
  - (a) If there is no short circuit:
    - connect the electrical connector (12HKA) (Ref. AMM TASK 21-63-51-400-001).
  - (b) If there is a short circuit:
    - repair the related wiring between: connector (12HKA) pin S and ZC connector (8HKAA) pin 5A, connector (12HKA) pin T and ZC connector (8HKAA) pin 5B, connector (12HKA) pin V and ZC connector (8HKAA) pin 5C (Ref. ASM 21-63/02).
    - connect the electrical connector (12HKA) (Ref. AMM TASK 21-63-51-400-001).

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- (4) If the fault continues:
  - disconnect the electrical connector (13HKA) from the VALVE-TRIM AIR, AFT CABIN (13HK) (Ref. AMM TASK 21-63-51-000-001).
  - at the electrical connector (13HKA) do a check for a short circuit: between pins S and T, S and V, T and V and, between GND and pins S, T and V (Ref. ASM 21-63/02).
  - (a) If there is no short circuit:
    - connect the electrical connector (13HKA) (Ref. AMM TASK 21-63-51-400-001).
  - (b) If there is a short circuit:
    - repair the related wiring between: connector (13HKA) pin S and ZC connector (8HKAA) pin 6A, connector (13HKA) pin T and ZC connector (8HKAA) pin 6B, connector (13HKA) pin V and ZC connector (8HKAA) pin 6C (Ref. ASM 21-63/02).
    - connect the electrical connector (12HKA) (Ref. AMM TASK 21-63-51-400-001).
- (5) If the fault continues:
  - disconnect the electrical connector (15HKA) from the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK) (Ref. AMM TASK 21-63-15-000-001).
  - at the electrical connector (15HKA) do a check for a short circuit: between pins E and F and, between GND and pins E and F (Ref. ASM 21-63/03).
  - (a) If there is no short circuit:
    - connect the electrical connector (15HKA) (Ref. AMM TASK 21-63-15-400-001).
  - (b) If there is a short circuit:
    - repair the related wiring between: connector (15HKA) pin E and ZC connector (8HKAA) pin 9A, connector (15HKA) pin F and ZC connector (8HKAA) pin 9B (Ref. ASM 21-63/03).
    - connect the electrical connector (15HKA) (Ref. AMM TASK 21-63-15-400-001).
- (6) If the fault continues:
  - disconnect the electrical connector (16HKA) from the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK) (Ref. AMM TASK 21-63-15-000-001).
  - at the electrical connector (16HKA) do a check for a short circuit: between pins E and F and, between GND and pins E and F (Ref. ASM 21-63/03).
  - (a) If there is no short circuit:
    - connect the electrical connector (16HKA) (Ref. AMM TASK 21-63-15-400-001).

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- (b) If there is a short circuit:
  - repair the related wiring between: connector (16HKA) pin E and ZC connector (8HKAA) pin 9C, connector (16HKA) pin F and ZC connector (8HKAA) pin 9D (Ref. ASM 21-63/03).
  - connect the electrical connector (16HKA) (Ref. AMM TASK 21-63-15-400-001).
- (7) If the fault continues:
  - disconnect the electrical connector (17HKA) from the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK) (Ref. AMM TASK 21-63-15-000-001).
  - at the electrical connector (17HKA) do a check for a short circuit: between pins E and F and, between GND and pins E and F (Ref. ASM 21-63/03).
  - (a) If there is no short circuit:
    - connect the electrical connector (17HKA) (Ref. AMM TASK 21-63-15-400-001).
  - (b) If there is a short circuit:
    - repair the related wiring between: connector (17HKA) pin E and ZC connector (8HKAA) pin 10A, connector (17HKA) pin F and ZC connector (8HKAA) pin 10B (Ref. ASM 21-63/03).
    - connect the electrical connector (17HKA) (Ref. AMM TASK 21-63-15-400-001).
- (8) If the fault continues:
  - disconnect the electrical connector (18HKA) from the SENSOR-DUCT OVHT TEMPERATURE, COCKPIT (18HK) (Ref. AMM TASK 21-63-18-000-001).
  - at the electrical connector (18HKA) do a check for a short circuit: between pins A and B and, between GND and pins A and B (Ref. ASM 21-63/03).
  - (a) If there is no short circuit:
    - connect the electrical connector (18HKA) (Ref. AMM TASK 21-63-18-400-001).
  - (b) If there is a short circuit:
    - repair the related wiring between: connector (18HKA) pin A and ZC connector (8HKAA) pin 11B, connector (18HKA) pin B and ZC connector (8HKAA) pin 11A (Ref. ASM 21-63/03).
    - connect the electrical connector (18HKA) (Ref. AMM TASK 21-63-18-400-001).
- (9) If the fault continues:
  - disconnect the electrical connector (19HKA) from the SENSOR-DUCT
     OVHT TEMPERATURE, FWD CABIN (19HK) (Ref. AMM TASK 21-63-18-000-001).
  - at the electrical connector (19HKA) do a check for a short circuit: between pins A and B and, between GND and pins A and B (Ref. ASM 21-63/03).

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- (a) If there is no short circuit:
  - connect the electrical connector (19HKA) (Ref. AMM TASK 21-63-18-400-001).
- (b) If there is a short circuit:
  - repair the related wiring between: connector (19HKA) pin A and ZC connector (8HKAA) pin 11D, connector (19HKA) pin B and ZC connector (8HKAA) pin 11C (Ref. ASM 21-63/03).
  - connect the electrical connector (19HKA) (Ref. AMM TASK 21-63-18-400-001).

#### (10) If the fault continues:

- disconnect the electrical connector (20HKA) from the SENSOR-DUCT TEMPERATURE, AFT CABIN (20HK) (Ref. AMM TASK 21-63-18-000-001).
- at the electrical connector (20HKA) do a check for a short circuit: between pins A and B and, between GND and pins A and B (Ref. ASM 21-63/03).
- (a) If there is no short circuit:
  - connect the electrical connector (20HKA) (Ref. AMM TASK 21-63-18-400-001).
- (b) If there is a short circuit:
  - repair the related wiring between: connector (20HKA) pin A and ZC connector (8HKAA) pin 12B, connector (20HKA) pin B and ZC connector (8HKAA) pin 12A (Ref. ASM 21-63/03).
  - connect the electrical connector (20HKA) (Ref. AMM TASK 21-63-18-400-001).

### (11) If the fault continues:

- disconnect the electrical connector (21HKA) from the SENSOR-TEMPERATURE, COCKPIT (21HK) (Ref. AMM TASK 21-63-17-000-001).
- at the electrical connector (21HKA) do a check for a short circuit: between pins A and B and, between GND and pins A and B (Ref. ASM 21-63/03).
- (a) If there is no short circuit:
  - connect the electrical connector (21HKA) (Ref. AMM TASK 21-63-17-400-001).
- (b) If there is a short circuit:
  - repair the related wiring between: connector (21HKA) pin A and ZC connector (8HKAA) pin 7A, connector (21HKA) pin B and ZC connector (8HKAA) pin 7B (Ref. ASM 21-63/03).
  - connect the electrical connector (21HKA) (Ref. AMM TASK 21-63-17-400-001).

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- (12) If the fault continues:
  - disconnect the electrical connector (22HKA) from the SENSOR-TEMPERATURE, FWD CABIN (22HK) (Ref. AMM TASK 21-63-17-000-
  - at the electrical connector (22HKA) do a check for a short circuit: between pins A and B and, between GND and pins A and B (Ref. ASM 21-63/03).
  - (a) If there is no short circuit:
    - connect the electrical connector (22HKA) (Ref. AMM TASK 21-63-17-400-001).
  - (b) If there is a short circuit:
    - repair the related wiring between: connector (22HKA) pin A and ZC connector (8HKAA) pin 7C, connector (22HKA) pin B and ZC connector (8HKAA) pin 7D (Ref. ASM 21-63/03).
    - connect the electrical connector (22HKA) (Ref. AMM TASK 21-63-17-400-001).
- (13) If the fault continues:
  - disconnect the electrical connector (23HKA) from the SENSOR-TEMPERATURE, AFT CABIN (23HK) (Ref. AMM TASK 21-63-17-000-001).
  - at the electrical connector (23HKA) do a check for a short circuit: between pins A and B and, between GND and pins A and B (Ref. ASM 21-63/03).
  - (a) If there is no short circuit:
    - connect the electrical connector (23HKA) (Ref. AMM TASK 21-63-17-400-001).
  - (b) If there is a short circuit:
    - repair the related wiring between: connector (23HKA) pin A and ZC connector (8HKAA) pin 8A, connector (23HKA) pin B and ZC connector (8HKAA) pin 8B (Ref. ASM 21-63/03).
    - connect the electrical connector (23HKA) (Ref. AMM TASK 21-63-17-400-001).
- (14) If the fault continues:
  - disconnect the electrical connector (24HKA) from the SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK) (Ref. AMM TASK 21-63-16-000-001).
  - at the electrical connector do a check for a short circuit: between pins E and F and, between GND and pins E and F (Ref. ASM 21-63/03).
  - (a) If there is no short circuit:

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- connect the electrical connector (24HKA) (Ref. AMM TASK 21-63-16-400-001).

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- (b) If there is a short circuit:
  - repair the related wiring between: connector (24HKA) pin E and ZC connector (8HKAA) pin 8C, connector (24HKA) pin F and ZC connector (8HKAA( pin 8D (Ref. ASM 21-63/03).
  - connect the electrical connector (24HKA) (Ref. AMM TASK 21-63-16-400-001).

#### (15) If the fault continues:

- disconnect the electrical connector (25HKA) from the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK) (Ref. AMM TASK 21-63-16-000-001).
- at the electrical connector (25HKA) do a check for a short circuit: between pins E and F and, between GND and pins E and F (Ref. ASM 21-63/03).
- (a) If there is no short circuit:
  - connect the electrical connector (25HKA) (Ref. AMM TASK 21-63-16-400-001).
- (b) If there is a short circuit:
  - repair the related wiring between: connector (25HKA) pin E and ZC connector (8HKAA) pin 10C, connector (25HKA) pin F and ZC connector (8HKAA) pin 10D (Ref. ASM 21-63/03).
  - connect the electrical connector (25HKA) (Ref. AMM TASK 21-63-16-400-001).

#### (16) If the fault continues:

- disconnect the electrical connector (27HKA) from the SEL-TEMPERATURE, AIR COND/COCKPIT (27HK) (Ref. AMM TASK 21-63-11-000-001).
- at the electrical connector (27HKA) do a check for a short circuit: between pins 2 and 3, 2 and 4, 3 and 4 and, between GND and pins 2, 3, and 4 (Ref. ASM 21-63/02).
- (a) If there is no short circuit:
  - connect the electrical connector (27HKA) (Ref. AMM TASK 21-63-11-400-001).
- (b) If there is a short circuit:

227-227, 229-237, 276-281, 476-478,

- repair the related wiring between: connector (27HKA) pin 2 and ZC connector (8HKAA) pin 13A, connector (27HKA) pin 3 and ZC connector (8HKAA) pin 14A, connector (27HKA) pin 4 and ZC connector (8HKAA) pin 15A (Ref. ASM 21-63/02).
- connect the electrical connector (27HKA) (Ref. AMM TASK 21-63-11-400-001).

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#### TROUBLE SHOOTING MANUAL

#### (17) If the fault continues:

- disconnect the electrical connector (28HKA) from the SEL-TEMPERATURE, AIR COND/FWD CABIN (28HK) (Ref. AMM TASK 21-63-11-000-001).
- at the electrical connector (28HKA) do a check for a short circuit: between pins 2 and 3, 2 and 4, 3 and 4 and, between GND and pins 2, 3 and 4 (Ref. ASM 21-63/02).
- (a) If there is no short circuit:
  - connect the electrical connector (28HKA) (Ref. AMM TASK 21-63-11-400-001).
- (b) If there is a short circuit:
  - repair the related wiring between: connector (28HKA) pin 2 and ZC connector (8HKAA) pin 13B, connector (28HKA) pin 3 and ZC connector (8HKAA) pin 14B, connector (28HKA) pin 4 and ZC connector (8HKAA) pin 15B (Ref. ASM 21-63/02).
  - connect the electrical connector (28HKA) (Ref. AMM TASK 21-63-11-400-001).

#### (18) If the fault continues:

- disconnect the electrical connector (29HKA) from the SEL-TEMPERATURE, AIR COND/AFT CABIN (29HK) (Ref. AMM TASK 21-63-11-000-001).
- at the electrical connector (29HKA) do a check for a short circuit: between pins 2 and 3, 2 and 4, 3 and 4 and, between GND and pins 2, 3 and 4 (Ref. ASM 21-63/02).
- (a) If there is no short circuit:
  - connect the electrical connector (29HKA) (Ref. AMM TASK 21-63-11-400-001).
- (b) If there is a short circuit:

227-227, 229-237, 276-281, 476-478,

- repair the related wiring between: connector (29HKA) pin 2 and ZC connector (8HKAA) pin 13C, connector (29HKA) pin 3 and ZC connector (8HKAA) pin 14C, connector (29HKA) pin 4 and ZC connector (8HKAA) pin 15C (Ref. ASM 21-63/02).
- connect the electrical connector (29HKA) (Ref. AMM TASK 21-63-11-400-001).
- install the removed CONT-ZONE TEMPERATURE (8HK) and (Ref. AMM TASK 21-63-34-000-001).
- close the CB's 1HK (V17), 2HK (V18), 3HK (V19) and 4HK (V20).

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\*\*ON A/C ALL

- R Post SB 21-1104 For A/C 227-227,229-237,276-281,476-478,
  - A. If the test gives the maintenance message ZONE CONT OR SENSOR SUPPLY SHORT:
    - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).
    - (1) If the fault continues:
      - disconnect the electrical connector (25HKA) from the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK) (Ref. AMM TASK 21-63-16-000-001).
      - make sure that the electrical connector is clean and in the correct condition.
      - do a check for 5 VDC at the electrical connector (25HKA) between pins E and F (5 VDC from zone controller primary channel) (Ref. ASM 21-63/03).
      - (a) If the voltage is not between 4.8 VDC and 5.2 VDC:
        - disconnect the electrical connector (11HKA) (Ref. AMM TASK 21-63-51-000-001).
        - make sure that the electrical connector is clear and in the correct condition.
        - do a check for 5 VDC again.
        - 1 If the voltage is between 4.8 VDC and 5.2 VDC:
          - replace the TRIM VALVE CKPT (11HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).
          - connect the electrical connector (11HKA) (Ref. AMM TASK 21-63-51-400-001).
        - 2 If the voltage is not between 4.8 VDC and 5.2 VDC:
          - connect the electrical connector (11HKA) (Ref. AMM TASK 21-63-51-400-001).
          - repeat para. 4.A.(1).(a) for:
             connector (12HKA) and the VALVE-TRIM AIR, FWD CABIN (12HK)
             (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-6351-400-001),

connector (13HKA) and the VALVE-TRIM AIR, AFT CABIN (13HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001),

connector (15HKA) and the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001),

connector (16HKA) and the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001),

connector (17HKA) and the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK) (Ref. AMM TASK 21-63-15-000-001) and (Ref. AMM TASK 21-63-15-400-001),

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connector (21HKA) and the SENSOR-TEMPERATURE, COCKPIT (21HK) (Ref. AMM TASK 21-63-17-000-001) and (Ref. AMM TASK 21-63-17-400-001),

connector (22HKA) and the SENSOR-TEMPERATURE, FWD CABIN (22HK) (Ref. AMM TASK 21-63-17-000-001) and (Ref. AMM TASK 21-63-17-400-001),

connector (23HKA) and the SENSOR-TEMPERATURE, AFT CABIN (23HK) (Ref. AMM TASK 21-63-17-000-001) and (Ref. AMM TASK 21-63-17-400-001),

connector (24HKA) and the SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK) (Ref. AMM TASK 21-63-16-000-001) and (Ref. AMM TASK 21-63-16-400-001),

connector (27HKA) and the SEL-TEMPERATURE, AIR COND/COCKPIT (27HK) (Ref. AMM TASK 21-63-11-000-001) and (Ref. AMM TASK 21-63-11-400-001),

connector (28HKA) and the SEL-TEMPERATURE, AIR COND/FWD CABIN (28HK) (Ref. AMM TASK 21-63-11-000-001) and (Ref. AMM TASK 21-63-11-400-001),

connector (29HKA) and the SEL-TEMPERATURE, AIR COND/AFT CABIN (29HK) (Ref. AMM TASK 21-63-11-000-001) and (Ref. AMM TASK 21-63-11-400-001).

- (b) If the voltage is between 4.8 VDC and 5.2 VDC:
  - replace SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK) (Ref. AMM TASK 21-63-16-000-001) and (Ref. AMM TASK 21-63-16-400-001).
  - connect the electrical connector (25HKA) (Ref. AMM TASK 21-63-16-400-001).
- (2) If the fault continues:
  - open the CB's 1HK (V17), 2HK (V18), 3HK (V19) and 4HK (V20).
  - remove the CONT-ZONE TEMPERATURE (8HK) and (Ref. AMM TASK 21-63-34-000-001).
  - disconnect the electrical connector (11HKA) from the TRIM VALVE CKPT (11HK) (Ref. AMM TASK 21-63-51-000-001).
  - at the electrical connector (11HKA) do a check for a short circuit: between pins U and J, U and K, U and L, J and K, J and L, K and L, C and D and,

between GND and pins U, J,K, L and C (Ref. ASM 21-63/02).

- (a) If there is no short circuit:
  - connect the electrical connector (11HKA) (Ref. AMM TASK 21-63-51-400-001).
- (b) If there is a short circuit:
  - repair the related wiring between: connector (11HKA) pin U and ZC connector (8HKAB) pin 13A, connector (11HKA) pin J and ZC connector (8HKAB) pin 12B, connector (11HKA) pin K and ZC connector (8HKAB) pin 13B, connector (11HKA) pin L and ZC connector (8HKAB) pin 14B, connector (11HKA) pin C and ZC connector (8HKAB) pin 7C (Ref. ASM 21-63/02).

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- connect the electrical connector (11HKA) (Ref. AMM TASK 21-63-51-400-001).
- (3) If the fault continues:
  - disconnect the electrical connector (12HKA) from the VALVE-TRIM AIR, FWD CABIN (12HK) (Ref. AMM TASK 21-63-51-000-001).
  - at the electrical connector (12HKA) do a check for a short circuit: between pins U and J, U and K, U and L, J and K, J and L, K and L, C and D and,

between GND and pins U, J,K, L and C (Ref. ASM 21-63/02).

- (a) If there is no short circuit:
  - connect the electrical connector (12HKA) (Ref. AMM TASK 21-63-51-400-001).
- (b) If there is a short circuit:
  - repair the related wiring between: connector (12HKA) pin U and ZC connector (8HKAB) pin 11A, connector (12HKA) pin J and ZC connector (8HKAB) pin 10A, connector (12HKA) pin K and ZC connector (8HKAB) pin 10B, connector (12HKA) pin L and ZC connector (8HKAB) pin 11B, connector (12HKA) pin C and ZC connector (8HKAB) pin 6C (Ref. ASM 21-63/02).
  - connect the electrical connector (12HKA) (Ref. AMM TASK 21-63-51-400-001).
- (4) If the fault continues:
  - disconnect the electrical connector (13HKA) from the VALVE-TRIM AIR, AFT CABIN (13HK) (Ref. AMM TASK 21-63-51-000-001).
  - at the electrical connector (13HKA) do a check for a short circuit: between pins U and J, U and K, U and L, J and K, J and L, K and L, C and D and,

between GND and pins U, J,K, L and C (Ref. ASM 21-63/02).

- (a) If there is no short circuit:
  - connect the electrical connector (13HKA) (Ref. AMM TASK 21-63-51-400-001).
- (b) If there is a short circuit:
  - repair the related wiring between: connector (13HKA) pin U and ZC connector (8HKAB) pin 15A, connector (13HKA) pin J and ZC connector (8HKAB) pin 15C, connector (13HKA) pin K and ZC connector (8HKAB) pin 15D, connector (13HKA) pin L and ZC connector (8HKAB) pin 15E, connector (13HKA) pin C and ZC connector (8HKAB) pin 5C (Ref. ASM 21-63/02).
  - connect the electrical connector (12HKA) (Ref. AMM TASK 21-63-51-400-001).

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- (5) If the fault continues:
  - disconnect the electrical connector (15HKA) from the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK) (Ref. AMM TASK 21-63-15-000-001).
  - at the electrical connector (15HKA) do a check for a short circuit: between pins E and F and, between GND and pins E and F (Ref. ASM 21-63/03).
  - (a) If there is no short circuit:
    - connect the electrical connector (15HKA) (Ref. AMM TASK 21-63-15-400-001).
  - (b) If there is a short circuit:
    - repair the related wiring between: connector (15HKA) pin E and ZC connector (8HKAA) pin 9A, connector (15HKA) pin F and ZC connector (8HKAA) pin 9B (Ref. ASM 21-63/03).
    - connect the electrical connector (15HKA) (Ref. AMM TASK 21-63-15-400-001).
- (6) If the fault continues:
  - disconnect the electrical connector (16HKA) from the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK) (Ref. AMM TASK 21-63-15-000-001).
  - at the electrical connector (16HKA) do a check for a short circuit: between pins E and F and, between GND and pins E and F (Ref. ASM 21-63/03).
  - (a) If there is no short circuit:
    - connect the electrical connector (16HKA) (Ref. AMM TASK 21-63-15-400-001).
  - (b) If there is a short circuit:
    - repair the related wiring between: connector (16HKA) pin E and ZC connector (8HKAA) pin 9C, connector (16HKA) pin F and ZC connector (8HKAA) pin 9D (Ref. ASM 21-63/03).
    - connect the electrical connector (16HKA) (Ref. AMM TASK 21-63-15-400-001).
- (7) If the fault continues:
  - disconnect the electrical connector (17HKA) from the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK) (Ref. AMM TASK 21-63-15-000-001).
  - at the electrical connector (17HKA) do a check for a short circuit: between pins E and F and, between GND and pins E and F (Ref. ASM 21-63/03).
  - (a) If there is no short circuit:
    - connect the electrical connector (17HKA) (Ref. AMM TASK 21-63-15-400-001).

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- (b) If there is a short circuit:
  - repair the related wiring between: connector (17HKA) pin E and ZC connector (8HKAA) pin 10A, connector (17HKA) pin F and ZC connector (8HKAA) pin 10B (Ref. ASM 21-63/03).
  - connect the electrical connector (17HKA) (Ref. AMM TASK 21-63-15-400-001).
- (8) If the fault continues:
  - disconnect the electrical connector (21HKA) from the SENSOR-TEMPERATURE, COCKPIT (21HK) (Ref. AMM TASK 21-63-17-000-001).
  - at the electrical connector (21HKA) do a check for a short circuit: between pins A and B and, between GND and pins A and B (Ref. ASM 21-63/03).
  - (a) If there is no short circuit:
    - connect the electrical connector (21HKA) (Ref. AMM TASK 21-63-17-400-001).
  - (b) If there is a short circuit:
    - repair the related wiring between: connector (21HKA) pin A and ZC connector (8HKAA) pin 7A, connector (21HKA) pin B and ZC connector (8HKAA) pin 7B (Ref. ASM 21-63/03).
    - connect the electrical connector (21HKA) (Ref. AMM TASK 21-63-17-400-001).
- (9) If the fault continues:
  - disconnect the electrical connector (22HKA) from the SENSOR-TEMPERATURE, FWD CABIN (22HK) (Ref. AMM TASK 21-63-17-000-001).
  - at the electrical connector (22HKA) do a check for a short circuit: between pins A and B and, between GND and pins A and B (Ref. ASM 21-63/03).
  - (a) If there is no short circuit:
    - connect the electrical connector (22HKA) (Ref. AMM TASK 21-63-17-400-001).
  - (b) If there is a short circuit:
    - repair the related wiring between: connector (22HKA) pin A and ZC connector (8HKAA) pin 7C, connector (22HKA) pin B and ZC connector (8HKAA) pin 7D (Ref. ASM 21-63/03).
    - connect the electrical connector (22HKA) (Ref. AMM TASK 21-63-17-400-001).
- (10) If the fault continues:
  - disconnect the electrical connector (23HKA) from the SENSOR-TEMPERATURE, AFT CABIN (23HK) (Ref. AMM TASK 21-63-17-000-001).
  - at the electrical connector (23HKA) do a check for a short circuit:

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between pins A and B and, between GND and pins A and B (Ref. ASM 21-63/03).

- (a) If there is no short circuit:
  - connect the electrical connector (23HKA) (Ref. AMM TASK 21-63-17-400-001).
- (b) If there is a short circuit:
  - repair the related wiring between: connector (23HKA) pin A and ZC connector (8HKAA) pin 8A, connector (23HKA) pin B and ZC connector (8HKAA) pin 8B (Ref. ASM 21-63/03).
  - connect the electrical connector (23HKA) (Ref. AMM TASK 21-63-17-400-001).
- (11) If the fault continues:
  - disconnect the electrical connector (24HKA) from the SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK) (Ref. AMM TASK 21-63-16-000-001).
  - at the electrical connector do a check for a short circuit: between pins E and F and, between GND and pins E and F (Ref. ASM 21-63/03).
  - (a) If there is no short circuit:
    - connect the electrical connector (24HKA) (Ref. AMM TASK 21-63-16-400-001).
  - (b) If there is a short circuit:
    - repair the related wiring between: connector (24HKA) pin E and ZC connector (8HKAA) pin 8C, connector (24HKA) pin F and ZC connector (8HKAA( pin 8D (Ref. ASM 21-63/03).
    - connect the electrical connector (24HKA) (Ref. AMM TASK 21-63-16-400-001).
- (12) If the fault continues:
  - disconnect the electrical connector (25HKA) from the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK) (Ref. AMM TASK 21-63-16-000-001).
  - at the electrical connector (25HKA) do a check for a short circuit: between pins E and F and, between GND and pins E and F (Ref. ASM 21-63/03).
  - (a) If there is no short circuit:
    - connect the electrical connector (25HKA) (Ref. AMM TASK 21-63-16-400-001).
  - (b) If there is a short circuit:
    - repair the related wiring between: connector (25HKA) pin E and ZC connector (8HKAA) pin 10C, connector (25HKA) pin F and ZC connector (8HKAA) pin 10D (Ref. ASM 21-63/03).
    - connect the electrical connector (25HKA) (Ref. AMM TASK 21-63-16-400-001).

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- (13) If the fault continues:
  - disconnect the electrical connector (27HKA) from the SEL-TEMPERATURE, AIR COND/COCKPIT (27HK) (Ref. AMM TASK 21-63-11-000-001).
  - at the electrical connector (27HKA) do a check for a short circuit: between pins 2 and 3, 2 and 4, 3 and 4 and, between GND and pins 2, 3, and 4 (Ref. ASM 21-63/02).
  - (a) If there is no short circuit:
    - connect the electrical connector (27HKA) (Ref. AMM TASK 21-63-11-400-001).
  - (b) If there is a short circuit:
    - repair the related wiring between: connector (27HKA) pin 2 and ZC connector (8HKAA) pin 13A, connector (27HKA) pin 3 and ZC connector (8HKAA) pin 14A, connector (27HKA) pin 4 and ZC connector (8HKAA) pin 15A (Ref. ASM 21-63/02).
    - connect the electrical connector (27HKA) (Ref. AMM TASK 21-63-11-400-001).
- (14) If the fault continues:
  - disconnect the electrical connector (28HKA) from the SEL-TEMPERATURE, AIR COND/FWD CABIN (28HK) (Ref. AMM TASK 21-63-11-000-001).
  - at the electrical connector (28HKA) do a check for a short circuit: between pins 2 and 3, 2 and 4, 3 and 4 and, between GND and pins 2, 3 and 4 (Ref. ASM 21-63/02).
  - (a) If there is no short circuit:
    - connect the electrical connector (28HKA) (Ref. AMM TASK 21-63-11-400-001).
  - (b) If there is a short circuit:
    - repair the related wiring between: connector (28HKA) pin 2 and ZC connector (8HKAA) pin 13B, connector (28HKA) pin 3 and ZC connector (8HKAA) pin 14B, connector (28HKA) pin 4 and ZC connector (8HKAA) pin 15B (Ref. ASM 21-63/02).
    - connect the electrical connector (28HKA) (Ref. AMM TASK 21-63-11-400-001).
- (15) If the fault continues:
  - disconnect the electrical connector (29HKA) from the SEL-TEMPERATURE, AIR COND/AFT CABIN (29HK) (Ref. AMM TASK 21-63-11-000-001).
  - at the electrical connector (29HKA) do a check for a short circuit: between pins 2 and 3, 2 and 4, 3 and 4 and, between GND and pins 2, 3 and 4 (Ref. ASM 21-63/02).

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- (a) If there is no short circuit:
  - connect the electrical connector (29HKA) (Ref. AMM TASK 21-63-11-400-001).
- (b) If there is a short circuit:
  - repair the related wiring between: connector (29HKA) pin 2 and ZC connector (8HKAA) pin 13C, connector (29HKA) pin 3 and ZC connector (8HKAA) pin 14C, connector (29HKA) pin 4 and ZC connector (8HKAA) pin 15C (Ref. ASM 21-63/02).
  - connect the electrical connector (29HKA) (Ref. AMM TASK 21-63-11-400-001).
  - install the removed CONT-ZONE TEMPERATURE (8HK) and (Ref. AMM TASK 21-63-34-000-001).
  - close the CB's 1HK (V17), 2HK (V18), 3HK (V19) and 4HK (V20).

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B. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-845

Zone Cont Electrical Component with Short Circuit (Secondary Channel)

### 1. Possible Causes

- CONT-ZONE TEMPERATURE (8HK)
- SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK)
- TRIM VALVE CKPT (11HK)
- VALVE-TRIM AIR, FWD CABIN (12HK)
- VALVE-TRIM AIR, AFT CABIN (13HK)
- SENSOR-DUCT TEMPERATURE, COCKPIT (15HK)
- SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK)
- SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK)
- SENSOR-TEMPERATURE, COCKPIT (21HK)
- SENSOR-TEMPERATURE, FWD CABIN (22HK)
- SENSOR-TEMPERATURE, AFT CABIN (23HK)
- SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK)

### 2. Job Set-up Information

#### A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |
|-----------|------------------|--|--|
|           |                  |  |  |
| AMM       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |  |
| AMM       | 21-63-15-000-001 | Removal of the Duct Temperature Sensors 15HK, 16HK and 17HK                  |  |
| AMM       | 21-63-15-400-001 | Installation of the Duct Temperature Sensors 15HK, 16HK and 17HK             |  |
| AMM       | 21-63-16-000-001 | Removal of the Mixer Temperature Sensor 24HK (25HK)                          |  |
| AMM       | 21-63-16-400-001 | Installation of the Mixer Temperature Sensor 24HK (25HK)                     |  |
| AMM       | 21-63-17-000-001 | Removal of the Temperature Sensors (21HK, 22HK, 23HK)                        |  |
| AMM       | 21-63-17-400-001 | Installation of the Temperature Sensors (21HK, 22HK, 23HK)                   |  |
| AMM       | 21-63-34-000-001 | Removal of the Zone Controller (8HK)   |  |
| AMM       | 21-63-34-400-001 | Installation of the Zone Controller (8HK)                                    |  |
| AMM       | 21-63-51-000-001 | Removal of the Trim Air Valve (11HK,12HK,13HK)                               |  |
| AMM       | 21-63-51-400-001 | Installation of the Trim Air Valve (11HK,12HK,13HK)                          |  |
| ASM       | 21-63/03         |  |  |

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### TROUBLE SHOOTING MANUAL

### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU.

(Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the ZC gives a fault code for shop maintenance in addition to the related CFDS message(s).

For detailed information see the applicable Page Block 301.

### 4. Fault Isolation

R \*\*ON A/C 227-227, 229-237, 276-281, 476-478,

- A. If the ECAM lower DU gives the warning ZONE CONT or the test gives the maintenance message ZONE CONT OR SENSOR SUPPLY SHORT:
  - replace the CONT-ZONE TEMPERATURE (8HK).
     (Ref. AMM TASK 21-63-34-000-001) and,
     (Ref. AMM TASK 21-63-34-400-001).
  - (1) Additional Information.
    - (a) For wiring and pin identification used in this procedure: - (Ref. ASM 21-63/03).
    - (b) for disconnection/connection of electrical connectors refer to the applicable work step in para. 4. A. (2).
  - (2) If the fault continues:
    - disconnect the electrical connector (25HKA) from the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK).
    - make sure that the electrical connector is clean and in the correct condition.
    - do a check for 5 VDC at the electrical connector (25HKA) between pins C and D (5 VDC from zone controller secondary channel).
    - (a) If the voltage is between 4.8 VDC and 5.2 VDC replace the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK) and connect the electrical connector (25HKA).

(Ref. AMM TASK 21-63-16-000-001) and, (Ref. AMM TASK 21-63-16-400-001).

- (b) If the voltage is not between 4.8 VDC and 5.2 VDC:
  - disconnect the electrical connector (11HKA),
  - make sure that the electrical connector is clear and in the correct condition,
  - do a check for 5 VDC again.
  - If the voltage is between 4.8 VDC and 5.2 VDC replace the TRIM VALVE CKPT (11HK) and connect the electrical connector (11HKA).

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#### TROUBLE SHOOTING MANUAL

(Ref. AMM TASK 21-63-51-000-001) and, (Ref. AMM TASK 21-63-51-400-001).

- 2 If the voltage is not between 4.8 VDC and 5.2 VDC:
  - connect the electrical connector (11HKA),
  - repeat para. 4.A.(2) (b) for:
  - connector (12HKA) and the VALVE-TRIM AIR, FWD CABIN (12HK).
     (Ref. AMM TASK 21-63-51-000-001) and,

(Ref. AMM TASK 21-63-51-400-001).

- connector (13HKA) and the VALVE-TRIM AIR, AFT CABIN (13HK). (Ref. AMM TASK 21-63-51-000-001) and,

(Ref. AMM TASK 21-63-51-400-001).

- connector (15HKA) and the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK).
  - (Ref. AMM TASK 21-63-15-000-001) and,
  - (Ref. AMM TASK 21-63-15-400-001).
- connector (16HKA) and the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK).
  - (Ref. AMM TASK 21-63-15-000-001) and,

(Ref. AMM TASK 21-63-15-400-001).

- connector (17HKA) and the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK).
  - (Ref. AMM TASK 21-63-15-000-001) and,

(Ref. AMM TASK 21-63-15-400-001).

- connector (21HKA) and the SENSOR-TEMPERATURE, COCKPIT (21HK).
  - (Ref. AMM TASK 21-63-17-000-001) and,

(Ref. AMM TASK 21-63-17-400-001).

- connector (22HKA) and the SENSOR-TEMPERATURE, FWD CABIN (22HK).
  - (Ref. AMM TASK 21-63-17-000-001) and,

(Ref. AMM TASK 21-63-17-400-001).

- connector (23HKA) and the SENSOR-TEMPERATURE, AFT CABIN (23HK).
  - (Ref. AMM TASK 21-63-17-000-001) and,
  - (Ref. AMM TASK 21-63-17-400-001).
- connector (24HKA) and the SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK).
  - (Ref. AMM TASK 21-63-16-000-001) and,
  - (Ref. AMM TASK 21-63-16-400-001).
- connect the electrical connector (25HKA).

### (3) If the fault continues:

- on the circuit breaker panel 122VU open the CB's 1HK (V17), 2HK (V18), 3HK (V19) and 4HK (V20),
- remove the CONT-ZONE TEMPERATURE (8HK), (Ref. AMM TASK 21-63-34-000-001).
- disconnect the electrical connector (11HKA) from the TRIM VALVE CKPT (11HK).
- at the electrical connector (11HKA) do a check for a short circuit between:
  - \* pins N and P, N and R, P and R and,
  - \* GND and pins N, P and R.

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- (a) If there is no short circuit connect the electrical connector (11HKA).
- (b) If there is a short circuit repair the related wiring between:
  - \* connector (11HKA) pin N and ZC connector (8HKAA) pin 4H,
  - \* connector (11HKA) pin P and ZC connector (8HKAA) pin 4J,
  - \* connector (11HKA) pin R and ZC connector (8HKAA) pin 4K.
  - connect the electrical connector (11HKA).

#### (4) If the fault continues:

- disconnect the electrical connector (12HKA) from the VALVE-TRIM AIR, FWD CABIN (12HK).
- at the electrical connector (12HKA) do a check for a short circuit between:
  - \* pins N and P, N and R, P and R and,
  - \* GND and pins N, P and R.
- (a) If there is no short circuit connect the electrical connector (12HKA).
- (b) If there is a short circuit repair the related wiring between:
  - \* connector (12HKA) pin N and ZC connector (8HKAA) pin 5H,
  - \* connector (12HKA) pin P and ZC connector (8HKAA) pin 5J,
  - \* connector (12HKA) pin R and ZC connector (8HKAA) pin 5K.
  - connect the electrical connector (12HKA).

#### (5) If the fault continues:

- disconnect the electrical connector (13HKA) from the VALVE-TRIM AIR, AFT CABIN (13HK).
- at the electrical connector (13HKA) do a check for a short circuit between:
  - \* pins N and P, N and R, P and R and,
  - \* GND and pins N, P and R.
- (a) If there is no short circuit connect the electrical connector (13HKA).
- (b) If there is a short circuit repair the related wiring between:
  - \* connector (13HKA) pin N and ZC connector (8HKAA) pin 6H,
  - \* connector (13HKA) pin P and ZC connector (8HKAA) pin 6J,
  - \* connector (13HKA) pin R and ZC connector (8HKAA) pin 6K.
  - connect the electrical connector (12HKA).

#### (6) If the fault continues:

- disconnect the electrical connector (15HKA) from the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK).
- at the electrical connector (15HKA) do a check for a short circuit between:
  - \* pins C and D and,
  - \* GND and pins C and D.

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- (a) If there is no short circuit connect the electrical connector (15HKA).
- (b) If there is a short circuit repair the related wiring between:
  - \* connector (15HKA) pin C and ZC connector (8HKAA) pin 9K,
  - \* connector (15HKA) pin D and ZC connector (8HKAA) pin 9J.
  - connect the electrical connector (15HKA).

#### (7) If the fault continues:

- disconnect the electrical connector (16HKA) from the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK).
- at the electrical connector (16HKA) do a check for a short circuit between:
  - \* pins C and D and,
  - \* GND and pins C and D.
- (a) If there is no short circuit connect the electrical connector (16HKA).
- (b) If there is a short circuit repair the related wiring between:
  - \* connector (16HKA) pin C and ZC connector (8HKAA) pin 9H,
  - \* connector (16HKA) pin D and ZC connector (8HKAA) pin 9G.
  - connect the electrical connector (16HKA).

#### (8) If the fault continues:

- disconnect the electrical connector (17HKA) from the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK).
- at the electrical connector (17HKA) do a check for a short circuit between:
  - \* pins C and D and,
  - \* GND and pins C and D.
- (a) If there is no short circuit connect the electrical connector (17HKA).
- (b) If there is a short circuit repair the related wiring between:
  - \* connector (17HKA) pin C and ZC connector (8HKAA) pin 10K,
  - \* connector (17HKA) pin D and ZC connector (8HKAA) pin 10J.
  - connect the electrical connector (17HKA).

#### (9) If the fault continues:

- disconnect the electrical connector (21HKA) from the SENSOR-TEMPERATURE, COCKPIT (21HK).
- at the electrical connector (21HKA) do a check for a short circuit between:
  - \* pins D and E and,
  - \* GND and pins D and E.
- (a) If there is no short circuit connect the electrical connector (21HKA).

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- (b) If there is a short circuit repair the related wiring between:
  - \* connector (21HKA) pin D and ZC connector (8HKAA) pin 7K,
  - \* connector (21HKA) pin E and ZC connector (8HKAA) pin 7J.
  - connect the electrical connector (21HKA).

#### (10) If the fault continues:

- disconnect the electrical connector (22HKA) from the SENSOR-TEMPERATURE, FWD CABIN (22HK).
- at the electrical connector (22HKA) do a check for a short circuit between:
  - \* pins D and E and,
  - \* GND and pins D and E.
- (a) If there is no short circuit connect the electrical connector (22HKA).
- (b) If there is a short circuit repair the related wiring between:
  - \* connector (22HKA) pin D and ZC connector (8HKAA) pin 7H,
  - \* connector (22HKA) pin E and ZC connector (8HKAA) pin 7G.
  - connect the electrical connector (22HKA).

#### (11) If the fault continues:

- disconnect the electrical connector (23HKA) from the SENSOR-TEMPERATURE, AFT CABIN (23HK).
- at the electrical connector (23HKA) do a check for a short circuit between:
  - \* pins D and E and,
  - \* GND and pins D and E.
- (a) If there is no short circuit connect the electrical connector (23HKA).
- (b) If there is a short circuit repair the related wiring between:
  - \* connector (23HKA) pin D and ZC connector (8HKAA) pin 8K,
  - \* connector (23HKA) pin E and ZC connector (8HKAA) pin 8J.
  - connect the electrical connector (23HKA).

#### (12) If the fault continues:

- disconnect the electrical connector (24HKA) from the SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK).
- at the electrical connector do a check for a short circuit between:
  - \* pins C and D and,
  - \* GND and pins C and D.
- (a) If there is no short circuit connect the electrical connector (24HKA).
- (b) If there is a short circuit repair the related wiring between:
  - \* connector (24HKA) pin C and ZC connector (8HKAA) pin 8H,
  - \* connector (24HKA) pin D and ZC connector (8HKAA( pin 8G.
  - connect the electrical connector (24HKA).

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- (13) If the fault continues:
  - disconnect the electrical connector (25HKA) from the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK).
  - at the electrical connector (25HKA) do a check for a short circuit between:
    - \* pins C and D and,
    - \* GND and pins C and D.
  - (a) If there is no short circuit connect the electrical connector (25HKA).
  - (b) If there is a short circuit repair the related wiring between:
    - \* connector (25HKA) pin C and ZC connector (8HKAA) pin 10H,
    - \* connector (25HKA) pin D and ZC connector (8HKAA) pin 10G.
    - connect the electrical connector (25HKA).
    - install the CONT-ZONE TEMPERATURE (8HK). (Ref. AMM TASK 21-63-34-000-001).
    - on the circuit breaker panel 122VU close the CB's 1HK (V17), 2HK (V18), 3HK (V19) and 4HK (V20).

\*\*ON A/C ALL

- R Post SB 21-1104 For A/C 227-227,229-237,276-281,476-478,
  - A. If the ECAM lower DU gives the warning ZONE CONT or the test gives the maintenance message ZONE CONT OR SENSOR SUPPLY SHORT:
    - replace the CONT-ZONE TEMPERATURE (8HK).

(Ref. AMM TASK 21-63-34-000-001) and,

(Ref. AMM TASK 21-63-34-400-001).

- (1) Additional Information.
  - (a) For wiring and pin identification used in this procedure: (Ref. ASM 21-63/03).
  - (b) For disconnection/connection of electrical connectors refer to the applicable work step in para. 4. A. (2).
- (2) If the fault continues:
  - disconnect the electrical connector (25HKA) from the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK),
  - make sure that the electrical connector is clean and in the correct condition,
  - do a check for 5 VDC at the electrical connector (25HKA) between pins C and D (5 VDC from zone controller secondary channel).
  - (a) If the voltage is between 4.8 VDC and 5.2 VDC replace the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK) and connect the electrical connector (25HKA).

(Ref. AMM TASK 21-63-16-000-001) and, (Ref. AMM TASK 21-63-16-400-001).

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- (b) If the voltage is not between 4.8 VDC and 5.2 VDC:
  - disconnect the electrical connector (15HKA) from the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK).
  - make sure that the electrical connector is clean and in the correct condition,
  - do a check for 5 VDC again.
  - 1 If the voltage is between 4.8 VDC and 5.2 VDC:
    - replace the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK). (Ref. AMM TASK 21-63-15-000-001) and, (Ref. AMM TASK 21-63-15-400-001).
    - connect the electrical connector (15HKA).
  - 2 If the voltage is not between 4.8 VDC and 5.2 VDC:
    - repeat para. 4.A.(2) (b) for:
    - connector (16HKA) and the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK).

(Ref. AMM TASK 21-63-15-000-001) and, (Ref. AMM TASK 21-63-15-400-001).

 connector (17HKA) and the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK).

(Ref. AMM TASK 21-63-15-000-001) and, (Ref. AMM TASK 21-63-15-400-001).

- connector (21HKA) and the SENSOR-TEMPERATURE, COCKPIT (21HK). (Ref. AMM TASK 21-63-17-000-001) and,

(Ref. AMM TASK 21-63-17-400-001).

 connector (22HKA) and the SENSOR-TEMPERATURE, FWD CABIN (22HK).

(Ref. AMM TASK 21-63-17-000-001) and,

(Ref. AMM TASK 21-63-17-400-001).

 connector (23HKA) and the SENSOR-TEMPERATURE, AFT CABIN (23HK).

(Ref. AMM TASK 21-63-17-000-001) and, (Ref. AMM TASK 21-63-17-400-001).

 connector (24HKA) and the SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK).

(Ref. AMM TASK 21-63-16-000-001) and,

(Ref. AMM TASK 21-63-16-400-001).

- connect the electrical connector (25HKA).
- (3) If the fault continues:
  - on the circuit breaker panel 122VU open the CB's 1HK (V17), 2HK (V18), 3HK (V19) and 4HK (V20),
  - remove the CONT-ZONE TEMPERATURE (8HK).
    - (Ref. AMM TASK 21-63-34-000-001).
  - disconnect the electrical connector (15HKA) from the SENSOR-DUCT TEMPERATURE, COCKPIT (15HK),
  - at the electrical connector (15HKA) do a check for a short circuit between:
    - \* pins C and D and,
    - \* GND and pins C and D.

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#### TROUBLE SHOOTING MANUAL

- (a) If there is no short circuit connect the electrical connector (15HKA).
- (b) If there is a short circuit repair the related wiring between:
  - \* connector (15HKA) pin C and ZC connector (8HKAA) pin 9K,
  - \* connector (15HKA) pin D and ZC connector (8HKAA) pin 9J.
  - connect the electrical connector (15HKA).

#### (4) If the fault continues:

- disconnect the electrical connector (16HKA) from the SENSOR-DUCT TEMPERATURE, FWD CABIN (16HK).
- at the electrical connector (16HKA) do a check for a short circuit between:
  - \* pins C and D and,
  - \* GND and pins C and D.
- (a) If there is no short circuit connect the electrical connector (16HKA).
- (b) If there is a short circuit repair the related wiring between:
  - \* connector (16HKA) pin C and ZC connector (8HKAA) pin 9H,
  - \* connector (16HKA) pin D and ZC connector (8HKAA) pin 9G.
  - connect the electrical connector (16HKA).

#### (5) If the fault continues:

- disconnect the electrical connector (17HKA) from the SENSOR-DUCT TEMPERATURE, AFT CABIN (17HK).
- at the electrical connector (17HKA) do a check for a short circuit between:
  - pins C and D and,
  - \* GND and pins C and D.
- (a) If there is no short circuit connect the electrical connector (17HKA).
- (b) If there is a short circuit repair the related wiring between:
  - \* connector (17HKA) pin C and ZC connector (8HKAA) pin 10K,
  - \* connector (17HKA) pin D and ZC connector (8HKAA) pin 10J.
  - connect the electrical connector (17HKA).

#### (6) If the fault continues:

- disconnect the electrical connector (21HKA) from the SENSOR-TEMPERATURE, COCKPIT (21HK).
- at the electrical connector (21HKA) do a check for a short circuit between:
  - \* pins D and E and,
  - \* GND and pins D and E.
- (a) If there is no short circuit connect the electrical connector (21HKA).

EFF: ALL

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#### TROUBLE SHOOTING MANUAL

- (b) If there is a short circuit repair the related wiring between:
  - \* connector (21HKA) pin D and ZC connector (8HKAA) pin 7K,
  - \* connector (21HKA) pin E and ZC connector (8HKAA) pin 7J.
  - connect the electrical connector (21HKA).

#### (7) If the fault continues:

- disconnect the electrical connector (22HKA) from the SENSOR-TEMPERATURE, FWD CABIN (22HK).
- at the electrical connector (22HKA) do a check for a short circuit between:
  - \* pins D and E and,
  - \* GND and pins D and E.
- (a) If there is no short circuit connect the electrical connector (22HKA).
- (b) If there is a short circuit repair the related wiring between:
  - \* connector (22HKA) pin D and ZC connector (8HKAA) pin 7H,
  - \* connector (22HKA) pin E and ZC connector (8HKAA) pin 7G.
  - connect the electrical connector (22HKA).

#### (8) If the fault continues:

- disconnect the electrical connector (23HKA) from the SENSOR-TEMPERATURE, AFT CABIN (23HK).
- at the electrical connector (23HKA) do a check for a short circuit between:
  - \* pins D and E and,
  - \* GND and pins D and E.
- (a) If there is no short circuit connect the electrical connector (23HKA).
- (b) If there is a short circuit repair the related wiring between:
  - \* connector (23HKA) pin D and ZC connector (8HKAA) pin 8K,
  - \* connector (23HKA) pin E and ZC connector (8HKAA) pin 8J.
  - connect the electrical connector (23HKA).

### (9) If the fault continues:

- disconnect the electrical connector (24HKA) from the SENSOR-MIXER UNIT TEMPERATURE COCKPIT (24HK).
- at the electrical connector do a check for a short circuit between:
  - \* pins C and D and,
  - \* GND and pins C and D.
- (a) If there is no short circuit connect the electrical connector (24HKA).
- (b) If there is a short circuit repair the related wiring between:
  - \* connector (24HKA) pin C and ZC connector (8HKAA) pin 8H,
  - \* connector (24HKA) pin D and ZC connector (8HKAA( pin 8G.
  - connect the electrical connector (24HKA).

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### TROUBLE SHOOTING MANUAL

- (10) If the fault continues:
  - disconnect the electrical connector (25HKA) from the SENSOR-MIXER UNIT TEMPERATURE CABIN (25HK).
  - at the electrical connector (25HKA) do a check for a short circuit between:
    - \* pins C and D and,
    - \* GND and pins C and D.
  - (a) If there is no short circuit connect the electrical connector (25HKA).
  - (b) If there is a short circuit repair the related wiring between:
    - \* connector (25HKA) pin C and ZC connector (8HKAA) pin 10H,
    - \* connector (25HKA) pin D and ZC connector (8HKAA) pin 10G.
    - connect the electrical connector (25HKA).
    - install the CONT-ZONE TEMPERATURE (8HK). (Ref. AMM TASK 21-63-34-000-001).
    - on the circuit breaker panel 122VU close the CB's 1HK (V17), 2HK (V18), 3HK (V19) and 4HK (V20).

\*\*ON A/C ALL

B. Do the test as given in the Para. 3.A.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

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### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-846

Actual Zone Temperatures are above Selected Zone Temperatures (Cockpit)

- 1. Possible Causes
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |
|-----------|------------------|--|
| АММ       | 12-33-21-618-001 | Pre-conditioning through the HP Ground Connection    |
|           | 21-52-00-200-011 | General Visual Inspection of the Bellows between the |
|           |                  | Pack Outlet and the Mixer Unit                       |
| AMM       | 21-52-43-210-001 | Detailed Visual Inspection of Pack-Air Check-Valve   |
|           |                  | Flappers for Condition and Operation                 |

#### 3. Fault Confirmation

- A. Functional Test of the Cockpit Temperature Control
  - (1) Do the pre-conditioning through the HP ground connection (Ref. AMM TASK 12-33-21-618-001).
  - (2) With your hand or a piece of paper do a check for air flow at the cockpit air-outlets.

#### 4. Fault Isolation

- A. If there is not a sufficient airflow from the cockpit air-outlets do the steps which follow:
  - (1) Do a check of the belly-fairing blowout-panel.If the belly-fairing blowout panel is open, then close it.
  - (2) Do a detailed visual inspection of the bellows between the air-pack 1 outlet and the mixer unit (Ref. AMM TASK 21-52-00-200-011).
  - (3) Replace the bellows if nessesary.

NOTE: If the bellows are damaged, do a detailed visual inspection of the flap of the pack 1 downstream check-valve (15HM) for condition and operation (Ref. AMM TASK 21-52-43-210-001).

EFF: ALL 21-63-00

### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-847

Actual Zone Temperatures are above Selected Zone Temperatures (Cabin)

- 1. Possible Causes
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
| AMM       | 12-33-21-618-001 | Pre-conditioning through the HP Ground Connection                                       |
| AMM       | 21-52-00-200-011 | General Visual Inspection of the Bellows between the Pack Outlet and the Mixer Unit     |
| AMM       | 21-52-43-210-001 | Detailed Visual Inspection of Pack-Air Check-Valve Flappers for Condition and Operation |

#### 3. Fault Confirmation

- A. Functional Test of the Cabin Temperature Control
  - (1) Do the pre-conditioning through the HP ground connection (Ref. AMM TASK 12-33-21-618-001).
  - (2) With your hand or a piece of paper do a check for air flow at the cabin air-outlets.

#### 4. Fault Isolation

- A. If there is not a sufficient airflow from the cabin air-outlets do the steps which follow:
  - (1) Do a check of the belly-fairing blowout-panel.If the belly-fairing blowout panel is open, then close it.
  - (2) Do a detailed visual inspection of the bellows between the air-pack 2 outlet and the mixer unit (Ref. AMM TASK 21-52-00-200-011).
  - (3) Replace the bellows if nessesary.

NOTE : If the bellows are damaged, do a detailed visual inspection of the flap of the pack 2 downstream check-valve (16HM) for condition and operation (Ref. AMM TASK 21-52-43-210-001).

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EFF:

ALL

### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-848

Failure Not Clearly Identified - Zone Controller Fault

NOTE: Further information for Zone Controllers Part Number 775D0000-01 with these serial numbers: 1336 to 1340, 1344, 1345, 1347, 1354 to 1356, 1359, 1360, 1362, 1363, 1366 to 1368, 1370 to 1372, 1374, 1376, 1377, 1380, 1381, 1384, 1385, 1387, 1389, 1392 to 1394, 1396, 1397, 1399, 1403, 1405 to 1409, 1411, 1412, 1414 to 1420, 1422, 1431, 1437 and 1462 can be found in Libherr SIL 120.

- 1. Possible Causes
  - CONT-ZONE TEMPERATURE (8HK)
- 2. Job Set-up Information
  - A. Referenced Information

DEFENSE. DESCRIPTION

REFERENCE

DESIGNATION

AMM 21-63-34-000-001 Removal of the Zone Controller (8HK)
AMM 21-63-34-400-001 Installation of the Zone Controller (8HK)

- 3. Fault Confirmation
  - A. This fault cannot be confirmed on the ground.
    - (1) Do a read out of the Previous Leg Reports (PLR).
- 4. Fault Isolation

R

- A. If the PLR's give the maintenance message FAILURE NOT CLEARLY IDENTIFIED:
  - (1) If the message is not repetitive no further trouble shooting is necessary.

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**SROS** 

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### TROUBLE SHOOTING MANUAL

R

TASK 21-63-00-810-849

Trim-Air Pressure Regulating Valve or Pressure Switch Fault

#### 1. Possible Causes

- VALVE-PRESSURE REGULATING (14HK)
- PRESSURE SWITCH-HOT AIR (26HK)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION   |  |
|-----------|------------------|---|--|
| AMM       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature |  |
|           |                  | Control with CFDS/MCDU                                |  |
| AMM       | 21-63-00-920-001 | Scheduled Replace/Restore the Trim-Air                |  |
|           |                  | Pressure-Regulating Valve Filter                      |  |
| AMM       | 21-63-19-000-001 | Removal of the Hot Air-Pressure Switch 26HK           |  |
| AMM       | 21-63-19-400-001 | Installation of the Hot Air-Pressure Switch 26HK      |  |
| AMM       | 21-63-52-000-001 | Removal of the Pressure Regulating Valve 14HK         |  |
| AMM       | 21-63-52-400-001 | Installation of the Pressure Regulating Valve 14HK    |  |
| ASM       | 21-63/01         |   |  |
| ASM       | 21-63/03         |   |  |

#### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

NOTE: If a fault is detected, the IC gives a fault code for shop maintenance in addition to the related CFDS message(s). For detailed information see the applicable Page Block 301.

### 4. Fault Isolation

- A. If the test gives the maintenance message TRIM AIR PRESS VALVE OR PRESS
  - replace the trim air pressure-regulating valve filter (Ref. AMM TASK 21-63-00-920-001).
  - (1) If the fault continues:
    - replace the VALVE-PRESSURE REGULATING (14HK) (Ref. AMM TASK 21-63-52-000-001) and (Ref. AMM TASK 21-63-52-400-001).

EFF: ALL

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### TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
  - replace the PRESSURE SWITCH-HOT AIR (26HK) (Ref. AMM TASK 21-63-19-000-001) and (Ref. AMM TASK 21-63-19-400-001).
- (3) If the fault continues:
  - do a check and repair the wiring (Ref. ASM 21-63/01) and (Ref. ASM 21-63/03) from:
  - the VALVE (14HK) to the ZC (8HK),
  - the VALVE (14HK) to ground,
  - the VALVE (14HK) to the CB (3HK) via the P/BSW (7HK),
  - the SWITCH (26HK) to the ZC (8HK) and,
  - the SWITCH (26HK) to ground.
- B. If the test gives the maintenance message TEST OK, but the POST FLIGHT REPORT and the PREVIOUS LEG REPORT give the maintenance message TRIM AIR PRESS VALVE OR PRESS SWITCH:
  - replace the PRESSURE SWITCH-HOT AIR (26HK) (Ref. AMM TASK 21-63-19-000-001) and (Ref. AMM TASK 21-63-19-400-001).
  - (1) If the fault continues:
    - replace the VALVE-PRESSURE REGULATING (14HK) (Ref. AMM TASK 21-63-52-000-001) and (Ref. AMM TASK 21-63-52-400-001).
- C. Do the test as given in the Para. 3.A.

EFF: ALL 21-63-00

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### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-850

Pack 1 Trim Air Check Valve Fault

- 1. Possible Causes
  - CHECK VALVE-TRIM AIR (18HM)
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE  | DESIGNATION  |
|--|--|
| AMM 21-63-00-710-005<br>AMM 21-63-42-000-001<br>AMM 21-63-42-400-001 | Operational Test of the Trim Air Check-Valves Removal of the Trim-Air Check Valves 18HM and 19HM Installation of the Trim-Air Check Valves 18HM and 19HM |

### 3. Fault Confirmation

A. Do an operational test of the trim air check-valve (Ref. AMM TASK 21-63-00-710-005).

### 4. Fault Isolation

- A. If during the test the pack 1 discharge temperature increases: - replace the CHECK VALVE-TRIM AIR (18HM) (Ref. AMM TASK 21-63-42-000-001) and (Ref. AMM TASK 21-63-42-400-001).
- B. Do the test given in para. 3.

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EFF: ALL

### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-851

Pack 2 Trim Air Check Valve Fault

- 1. Possible Causes
  - CHECK VALVE-TRIM AIR (19HM)
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE  | DESIGNATION   |
|--|---|
| AMM 21-63-00-710-005<br>AMM 21-63-42-000-001<br>AMM 21-63-42-400-001 | Operational Test of the Trim Air Check-Valves<br>Removal of the Trim-Air Check Valves 18HM and 19HM<br>Installation of the Trim-Air Check Valves 18HM and<br>19HM |

### 3. Fault Confirmation

A. Do an operational test of the trim air check-valve (Ref. AMM TASK 21-63-00-710-005).

### 4. Fault Isolation

- A. If during the test the pack 2 discharge temperature increases: - replace the CHECK VALVE-TRIM AIR (19HM) (Ref. AMM TASK 21-63-42-000-001) and (Ref. AMM TASK 21-63-42-400-001).
- B. Do the test given in para. 3.

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### TROUBLE SHOOTING MANUAL

R \*\*ON A/C 209-225, 451-475, 551-599,

TASK 21-63-00-810-852

Trim Air System Fault with CKPT Trim Air Valve position AMBER XX

- 1. Possible Causes
  - TRIM VALVE CKPT (11HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |  | DESIGNATION  |
|-----------|--|--|
| AMM       | 21-63-00-710-004                                 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU                       |
| AMM       | 21-63-51-000-001<br>21-63-51-400-001<br>21-63/02 | Removal of the Trim Air Valve (11HK,12HK,13HK) Installation of the Trim Air Valve (11HK,12HK,13HK) |

- 3. Fault Confirmation
  - A. Confirmation of the Fault
    - (1) Do the operational test of the cockpit and cabin temperature-control system (Ref. AMM TASK 21-63-00-710-004).
- 4. Fault Isolation

R

- A. If on the ECAM COND page the CKPT trim air valve position indication shows amber XX:
  - replace the TRIM VALVE CKPT (11HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-63/02) from:
    - the TRIM AIR VALVE CKPT (11HK) to the Zone Controller (8HK) and,
    - the TRIM AIR VALVE CKPT (11HK) to ground.

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209-225, 451-475, 551-599,

EFF:

### TROUBLE SHOOTING MANUAL

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TASK 21-63-00-810-853

Trim Air System Fault with FWD Trim Air Valve position AMBER XX

- 1. Possible Causes
  - TRIM VALVE FWD CAB (12HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |  | DESIGNATION  |
|-----------|--|--|
| AMM       | 21-63-00-710-004                                 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU                       |
| AMM       | 21-63-51-000-001<br>21-63-51-400-001<br>21-63/02 | Removal of the Trim Air Valve (11HK,12HK,13HK) Installation of the Trim Air Valve (11HK,12HK,13HK) |

- 3. Fault Confirmation
  - A. Confirmation of the Fault
    - (1) Do the operational test of the cockpit and cabin temperature-control system (Ref. AMM TASK 21-63-00-710-004).
- 4. Fault Isolation

\*\*ON A/C 456-475,

- A. If the test does not confirm the fault:
  - (1) Do the reset procedure for the ACSC2 as follows,
    - open the circuit breakers 53HH, 54HH, 55HH and 56HH.
    - wait for a minimum of 5 seconds.
    - close the circuit breakers 53HH, 54HH, 55HH and 56HH.
  - (2) No further trouble shooting is necessary.

EFF: 209-225, 451-475, 551-599,

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### TROUBLE SHOOTING MANUAL

\*\*ON A/C 209-225, 451-475, 551-599,

- B. If on the ECAM COND page the FWD trim air valve position indication shows amber XX:
  - replace the TRIM VALVE FWD CAB (12HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-63/02) from:
    - the TRIM AIR VALVE FWD CABIN (12HK) to the Zone Controller (8HK) and.
    - the TRIM AIR VALVE FWD CABIN (12HK) to ground.

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R

EFF: 209-225, 451-475, 551-599,

### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-854

Trim Air System Fault with AFT Trim Air Valve position AMBER XX

#### 1. Possible Causes

- TRIM VALVE AFT CAB (13HK)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
|           |                  |   |
| AMM       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature |
|           |                  | Control with CFDS/MCDU                                |
| AMM       | 21-63-51-000-001 | Removal of the Trim Air Valve (11HK,12HK,13HK)        |
| AMM       | 21-63-51-400-001 | Installation of the Trim Air Valve (11HK,12HK,13HK)   |
| ASM       | 21-63/03         |   |

### 3. Fault Confirmation

- A. Confirmation of the Fault
  - (1) Do the operational test of the cockpit and cabin temperature-control system (Ref. AMM TASK 21-63-00-710-004).

#### 4. Fault Isolation

- A. If on the ECAM COND page the AFT trim air valve position indication shows amber XX:
  - replace the TRIM VALVE AFT CAB (13HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-63/03) from:
    - the TRIM AIR VALVE AFT CABIN (13HK) to the Zone Controller (8HK) and,
    - the TRIM AIR VALVE AFT CABIN (13HK) to ground.

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### TROUBLE SHOOTING MANUAL

\*\*ON A/C ALL

TASK 21-63-00-810-855

Cockpit Temperature uncontrollable or too low with TAV AMBER XX

- 1. Possible Causes
  - TRIM VALVE CKPT (11HK)
  - wiring
- 2. Job Set-up Information
  - A. Referenced Information

| REFERENCE |                  | DESIGNATION  |  |
|-----------|------------------|--|--|
| AMM       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |  |
| AMM       | 21-63-51-000-001 | Removal of the Trim Air Valve (11HK,12HK,13HK)                               |  |
| AMM       | 21-63-51-400-001 | Installation of the Trim Air Valve (11HK,12HK,13HK)                          |  |
| ASM       | 21-63/02         |  |  |
| ASM       | 21-63/03         |  |  |

- 3. Fault Confirmation
  - A. Confirmation of the Fault
    - (1) Do the operational test of the cockpit and cabin temperature-control system (Ref. AMM TASK 21-63-00-710-004).
- 4. Fault Isolation

**SROS** 

- R \*\*ON A/C 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, R 701-749,
  - A. If on the ECAM COND page the CKPT trim air valve position indication shows amber XX and/or the Cockpit temperature is uncontrollable or too low (in flight):
    - replace the TRIM VALVE CKPT (11HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).
    - (1) If the fault continues:
      - do a check and repair the wiring (Ref. ASM 21-63/02) from:
      - the TRIM AIR VALVE CKPT (11HK) to the Zone Controller (8HK) and,
      - the TRIM AIR VALVE CKPT (11HK) to ground.

EFF: ALL

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### TROUBLE SHOOTING MANUAL

\*\*ON A/C 456-475,

- A. If on the ECAM COND page the CKPT trim air valve position indication shows amber XX and/or the Cockpit temperature is uncontrollable or too low (in flight):
  - replace the TRIM VALVE CKPT (11HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-63/03) from:
    - the TRIM AIR VALVE CKPT (11HK) to the ACSC1 (47HH) and,
    - the TRIM AIR VALVE CKPT (11HK) to ground.

\*\*ON A/C ALL

B. Do the test given in para. 3.

EFF: ALL

21-63-00

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### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-856

FWD Cabin Temperature uncontrollable or too low with TAV AMBER XX

#### 1. Possible Causes

- TRIM VALVE FWD CAB (12HK)
- wiring

#### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |                  | DESIGNATION   |
|-----------|------------------|---|
|           |                  |   |
| AMM       | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature |
|           |                  | Control with CFDS/MCDU                                |
| AMM       | 21-63-51-000-001 | Removal of the Trim Air Valve (11HK,12HK,13HK)        |
| AMM       | 21-63-51-400-001 | Installation of the Trim Air Valve (11HK,12HK,13HK)   |
| ASM       | 21-63/02         | , ,   |

### 3. Fault Confirmation

- A. Confirmation of the Fault
  - (1) Do the operational test of the cockpit and cabin temperature-control system (Ref. AMM TASK 21-63-00-710-004).

#### 4. Fault Isolation

- A. If on the ECAM COND page the FWD trim air valve position indication shows amber XX and/or the FWD cabin temperature is uncontrollable or too low (in flight):
  - replace the TRIM VALVE FWD CAB (12HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-63/02) from:
    - the TRIM AIR VALVE FWD CABIN (12HK) to the Zone Controller (8HK) and,
    - the TRIM AIR VALVE FWD CABIN (12HK) to ground.
- B. Do the test given in para. 3.

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### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-857

AFT Cabin Temperature uncontrollable or too low with TAV AMBER XX

#### 1. Possible Causes

- TRIM VALVE AFT CAB (13HK)
- wiring

### 2. Job Set-up Information

A. Referenced Information

| REFERENCE |  | DESIGNATION  |
|-----------|--|--|
| AMM       | 21-63-00-710-004                                 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU                       |
| AMM       | 21-63-51-000-001<br>21-63-51-400-001<br>21-63/03 | Removal of the Trim Air Valve (11HK,12HK,13HK) Installation of the Trim Air Valve (11HK,12HK,13HK) |

### 3. Fault Confirmation

- A. Confirmation of the Fault
  - (1) Do the operational test of the cockpit and cabin temperature-control system (Ref. AMM TASK 21-63-00-710-004).

#### 4. Fault Isolation

- A. If on the ECAM COND page the AFT trim air valve position indication shows amber XX and/or the Aft cabin temperature is uncontrollable or too low (in flight):
  - replace the TRIM VALVE AFT CAB (13HK) (Ref. AMM TASK 21-63-51-000-001) and (Ref. AMM TASK 21-63-51-400-001).
  - (1) If the fault continues:
    - do a check and repair the wiring (Ref. ASM 21-63/03) from:
    - the TRIM AIR VALVE AFT CABIN (13HK) to the Zone Controller (8HK) and,
    - the TRIM AIR VALVE AFT CABIN (13HK) to ground.
- B. Do the test given in para. 3.

EFF: ALL 21-63-00

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**SROS** 

### TROUBLE SHOOTING MANUAL

TASK 21-63-00-810-858

ECS receives no Data from CIDS

- 1. Possible Causes
  - CONT-ZONE TEMPERATURE (8HK)
- 2. Job Set-up Information
  - A. Referenced Information

|        | REFE | RENCE            | DESIGNATION  |
|--------|------|------------------|--|
|        | AMM  | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |
|        | AMM  | 21-63-34-000-001 | Removal of the Zone Controller (8HK)   |
|        | AMM  | 21-63-34-400-001 | Installation of the Zone Controller (8HK)                                    |
| R<br>R | AMM  | 23-73-00-740-003 | BITE-test of the Cabin Intercommunication Data System (CIDS) through the PTP |
|        | ASM  | 21-63/01         | _  |

### 3. Fault Confirmation

A. Do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).

### 4. Fault Isolation

- A. If the test gives the maintenance message NO DATA FROM CIDS:
   Do the bite test of the CIDS (Ref. AMM TASK 23-73-00-740-003).
  - (1) If the test gives a different maintenance message, you can find the related trouble shooting procedure in the applicable Page Block 101.
  - (2) If the fault continues:
    - (a) Do a check and repair if necessary the connector pin at the connector 8HK/BA for the CIDS option.
      - If CIDS option is installed pin BA3 to ground.
      - If CIDS option is not installed pin BA3 is not used and should show OPEN CONTACT.

EFF: ALL 21-63-00

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### TROUBLE SHOOTING MANUAL

- (3) If the fault continues:
  - (a) Do a check and repair the ARINC 429 wiring as necessary of the signal INPUT CIDS from: (Ref. ASM 21-63/01)
    - the CIDS Director (101RH) connector AA/6A to the Zone Controller (8HK) connector AA/3A.
    - the CIDS Director (101RH) connector AA/6B to the Zone Controller (8HK) connector AA/B3.
- (4) If the fault continues:
  - replace the CONT-ZONE TEMPERATURE (8HK) (Ref. AMM TASK 21-63-34-000-001) and (Ref. AMM TASK 21-63-34-400-001).
- B. Do the test given in para. 3.

### 5. Close-up

A. Put the aircraft back to its initial configuration.

EFF: ALL 21-63-00

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## *DA319/A320/A321*

### TROUBLE SHOOTING MANUAL

- R TASK 21-63-00-810-859
- R CIDS receives no Data from the ZC
- 1. Possible Causes
- DIR-CIDS, 1 (101RH)
- R - wiring
- 2. Job Set-up Information
- R A. Referenced Information

| D      |      |                  |  |
|--------|------|------------------|--|
| R<br>R | REFE | RENCE            | DESIGNATION  |
| R<br>R | AMM  | 21-63-00-710-004 | Operational Test of the Cockpit and Cabin Temperature Control with CFDS/MCDU |
| R<br>R | AMM  | 23-73-00-740-003 | BITE-test of the Cabin Intercommunication Data System (CIDS) through the PTP |
| R      | AMM  | 23-73-34-000-001 | Removal of the CIDS Director (101RH,102RH)                                   |
| R      | AMM  | 23-73-34-400-001 | Installation of the CIDS Director (101RH,102RH)                              |
| R      | ASM  | 21-63/01         |  |

- R 3. Fault Confirmation
- A. Do the bite test of the CIDS (Ref. AMM TASK 23-73-00-740-003). R
- R 4. Fault Isolation
- R A. If the test gives a different maintenance message, do the trouble shooting procedure related to the maintenance message.
- R B. If the test gives the maintenance message ZC(8HK)/SDAC1(1WV1)/DIR1(101RH): R
  - do the operational test of the cockpit and cabin temperature-control system with CFDS/MCDU (Ref. AMM TASK 21-63-00-710-004).
- R (1) If the test gives a different maintenance message, you can find the related trouble shooting procedure in the applicable Page Block 101. R
  - (2) If the fault continues:
- (a) Do a check and repair if necessary the connector pin at the R connector 8HK/BA for the CIDS option. R R
  - Pin BA3 to ground.

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**SROS** 

EFF:

ALL

R

R

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### TROUBLE SHOOTING MANUAL

| R | (3) If the fault continues:  |
|---|--|
| R | (a) Do a check and repair the ARINC 429 wiring as necessary of the   |
| R | signal INPUT Zone Controller from: (Ref. ASM 21-63/01)               |
| R | - the CIDS Director (101RH) connector AA/6A to the Zone              |
| R | Controller (8HK) connector AA/3A.                                    |
| R | - the CIDS Director (101RH) connector AA/6B to the Zone              |
| R | Controller (8HK) connector AA/B3.                                    |
| R | (4) If the fault continues:  |
| R | Replace the DIR-CIDS, 1 (101RH) (Ref. AMM TASK 23-73-34-000-001) and |
| R | (Ref. AMM TASK 23-73-34-400-001).                                    |
| R | C. Do the test given in para. 3.                                     |

EFF: ALL
SROS

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### TROUBLE SHOOTING MANUAL

### COCKPIT AND CABIN TEMPERATURE CONTROL - TASK SUPPORTING DATA

### 1. Zone Controller

A. CFDS Fault Information

Additional information about a failed component is available in the MCDU CAB TEMP CONT menu.

The related LAST LEG REPORT page shows:

- the date and time when the fault occured,
- the ATA number of the component,
- the FIN of the component.
- B. Initiated ZC Test Data

If a fault is detected during the ZC initiated test, a fault code for shop maintenance is given in addition to the related CFDS message. The subsequent table shows the possible fault codes with their attached fault origns:

R \*\*ON A/C 209-225, 247-275, 429-475, 551-599, 701-749,

| FAULT<br>  CODE | FAULT ORIGIN                               | CFDS MESSAGE             |
|-----------------|--|--------------------------|
| 10              | TAV CKPT MOTOR, MECHANIC                   | TRIM VALVE CKPT          |
| 11              | TAV FWD CAB MOTOR, MECHANIC                | TRIM VALVE FWD CAB       |
| 12              | TAV AFT CAB MOTOR, MECHANIC                | TRIM VALVE AFT CAB       |
| 13<br>          | TAPRV FAILED OPEN/CLOSED, SOLENOID REDUCED | TRIM AIR PRESS VALVE     |
| 14              | CKPT TEMPERATURE SENSOR                    | TEMP SENSOR CKPT         |
| 15              | FWD CAB TEMPERATURE SENSOR                 | TEMP SENSOR FWD CAB      |
| 16              | AFT CAB TEMPERATURE SENSOR                 | TEMP SENSOR AFT CAB      |
| 17              | CKPT DUCT TEMPERATURE SENSOR               | TEMP SENSOR CKPT DUCT    |
| 18              | FWD CAB DUCT TEMPERATURE SENSOR            | TEMP SENSOR FWD CAB DUCT |
| 19              | AFT CAB DUCT TEMPERATURE SENSOR            | TEMP SENSOR AFT CAB DUCT |
| 1D              | L/H MIXER MANIFOLD TEMP SENSOR             | TEMP SENSOR L/H MIXER    |
| 1E              | R/H MIXER MANIFOLD TEMP SENSOR             | TEMP SENSOR R/H MIXER    |
| 1F              | CKPT TEMPERATURE SELECTOR                  | CKPT TEMP SELECTOR       |
|                 | 1  | = = = = = = = = =        |

| FF: | ALL |  |
|-----|-----|--|
|     |     |  |

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### TROUBLE SHOOTING MANUAL

| FAULT                 | <br>  FAULT ORIGIN<br>  | CFDS MESSAGE                              |
|-----------------------|---|---|
| 20                    | FWD CAB TEMPERATURE SELECTOR  | FWD CAB TEMP SELECTOR                     |
| 21                    | AFT CAB TEMPERATURE SELECTOR  | AFT CAB TEMP SELECTOR                     |
| !                     | G & T FAN FAULT/OFF   | GALY & TOIL FAN OR SPLY                   |
| 23                    | <br>  HIGH HOT AIR PRESSURE<br>   | TRIM AIR PRESS VALVE OR<br>  PRESS SWITCH |
| 24                    | FLOW SELECTOR   | FLOW SEL                                  |
| 2E                    | ZC 429 RCV EXT  | NO DATA FROM CFDS                         |
| 2F                    | ZC 429 RCV EXT  | NO DATA FROM ADIRS                        |
| 30<br> <br> <br> <br> | ZC RAM, EPROM, CPU, A/D CONVERTER,<br>  DISCRETE INPUTS, DISCRETE OUTPUTS,<br>  429 XTR INT, 429 XTR EXT, PWR SPLY,<br>  TAV DRIVE OUTPUTS, 429 RCV INT,<br>  WATCHDOG BACKUP SWITCHING | ZONE CONT<br> <br>                        |
| 31                    | WRG SHORT CIRCUIT   | ZONE CONT OR SENSOR SUPPLY SHORT          |
| 34                    | TAPRV FAILED OPEN   | ZONE CONT                                 |
| 38                    | TAPRV DRIVE   | ZONE CONT                                 |
| 39                    | RECIRCULATION FAN 1   | RECIRC FAN 1 OR SPLY                      |
| 3A                    | RECIRCULATION FAN 2   | RECIRC FAN 2 OR SPLY                      |
| 3B                    | FWD CARGO VENTILATION   | FWD CARGO FAN OR SPLY                     |
| :                     | AFT CARGO VENTILATION   | AFT CARGO FAN OR SPLY                     |
| <br>  3D              | LH ANTI ICE SYSTEM  | I   |
| 3E                    | <br>  RH ANTI ICE SYSTEM<br>  |   |
| 3F                    | I .   | NO BLEED AIR ENG 1                        |
| 40                    | RH ANTI ICE SYSTEM  | NO BLEED AIR ENG 2                        |
|                       | I   | MIXER FLAP DRIVE OR SPLY                  |
| 43                    | P 1 COMPRESSOR TEMP SENSOR / P 1 COMPRESSOR OVHT SENSOR DISAGREE  | PC1 COMP TEMP/OVHT SENSOR                 |

EFF: 209-225, 247-275, 429-475, 551-599, 701-749, SROS

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### TROUBLE SHOOTING MANUAL

| <br>  FAULT<br>  CODE<br> |  |   |
|---------------------------|--|---|
| <br>  44<br>              | P 2 COMPRESSOR TEMP SENSOR / P 2   COMPRESSOR OVHT SENSOR DISAGREE | <br>  PC2 COMP TEMP/OVHT SENSOR<br>  DISAGREE |
| 49                        | PC 1 MAIN DC SUPPLY  | NO 28V ON PACK 1 MAIN                         |
| 4A                        | PC 2 MAIN DC SUPPLY  | NO 28V ON PACK 2 MAIN                         |
| 4B                        | PC 1 SECD DC SUPPLY  | NO 28V ON PACK 1 SECD                         |
| 4C                        | PC 2 SECD DC SUPPLY  | NO 28V ON PACK 2 SECD                         |
| 4E                        | ZC MAIN DC SUPPLY  | NO 28V ON ZONE MAIN                           |
| <br>  4F                  | ZC SECD DC SUPPLY  | NO 28V ON ZONE SECD                           |
| 52                        | PACK 1 PRESSURE INLET SENSOR                                       | P1 PRESS INL SENSOR                           |
| 53                        | PACK 2 PRESSURE INLET SENSOR                                       | P2 PRESS INL SENSOR                           |
| 54                        | PACK 1 DISCHARGE OVERHEAT  | P1 AIR CYCLE MACH CHECK                       |
| 55                        | PACK 2 DISCHARGE OVERHEAT  | P2 AIR CYCLE MACH CHECK                       |
| 56                        | PACK 1 COMPRESSOR TEMP SENSOR                                      | P1 COMP TEMP SENSOR                           |
| 57                        | PACK 2 COMPRESSOR TEMP SENSOR                                      | P2 COMP TEMP SENSOR                           |
| 58                        | PACK 1 COMPRESSOR OVERHEAT SENSOR                                  | P1 COMP OVHT SENSOR                           |
| 59                        | PACK 2 COMPRESSOR OVERHEAT SENSOR                                  | P2 COMP OVHT SENSOR                           |
| 5A                        | PACK 1 OUTLET TEMPERATURE SENSOR                                   | P1 OUTLET TEMP SENSOR                         |
| 5B                        | PACK 2 OUTLET TEMPERATURE SENSOR                                   | P2 OUTLET TEMP SENSOR                         |
| 5C                        | PACK 1 WATER EXTRACTOR TEMP SENSOR                                 | P1 WATER EX TEMP SENSOR                       |
| 5D                        | PACK 2 WATER EXTRACTOR TEMP SENSOR                                 | P2 WATER EX TEMP SENSOR                       |
|                           | PACK 1 RAI MOTOR, POT, MECHANIC, LIMIT SWITCH                      | P1 RAM AIR IN ACTUATOR                        |
| <br>  5F<br>              | PACK 2 RAI MOTOR, POT, MECHANIC, LIMIT SWITCH                      | P2 RAM AIR IN ACTUATOR                        |
|                           | PACK 1 BPV MOTOR, POT, MECHANIC,                                   | P1 BYPASS VALVE<br>                           |

EFF: 209-225, 247-275, 429-475, 551-599, 701-749,

21-63-00

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### TROUBLE SHOOTING MANUAL

| FAULT CODE        |   | CFDS MESSAGE<br>                              |
|-------------------|---|---|
| <br>  63<br>      | PACK 2 BPV MOTOR, POT, MECHANIC,   LIMIT SWITCH                                 | <br>  P2 BYPASS VALVE<br>                     |
| 64                | PACK 1 FCV MOTOR, POT, MECHANIC   | P1 FLOW CONT VALVE                            |
| 65                | PACK 2 FCV MOTOR, POT, MECHANIC   | P2 FLOW CONT VALVE                            |
| 66                | PACK 1 AIV PERMANENT OPEN/CLOSED  | P1 CONT OR ANTI ICE VALVE                     |
| 67                | PACK 2 AIV PERMANENT OPEN/CLOSED  | P2 CONT OR ANTI ICE VALVE                     |
| 68                | PACK 1 PRESSURE (FLOW) SENSOR   | P1 FLOW SENSOR                                |
| 69                | PACK 2 PRESSURE (FLOW) SENSOR   | P2 FLOW SENSOR                                |
| <br>  6A<br> <br> | PC 1 RAM, EPROM, CPU, A/D CONVERTER, DISCRETE INPUTS, 429 RCV, BPV DRIVE OUTPUT | <br>  P1 CONT<br>                             |
| 6B<br> <br>       | PC 2 RAM, EPROM, CPU, A/D CONVERTER, DISCRETE INPUTS, 429 RCV, BPV DRIVE OUTPUT | P2 CONT<br> <br>                              |
| 6C                | ZC AC SUPPLY  | AC SUPPLY ZONE CONT                           |
| 6D<br>            | PC 1 NO TEST  | NO TEST RESULT RECEPTION<br>  FROM P1 CONT    |
| 6E<br>            | PC 2 NO TEST  | NO TEST RESULT RECEPTION<br>  FROM P2 CONT    |
| 6F                | PRESSURE SWITCH OUTPUT  | PRESS SWITCH                                  |
| 7B                |   | CHECK BUS ZONE CONT TO<br>  P1 CONT + P2 CONT |
| 7C                | ZC DC SUPPLY  | DC SUPPLY ZONE CONT                           |
| 7 D               | PC 1 DC SUPPLY  | DC SUPPLY P1 CONT                             |
|                   | PC 2 DC SUPPLY  | DC SUPPLY P2 CONT                             |
| :                 | RECIRCULATION FAN 1 AND 2   | RECIRC FAN 1 AND 2 OR SPLY                    |
| <br>  77<br>      | <br>  L/H AND R/H MIXER UNIT TEMP SENSORS<br>                                   | TEMP SENSOR L/H AND R/H MIXER<br>             |

EFF: 209-225, 247-275, 429-475, 551-599, 701-749, SROS

21-63-00

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### TROUBLE SHOOTING MANUAL

R \*\*ON A/C 227-227, 229-237,

| -           | <br>   | CFDS MESSAGE                           |
|-------------|--|--|
| -           | TAV CKRT MOTOR DOT MECHANIC                  | TRIM VALVE CKRT                        |
| 10  <br>  - | TAV CKPT MOTOR, POT, MECHANIC                | TRIM VALVE CKPT                        |
| 11          | TAV FWD CAB MOTOR, POT, MECHANIC             | TRIM VALVE FWD CAB                     |
| 12          | TAV AFT CAB MOTOR, POT, MECHANIC             | TRIM VALVE AFT CAB                     |
| : :         | TAPRV FAILED OPEN/CLOSED, SOLENOID   REDUCED | TRIM AIR PRESS VALVE                   |
| 14          | CKPT TEMPERATURE SENSOR                      | TEMP SENSOR CKPT                       |
| 15          | FWD CAB TEMPERATURE SENSOR                   | TEMP SENSOR FWD CAB                    |
| 16          | AFT CAB TEMPERATURE SENSOR                   | TEMP SENSOR AFT CAB                    |
| 17          | CKPT DUCT TEMPERATURE SENSOR                 | TEMP SENSOR CKPT DUCT                  |
| 18          | FWD CAB DUCT TEMPERATURE SENSOR              | TEMP SENSOR FWD CAB DUCT               |
| 19          | AFT CAB DUCT TEMPERATURE SENSOR              | TEMP SENSOR AFT CAB DUCT               |
| 1A          | CKPT DUCT OVERHEAT SENSOR                    | CKPT DUCT OVHT SENSOR                  |
| 1B          | FWD CAB DUCT OVERHEAT SENSOR                 | FWD CAB DUCT OVHT SENSOR               |
| 1C          | AFT CAB DUCT OVERHEAT SENSOR                 | AFT CAB DUCT OVHT SENSOR               |
| 1D          | L/H MIXER MANIFOLD TEMP SENSOR               | TEMP SENSOR L/H MIXER                  |
| 1E          | R/H MIXER MANIFOLD TEMP SENSOR               | TEMP SENSOR R/H MIXER                  |
| 1F          | CKPT TEMPERATURE SELECTOR                    | CKPT TEMP SELECTOR                     |
| 20          | FWD CAB TEMPERATURE SELECTOR                 |  |
| 21          | ı  | AFT CAB TEMP SELECTOR                  |
| 22          | ı  | GALY & TOIL FAN OR SPLY                |
| 23          | HIGH HOT AIR PRESSURE                        | TRIM AIR PRESS VALVE OR   PRESS SWITCH |
|             | · · · · · · · · · · · · · · · · · · ·        | FLOW SEL                               |

EFF: 227-227, 229-237,

21-63-00

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## TROUBLE SHOOTING MANUAL

| FAULT<br>  CODE         | FAULT ORIGIN  | CFDS MESSAGE                          |
|-------------------------|---|---------------------------------------|
| 2E                      | ZC 429 RCV EXT  | NO DATA FROM CFDS                     |
| 2F                      | ZC 429 RCV EXT  | NO DATA FROM ADIRS                    |
| <b>30</b><br> <br> <br> | ZC RAM, EPROM, CPU, A/D CONVERTER,<br>  DISCRETE INPUTS, DISCRETE OUTPUTS,<br>  429 XTR INT, 429 XTR EXT, PWR SPLY,<br>  TAV DRIVE OUTPUTS, 429 RCV INT,<br>  WATCHDOG BACKUP SWITCHING | ZONE CONT<br> <br>                    |
| 31                      | WRG SHORT CIRCUIT   | ZONE CONT OR SENSOR<br>  SUPPLY SHORT |
| 34                      | TAPRV FAILED OPEN   | ZONE CONT                             |
| 38                      | TAPRV DRIVE   | ZONE CONT                             |
| 39                      | RECIRCULATION FAN 1   | RECIRC FAN 1 OR SPLY                  |
| 3A                      | RECIRCULATION FAN 2   | RECIRC FAN 2 OR SPLY                  |
| 3B                      | FWD CARGO VENTILATION   | FWD CARGO FAN OR SPLY                 |
| 3C                      | AFT CARGO VENTILATION   | AFT CARGO FAN OR SPLY                 |
| 3D                      | LH ANTI ICE SYSTEM  | WAI FILTER OR VALVE 9DL               |
| 3E                      | RH ANTI ICE SYSTEM  | WAI FILTER OR VALVE 10DL              |
| 3F                      | LH ANTI ICE SYSTEM  | NO BLEED AIR ENG 1                    |
| 40                      | RH ANTI ICE SYSTEM  | NO BLEED AIR ENG 2                    |
| 41                      | MIXER FLAP DISAGREE   | MIXER FLAP DRIVE OR SPLY              |
| 49                      | PC 1 MAIN DC SUPPLY   | NO 28V ON PACK 1 MAIN                 |
| 4A                      | I   | NO 28V ON PACK 2 MAIN                 |
| 4B                      | I   | NO 28V ON PACK 1 SECD                 |
| 4C                      | I   | NO 28V ON PACK 2 SECD                 |
| 4E                      | I   | NO 28V ON ZONE MAIN                   |
| 4F                      | I   | NO 28V ON ZONE SECD                   |
| 50                      | PACK 1 BLEED TEMPERATURE SENSOR   | <br>  P1 BLEED TEMP SENSOR            |

EFF: 227-227, 229-237,

21-63-00

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### TROUBLE SHOOTING MANUAL

| FAULT<br>CODE |  |                         |
|---------------|--|-------------------------|
| 51            | PACK 2 BLEED TEMPERATURE SENSOR                    | P2 BLEED TEMP SENSOR    |
| 52            | <br>  PACK 1 PRESSURE INLET SENSOR                 | P1 PRESS INL SENSOR     |
| 53            | PACK 2 PRESSURE INLET SENSOR                       | P2 PRESS INL SENSOR     |
| 54            | PACK 1 DISCHARGE OVERHEAT                          | P1 AIR CYCLE MACH CHECK |
| 55            | PACK 2 DISCHARGE OVERHEAT                          | P2 AIR CYCLE MACH CHECK |
| 56            | PACK 1 COMPRESSOR TEMP SENSOR                      | P1 COMP TEMP SENSOR     |
| 57            | PACK 2 COMPRESSOR TEMP SENSOR                      | P2 COMP TEMP SENSOR     |
| 58            | PACK 1 COMPRESSOR OVERHEAT SENSOR                  | P1 COMP OVHT SENSOR     |
| 59            | PACK 2 COMPRESSOR OVERHEAT SENSOR                  | P2 COMP OVHT SENSOR     |
| 5A            | PACK 1 OUTLET TEMPERATURE SENSOR                   | P1 OUTLET TEMP SENSOR   |
| 5B            | PACK 2 OUTLET TEMPERATURE SENSOR                   | P2 OUTLET TEMP SENSOR   |
| 5C            | PACK 1 WATER EXTRACTOR TEMP SENSOR                 | P1 WATER EX TEMP SENSOR |
| 5D            | PACK 2 WATER EXTRACTOR TEMP SENSOR                 | P2 WATER EX TEMP SENSOR |
| 5E            | PACK 1 RAI MOTOR, POT, MECHANIC,<br>  LIMIT SWITCH | P1 RAM AIR IN ACTUATOR  |
| 5F            | PACK 2 RAI MOTOR, POT, MECHANIC,<br>  LIMIT SWITCH | P2 RAM AIR IN ACTUATOR  |
| 60            | PACK 1 RAO MOTOR, POT, MECHANIC,<br>  LIMIT SWITCH | P1 RAM AIR OUT ACTUATOR |
| 61            | PACK 2 RAO MOTOR, POT, MECHANIC,<br>  LIMIT SWITCH | P2 RAM AIR OUT ACTUATOR |
| 62            | PACK 1 BPV MOTOR, POT, MECHANIC,   LIMIT SWITCH    | P1 BYPASS VALVE         |
| 63            | PACK 2 BPV MOTOR, POT, MECHANIC, LIMIT SWITCH      | P2 BYPASS VALVE         |
| 64            | PACK 1 FCV MOTOR, POT, MECHANIC                    | P1 FLOW CONT VALVE      |
| 65            | PACK 2 FCV MOTOR, POT, MECHANIC                    | P2 FLOW CONT VALVE      |

EFF: 227-227, 229-237,

21-63-00

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### TROUBLE SHOOTING MANUAL

| FAULT   CODE |   |   |
|--------------|---|---|
|              | PACK 1 AIV PERMANENT OPEN/CLOSED  | <br>  P1 CONT OR ANTI ICE VALVE                 |
| 67           | PACK 2 AIV PERMANENT OPEN/CLOSED  | P2 CONT OR ANTI ICE VALVE                       |
| 68           | PACK 1 PRESSURE (FLOW) SENSOR   | P1 FLOW SENSOR                                  |
| 69           | PACK 2 PRESSURE (FLOW) SENSOR   | P2 FLOW SENSOR                                  |
| 6A<br> <br>  | PC 1 RAM, EPROM, CPU, A/D CONVERTER, DISCRETE INPUTS, 429 RCV, BPV DRIVE OUTPUT | P1 CONT  <br>                                   |
| 6B<br> <br>  | PC 2 RAM, EPROM, CPU, A/D CONVERTER, DISCRETE INPUTS, 429 RCV, BPV DRIVE OUTPUT | P2 CONT   |
| 6C           | ZC AC SUPPLY  | AC SUPPLY ZONE CONT                             |
| 6D<br>       | PC 1 NO TEST  | NO TEST RESULT RECEPTION  <br>FROM P1 CONT      |
| 6E<br>       | PC 2 NO TEST  | NO TEST RESULT RECEPTION  <br>FROM P2 CONT      |
| 6F           | PRESSURE SWITCH OUTPUT  | PRESS SWITCH                                    |
| 7B<br> <br>  |   | CHECK BUS ZONE CONT TO  <br>  P1 CONT + P2 CONT |
| 7C           | ZC DC SUPPLY  | DC SUPPLY ZONE CONT                             |
| 7D           | PC 1 DC SUPPLY  | DC SUPPLY P1 CONT                               |
| 7E<br>       | PC 2 DC SUPPLY  | DC SUPPLY P2 CONT                               |
|              |   | ··  |

\*\*ON A/C 276-281, 476-478,

| 10 | TAV CKPT MOTOR, POT, MECHANIC                   | TRIM VALVE CKPT      |
|----|---|----------------------|
| 11 | TAV FWD CAB MOTOR, POT, MECHANIC                | TRIM VALVE FWD CAB   |
| 12 | TAV AFT CAB MOTOR, POT, MECHANIC                | TRIM VALVE AFT CAB   |
| 13 | TAPRV FAILED OPEN/CLOSED, SOLENOID<br>  REDUCED | TRIM AIR PRESS VALVE |

EFF: 227-227, 229-237, 276-281, 476-478,

21-63-00

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## TROUBLE SHOOTING MANUAL

| <br>  FAULT<br>  CODE<br> | FAULT ORIGIN<br>  |   |
|---------------------------|---|---|
|                           | CKPT TEMPERATURE SENSOR   | <br>  TEMP SENSOR CKPT                    |
| 15                        | <br>  FWD CAB TEMPERATURE SENSOR  | TEMP SENSOR FWD CAB                       |
| 16                        | AFT CAB TEMPERATURE SENSOR  | <br>  TEMP SENSOR AFT CAB                 |
| 17                        | CKPT DUCT TEMPERATURE SENSOR  | TEMP SENSOR CKPT DUCT                     |
| 18                        | <br>  FWD CAB DUCT TEMPERATURE SENSOR   | TEMP SENSOR FWD CAB DUCT                  |
| 19                        | AFT CAB DUCT TEMPERATURE SENSOR   | TEMP SENSOR AFT CAB DUCT                  |
| 1A                        | CKPT DUCT OVERHEAT SENSOR   | <br>  CKPT DUCT OVHT SENSOR               |
| 1B                        | FWD CAB DUCT OVERHEAT SENSOR  | FWD CAB DUCT OVHT SENSOR                  |
| 1C                        | AFT CAB DUCT OVERHEAT SENSOR  | AFT CAB DUCT OVHT SENSOR                  |
| 1D                        | L/H MIXER MANIFOLD TEMP SENSOR  | TEMP SENSOR L/H MIXER                     |
| 1E                        | R/H MIXER MANIFOLD TEMP SENSOR  | TEMP SENSOR R/H MIXER                     |
| 1F                        | CKPT TEMPERATURE SELECTOR   | CKPT TEMP SELECTOR                        |
| 20                        | FWD CAB TEMPERATURE SELECTOR  | FWD CAB TEMP SELECTOR                     |
| 21                        | AFT CAB TEMPERATURE SELECTOR  | AFT CAB TEMP SELECTOR                     |
| 22                        | G & T FAN FAULT/OFF   | GALY & TOIL FAN OR SPLY                   |
| 23                        | <br>  HIGH HOT AIR PRESSURE<br>   | TRIM AIR PRESS VALVE OR<br>  PRESS SWITCH |
| 24                        | FLOW SELECTOR   | FLOW SEL                                  |
| 2E                        | ZC 429 RCV EXT  | NO DATA FROM CFDS                         |
| 2F                        | ZC 429 RCV EXT  | NO DATA FROM ADIRS                        |
| 30<br> <br> <br> <br>     | ZC RAM, EPROM, CPU, A/D CONVERTER, DISCRETE INPUTS, DISCRETE OUTPUTS, 429 XTR INT, 429 XTR EXT, PWR SPLY, TAV DRIVE OUTPUTS, 429 RCV INT, WATCHDOG BACKUP SWITCHING |   |
| 31<br>                    | WRG SHORT CIRCUIT   | ZONE CONT OR SENSOR<br>  SUPPLY SHORT     |

EFF: 276-281, 476-478,

21-63-00

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## TROUBLE SHOOTING MANUAL

| <br>  FAULT | FAULT ORIGIN                    | CFDS MESSAGE             |
|-------------|---------------------------------|--------------------------|
| CODE<br>    | <br>                            | <br>                     |
| <br>  34    | TAPRV FAILED OPEN               | <br>  ZONE CONT          |
|             | <br>  TAPRV DRIVE               | ZONE CONT                |
|             | <br>  RECIRCULATION FAN 1       | RECIRC FAN 1 OR SPLY     |
| <br>  3A    | RECIRCULATION FAN 2             | RECIRC FAN 2 OR SPLY     |
| 3B          | FWD CARGO VENTILATION           | FWD CARGO FAN OR SPLY    |
| 3C          | AFT CARGO VENTILATION           | AFT CARGO FAN OR SPLY    |
| 3D          | LH ANTI ICE SYSTEM              | WAI FILTER OR VALVE 9DL  |
| 3E          | RH ANTI ICE SYSTEM              | WAI FILTER OR VALVE 10DL |
| 3F          | LH ANTI ICE SYSTEM              | NO BLEED AIR ENG 1       |
| 40          | RH ANTI ICE SYSTEM              | NO BLEED AIR ENG 2       |
| 41          | MIXER FLAP DISAGREE             | MIXER FLAP DRIVE OR SPLY |
| 49          | PC 1 MAIN DC SUPPLY             | NO 28V ON PACK 1 MAIN    |
| 4A          | PC 2 MAIN DC SUPPLY             | NO 28V ON PACK 2 MAIN    |
| 4B          | PC 1 SECD DC SUPPLY             | NO 28V ON PACK 1 SECD    |
| 4C          | PC 2 SECD DC SUPPLY             | NO 28V ON PACK 2 SECD    |
| 4E          | ZC MAIN DC SUPPLY               | NO 28V ON ZONE MAIN      |
| 4F          | ZC SECD DC SUPPLY               | NO 28V ON ZONE SECD      |
| 50          | PACK 1 BLEED TEMPERATURE SENSOR | ·                        |
| 51<br>  51  | PACK 2 BLEED TEMPERATURE SENSOR | P2 BLEED TEMP SENSOR     |
| 52          | PACK 1 PRESSURE INLET SENSOR    | P1 PRESS INL SENSOR      |
| 53          | PACK 2 PRESSURE INLET SENSOR    | P2 PRESS INL SENSOR      |
| 54          | I                               | P1 AIR CYCLE MACH CHECK  |
| 55          | I                               | P2 AIR CYCLE MACH CHECK  |
| 56          | PACK 1 COMPRESSOR TEMP SENSOR   | 1                        |

EFF: 276-281, 476-478,

21-63-00

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## TROUBLE SHOOTING MANUAL

| FAULT  <br>  CODE | <br>  FAULT ORIGIN<br> <br>   | <br>  CFDS MESSAGE<br> <br> |
|-------------------|---|-----------------------------|
| <br>  <br>  57    | PACK 2 COMPRESSOR TEMP SENSOR   | P2 COMP TEMP SENSOR         |
| <br>  58          | PACK 1 COMPRESSOR OVERHEAT SENSOR   | P1 COMP OVHT SENSOR         |
| <br>  59          | PACK 2 COMPRESSOR OVERHEAT SENSOR   | <br>  P2 COMP OVHT SENSOR   |
| <br>  5A          | PACK 1 OUTLET TEMPERATURE SENSOR  | P1 OUTLET TEMP SENSOR       |
| <br>  5B          | PACK 2 OUTLET TEMPERATURE SENSOR  | P2 OUTLET TEMP SENSOR       |
| 5C                | PACK 1 WATER EXTRACTOR TEMP SENSOR  | P1 WATER EX TEMP SENSOR     |
| 5D                | PACK 2 WATER EXTRACTOR TEMP SENSOR  | P2 WATER EX TEMP SENSOR     |
| 5E  <br>          | PACK 1 RAI MOTOR, POT, MECHANIC,  | P1 RAM AIR IN ACTUATOR      |
| 5F                | PACK 2 RAI MOTOR, POT, MECHANIC,  | P2 RAM AIR IN ACTUATOR      |
| 60<br>            | PACK 1 RAO MOTOR, POT, MECHANIC,  | P1 RAM AIR OUT ACTUATOR     |
| <br>  61<br>      | PACK 2 RAO MOTOR, POT, MECHANIC,  | P2 RAM AIR OUT ACTUATOR     |
| <br>  62<br>      | PACK 1 BPV MOTOR, POT, MECHANIC,  | <br>  P1 BYPASS VALVE<br>   |
| <b>63</b><br>     | PACK 2 BPV MOTOR, POT, MECHANIC,  | <br>  P2 BYPASS VALVE<br>   |
| 64                | PACK 1 FCV MOTOR, POT, MECHANIC   | <br>  P1 FLOW CONT VALVE    |
| 65                | PACK 2 FCV MOTOR, POT, MECHANIC   | <br>  P2 FLOW CONT VALVE    |
| 66                | PACK 1 AIV PERMANENT OPEN/CLOSED  | P1 CONT OR ANTI ICE VALVE   |
| 67                | PACK 2 AIV PERMANENT OPEN/CLOSED  |                             |
| 68                | PACK 1 PRESSURE (FLOW) SENSOR   | P1 FLOW SENSOR              |
| 69                | PACK 2 PRESSURE (FLOW) SENSOR   | l                           |
| 6A  <br> <br>     | PC 1 RAM, EPROM, CPU, A/D CONVERTER, DISCRETE INPUTS, 429 RCV, BPV DRIVE OUTPUT | P1 CONT<br> <br>            |

EFF: 276-281, 476-478,

21-63-00

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### TROUBLE SHOOTING MANUAL

| <br>  FAULT<br>  CODE<br> |   |  |
|---------------------------|---|--|
| <br>  6B<br>              | PC 2 RAM, EPROM, CPU, A/D CONVERTER, DISCRETE INPUTS, 429 RCV, BPV DRIVE OUTPUT | <br>  P2 CONT                              |
| 6C                        | ZC AC SUPPLY  | AC SUPPLY ZONE CONT                        |
| 6D<br>                    | PC 1 NO TEST  | NO TEST RESULT RECEPTION  <br>FROM P1 CONT |
| 6E<br>                    | PC 2 NO TEST  | NO TEST RESULT RECEPTION  <br>FROM P2 CONT |
| 6F                        | PRESSURE SWITCH OUTPUT  | PRESS SWITCH                               |
| 70                        | ZC DISCRETE INPUTS  | ZC PIN PROGRAM MISMATCH                    |
| 71                        | PC 1 DISCRETE INPUTS  | PC 1 PIN PROGRAM MISMATCH                  |
| 72                        | PC 2 DISCRETE INPUTS  | PC 2 PIN PROGRAM MISMATCH                  |
| 74                        | AFT CARGO VENTILATION   | AFT CARGO FANS OR SPLY                     |
| 7B<br>                    | ZC 429 XTR  | CHECK BUS ZONE CONT TO P1 CONT + P2 CONT   |
| 7C                        | ZC DC SUPPLY  | DC SUPPLY ZONE CONT                        |
| 7D                        | PC 1 DC SUPPLY  | DC SUPPLY P1 CONT                          |
| <br>  <b>7</b> E<br>      |   | <br>  DC SUPPLY P2 CONT                    |

\*\*ON A/C 285-299, 479-499, 503-549,

|  | 10 | TAV CKPT MOTOR, MECHANIC                        | TRIM VALVE CKPT      |
|--|----|---|----------------------|
|  | 11 | TAV FWD CAB MOTOR, MECHANIC                     | TRIM VALVE FWD CAB   |
|  | 12 | TAV AFT CAB MOTOR, MECHANIC                     | TRIM VALVE AFT CAB   |
|  | 13 | TAPRV FAILED OPEN/CLOSED, SOLENOID  <br>REDUCED | TRIM AIR PRESS VALVE |
|  | 14 | CKPT TEMPERATURE SENSOR                         | TEMP SENSOR CKPT     |
|  | 15 | FWD CAB TEMPERATURE SENSOR                      | TEMP SENSOR FWD CAB  |

EFF: 276-281, 285-299, 476-499, 503-549,

21-63-00

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SROS

### TROUBLE SHOOTING MANUAL

| FAULT CODE | FAULT ORIGIN<br> <br>   | CFDS MESSAGE                          |
|------------|---|---------------------------------------|
| <br>16     | AFT CAB TEMPERATURE SENSOR  | TEMP SENSOR AFT CAB                   |
| 17         | CKPT DUCT TEMPERATURE SENSOR  | TEMP SENSOR CKPT DUCT                 |
| 18         | FWD CAB DUCT TEMPERATURE SENSOR   | TEMP SENSOR FWD CAB DUCT              |
| 19         | AFT CAB DUCT TEMPERATURE SENSOR   | TEMP SENSOR AFT CAB DUCT              |
| 1D         | L/H MIXER MANIFOLD TEMP SENSOR  | TEMP SENSOR L/H MIXER                 |
| 1E         | R/H MIXER MANIFOLD TEMP SENSOR  | TEMP SENSOR R/H MIXER                 |
| 1F         | CKPT TEMPERATURE SELECTOR   | CKPT TEMP SELECTOR                    |
| 20         | FWD CAB TEMPERATURE SELECTOR  | FWD CAB TEMP SELECTOR                 |
| 21         | AFT CAB TEMPERATURE SELECTOR  | AFT CAB TEMP SELECTOR                 |
| 22         | G & T FAN FAULT/OFF   | GALY & TOIL FAN OR SPLY               |
| 23         | HIGH HOT AIR PRESSURE   | TRIM AIR PRESS VALVE OR PRESS SWITCH  |
| 24         | FLOW SELECTOR   | FLOW SEL                              |
| 2E         | ZC 429 RCV EXT  | NO DATA FROM CFDS                     |
| 2F         | ZC 429 RCV EXT  | NO DATA FROM ADIRS                    |
| <b>30</b>  | ZC RAM, EPROM, CPU, A/D CONVERTER, DISCRETE INPUTS, DISCRETE OUTPUTS, 429 XTR INT, 429 XTR EXT, PWR SPLY, TAV DRIVE OUTPUTS, 429 RCV INT, WATCHDOG BACKUP SWITCHING | ZONE CONT<br> <br>                    |
| 31         | WRG SHORT CIRCUIT   | ZONE CONT OR SENSOR<br>  SUPPLY SHORT |
| 34         | TAPRV FAILED OPEN   | ZONE CONT                             |
| <br>38     | <br>  TAPRV DRIVE   | ZONE CONT                             |
| 39         |   | RECIRC FAN 1 OR SPLY                  |
| 3A         | <br>  RECIRCULATION FAN 2   | RECIRC FAN 2 OR SPLY                  |
| 3B         | <br>  FWD CARGO VENTILATION   | FWD CARGO FAN OR SPLY                 |

EFF: 285-299, 479-499, 503-549,

21-63-00

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### TROUBLE SHOOTING MANUAL

| FAULT  <br>  CODE | FAULT ORIGIN   |   |
|-------------------|--|---|
| <br>  3C          | AFT CARGO VENTILATION  | AFT CARGO FAN OR SPLY                   |
| <br>  3D          | LH ANTI ICE SYSTEM   | <br>  WAI FILTER OR VALVE 9DL           |
| <br>  3E          | <br>  RH ANTI ICE SYSTEM   | <br>  WAI FILTER OR VALVE 10DL          |
| <br>  3F          | LH ANTI ICE SYSTEM   | NO BLEED AIR ENG 1                      |
| 40                | RH ANTI ICE SYSTEM   | NO BLEED AIR ENG 2                      |
| 41                | MIXER FLAP DISAGREE  | MIXER FLAP DRIVE OR SPLY                |
| 43                | P 1 COMPRESSOR TEMP SENSOR / P 1 COMPRESSOR OVHT SENSOR DISAGREE | PC1 COMP TEMP/OVHT SENSOR<br>  DISAGREE |
| 44                | P 2 COMPRESSOR TEMP SENSOR / P 2 COMPRESSOR OVHT SENSOR DISAGREE | PC2 COMP TEMP/OVHT SENSOR DISAGREE      |
| 49                | PC 1 MAIN DC SUPPLY  | NO 28V ON PACK 1 MAIN                   |
| <br>  4A          | PC 2 MAIN DC SUPPLY  | NO 28V ON PACK 2 MAIN                   |
| 4B                | PC 1 SECD DC SUPPLY  | NO 28V ON PACK 1 SECD                   |
| 4C                | PC 2 SECD DC SUPPLY  | NO 28V ON PACK 2 SECD                   |
| 4E                | ZC MAIN DC SUPPLY  | NO 28V ON ZONE MAIN                     |
| 4F                | ZC SECD DC SUPPLY  | NO 28V ON ZONE SECD                     |
| 52                | PACK 1 PRESSURE INLET SENSOR                                     | P1 PRESS INL SENSOR                     |
| 53                | PACK 2 PRESSURE INLET SENSOR                                     | P2 PRESS INL SENSOR                     |
|                   | PACK 1 DISCHARGE OVERHEAT  | P1 AIR CYCLE MACH CHECK                 |
| 55                | PACK 2 DISCHARGE OVERHEAT  | P2 AIR CYCLE MACH CHECK                 |
| 56                | PACK 1 COMPRESSOR TEMP SENSOR                                    | •                                       |
| 57                | PACK 2 COMPRESSOR TEMP SENSOR                                    | I                                       |
| 58                | PACK 1 COMPRESSOR OVERHEAT SENSOR                                | •                                       |
|                   | PACK 2 COMPRESSOR OVERHEAT SENSOR                                |   |
| 5A                | PACK 1 OUTLET TEMPERATURE SENSOR                                 | <br>  P1 OUTLET TEMP SENSOR             |

EFF: 285-299, 479-499, 503-549,

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| FAULT   CODE |   |  |
|--------------|---|--|
| <br>  5B     | PACK 2 OUTLET TEMPERATURE SENSOR  | P2 OUTLET TEMP SENSOR                        |
| <br>  5C     | PACK 1 WATER EXTRACTOR TEMP SENSOR  | P1 WATER EX TEMP SENSOR                      |
| 5D           | PACK 2 WATER EXTRACTOR TEMP SENSOR  | P2 WATER EX TEMP SENSOR                      |
| 5E<br>       | PACK 1 RAI MOTOR, POT, MECHANIC,<br>  LIMIT SWITCH                              | P1 RAM AIR IN ACTUATOR                       |
| 5F           | PACK 2 RAI MOTOR, POT, MECHANIC,<br>  LIMIT SWITCH                              | P2 RAM AIR IN ACTUATOR                       |
| 62           | PACK 1 BPV MOTOR, POT, MECHANIC,<br>  LIMIT SWITCH                              | P1 BYPASS VALVE                              |
| 63           | PACK 2 BPV MOTOR, POT, MECHANIC, LIMIT SWITCH                                   | P2 BYPASS VALVE                              |
| 64           | PACK 1 FCV MOTOR, POT, MECHANIC   | P1 FLOW CONT VALVE                           |
| 65           | PACK 2 FCV MOTOR, POT, MECHANIC   | P2 FLOW CONT VALVE                           |
| 66           | PACK 1 AIV PERMANENT OPEN/CLOSED  | P1 CONT OR ANTI ICE VALVE                    |
| 67           | PACK 2 AIV PERMANENT OPEN/CLOSED  | P2 CONT OR ANTI ICE VALVE                    |
| 68           | PACK 1 PRESSURE (FLOW) SENSOR   | P1 FLOW SENSOR                               |
| 69           | PACK 2 PRESSURE (FLOW) SENSOR   | P2 FLOW SENSOR                               |
| 6A<br> <br>  | PC 1 RAM, EPROM, CPU, A/D CONVERTER, DISCRETE INPUTS, 429 RCV, BPV DRIVE OUTPUT | P1 CONT                                      |
| 6B<br> <br>  | PC 2 RAM, EPROM, CPU, A/D CONVERTER, DISCRETE INPUTS, 429 RCV, BPV DRIVE OUTPUT | P2 CONT                                      |
| 6C           | ZC AC SUPPLY  | AC SUPPLY ZONE CONT                          |
| 6D<br>       | <br>  PC 1 NO TEST<br>  | NO TEST RESULT RECEPTION  <br>  FROM P1 CONT |
| 6E<br>       | PC 2 NO TEST<br>  | NO TEST RESULT RECEPTION  <br>FROM P2 CONT   |
| 6F           | PRESSURE SWITCH OUTPUT  | PRESS SWITCH                                 |

EFF: 285-299, 479-499, 503-549,

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SROS

### TROUBLE SHOOTING MANUAL

| FAULT  | FAULT ORIGIN                        | CFDS MESSAGE                                  |
|--------|-------------------------------------|---|
|        |                                     | <br>  |
| 70     | ZC DISCRETE INPUTS                  | ZC PIN PROGRAM MISMATCH                       |
| 71     | PC 1 DISCRETE INPUTS                | PC 1 PIN PROGRAM MISMATCH                     |
| 72     | PC 2 DISCRETE INPUTS                | PC 2 PIN PROGRAM MISMATCH                     |
| 74     | AFT CARGO VENTILATION               | AFT CARGO FANS OR SPLY                        |
| 7B     | ZC 429 XTR                          | CHECK BUS ZONE CONT TO  <br>P1 CONT + P2 CONT |
| 7C     | ZC DC SUPPLY                        | DC SUPPLY ZONE CONT                           |
| 7D     | PC 1 DC SUPPLY                      | DC SUPPLY P1 CONT                             |
| 7E     | PC 2 DC SUPPLY                      | DC SUPPLY P2 CONT                             |
| 76     | RECIRCULATION FAN 1 AND 2           | RECIRC FAN 1 AND 2 OR SPLY                    |
| 77<br> | L/H AND R/H MIXER UNIT TEMP SENSORS | <br>  TEMP SENSOR L/H AND R/H MIXER <br>      |

R \*\*ON A/C 201-208, 227-227, 229-245, 426-428,

R Post SB 21-1104 For A/C 227-227,229-237,

| 10       | TAV CKPT MOTOR, MECHANIC           | TRIM VALVE CKPT          |
|----------|------------------------------------|--------------------------|
| 11       | TAV FWD CAB MOTOR, MECHANIC        | TRIM VALVE FWD CAB       |
| 12       | TAV AFT CAB MOTOR, MECHANIC        | TRIM VALVE AFT CAB       |
| 13       | TAPRV FAILED OPEN/CLOSED, SOLENOID | TRIM AIR PRESS VALVE     |
| 14       | CKPT TEMPERATURE SENSOR            | TEMP SENSOR CKPT         |
| 15       | FWD CAB TEMPERATURE SENSOR         | TEMP SENSOR FWD CAB      |
| 16       | AFT CAB TEMPERATURE SENSOR         | TEMP SENSOR AFT CAB      |
| 17       | CKPT DUCT TEMPERATURE SENSOR       | TEMP SENSOR CKPT DUCT    |
| 18       | FWD CAB DUCT TEMPERATURE SENSOR    | TEMP SENSOR FWD CAB DUCT |
| 19       | AFT CAB DUCT TEMPERATURE SENSOR    | TEMP SENSOR AFT CAB DUCT |
| <b>-</b> |                                    |                          |

EFF: 201-208, 227-227, 229-245, 285-299, 426-428, 479-499, 503-549, SROS

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### TROUBLE SHOOTING MANUAL

| FAULT<br>  CODE       | FAULT ORIGIN  | CFDS MESSAGE                              |
|-----------------------|---|---|
| 1D                    | L/H MIXER MANIFOLD TEMP SENSOR  | TEMP SENSOR L/H MIXER                     |
| 1E                    | R/H MIXER MANIFOLD TEMP SENSOR  | TEMP SENSOR R/H MIXER                     |
| 1F                    | CKPT TEMPERATURE SELECTOR   | CKPT TEMP SELECTOR                        |
| 20                    | FWD CAB TEMPERATURE SELECTOR  | <br>  FWD CAB TEMP SELECTOR               |
| 21                    | AFT CAB TEMPERATURE SELECTOR  | AFT CAB TEMP SELECTOR                     |
| 22                    | G & T FAN FAULT/OFF   | GALY & TOIL FAN OR SPLY                   |
| 23                    | <br>  HIGH HOT AIR PRESSURE<br>   | TRIM AIR PRESS VALVE OR<br>  PRESS SWITCH |
| 24                    | FLOW SELECTOR   | <br>  FLOW SEL                            |
| 2E                    | ZC 429 RCV EXT  | NO DATA FROM CFDS                         |
| 2F                    | ZC 429 RCV EXT  | <br>  NO DATA FROM ADIRS                  |
| 30<br> <br> <br> <br> | ZC RAM, EPROM, CPU, A/D CONVERTER,<br>  DISCRETE INPUTS, DISCRETE OUTPUTS,<br>  429 XTR INT, 429 XTR EXT, PWR SPLY,<br>  TAV DRIVE OUTPUTS, 429 RCV INT,<br>  WATCHDOG BACKUP SWITCHING | ZONE CONT<br> <br>                        |
| <b>31</b><br>         | WRG SHORT CIRCUIT   | ZONE CONT OR SENSOR<br>  SUPPLY SHORT     |
| 34                    | TAPRV FAILED OPEN   | ZONE CONT                                 |
| 38                    | TAPRV DRIVE   | ZONE CONT                                 |
| 39                    | RECIRCULATION FAN 1   | RECIRC FAN 1 OR SPLY                      |
| 3A                    | I   | RECIRC FAN 2 OR SPLY                      |
| 3B                    | FWD CARGO VENTILATION   | FWD CARGO FAN OR SPLY                     |
| 1                     | I   | AFT CARGO FAN OR SPLY                     |
| 3D<br>                | LH ANTI ICE SYSTEM  | <br>  WAI FILTER OR VALVE 9DL             |
| 3E                    | RH ANTI ICE SYSTEM  | WAI FILTER OR VALVE 10DL                  |
|                       | ı   | NO BLEED AIR ENG 1                        |
|                       |   |   |

EFF: 201-208, 227-227, 229-245, 426-428,

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### TROUBLE SHOOTING MANUAL

| FAULT | FAULT ORIGIN   | CFDS MESSAGE                       |
|-------|--|------------------------------------|
| 40    | RH ANTI ICE SYSTEM   | NO BLEED AIR ENG 2                 |
| 41    | MIXER FLAP DISAGREE  | MIXER FLAP DRIVE OR SPLY           |
| 43    | P 1 COMPRESSOR TEMP SENSOR / P 1 COMPRESSOR OVHT SENSOR DISAGREE | PC1 COMP TEMP/OVHT SENSOR DISAGREE |
| 44    | P 2 COMPRESSOR TEMP SENSOR / P 2 COMPRESSOR OVHT SENSOR DISAGREE | PC2 COMP TEMP/OVHT SENSOR DISAGREE |
| 49    | PC 1 MAIN DC SUPPLY  | NO 28V ON PACK 1 MAIN              |
| 4A    | PC 2 MAIN DC SUPPLY  | NO 28V ON PACK 2 MAIN              |
| 4B    | PC 1 SECD DC SUPPLY  | NO 28V ON PACK 1 SECD              |
| 4C    | PC 2 SECD DC SUPPLY  | NO 28V ON PACK 2 SECD              |
| 4E    | ZC MAIN DC SUPPLY  | NO 28V ON ZONE MAIN                |
| 4F    | ZC SECD DC SUPPLY  | NO 28V ON ZONE SECD                |
| 50    | PACK 1 BLEED TEMPERATURE SENSOR                                  | P1 BLEED TEMP SENSOR               |
| 51    | PACK 2 BLEED TEMPERATURE SENSOR                                  | P2 BLEED TEMP SENSOR               |
| 52    | PACK 1 PRESSURE INLET SENSOR                                     | P1 PRESS INL SENSOR                |
| 53    | PACK 2 PRESSURE INLET SENSOR                                     | P2 PRESS INL SENSOR                |
| 54    | PACK 1 DISCHARGE OVERHEAT  | P1 AIR CYCLE MACH CHECK            |
| 55    | PACK 2 DISCHARGE OVERHEAT  | P2 AIR CYCLE MACH CHECK            |
| 56    | PACK 1 COMPRESSOR TEMP SENSOR                                    | P1 COMP TEMP SENSOR                |
|       | PACK 2 COMPRESSOR TEMP SENSOR                                    | P2 COMP TEMP SENSOR                |
| 58    | PACK 1 COMPRESSOR OVERHEAT SENSOR                                | P1 COMP OVHT SENSOR                |
| 59    | PACK 2 COMPRESSOR OVERHEAT SENSOR                                | P2 COMP OVHT SENSOR                |
| 5A    | PACK 1 OUTLET TEMPERATURE SENSOR                                 | P1 OUTLET TEMP SENSOR              |
| 5B    | PACK 2 OUTLET TEMPERATURE SENSOR                                 | P2 OUTLET TEMP SENSOR              |
|       | PACK 1 WATER EXTRACTOR TEMP SENSOR                               | <br>  P1 WATER EX TEMP SENSOR<br>  |

EFF: 201-208, 227-227, 229-245, 426-428,

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### TROUBLE SHOOTING MANUAL

| FAULT<br>  CODE   | -<br>  FAULT ORIGIN<br>   | -<br>  CFDS MESSAGE<br>                   |
|-------------------|---|---|
| <br>  5D          | PACK 2 WATER EXTRACTOR TEMP SENSOR  | P2 WATER EX TEMP SENSOR                   |
| <br>  5E<br>      | PACK 1 RAI MOTOR, POT, MECHANIC,<br>  LIMIT SWITCH                              | P1 RAM AIR IN ACTUATOR                    |
| <br>  5F<br>      | PACK 2 RAI MOTOR, POT, MECHANIC,<br>  LIMIT SWITCH                              | P2 RAM AIR IN ACTUATOR                    |
| <b>60</b><br>     | PACK 1 RAO MOTOR, POT, MECHANIC,<br>  LIMIT SWITCH                              | P1 RAM AIR OUT ACTUATOR                   |
| <br>  61<br>      | PACK 2 RAO MOTOR, POT, MECHANIC,  | P2 RAM AIR OUT ACTUATOR                   |
| <br>  62<br>      | PACK 1 BPV MOTOR, POT, MECHANIC,   LIMIT SWITCH                                 | <br>  P1 BYPASS VALVE<br>                 |
| <br>  63<br>      | PACK 2 BPV MOTOR, POT, MECHANIC, LIMIT SWITCH                                   | <br>  P2 BYPASS VALVE<br>                 |
|                   | PACK 1 FCV MOTOR, POT, MECHANIC   | P1 FLOW CONT VALVE                        |
| 65                | PACK 2 FCV MOTOR, POT, MECHANIC   | P2 FLOW CONT VALVE                        |
| 66                | PACK 1 AIV PERMANENT OPEN/CLOSED  | P1 CONT OR ANTI ICE VALVE                 |
| 67                | PACK 2 AIV PERMANENT OPEN/CLOSED  | P2 CONT OR ANTI ICE VALVE                 |
| 68                | PACK 1 PRESSURE (FLOW) SENSOR   | P1 FLOW SENSOR                            |
| 69                | PACK 2 PRESSURE (FLOW) SENSOR   | P2 FLOW SENSOR                            |
| <br>  6A<br>      | PC 1 RAM, EPROM, CPU, A/D CONVERTER, DISCRETE INPUTS, 429 RCV, BPV DRIVE OUTPUT | <br>  P1 CONT<br> <br>                    |
| <br>  6B<br>      | PC 2 RAM, EPROM, CPU, A/D CONVERTER, DISCRETE INPUTS, 429 RCV, BPV DRIVE OUTPUT | P2 CONT<br> <br>                          |
| <br>  6C          | ZC AC SUPPLY  | AC SUPPLY ZONE CONT                       |
| <br>  6D<br>      | <br>  PC 1 NO TEST<br>  | NO TEST RESULT RECEPTION   FROM P1 CONT   |
| <br>  6E<br>      | <br>  PC 2 NO TEST<br>  | NO TEST RESULT RECEPTION   FROM P2 CONT   |
| <br>  6D<br> <br> | ZC AC SUPPLY      PC 1 NO TEST  | NO TEST RESULT RECEPTION     FROM P1 CONT |

EFF: 201-208, 227-227, 229-245, 426-428,

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### TROUBLE SHOOTING MANUAL

| FAULT         | FAULT ORIGIN                        | CFDS MESSAGE                                    |
|---------------|-------------------------------------|---|
| 6F            | PRESSURE SWITCH OUTPUT              | PRESS SWITCH                                    |
| 7B<br>        | ZC 429 XTR                          | CHECK BUS ZONE CONT TO  <br>  P1 CONT + P2 CONT |
| 7C            | ZC DC SUPPLY                        | DC SUPPLY ZONE CONT                             |
| 7D            | PC 1 DC SUPPLY                      | DC SUPPLY P1 CONT                               |
| 7E            | PC 2 DC SUPPLY                      | DC SUPPLY P2 CONT                               |
| 76            | RECIRCULATION FAN 1 AND 2           | RECIRC FAN 1 AND 2 OR SPLY                      |
| <b>77</b><br> | L/H AND R/H MIXER UNIT TEMP SENSORS | TEMP SENSOR L/H AND R/H MIXER                   |

\*\*ON A/C 276-284, 476-478,

Post SB 21-1104 For A/C 276-281,476-478,

| 10  | TAV CKPT MOTOR, MECHANIC                   | TRIM VALVE CKPT          |
|-----|--|--------------------------|
| 11  | TAV FWD CAB MOTOR, MECHANIC                | TRIM VALVE FWD CAB       |
| 12  | TAV AFT CAB MOTOR, MECHANIC                | TRIM VALVE AFT CAB       |
| 13  | TAPRV FAILED OPEN/CLOSED, SOLENOID REDUCED | TRIM AIR PRESS VALVE     |
| 14  | CKPT TEMPERATURE SENSOR                    | TEMP SENSOR CKPT         |
| 15  | FWD CAB TEMPERATURE SENSOR                 | TEMP SENSOR FWD CAB      |
| 16  | AFT CAB TEMPERATURE SENSOR                 | TEMP SENSOR AFT CAB      |
| 17  | CKPT DUCT TEMPERATURE SENSOR               | TEMP SENSOR CKPT DUCT    |
| 18  | FWD CAB DUCT TEMPERATURE SENSOR            | TEMP SENSOR FWD CAB DUCT |
| 19  | AFT CAB DUCT TEMPERATURE SENSOR            | TEMP SENSOR AFT CAB DUCT |
| 1D  | L/H MIXER MANIFOLD TEMP SENSOR             | TEMP SENSOR L/H MIXER    |
| 1E  | R/H MIXER MANIFOLD TEMP SENSOR             | TEMP SENSOR R/H MIXER    |
| 1 F | CKPT TEMPERATURE SELECTOR                  | CKPT TEMP SELECTOR       |

EFF: 201-208, 227-227, 229-245, 276-284, 426-428, 476-478, SROS

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## TROUBLE SHOOTING MANUAL

| FAULT CODE            |   |   |
|-----------------------|---|---|
|                       | FWD CAB TEMPERATURE SELECTOR  | <br>  FWD CAB TEMP SELECTOR               |
| 21                    | AFT CAB TEMPERATURE SELECTOR  | AFT CAB TEMP SELECTOR                     |
| 22                    | G & T FAN FAULT/OFF   | GALY & TOIL FAN OR SPLY                   |
| 23                    | <br>  HIGH HOT AIR PRESSURE<br>   | TRIM AIR PRESS VALVE OR<br>  PRESS SWITCH |
| 24                    | FLOW SELECTOR   | FLOW SEL                                  |
| 2E                    | ZC 429 RCV EXT  | NO DATA FROM CFDS                         |
| 2F                    | ZC 429 RCV EXT  | NO DATA FROM ADIRS                        |
| 30<br> <br> <br> <br> | ZC RAM, EPROM, CPU, A/D CONVERTER,<br>  DISCRETE INPUTS, DISCRETE OUTPUTS,<br>  429 XTR INT, 429 XTR EXT, PWR SPLY,<br>  TAV DRIVE OUTPUTS, 429 RCV INT,<br>  WATCHDOG BACKUP SWITCHING | ZONE CONT<br>                             |
| 31                    | WRG SHORT CIRCUIT   | ZONE CONT OR SENSOR SUPPLY SHORT          |
| 34                    | TAPRV FAILED OPEN   | ZONE CONT                                 |
| 38                    | TAPRV DRIVE   | ZONE CONT                                 |
| 39                    | RECIRCULATION FAN 1   | RECIRC FAN 1 OR SPLY                      |
| 3A                    | RECIRCULATION FAN 2   | RECIRC FAN 2 OR SPLY                      |
| 3B                    |   | FWD CARGO FAN OR SPLY                     |
| 3C                    | <br>  AFT CARGO VENTILATION<br>   | AFT CARGO FAN OR SPLY                     |
|                       | LH ANTI ICE SYSTEM  | WAI FILTER OR VALVE 9DL                   |
| :                     | RH ANTI ICE SYSTEM  | WAI FILTER OR VALVE 10DL                  |
| :                     | LH ANTI ICE SYSTEM  | NO BLEED AIR ENG 1                        |
|                       | I   | NO BLEED AIR ENG 2                        |
| 41                    | MIXER FLAP DISAGREE   | MIXER FLAP DRIVE OR SPLY                  |
| 43                    | P 1 COMPRESSOR TEMP SENSOR / P 1  | I   |

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## TROUBLE SHOOTING MANUAL

| FAULT<br>  CODE |   | CFDS MESSAGE                            |
|-----------------|---|---|
|                 | COMPRESSOR OVHT SENSOR DISAGREE                                       | DISAGREE                                |
| <br>  44<br>    | P 2 COMPRESSOR TEMP SENSOR / P 2<br>  COMPRESSOR OVHT SENSOR DISAGREE | PC2 COMP TEMP/OVHT SENSOR<br>  DISAGREE |
| <b>49</b>       | PC 1 MAIN DC SUPPLY   | NO 28V ON PACK 1 MAIN                   |
| 4A              | PC 2 MAIN DC SUPPLY   | NO 28V ON PACK 2 MAIN                   |
| 4B              | PC 1 SECD DC SUPPLY   | NO 28V ON PACK 1 SECD                   |
| 4C              | PC 2 SECD DC SUPPLY   | NO 28V ON PACK 2 SECD                   |
| 4E              | ZC MAIN DC SUPPLY   | NO 28V ON ZONE MAIN                     |
| 4F              | ZC SECD DC SUPPLY   | NO 28V ON ZONE SECD                     |
| 52              | PACK 1 PRESSURE INLET SENSOR  | P1 PRESS INL SENSOR                     |
| 53              | PACK 2 PRESSURE INLET SENSOR  | P2 PRESS INL SENSOR                     |
| 54              | PACK 1 DISCHARGE OVERHEAT   | P1 AIR CYCLE MACH CHECK                 |
| 55              | PACK 2 DISCHARGE OVERHEAT   | P2 AIR CYCLE MACH CHECK                 |
| 56              | PACK 1 COMPRESSOR TEMP SENSOR   | P1 COMP TEMP SENSOR                     |
| 57              | PACK 2 COMPRESSOR TEMP SENSOR   | P2 COMP TEMP SENSOR                     |
| 58              | PACK 1 COMPRESSOR OVERHEAT SENSOR                                     | P1 COMP OVHT SENSOR                     |
| 59              | PACK 2 COMPRESSOR OVERHEAT SENSOR                                     | P2 COMP OVHT SENSOR                     |
| <br>  5A        | PACK 1 OUTLET TEMPERATURE SENSOR                                      | P1 OUTLET TEMP SENSOR                   |
| <br>  5B        | PACK 2 OUTLET TEMPERATURE SENSOR                                      | P2 OUTLET TEMP SENSOR                   |
| <br>  5C        | PACK 1 WATER EXTRACTOR TEMP SENSOR                                    | P1 WATER EX TEMP SENSOR                 |
| <br>  5D        | PACK 2 WATER EXTRACTOR TEMP SENSOR                                    |   |
| <br>  5E<br>    | PACK 1 RAI MOTOR, POT, MECHANIC,<br>  LIMIT SWITCH                    | <br>  P1 RAM AIR IN ACTUATOR<br>        |
| 5F<br> <br>     | PACK 2 RAI MOTOR, POT, MECHANIC,<br>  LIMIT SWITCH                    | P2 RAM AIR IN ACTUATOR<br>              |
| 60              | PACK 1 RAO MOTOR, POT, MECHANIC,                                      | 1                                       |

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## TROUBLE SHOOTING MANUAL

| FAULT<br>  CODE |   | <br>  CFDS MESSAGE<br>                     |
|-----------------|---|--|
|                 | LIMIT SWITCH  | <br> <br>                                  |
| 61<br>  61      | PACK 2 RAO MOTOR, POT, MECHANIC,<br>  LIMIT SWITCH                              | P2 RAM AIR OUT ACTUATOR                    |
| <b>62</b><br>   | PACK 1 BPV MOTOR, POT, MECHANIC,<br>  LIMIT SWITCH                              | P1 BYPASS VALVE                            |
| <b>63</b><br>   | PACK 2 BPV MOTOR, POT, MECHANIC,<br>  LIMIT SWITCH                              | P2 BYPASS VALVE                            |
| 64              | PACK 1 FCV MOTOR, POT, MECHANIC   | P1 FLOW CONT VALVE                         |
| 65              | PACK 2 FCV MOTOR, POT, MECHANIC   | P2 FLOW CONT VALVE                         |
| 66              | PACK 1 AIV PERMANENT OPEN/CLOSED  | P1 CONT OR ANTI ICE VALVE                  |
| 67              | PACK 2 AIV PERMANENT OPEN/CLOSED  | P2 CONT OR ANTI ICE VALVE                  |
| 68              | PACK 1 PRESSURE (FLOW) SENSOR   | P1 FLOW SENSOR                             |
| 69              | PACK 2 PRESSURE (FLOW) SENSOR   | P2 FLOW SENSOR                             |
| 6A<br> <br>     | PC 1 RAM, EPROM, CPU, A/D CONVERTER, DISCRETE INPUTS, 429 RCV, BPV DRIVE OUTPUT | P1 CONT<br>                                |
| 6B<br> <br>     | PC 2 RAM, EPROM, CPU, A/D CONVERTER, DISCRETE INPUTS, 429 RCV, BPV DRIVE OUTPUT | P2 CONT<br>                                |
| 6C              | ZC AC SUPPLY  | AC SUPPLY ZONE CONT                        |
| 6D<br>          | PC 1 NO TEST<br>  | NO TEST RESULT RECEPTION<br>  FROM P1 CONT |
| 6E<br> <br>     | PC 2 NO TEST<br>  | NO TEST RESULT RECEPTION<br>  FROM P2 CONT |
| 6F              | I   | PRESS SWITCH                               |
| 70              | I   | ZC PIN PROGRAM MISMATCH                    |
| :               | PC 1 DISCRETE INPUTS  | PC 1 PIN PROGRAM MISMATCH                  |
| <br>  72        | I   | PC 2 PIN PROGRAM MISMATCH                  |
| <b>74</b>       | I .   | AFT CARGO FANS OR SPLY                     |

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### TROUBLE SHOOTING MANUAL

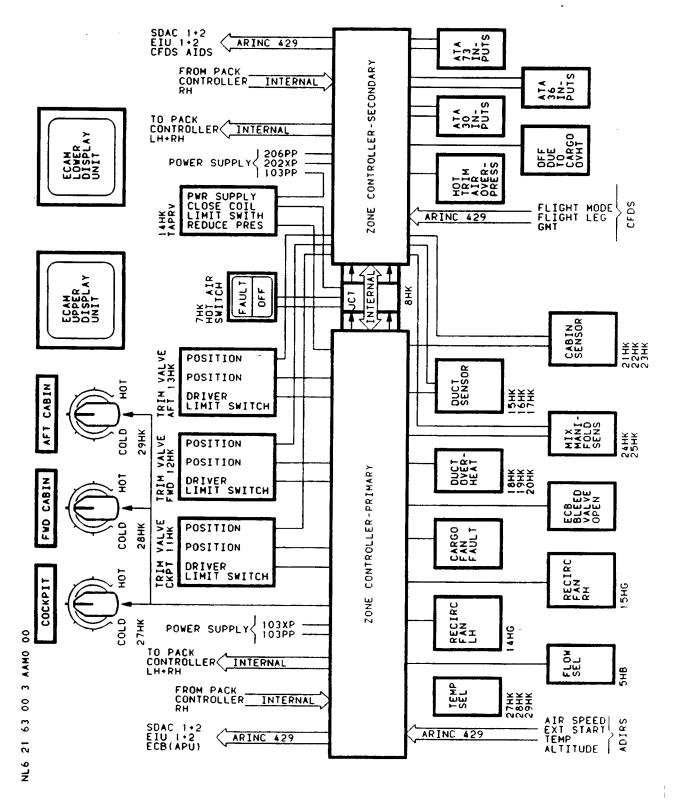
| FAULT<br>  CODE<br> |                                     | CFDS MESSAGE                             |
|---------------------|-------------------------------------|--|
| <br>  7B<br>        | <br>  ZC 429 XTR<br>                | <br>  CHECK BUS ZONE CONT TO             |
| 7C                  | ZC DC SUPPLY                        | DC SUPPLY ZONE CONT                      |
| 7D                  | PC 1 DC SUPPLY                      | DC SUPPLY P1 CONT                        |
| 7E                  | PC 2 DC SUPPLY                      | DC SUPPLY P2 CONT                        |
| 76<br>              | RECIRCULATION FAN 1 AND 2           | RECIRC FAN 1 AND 2 OR SPLY               |
| 77<br>              | L/H AND R/H MIXER UNIT TEMP SENSORS | <br>  TEMP SENSOR L/H AND R/H MIXER <br> |

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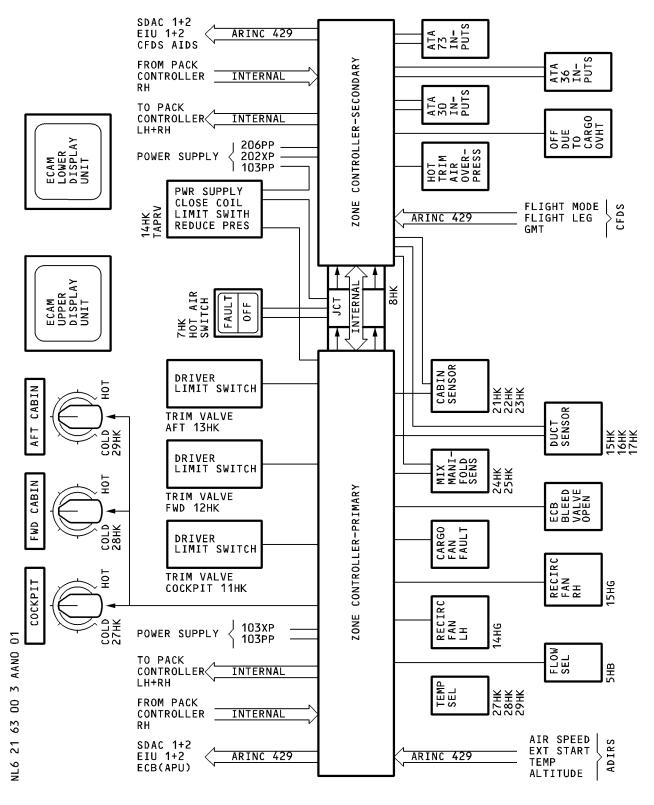
Cockpit and Cabin Temperature Control - Block Diagram Figure 301

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### TROUBLE SHOOTING MANUAL



Cockpit and Cabin Temperature Control - Block Diagram Figure 301A

