CHAPTER

23

COMMUNICATIONS

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23-EFFECTIVE PAGES			23-11 TASKS (cont)			23-11 TASKS (cont)		
1 thru 5	Oct 15/2024		210	Oct 15/2019		R 246	Oct 15/2024	
6	BLANK		R 211	Oct 15/2024		R 247	Oct 15/2024	
23-HOW TO USE THE FIM			212	Oct 15/2019		R 248	Oct 15/2024	
1	Feb 15/2013		213	Jun 15/2021		D 249	Oct 15/2024	
2	Feb 15/2013		R 214	Oct 15/2024		D 250	BLANK	
3	Feb 15/2013		R 215	Oct 15/2024		23-12 TASKS		
4	Feb 15/2013		R 216	Oct 15/2024		R 201	Oct 15/2024	
5	Feb 15/2013		R 217	Oct 15/2024		R 202	Oct 15/2024	
6	Feb 15/2013		R 218	Oct 15/2024		R 203	Oct 15/2024	
23-FAULT CODE INDEX			R 219	Oct 15/2024		204	Jun 15/2024	
101	Feb 15/2013		R 220	Oct 15/2024		205	Oct 15/2019	
102	Feb 15/2013		R 221	Oct 15/2024		206	Oct 15/2019	
103	Feb 15/2023		R 222	Oct 15/2024		R 207	Oct 15/2024	
104	Jun 15/2024		R 223	Oct 15/2024		208	Jun 15/2021	
105	Jun 15/2024		R 224	Oct 15/2024		R 209	Oct 15/2024	
106	Feb 15/2023		R 225	Oct 15/2024		R 210	Oct 15/2024	
107	Feb 15/2023		R 226	Oct 15/2024		R 211	Oct 15/2024	
108	BLANK		R 227	Oct 15/2024		R 212	Oct 15/2024	
23-MAINT MSG INDEX			R 228	Oct 15/2024		R 213	Oct 15/2024	
R 101	Oct 15/2024		R 229	Oct 15/2024		O 214	Oct 15/2024	
O 102	Oct 15/2024		R 230	Oct 15/2024		O 215	Oct 15/2024	
103	Feb 15/2017		R 231	Oct 15/2024		O 216	Oct 15/2024	
104	Jun 15/2013		R 232	Oct 15/2024		O 217	Oct 15/2024	
105	Jun 15/2013		R 233	Oct 15/2024		R 218	Oct 15/2024	
106	Oct 15/2013		R 234	Oct 15/2024		R 219	Oct 15/2024	
107	Feb 15/2023		R 235	Oct 15/2024		R 220	Oct 15/2024	
108	BLANK		R 236	Oct 15/2024		R 221	Oct 15/2024	
23-11 TASKS			R 237	Oct 15/2024		R 222	Oct 15/2024	
R 201	Oct 15/2024		R 238	Oct 15/2024		R 223	Oct 15/2024	
R 202	Oct 15/2024		R 239	Oct 15/2024		R 224	Oct 15/2024	
R 203	Oct 15/2024		R 240	Oct 15/2024		O 225	Oct 15/2024	
R 204	Oct 15/2024		R 241	Oct 15/2024		O 226	Oct 15/2024	
R 205	Oct 15/2024		R 242	Oct 15/2024		O 227	Oct 15/2024	
206	Oct 15/2019		R 243	Oct 15/2024		R 228	Oct 15/2024	
207	Oct 15/2019		R 244	Oct 15/2024		R 229	Oct 15/2024	
208	Jun 15/2021		R 245	Oct 15/2024		R 230	Oct 15/2024	
R 209	Oct 15/2024							

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

23-EFFECTIVE PAGES

Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
23-12 TASKS (cont)			23-27 TASKS (cont)			23-27 TASKS (cont)		
R 231	Oct 15/2024		R 202	Oct 15/2024		R 238	Oct 15/2024	
O 232	Oct 15/2024		R 203	Oct 15/2024		R 239	Oct 15/2024	
O 233	Oct 15/2024		R 204	Oct 15/2024		R 240	Oct 15/2024	
R 234	Oct 15/2024		R 205	Oct 15/2024		R 241	Oct 15/2024	
R 235	Oct 15/2024		R 206	Oct 15/2024		R 242	Oct 15/2024	
R 236	Oct 15/2024		R 207	Oct 15/2024		R 243	Oct 15/2024	
R 237	Oct 15/2024		R 208	Oct 15/2024		R 244	Oct 15/2024	
R 238	Oct 15/2024		R 209	Oct 15/2024		R 245	Oct 15/2024	
R 239	Oct 15/2024		R 210	Oct 15/2024		R 246	Oct 15/2024	
R 240	Oct 15/2024		R 211	Oct 15/2024		R 247	Oct 15/2024	
R 241	Oct 15/2024		R 212	Oct 15/2024		R 248	Oct 15/2024	
O 242	Oct 15/2024		R 213	Oct 15/2024		23-28 TASKS		
R 243	Oct 15/2024		R 214	Oct 15/2024		R 201	Oct 15/2024	
R 244	Oct 15/2024		R 215	Oct 15/2024		R 202	Oct 15/2024	
R 245	Oct 15/2024		R 216	Oct 15/2024		O 203	Oct 15/2024	
R 246	Oct 15/2024		R 217	Oct 15/2024		R 204	Oct 15/2024	
R 247	Oct 15/2024		R 218	Oct 15/2024		R 205	Oct 15/2024	
R 248	Oct 15/2024		R 219	Oct 15/2024		R 206	Oct 15/2024	
23-24 TASKS			R 220	Oct 15/2024		O 207	Oct 15/2024	
R 201	Oct 15/2024		R 221	Oct 15/2024		208	Jun 15/2021	
R 202	Oct 15/2024		R 222	Oct 15/2024		R 209	Oct 15/2024	
R 203	Oct 15/2024		R 223	Oct 15/2024		O 210	Oct 15/2024	
R 204	Oct 15/2024		R 224	Oct 15/2024		211	Jun 15/2021	
R 205	Oct 15/2024		R 225	Oct 15/2024		R 212	Oct 15/2024	
R 206	Oct 15/2024		R 226	Oct 15/2024		O 213	Oct 15/2024	
R 207	Oct 15/2024		R 227	Oct 15/2024		R 214	Oct 15/2024	
208	Feb 15/2015		R 228	Oct 15/2024		R 215	Oct 15/2024	
R 209	Oct 15/2024		R 229	Oct 15/2024		R 216	Oct 15/2024	
R 210	Oct 15/2024		R 230	Oct 15/2024		23-31 TASKS		
R 211	Oct 15/2024		R 231	Oct 15/2024		201	Jun 15/2013	
R 212	Oct 15/2024		R 232	Oct 15/2024		R 202	Oct 15/2024	
R 213	Oct 15/2024		R 233	Oct 15/2024		203	Jun 15/2021	
R 214	Oct 15/2024		R 234	Oct 15/2024		204	Oct 15/2019	
R 215	Oct 15/2024		R 235	Oct 15/2024		205	Jun 15/2024	
216	BLANK		R 236	Oct 15/2024		206	Jun 15/2019	
23-27 TASKS			R 237	Oct 15/2024		R 207	Oct 15/2024	
R 201	Oct 15/2024		R 238	Oct 15/2024		R 208	Oct 15/2024	

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23-EFFECTIVE PAGES

Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
23-31 TASKS (cont)			23-32 TASKS			23-34 TASKS (cont)		
R 209	Oct 15/2024		201	Jun 15/2024		R 210	Oct 15/2024	
R 210	Oct 15/2024		202	Jun 15/2024		R 211	Oct 15/2024	
O 211	Oct 15/2024		203	Jun 15/2024		R 212	Oct 15/2024	
O 212	Oct 15/2024		204	Jun 15/2024		R 213	Oct 15/2024	
R 213	Oct 15/2024		205	Jun 15/2024		R 214	Oct 15/2024	
R 214	Oct 15/2024		206	Jun 15/2024		R 215	Oct 15/2024	
R 215	Oct 15/2024		207	Jun 15/2024		216	BLANK	
R 216	Oct 15/2024		208	Jun 15/2024		23-41 TASKS		
R 217	Oct 15/2024		209	Jun 15/2024		R 201	Oct 15/2024	
R 218	Oct 15/2024		210	Jun 15/2024		R 202	Oct 15/2024	
R 219	Oct 15/2024		211	Jun 15/2024		203	Jun 15/2016	
R 220	Oct 15/2024		212	Jun 15/2024		R 204	Oct 15/2024	
R 221	Oct 15/2024		213	Jun 15/2024		R 205	Oct 15/2024	
R 222	Oct 15/2024		214	Jun 15/2024		R 206	Oct 15/2024	
R 223	Oct 15/2024		215	Jun 15/2024		207	Feb 15/2013	
O 224	Oct 15/2024		216	Jun 15/2024		R 208	Oct 15/2024	
R 225	Oct 15/2024		217	Jun 15/2024		R 209	Oct 15/2024	
R 226	Oct 15/2024		218	Jun 15/2024		O 210	Oct 15/2024	
O 227	Oct 15/2024		219	Jun 15/2024		R 211	Oct 15/2024	
O 228	Oct 15/2024		220	Jun 15/2024		212	Oct 15/2022	
O 229	Oct 15/2024		221	Jun 15/2024		R 213	Oct 15/2024	
O 230	Oct 15/2024		222	Jun 15/2024		O 214	Oct 15/2024	
R 231	Oct 15/2024		223	Jun 15/2024		215	Oct 15/2020	
R 232	Oct 15/2024		224	Jun 15/2024		216	Oct 15/2020	
R 233	Oct 15/2024		225	Jun 15/2024		23-42 TASKS		
O 234	Oct 15/2024		226	BLANK		R 201	Oct 15/2024	
O 235	Oct 15/2024		23-34 TASKS			202	Feb 15/2015	
O 236	Oct 15/2024		R 201	Oct 15/2024		203	Feb 15/2017	
O 237	Oct 15/2024		R 202	Oct 15/2024		204	Jun 15/2013	
O 238	Oct 15/2024		R 203	Oct 15/2024		205	Oct 15/2013	
D 239	Oct 15/2024		R 204	Oct 15/2024		206	Jun 15/2016	
D 240	Oct 15/2024		R 205	Oct 15/2024		R 207	Oct 15/2024	
D 241	Oct 15/2024		R 206	Oct 15/2024		R 208	Oct 15/2024	
D 242	Oct 15/2024		R 207	Oct 15/2024		R 209	Oct 15/2024	
D 243	Oct 15/2024		R 208	Oct 15/2024		R 210	Oct 15/2024	
D 244	Oct 15/2024		R 209	Oct 15/2024		211	Jun 15/2022	
						212	Jun 15/2022	

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Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
23-42 TASKS (cont)			23-51 TASKS (cont)			23-71 TASKS (cont)		
R 213	Oct 15/2024		202	Feb 15/2022		O 219	Oct 15/2024	
R 214	Oct 15/2024		203	Feb 15/2022		O 220	Oct 15/2024	
R 215	Oct 15/2024		204	Feb 15/2022		O 221	Oct 15/2024	
R 216	Oct 15/2024		R 205	Oct 15/2024		O 222	Oct 15/2024	
O 217	Oct 15/2024		R 206	Oct 15/2024		O 223	Oct 15/2024	
O 218	Oct 15/2024		207	Feb 15/2023		R 224	Oct 15/2024	
O 219	Oct 15/2024		208	Feb 15/2022		R 225	Oct 15/2024	
O 220	Oct 15/2024		209	Feb 15/2022		O 226	Oct 15/2024	
O 221	Oct 15/2024		210	Feb 15/2022		O 227	Oct 15/2024	
O 222	Oct 15/2024		211	Feb 15/2022		O 228	BLANK	
O 223	Oct 15/2024		212	Feb 15/2023		D 229	Oct 15/2024	
O 224	Oct 15/2024		R 213	Oct 15/2024		D 230	BLANK	
O 225	Oct 15/2024		R 214	Oct 15/2024		23-75 TASKS		
O 226	Oct 15/2024		O 215	Oct 15/2024		201	Oct 15/2019	
O 227	Oct 15/2024		O 216	Oct 15/2024		202	Oct 15/2019	
O 228	Oct 15/2024		O 217	Oct 15/2024		203	Oct 15/2019	
O 229	Oct 15/2024		218	BLANK		204	Oct 15/2019	
O 230	Oct 15/2024		23-71 TASKS			205	Oct 15/2019	
O 231	Oct 15/2024		R 201	Oct 15/2024		206	Oct 15/2019	
O 232	Oct 15/2024		R 202	Oct 15/2024		207	Oct 15/2019	
O 233	Oct 15/2024		R 203	Oct 15/2024		208	Oct 15/2019	
O 234	Oct 15/2024		R 204	Oct 15/2024		209	Oct 15/2019	
O 235	Oct 15/2024		R 205	Oct 15/2024		210	Oct 15/2019	
O 236	Oct 15/2024		206	Oct 15/2023		211	Oct 15/2019	
O 237	Oct 15/2024		R 207	Oct 15/2024		212	Oct 15/2022	
O 238	Oct 15/2024		208	Jun 15/2024		213	Oct 15/2022	
O 239	Oct 15/2024		209	Oct 15/2023		O 214	Oct 15/2024	
O 240	Oct 15/2024		210	Oct 15/2023		O 215	Oct 15/2024	
23-43 TASKS			211	Oct 15/2023		216	Oct 15/2022	
201	Oct 15/2022		R 212	Oct 15/2024		217	Oct 15/2022	
202	Oct 15/2022		R 213	Oct 15/2024		218	BLANK	
R 203	Oct 15/2024		R 214	Oct 15/2024		23-81 TASKS		
204	Feb 15/2013		R 215	Oct 15/2024		201	Jun 15/2015	
205	Jun 15/2016		O 216	Oct 15/2024		202	Feb 15/2023	
206	Jun 15/2016		O 217	Oct 15/2024		203	Feb 15/2023	
23-51 TASKS			O 218	Oct 15/2024		204	Feb 15/2023	
R 201	Oct 15/2024					205	Feb 15/2023	

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23-EFFECTIVE PAGES

Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
23-81 TASKS (cont)								
206	Feb 15/2023							
23-82 TASKS								
201	Feb 15/2022							
202	Feb 15/2022							
203	Feb 15/2022							
204	Feb 15/2022							
205	Feb 15/2022							
206	BLANK							

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

23-EFFECTIVE PAGES

YOU FIND A FAULT WITH
AN AIRPLANE SYSTEM

These are the possible types
of faults:

1. Observed Fault
2. Cabin Fault

USE BITE TO GET
MORE INFORMATION

If you did a BITE test already,
then you can go directly to the
fault isolation procedure for
the maintenance message.

For details, see Figure 2 ⟶

GO TO THE
FAULT ISOLATION
TASK IN THE FIM

Use the fault code or description
to find the task in the FIM. There
is a numerical list of fault codes
in each chapter. There are lists
of fault descriptions at the front
of the FIM.

For details, see Figure 3 ⟶

FOLLOW THE STEPS OF THE
FAULT ISOLATION TASK

The fault isolation task explains
how to find the cause of the fault.
When the task says "You corrected
the fault" you know that the fault
is gone.

For details, see Figure 4 ⟶

G04902 S0000148576_V1

Basic Fault Isolation Process
Figure 1

Some airplane systems have built-in test equipment (BITE). IF the system finds a fault when you do a BITE test, it will give you a maintenance message.

A maintenance message can be any of these:

- a code
- a text message
- a light
- an indication.

To find the fault isolation task for a maintenance message, go to the Maintenance Message Index in the chapter for the applicable system.

If you do not know which chapter is the correct one, look at the list at the front of any Maintenance Message Index. For each system or component (LRU) that has BITE, this list gives the chapter number where you can find the Index that you need.

Find the maintenance message for the applicable LRU or system in the Index. Then find the task number on the same line as the maintenance message. Go to the task in the FIM and do the steps of the task (see Figure 4).

G04950 S0000148578_V1

Getting Fault Information from BITE
Figure 2

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23-HOW TO USE THE FIM

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IF YOU HAVE:	THEN DO THIS TO FIND THE TASK IN THE FIM:

FAULT CODE →

1. The first two digits of the fault code are the FIM chapter that you need. Go to the Fault Code Index in that chapter and find the fault code. If the fault code starts with a letter, then go to the Cabin Fault Code Index at the front of the FIM.

2. Find the task number on the same line as the fault code. Go to the task in the FIM and do the steps in the task (see Figure 4).

OBSERVED FAULT DESCRIPTION →

1. Go to the Observed Fault List at the front of the FIM and find the best description for the fault.

2. Find the task number on the same line as the fault description. Go to the task in the FIM and do the steps of the task (see Figure 4).

CABIN FAULT DESCRIPTION →

1. Go to the Cabin Fault List at the front of the FIM and find the best description for the fault.

2. Find the task number on the same line as the fault description. Go to the task in the FIM and do the steps of the task (see Figure 4).

MAINTENANCE MESSAGE (FROM BITE) →

1. Go to the Maintenance Message Index in the chapter for the LRU (the front of each Index gives you the chapter number for all LRUs). Find the maintenance message in the Index.

2. Find the task number on the same line as the maintenance message. Go to the task in the FIM and do the steps in the task (see Figure 4).

G04979 S0000148579_V2

Finding the Fault Isolation Task in the FIM
Figure 3

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ASSUMED CONDITIONS AT START OF TASK

• External electrical power is ON
• Hydraulic power and pneumatic power are OFF
• Engines are shut down

• No equipment in the system is deactivated

POSSIBLE CAUSES

• The list of possible causes has the most likely cause first and the least
  likely cause last.

• You can use the maintenance records of your airline to determine if the fault
  occurred before. Compare the list of possible causes to the past maintenance
  actions. This will help prevent repetition of the same maintenance actions.

INITIAL EVALUATION PARAGRAPH

• The primary purpose of the Initial Evaluation paragraph at the start of the
  task is to help you find out if you can detect the fault right now:
  - If you cannot detect the fault right now, then the task cannot isolate the
    fault and the Initial Evaluation paragraph will say that there was an
    intermittent fault.
  - If you have an intermittent fault, you must use your judgement (and follow
    your airline's policy) to decide which maintenance action to take. Then
    monitor the airplane to see if the fault happens again on subsequent
    flights.

• The Initial Evaluation paragraph can also help you find out which Fault
  Isolation Procedure to use to isolate and correct the fault.

FAULT ISOLATION STEPS

• The FIM task steps are presented in a specified order. The "If... then"
  statements will guide you along a logical path. But if you do not plan to
  follow the FIM task exactly, make sure that you read it before you start to
  isolate the fault. Some FIM procedures start with important steps that have
  an effect on the other steps in the procedure.

• When you are at the endpoint of the path, the step says "...you corrected the
  fault." Complete the step and exit the procedure.

G05009 S0000148580_V3

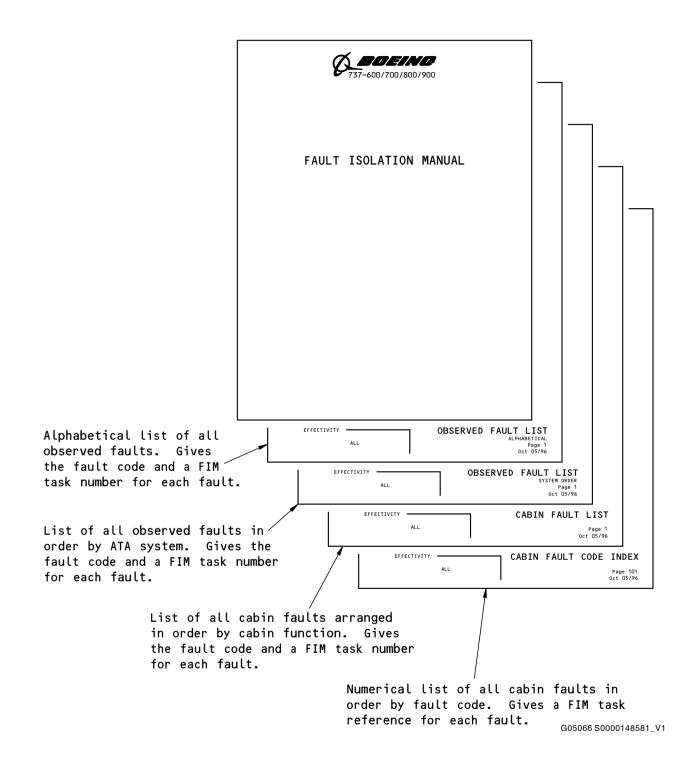**Doing the Fault Isolation Task**
Figure 4

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23-HOW TO USE THE FIM

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```
         ┌────────────────────────────────┐
         │           BOEING               │
         │      737-600/700/800/900       │
         │                                │
         │                                │
         │                                │
         │      FAULT  ISOLATION  MANUAL  │
         │                                │
         │                                │
         │                                │
```

Alphabetical list of all
observed faults. Gives
the fault code and a FIM
task number for each fault.

EFFECTIVITY   OBSERVED FAULT LIST
         ALL   ALPHABETICAL
                                  Page 1
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EFFECTIVITY   OBSERVED FAULT LIST
         ALL   SYSTEM ORDER
                                  Page 1
                                  Oct 05/96

List of all observed faults in
order by ATA system. Gives the
fault code and a FIM task number
for each fault.

EFFECTIVITY   CABIN FAULT LIST
         ALL
                                  Page 1
                                  Oct 05/96

EFFECTIVITY   CABIN FAULT CODE INDEX
         ALL
                                  Page 101
                                  Oct 05/96

List of all cabin faults arranged
in order by cabin function. Gives
the fault code and a FIM task number
for each fault.

Numerical list of all cabin faults in
order by fault code. Gives a FIM task
reference for each fault.

G05066 S0000148581_V1

Subjects at Front of FIM
Figure 5

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23-HOW TO USE THE FIM

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Instructions for
using the FIM.

21-HOW TO USE THE FIM

EFFECTIVITY
ALL

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Numerical index of all
fault codes that start
with the chapter number.
Gives a description and
a FIM task number for
each fault.

21-FAULT CODE INDEX

EFFECTIVITY
ALL

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21-MAINT MSG INDEX

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Alpha-numeric index of all
maintenance messages (from
BITE) for the chapter. Gives
a FIM task number for each
message.

21-31 TASK 801

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21-31 TASK SUPPORT

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21
AIR CONDITIONING

Illustrations and charts related to
the tasks in the chapter-section.

Fault isolation procedures for the
chapter. Each procedure is identified
by a chapter-section number and a
3-digit task number.

G05102 S0000148582_V1

**Subjects in Each FIM Chapter
Figure 6**

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SHZ ALL

23-HOW TO USE THE FIM

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FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
231 010 00	HF 1 control panel problem.	23-11 TASK 805
231 020 00	HF 2 control panel problem.	23-11 TASK 805
231 030 00	VHF 1 control panel problem.	23-12 TASK 814
231 040 00	VHF 2 control panel problem.	23-12 TASK 814
231 050 00	VHF 3 control panel problem.	23-12 TASK 814
231 060 31	HF 1 radio: reception and transmission problem at one station - captain's.	23-11 TASK 806
231 060 32	HF 1 radio: reception and transmission problem at one station - first officer's.	23-11 TASK 806
231 060 33	HF 1 radio: reception and transmission problem at one station - first observer's.	23-11 TASK 806
231 060 48	HF 1 radio: reception and transmission problem at all stations.	23-11 TASK 806
231 070 31	HF 1 radio: reception problem at one station - captain's.	23-11 TASK 806
231 070 32	HF 1 radio: reception problem at one station - first officer's.	23-11 TASK 806
231 070 33	HF 1 radio: reception problem at one station - first observer's.	23-11 TASK 806
231 070 48	HF 1 radio: reception problem at all stations.	23-11 TASK 806
231 080 31	HF 1 radio: Transmission problem at one station - captain's.	23-11 TASK 806
231 080 32	HF 1 radio: Transmission problem at one station - first officer's.	23-11 TASK 806
231 080 33	HF 1 radio: Transmission problem at one station - first observer's.	23-11 TASK 806
231 080 48	HF 1 radio: Transmission problem at all stations.	23-11 TASK 806
231 180 31	HF 2 radio: reception and transmission problem at one station - captain's.	23-11 TASK 806
231 180 32	HF 2 radio: reception and transmission problem at one station - first officer's.	23-11 TASK 806
231 180 33	HF 2 radio: reception and transmission problem at one station - first observer's.	23-11 TASK 806
231 180 48	HF 2 radio: reception and transmission problem at all stations.	23-11 TASK 806
231 190 31	HF 2 radio: reception problem at one station - captain's.	23-11 TASK 806
231 190 32	HF 2 radio: reception problem at one station - first officer's.	23-11 TASK 806
231 190 33	HF 2 radio: reception problem at one station - first observer's.	23-11 TASK 806
231 190 48	HF 2 radio: reception problem at all stations.	23-11 TASK 806
231 200 31	HF 2 radio: Transmission problem at one station - captain's.	23-11 TASK 806
231 200 32	HF 2 radio: Transmission problem at one station - first officer's.	23-11 TASK 806
231 200 33	HF 2 radio: Transmission problem at one station - first observer's.	23-11 TASK 806
231 200 48	HF 2 radio: Transmission problem at all stations.	23-11 TASK 806

EFFECTIVITY

SHZ ALL

23-FAULT CODE INDEX

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FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
231 300 31	Radio tuning panel problem - captain's.	23-12 TASK 815
231 300 32	Radio tuning panel problem - first officer's.	23-12 TASK 815
231 300 33	Radio tuning panel problem - first observer's.	23-12 TASK 815
231 310 31	VHF 1 radio: reception and transmission problem at one station - captain's.	23-12 TASK 816
231 310 32	VHF 1 radio: reception and transmission problem at one station - first officer's.	23-12 TASK 816
231 310 33	VHF 1 radio: reception and transmission problem at one station - first observer's.	23-12 TASK 816
231 310 48	VHF 1 radio: reception and transmission problem at all stations.	23-12 TASK 816
231 320 31	VHF 1 radio: reception problem at one station - captain's.	23-12 TASK 816
231 320 32	VHF 1 radio: reception problem at one station - first officer's.	23-12 TASK 816
231 320 33	VHF 1 radio: reception problem at one station - first observer's.	23-12 TASK 816
231 320 48	VHF 1 radio: reception problem at all stations.	23-12 TASK 816
231 330 31	VHF 1 radio: Transmission problem at one station - captain's.	23-12 TASK 816
231 330 32	VHF 1 radio: Transmission problem at one station - first officer's.	23-12 TASK 816
231 330 33	VHF 1 radio: Transmission problem at one station - first observer's.	23-12 TASK 816
231 330 48	VHF 1 radio: Transmission problem at all stations.	23-12 TASK 816
231 430 31	VHF 2 radio: reception and transmission problem at one station - captain's.	23-12 TASK 816
231 430 32	VHF 2 radio: reception and transmission problem at one station - first officer's.	23-12 TASK 816
231 430 33	VHF 2 radio: reception and transmission problem at one station - first observer's.	23-12 TASK 816
231 430 48	VHF 2 radio: reception and transmission problem at all stations.	23-12 TASK 816
231 440 31	VHF 2 radio: reception problem at one station - captain's.	23-12 TASK 816
231 440 32	VHF 2 radio: reception problem at one station - first officer's.	23-12 TASK 816
231 440 33	VHF 2 radio: reception problem at one station - first observer's.	23-12 TASK 816
231 440 48	VHF 2 radio: reception problem at all stations.	23-12 TASK 816
231 450 31	VHF 2 radio: Transmission problem at one station - captain's.	23-12 TASK 816
231 450 32	VHF 2 radio: Transmission problem at one station - first officer's.	23-12 TASK 816
231 450 33	VHF 2 radio: Transmission problem at one station - first observer's.	23-12 TASK 816
231 450 48	VHF 2 radio: Transmission problem at all stations.	23-12 TASK 816
231 550 31	VHF 3 radio: reception and transmission problem at one station - captain's.	23-12 TASK 816

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231 550 32	VHF 3 radio: reception and transmission problem at one station - first officer's.	23-12 TASK 816
231 550 33	VHF 3 radio: reception and transmission problem at one station - first observer's.	23-12 TASK 816
231 550 48	VHF 3 radio: reception and transmission problem at all stations.	23-12 TASK 816
231 560 31	VHF 3 radio: reception problem at one station - captain's.	23-12 TASK 816
231 560 32	VHF 3 radio: reception problem at one station - first officer's.	23-12 TASK 816
231 560 33	VHF 3 radio: reception problem at one station - first observer's.	23-12 TASK 816
231 560 48	VHF 3 radio: reception problem at all stations.	23-12 TASK 816
231 570 31	VHF 3 radio: Transmission problem at one station - captain's.	23-12 TASK 816
231 570 32	VHF 3 radio: Transmission problem at one station - first officer's.	23-12 TASK 816
231 570 33	VHF 3 radio: Transmission problem at one station - first observer's.	23-12 TASK 816
231 570 48	VHF 3 radio: Transmission problem at all stations.	23-12 TASK 816
231 575 00	VHF 3 radio: transmits continuously on the ELT VHF frequency.	23-27 TASK 808
232 020 00	SELCAL: Call switch does not reset for HF 1, PTT reset OK.	23-28 TASK 801
232 030 00	SELCAL: Call switch does not reset for HF 2, PTT reset OK.	23-28 TASK 801
232 040 00	SELCAL: Call switch does not reset for VHF 1, PTT reset OK.	23-28 TASK 801
232 050 00	SELCAL: Call switch does not reset for VHF 2, PTT reset OK.	23-28 TASK 801
232 060 00	SELCAL: Call switch does not reset for VHF 3, PTT reset OK.	23-28 TASK 801
232 080 00	SELCAL: call light does not come on for calls on HF 1.	23-28 TASK 802
232 090 00	SELCAL: call light does not come on for calls on HF 2.	23-28 TASK 802
232 100 00	SELCAL: call light does not come on for calls on VHF 1.	23-28 TASK 802
232 110 00	SELCAL: call light does not come on for calls on VHF 2.	23-28 TASK 802
232 120 00	SELCAL: call light does not come on for calls on VHF 3.	23-28 TASK 802
232 140 00	SELCAL: Chime does not operate for calls on HF 1, SELCAL call light comes on.	23-28 TASK 803
232 150 00	SELCAL: Chime does not operate for calls on HF 2, SELCAL call light comes on.	23-28 TASK 803
232 160 00	SELCAL: Chime does not operate for calls on VHF 1, SELCAL call light comes on.	23-28 TASK 803
232 170 00	SELCAL: Chime does not operate for calls on VHF 2, SELCAL call light comes on.	23-28 TASK 803
232 180 00	SELCAL: Chime does not operate for calls on VHF 3, SELCAL call light comes on.	23-28 TASK 803
232 200 00	SELCAL: does not operate for HF 1.	23-28 TASK 804
232 210 00	SELCAL: does not operate for HF 2.	23-28 TASK 804
232 220 00	SELCAL: does not operate for VHF 1.	23-28 TASK 804

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232 230 00	SELCAL: does not operate for VHF 2.	23-28 TASK 804
232 240 00	SELCAL: does not operate for VHF 3.	23-28 TASK 804
232 250 00	SELCAL: does not operate for any radio.	23-28 TASK 804
232 260 00	SELCAL: all call lights on.	23-28 TASK 805
232 305 00	ACARS: input problem.	23-27 TASK 827
232 306 00	ACARS: CDU scratchpad shows CHECK TRANSPONDER I/F.	23-27 TASK 826
232 310 00	ACARS: does not operate correctly.	23-27 TASK 801
232 313 00	ACARS: CDU scratchpad shows NO COMM.	23-27 TASK 806
232 314 00	ACARS: Out-Off-On-In (OOOI) value not correct.	23-27 TASK 807
232 315 00	ACARS: CDU scratchpad shows APM WARN.	23-27 TASK 825
232 316 00	ACARS: CDU scratchpad shows APM HARDWARE FAULT.	23-27 TASK 830
232 317 00	ACARS: CDU scratchpad shows INITIALIZE APM.	23-27 TASK 830
232 325 00	ACARS: communication problem.	23-27 TASK 814
232 326 00	ACARS: CDU interface problem.	23-27 TASK 815
232 327 00	ACARS: input problem.	23-27 TASK 816
232 328 00	ACARS: call annunciation problem.	23-27 TASK 818
232 401 00	Emergency Locator Transmitter (ELT): Self Test Fails.	23-24 TASK 801
232 410 00	Emergency Locator Transmitter (ELT): no ELT signal on VHF when ELT switch set to ON during test.	23-24 TASK 801
232 411 00	Emergency Locator Transmitter (ELT): ELT light is on.	23-24 TASK 807
232 719 00	ACARS: CMU cannot print data to the Multi-function Printer.	23-27 TASK 812
232 720 00	ACARS: MU cannot print data to the Multi-function Printer.	23-27 TASK 812
233 010 00	Passenger address system - does not operate from flight compartment.	23-31 TASK 801
233 020 00	Passenger address system - distorted from flight compartment.	23-31 TASK 801
233 030 00	Passenger address system - intermittent from flight compartment.	23-31 TASK 801
233 040 00	Passenger address system - volume problem from flight compartment.	23-31 TASK 802
234 010 00	Service interphone: does not connect to flight interphone.	23-41 TASK 801
234 020 48	Service interphone: does not operate - all jacks.	23-41 TASK 801
234 030 48	Service interphone: distorted - all jacks.	23-41 TASK 803
234 040 48	Service interphone: intermittent - all jacks.	23-41 TASK 803
234 050 48	Service interphone: volume problem - all jacks.	23-41 TASK 803
234 060 00	Service interphone: does not operate - jack at EE rack.	23-41 TASK 802
234 070 00	Service interphone: distorted - jack at EE rack.	23-41 TASK 802
234 080 00	Service interphone: intermittent - jack at EE rack.	23-41 TASK 802

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234 090 00	Service interphone: volume problem - jack at EE rack.	23-41 TASK 802
234 100 00	Service interphone: does not operate - jack adjacent to APU.	23-41 TASK 802
234 110 00	Service interphone: intermittent - jack adjacent to APU.	23-41 TASK 802
234 120 00	Service interphone: distorted - jack adjacent to APU.	23-41 TASK 802
234 130 00	Service interphone: volume problem - jack adjacent to APU.	23-41 TASK 802
234 140 00	Service interphone: does not operate - jack at aft entry light panel.	23-41 TASK 802
234 150 00	Service interphone: distorted - jack at aft entry light panel.	23-41 TASK 802
234 160 00	Service interphone: intermittent - jack at aft entry light panel.	23-41 TASK 802
234 170 00	Service interphone: volume problem - jack at aft entry light panel.	23-41 TASK 802
234 180 00	Service interphone: does not operate - jack at external power receptacle panel.	23-41 TASK 802
234 190 00	Service interphone: distorted - jack at external power receptacle panel.	23-41 TASK 802
234 200 00	Service interphone: intermittent - jack at external power receptacle panel.	23-41 TASK 802
234 210 00	Service interphone: volume problem - jack at external power receptacle panel.	23-41 TASK 802
234 220 00	Service interphone: does not operate - jack at left wheel well.	23-41 TASK 802
234 230 00	Service interphone: distorted - jack at left wheel well.	23-41 TASK 802
234 240 00	Service interphone: intermittent - jack at left wheel well.	23-41 TASK 802
234 250 00	Service interphone: volume problem - jack at left wheel well.	23-41 TASK 802
234 260 00	Service interphone: does not operate - jack at right wheel well.	23-41 TASK 802
234 270 00	Service interphone: distorted - jack at right wheel well.	23-41 TASK 802
234 280 00	Service interphone: intermittent - jack at right wheel well.	23-41 TASK 802
234 290 00	Service interphone: volume problem - jack at right wheel well.	23-41 TASK 802
234 300 00	Service interphone: does not operate - jack at right wing refueling slat.	23-41 TASK 802
234 310 00	Service interphone: distorted - jack at right wing refueling slat.	23-41 TASK 802
234 320 00	Service interphone: intermittent - jack at right wing refueling slat.	23-41 TASK 802
234 330 00	Service interphone: volume problem - jack at right wing refueling slat.	23-41 TASK 802
234 340 00	Call horn: does not sound.	23-43 TASK 801
234 350 00	Call horn: operates continuously.	23-43 TASK 802
234 360 00	Call system: does not operate, ground crew to flight compartment.	23-43 TASK 803

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234 370 00	Call system: call light does not come on, ground crew to flight compartment.	23-43 TASK 804
234 371 00	Call system: does not operate, attendant to flight compartment.	23-42 TASK 805
234 380 00	Call system: call light does not come on, attendant to flight compartment.	23-42 TASK 806
234 390 00	Call system: Chime does not sound in the flight compartment.	23-42 TASK 804
234 395 00	Call system: attendant call chime does not operate in passenger cabin.	23-42 TASK 803
234 400 00	Call system: does not operate, flight compartment to attendant.	23-42 TASK 802
234 410 00	Service interphone: does not operate - jack in the electronic equipment bay.	23-41 TASK 802
234 420 00	Service interphone: intermittent - jack in the electronic equipment bay.	23-41 TASK 802
234 430 00	Service interphone: distorted - jack in the electronic equipment bay.	23-41 TASK 802
234 440 00	Service interphone: volume problem - jack in the electronic equipment bay.	23-41 TASK 802
234 811 00	Attendant control panel: amber light on ACP switch assembly does not come on during operational test.	23-42 TASK 841
235 010 31	Boom microphone/headset: does not operate - captain's.	23-51 TASK 801
235 010 32	Boom microphone/headset: does not operate - first officer's.	23-51 TASK 801
235 020 31	Boom microphone/headset: damaged - captain's.	23-51 TASK 802
235 020 32	Boom microphone/headset: damaged - first officer's.	23-51 TASK 802
235 030 31	Flight interphone: does not operate - captain's.	23-51 TASK 804
235 030 32	Flight interphone: does not operate - first officer's.	23-51 TASK 804
235 030 33	Flight interphone: does not operate - first observer's.	23-51 TASK 804
235 030 48	Flight interphone: does not operate - all stations.	23-51 TASK 803
235 040 31	Headphone: does not operate - captain's.	23-51 TASK 801
235 040 32	Headphone: does not operate - first officer's.	23-51 TASK 801
235 040 33	Headphone: does not operate - first observer's.	23-51 TASK 801
235 040 34	Headphone: does not operate - second observer's.	23-51 TASK 801
235 050 31	Hand microphone: does not operate - captain's.	23-51 TASK 801
235 050 32	Hand microphone: does not operate - first officer's.	23-51 TASK 801
235 050 33	Hand microphone: does not operate - first observer's.	23-51 TASK 801
235 060 31	Hand microphone: damaged - captain's.	23-51 TASK 802
235 060 32	Hand microphone: damaged - first officer's.	23-51 TASK 802
235 060 33	Hand microphone: damaged - first observer's.	23-51 TASK 802
235 070 31	Headphone: damaged - captain's.	23-51 TASK 802

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235 070 32	Headphone: damaged - first officer's.	23-51 TASK 802
235 070 33	Headphone: damaged - first observer's.	23-51 TASK 802
235 070 34	Headphone: damaged - second observer's.	23-51 TASK 802
235 071 31	Oxygen mask: communication problem - captain's.	23-51 TASK 808
235 071 32	Oxygen mask: communication problem - first officer's.	23-51 TASK 808
235 071 33	Oxygen mask: communication problem - first observer's.	23-51 TASK 808
235 080 31	Speaker in the flight compartment: does not operate - captain's.	23-51 TASK 805
235 080 32	Speaker in the flight compartment: does not operate - first officer's.	23-51 TASK 806
235 101 31	Audio control panel indicator light problem - captain's.	23-51 TASK 807
235 101 32	Audio control panel indicator light problem - first officer's.	23-51 TASK 807
235 101 33	Audio control panel indicator light problem - first observer's.	23-51 TASK 807
235 102 31	Audio control panel volume control problem - captain's.	23-51 TASK 807
235 102 32	Audio control panel volume control problem - first officer's.	23-51 TASK 807
235 102 33	Audio control panel volume control problem - first observer's.	23-51 TASK 807
235 103 31	Audio control panel selector switch problem - captain's.	23-51 TASK 807
235 103 32	Audio control panel selector switch problem - first officer's.	23-51 TASK 807
235 103 33	Audio control panel selector switch problem - first observer's.	23-51 TASK 807
237 010 00	Voice recorder: Signal problem at monitor jack.	23-71 TASK 801
237 015 00	Voice recorder: RIPS maintenance discrete check fails.	23-71 TASK 806
237 020 00	Voice recorder: STATUS light or TEST light does not come on when TEST switch is pushed.	23-71 TASK 804
237 050 00	Voice recorder: system operation problem (airplanes with AUTO/ON switch).	23-71 TASK 805
237 501 01	Video Surveillance System: no video for one camera - CAM 1.	23-75 TASK 807
237 501 02	Video Surveillance System: no video for one camera - CAM 2.	23-75 TASK 807
237 501 03	Video Surveillance System: no video for one camera - CAM 3.	23-75 TASK 807
237 502 00	Video Surveillance System: no video for all three Video Surveillance Cameras and/or the Lower Center Multi-function Display shows CAMERA FAIL.	23-75 TASK 809
237 510 00	Video Surveillance System: Distorted video from one camera.	23-75 TASK 808
238 301 00	Flight Compartment: Outlet Unit LED Problems.	Reference Not Currently Available
238 303 00	Flight Compartment: Outlet Unit Has No Power or USB Problems.	23-82 TASK 803

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Window Heat Control Unit - Right Forward	WHCU - R FWD	30
Window Heat Control Unit - Right Side	WHCU - R SIDE	30
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ACP	23-11034 LIGHT <COLUMN>-<ADDRESS> INCORRECT CUSTOM SCENES DETECTED	23-42 TASK 810
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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
ACP	23-11047 LIGHT <COLUMN>-<ADDRESS> NO RESPONSE DURING ZONING	23-42 TASK 823
ACP	23-11048 LIGHT <COLUMN>-<ADDRESS> OUT OF SEQUENCE RESPONSE DURING ZONING	23-42 TASK 823
ACP	23-11049 LIGHT <COLUMN>-<ADDRESS> INCORRECT ZONE DETECTED	23-42 TASK 824
ACP	23-11050 LIGHT <COLUMN>-<ADDRESS> NO RESPONSE DURING STANDARD SCENE DOWNLOAD	23-42 TASK 823
ACP	23-11051 LIGHT <COLUMN>-<ADDRESS> OUT OF SEQUENCE RESPONSE DURING STANDARD SCENE DOWNLOAD	23-42 TASK 823
ACP	23-11052 LIGHT <COLUMN>-<ADDRESS> FAILED STANDARD SCENE DOWNLOAD	23-42 TASK 823
ACP	23-11053 LIGHT <COLUMN>-<ADDRESS> NO RESPONSE DURING CUSTOM SCENE DOWNLOAD	23-42 TASK 823
ACP	23-11054 LIGHT <COLUMN>-<ADDRESS> OUT OF SEQUENCE RESPONSE DURING CUSTOM SCENE DOWNLOAD	23-42 TASK 823
ACP	23-11055 LIGHT <COLUMN>-<ADDRESS> FAILED CUSTOM SCENE DOWNLOAD	23-42 TASK 823
ACP	23-11056 NO DATA LOAD LRU RESPONSES DETECTED ON COLUMN 1	23-42 TASK 825
ACP	23-11057 NO DATA LOAD LRU RESPONSES DETECTED ON COLUMN 2	23-42 TASK 825
ACP	23-11058 NO DATA LOAD LRU RESPONSES DETECTED ON COLUMN 3	23-42 TASK 825
ACP	23-11059 NO DATA LOAD LRU RESPONSES DETECTED ON COLUMN 4	23-42 TASK 825
ACP	23-11060 DATA LOAD RS-485 CABLE BREAK DETECTED ON COLUMN 1	23-42 TASK 826
ACP	23-11061 DATA LOAD RS-485 CABLE BREAK DETECTED ON COLUMN 2	23-42 TASK 826
ACP	23-11062 DATA LOAD RS-485 CABLE BREAK DETECTED ON COLUMN 3	23-42 TASK 826
ACP	23-11063 DATA LOAD RS-485 CABLE BREAK DETECTED ON COLUMN 4	23-42 TASK 826
ACP	23-11064 INTERNAL ACP FAULT DETECTED	23-42 TASK 827
ACP	23-11065 INTERNAL ACP FAULT DETECTED	23-42 TASK 827
ACP	23-11066 INTERNAL ACP FAULT DETECTED	23-42 TASK 827
ACP	23-11067 INTERNAL ACP FAULT DETECTED	23-42 TASK 827
ACP	23-11068 COMMUNICATIONS WITH AFT ACP LOST	23-42 TASK 828

EFFECTIVITY

SHZ ALL

23-MAINT MSG INDEX

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
ACP	23-11069 LSAP CONFIGURATION INVALID	23-42 TASK 829
ACP	23-11070 INTERNAL ACP FAULT DETECTED	23-42 TASK 830
ACP	23-11071 INTERNAL ACP FAULT DETECTED	23-42 TASK 830
ACP	23-11072 INTERNAL ACP FAULT DETECTED	23-42 TASK 830
ACP	23-11073 INTERNAL ACP FAULT DETECTED	23-42 TASK 830
ACP	23-11074 DISK FAULT DETECTED	23-42 TASK 831
ACP	23-11075 DISK FAULT DETECTED	23-42 TASK 831
ACP	23-11076 DISK FAULT DETECTED	23-42 TASK 831
ACP	23-11077 DISK FAULT DETECTED	23-42 TASK 831
ACP	23-11078 INCOMPATIBLE DISK DETECTED	23-42 TASK 832
ACP	23-11079 INCOMPATIBLE DISK DETECTED	23-42 TASK 832
ACP	23-11080 COMMUNICATIONS WITH ADL LOST	23-42 TASK 833
ACP	33-11001 Light <column>-<address> Component ID Error	33-20 TASK 817
ACP	33-11002 Light <column>-<address> Calibration Data CRC Error	33-20 TASK 817
ACP	33-11003 Light <column>-<address> Firmware Version Disagree Error	33-20 TASK 817
ACP	33-11004 Light <column>-<address> Power Supply Error	33-20 TASK 817
ACP	33-11005 Light <column>-<address> Temperature Sensor Error	33-20 TASK 817
ACP	33-11006 Light <column>-<address> RAM Check Error	33-20 TASK 817
ACP	33-11007 Light <column>-<address> Slave Token Error	33-20 TASK 817
ACP	33-11008 Light <column>-<address> Slave Communication Error	33-20 TASK 817
ACP	33-11009 Light <column>-<address> Slave Communication Error	33-20 TASK 817
ACP	33-11010 Light <column>-<address> Slave Communication Error	33-20 TASK 817
ACP	33-11011 Light <column>-<address> LED Wrap Data	33-20 TASK 817
ACP	33-11012 Light <column>-<address> Zone/Address Data CRC Error	33-20 TASK 818
ACP	33-11013 Light <column>-<address> Zone Address Disagree	33-20 TASK 818
ACP	33-11014 Light <column>-<address> Standard Scene CRC Error	33-20 TASK 818
ACP	33-11015 Light <column>-<address> Custom Scene CRC Error	33-20 TASK 818
ACP	33-11016 Light <column>-<address> Watchdog Timer Error	33-20 TASK 817

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SHZ ALL

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
ACP	33-11017 Light <column>-<address> Master Token Timeout Error	33-20 TASK 819
ACP	33-11018 Light <column>-<address> Master Token Release Error	33-20 TASK 819
ACP	33-11019 Light <column>-<address> Loss of communication	33-20 TASK 819
ELT	LED flashes 1 time per second	23-24 TASK 808
ELT	LED flashes 2 times per second	23-24 TASK 810
ELT	LED flashes 4 times per second	23-24 TASK 809
ELT	LED flashes one time	23-24 TASK 802
ELT	LED flashes seven times	23-24 TASK 804
ELT	LED flashes three or four times	23-24 TASK 803
HF XCVR	CONTROL FAIL	23-11 TASK 802
HF XCVR	CONTROL INPUT FAIL	23-11 TASK 802
HF XCVR	COUPLER FAIL	23-11 TASK 804
HF XCVR	EXTERNAL INPUT FAIL	23-11 TASK 802
HF XCVR	KEY INTERLOCK	23-11 TASK 804
HF XCVR	LRU FAIL	23-11 TASK 803
HF XCVR	LRU STATUS	23-11 TASK 803
VHF XCVR	ANTENNA FAIL	23-12 TASK 813
VHF XCVR	CONTROL FAIL	23-12 TASK 812
VHF XCVR	LRU STATUS	23-12 TASK 811
VHF XCVR	LRU STATUS	23-12 TASK 818
VHF XCVR	TUNING PORT B MISSING INPUT	23-12 TASK 812
VHF XCVR	VHF DATA RADIO FAILED	23-12 TASK 811

EFFECTIVITY
SHZ ALL

23-MAINT MSG INDEX

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801. HF Communication System - BITE Procedure

    A. General

        (1) You do the High Frequency (HF) Communication System BITE Procedure from the:

        SHZ 721-799

          (a) HF Control Panel on the Aft Electronic Panel, P8, in the Flight Deck.

        SHZ 002, 009-699, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

          (b) Front Panel of the HF Transceiver.

        SHZ 009-699

        (2) The HF Transceiver is located in the Main Equipment Center on the Electronic Equipment Rack, E4.

        SHZ 002, 721-799

        (3) No. 1 and No. 2 HF Transceivers are located in the Main Equipment Center on the Electronic Equipment Rack, E4.

        SHZ 801-819, 821-825, 827-847, 850-852, 855-859, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

        (4) The HF Transceiver is located in the Aft Cargo Compartment on the Electronic Equipment Rack, E6.

        SHZ 820, 888-899; SHZ 866 POST SB 737-23-1560

        (5) No. 1 and No. 2 HF Transceivers are located in the Aft Cargo Compartment on the Electronic Equipment Rack, E6.

        SHZ 860-863

        (6) HF Transceiver is located in the Main Equipment Center on the Electronic Equipment Rack, E8.

        SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

        (7) The HF Communication System BITE Test does a self check for existing Internal and External Faults.

          (a) Results of the BITE Test are shown with Fault Lights on the HF Transceiver Front Panel.

        SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-859, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560; WITH SINGLE COLLINS HF TRANSCEIVER

    B. BITE Procedure - COLLINS Single HF Transceiver

        SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-859, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

⚠️ **WARNING**	DO NOT OPERATE THE HF SYSTEM WHILE THE AIRPLANE IS REFUELED OR DEFUELED. THIS CAN CAUSE INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT.

┌─ EFFECTIVITY ─┐
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-11 TASK 801

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SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-859, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560 (Continued)

(WARNING PRECEDES)

⚠️ **WARNING**	MAKE SURE THAT PERSONNEL STAY A MINIMUM OF 10 FT (3 M) AWAY FROM THE VERTICAL STABILIZER WHEN THE HF SYSTEM TRANSMITS. RF ENERGY FROM THE HF ANTENNA CAN CAUSE INJURIES TO PERSONNEL.

(1)   Do these steps to do the BITE Procedure for the HF Communication System:

    (a)   Push and release the TEST Switch on the HF Transceiver Front Panel.

    (b)   Push and release the TEST Switch on the applicable HF Transceiver-1 (2) Front Panel.

    (c)   Make sure that these conditions occur:

        1)   All three LEDs on the HF Transceiver Front Panel come ON Red for one to three seconds.

        2)   The LRU STATUS LED comes ON Green and the KEY INTERLOCK and CONTROL FAIL LEDs stay Red for one to three seconds.

        3)   All three LEDs go OFF for one to seven seconds.

        4)   The LRU STATUS LED comes ON Green for about 30 seconds and the KEY INTERLOCK and CONTROL FAIL LEDs stay OFF.

    (d)   If the LRU STATUS LED comes ON Green for about 30 seconds and the KEY INTERLOCK and CONTROL FAIL LEDs stay OFF, then the BITE Test passed.

    (e)   If the Red LRU STATUS, KEY INTERLOCK, or CONTROL FAIL LED is ON, then refer to the table at the end of this task to find the applicable Fault Isolation Manual (FIM) Tasks for the maintenance messages that show.

    NOTE: LRU STATUS is the same as LRU FAIL.

             CONTROL FAIL is the same as CONTROL INPUT FAIL.

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560; WITH DUAL COLLINS HF TRANSCEIVERS

C.   BITE Procedure - COLLINS DUAL HF Transceivers

SHZ 002, 820, 888-899; SHZ 866 POST SB 737-23-1560

⚠️ **WARNING**	DO NOT OPERATE THE HF SYSTEM WHILE THE AIRPLANE IS REFUELED OR DEFUELED. THIS CAN CAUSE INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT.

⚠️ **WARNING**	MAKE SURE THAT PERSONNEL STAY A MINIMUM OF 10 FT (3 M) AWAY FROM THE VERTICAL STABILIZER WHEN THE HF SYSTEM TRANSMITS. RF ENERGY FROM THE HF ANTENNA CAN CAUSE INJURIES TO PERSONNEL.

(1)   Do these steps to do the BITE Procedure for the HF Communication System:

    (a)   Push and release the TEST Switch on the applicable HF Transceiver-1 (2) Front Panel.

    (b)   Make sure that these conditions occur:

┌─ EFFECTIVITY ─┐
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-11 TASK 801

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SHZ 002, 820, 888-899; SHZ 866 POST SB 737-23-1560 (Continued)

    1)   All three LEDs on the HF Transceiver Front Panel come ON Red for one to three seconds.

    2)   The LRU STATUS LED comes ON Green and the KEY INTERLOCK and CONTROL FAIL LEDs stay Red for one to three seconds.

    3)   All three LEDs go OFF for one to seven seconds.

    4)   The LRU STATUS LED comes ON Green for about 30 seconds and the KEY INTERLOCK and CONTROL FAIL LEDs stay OFF.

(c)   If the LRU STATUS LED comes ON Green for about 30 seconds and the KEY INTERLOCK and CONTROL FAIL LEDs stay OFF, then the BITE Test passed.

(d)   If the Red LRU STATUS, KEY INTERLOCK, or CONTROL FAIL LED is ON, then refer to the table at the end of this task to find the applicable FIM Tasks for the maintenance messages that show.

    NOTE: LRU STATUS is the same as LRU FAIL.

                CONTROL FAIL is the same as CONTROL INPUT FAIL.

SHZ 721-799

⚠️ **WARNING**	DO NOT OPERATE THE HF SYSTEM WHILE THE AIRPLANE IS REFUELED OR DEFUELED. THIS CAN CAUSE INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT.

⚠️ **WARNING**	MAKE SURE THAT PERSONNEL STAY A MINIMUM OF 10 FT (3 M) AWAY FROM THE VERTICAL STABILIZER WHEN THE HF SYSTEM TRANSMITS. RF ENERGY FROM THE HF ANTENNA CAN CAUSE INJURIES TO PERSONNEL.

(2)   Do the BITE Procedure for the HF Communication System as follows:

(a)   Push and hold the SQL/LAMP TEST Switch on the applicable HF Transceiver 1 (2) Front Panel to do the Lamp Test.

    1)   Make sure that the LRU FAIL, KEY INTERLOCK, and CONTROL INPUT FAIL Lights come ON and stay ON.

(b)   Release the SQL/LAMP TEST Switch.

    1)   Make sure that the LRU FAIL, KEY INTERLOCK, and CONTROL INPUT FAIL Lights go OFF.

(c)   Connect a Headset/Boom Microphone to the Captain's Jack Panel.

(d)   Do these steps to prepare the Captain's Audio Control Panel (ACP), on the P8 Panel, for HF System Operation:

    1)   Push and release the applicable HF-1 or HF-2 Switch.

        a)   Make sure that the Switch Light comes ON.

    2)   Push and release the applicable HF-1 or HF-2 Volume Control.

        a)   Make sure that the Volume Control Indicator Light comes ON.

    3)   Set the Volume Control to the middle position.

    4)   Set the MASK/BOOM Switch (if installed) to the BOOM position.

━━━ EFFECTIVITY ━━━
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-11 TASK 801

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SHZ 721-799 (Continued)

    (e)   On the P8 Panel, do these steps at the applicable Radio Tuning Panel (RTP)-1 (2):

        1)   Push the applicable HF-1 (2) Switch Light.

            a)   Make sure that the Switch Light comes ON.

        2)   Push the AM Switch Light for AM or USB Mode of operation.

            a)   Make sure that the Switch Light is ON for AM, or OFF for USB.

        3)   Rotate the SENS Control fully clockwise.

        4)   Set the STANDBY Frequency Window to an approved Test Frequency.

        5)   Push the Display Transfer Switch.

            a)   Make sure that the STANDBY Frequency moves to the ACTIVE Frequency Window.

    (f)   Push and release the Captain's Push-To-Talk (PTT) Switch.

        1)   Make sure that you hear a 1 kHz Tune-in-progress Tone in the headset.

           NOTE: A continuous or pulsed tone indicates that the coupler is tuning to a new frequency. The coupler tune tone will sound no longer than 15 seconds. The average coupler tune time is approximately 2 to 4 seconds typical, 7 seconds maximum.

           NOTE: Some coupler types are able to tune quickly when previously used frequencies are selected (about 1 second), in which case the tune tone may be only a momentary beep or may not be audible. But at the first tuning after a cold start, the tune tone is always audible regardless of whether this frequency is stored (average 2 to 4 seconds, 7 seconds maximum).

           NOTE: Data for the last 100 tuned frequencies is stored in memory. When you replace the HF Antenna or HF Transceiver, the Frequency Memory is reset.

    (g)   If the LRU FAIL, KEY INTERLOCK, and CONTROL INPUT FAIL Lights on the HF Transceiver Front Panel are OFF, then the BITE Test passed.

    (h)   If a LRU FAIL, KEY INTERLOCK, or CONTROL INPUT FAIL Light is ON, then refer to the table at the end of this task to find the applicable FIM Tasks for the maintenance messages that show.

SHZ 860-863

    D.   **BITE Procedure - ALLIED SIGNAL/HONEYWELL HF Transceivers**

⚠️ **WARNING**	DO NOT OPERATE THE HF SYSTEM WHILE THE AIRPLANE IS REFUELED OR DEFUELED. THIS CAN CAUSE INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT.

⚠️ **WARNING**	MAKE SURE THAT PERSONNEL STAY A MINIMUM OF 10 FT (3 M) AWAY FROM THE VERTICAL STABILIZER WHEN THE HF SYSTEM TRANSMITS. RF ENERGY FROM THE HF ANTENNA CAN CAUSE INJURIES TO PERSONNEL.

    (1)   Do these steps to do the BITE Procedure for the HF Communication System:

        (a)   Push and hold the TEST Switch on the HF Transceiver Front Panel.

┌── EFFECTIVITY ──
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-11 TASK 801

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SHZ 860-863 (Continued)

      1)   Make sure that the LRU FAIL, COUPLER FAIL, and EXTERNAL INPUT FAIL Lights come ON and stay ON.

(b)   Release the TEST Switch.

(c)   If the LRU FAIL, COUPLER FAIL, and EXTERNAL INPUT FAIL Lights go OFF, then the BITE Test passed.

(d)   If a LRU FAIL, COUPLER FAIL, or EXTERNAL INPUT FAIL Light stays ON, then refer to the table at the end of this task to find the applicable FIM Tasks for the maintenance messages that show.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
HF XCVR	CONTROL FAIL	23-11 TASK 802
HF XCVR	CONTROL INPUT FAIL	23-11 TASK 802
HF XCVR	COUPLER FAIL	23-11 TASK 804
HF XCVR	EXTERNAL INPUT FAIL	23-11 TASK 802
HF XCVR	KEY INTERLOCK	23-11 TASK 804
HF XCVR	LRU FAIL	23-11 TASK 803
HF XCVR	LRU STATUS	23-11 TASK 803

——— **END OF TASK** ———

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-11 TASK 801

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ELECTRONIC
EQUIPMENT
RACK, E4

SEE (A)

NO. 1 HF
TRANSCEIVER
(E4-1)

SEE (B)

ELECTRONIC EQUIPMENT
ACCESS DOOR, 117A

ELECTRONIC
EQUIPMENT
ACCESS DOOR,
117A

FWD

ELECTRONIC EQUIPMENT RACK, E4

(A)

G99464 S0000146836_V1
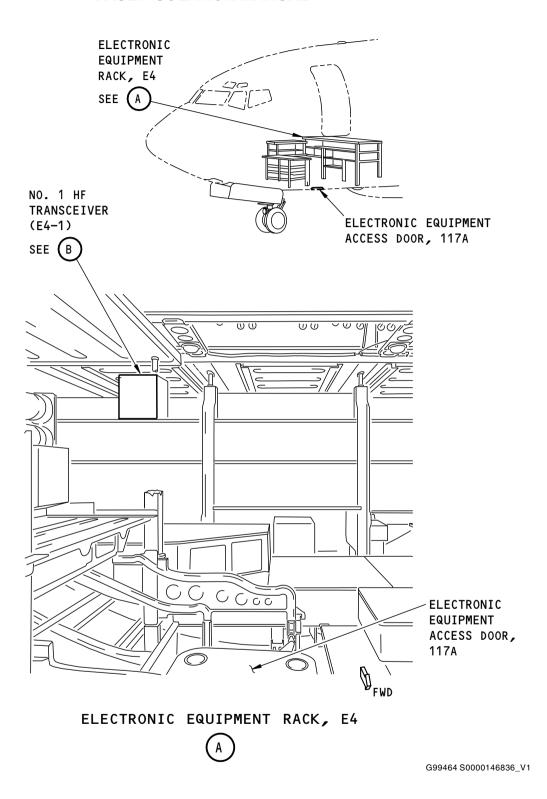
HF Transceiver - Component Location
Figure 201/23-11-00-990-832

EFFECTIVITY
SHZ 009-699
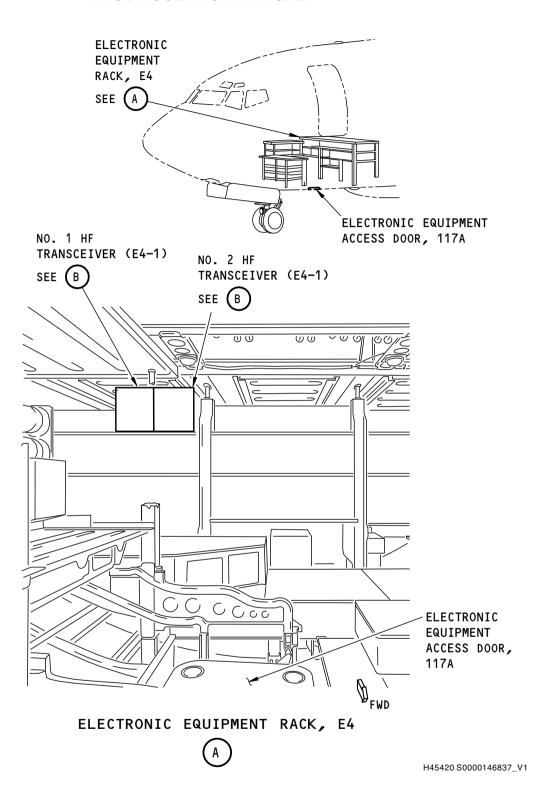
23-11 TASK 801

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ELECTRONIC
EQUIPMENT
RACK, E4

SEE (A)

ELECTRONIC EQUIPMENT
ACCESS DOOR, 117A

NO. 1 HF
TRANSCEIVER (E4-1)

SEE (B)

NO. 2 HF
TRANSCEIVER (E4-1)

SEE (B)

ELECTRONIC
EQUIPMENT
ACCESS DOOR,
117A

FWD

ELECTRONIC EQUIPMENT RACK, E4

(A)

H45420 S0000146837_V1

HF Transceiver - Component Location
Figure 202/23-11-00-990-831
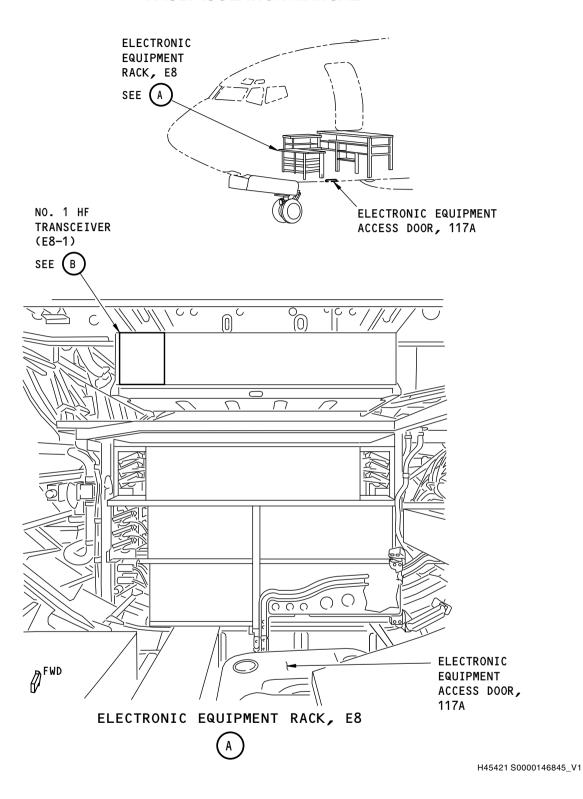
EFFECTIVITY
SHZ 002, 721-799

23-11 TASK 801

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ELECTRONIC
EQUIPMENT
RACK, E8

SEE (A)

ELECTRONIC EQUIPMENT
ACCESS DOOR, 117A

NO. 1 HF
TRANSCEIVER
(E8-1)

SEE (B)

FWD

ELECTRONIC
EQUIPMENT
ACCESS DOOR,
117A

ELECTRONIC EQUIPMENT RACK, E8

(A)

H45421 S0000146845_V1

**HF Transceiver - Component Location
Figure 203/23-11-00-990-830**

EFFECTIVITY
SHZ 860-863
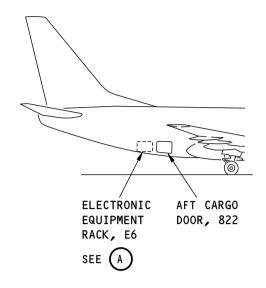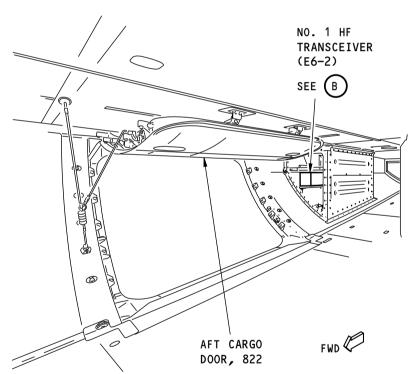
23-11 TASK 801

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ELECTRONIC
EQUIPMENT
RACK, E6

AFT CARGO
DOOR, 822

SEE Ⓐ

NO. 1 HF
TRANSCEIVER
(E6-2)

SEE Ⓑ

AFT CARGO
DOOR, 822

FWD

ELECTRONIC EQUIPMENT RACK, E6

Ⓐ

H45423 S0000146848_V1
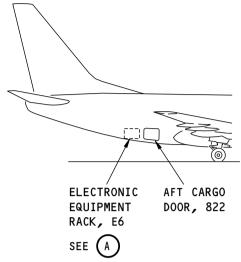
HF Transceiver - Component Location
Figure 204/23-11-00-990-828
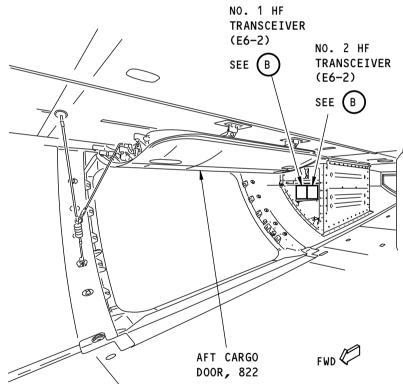
EFFECTIVITY
SHZ 801-819, 821-825, 827-847, 850-852, 855-859,
865, 871-874, 876-887, 901-999; SHZ 866 PRE SB
737-23-1560

23-11 TASK 801

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ELECTRONIC
EQUIPMENT
RACK, E6

SEE Ⓐ

AFT CARGO
DOOR, 822

NO. 1 HF
TRANSCEIVER
(E6-2)

SEE Ⓑ

NO. 2 HF
TRANSCEIVER
(E6-2)

SEE Ⓑ

AFT CARGO
DOOR, 822

FWD

ELECTRONIC EQUIPMENT RACK, E6

Ⓐ

H45424 S0000146849_V1

HF Transceiver - Component Location
Figure 205/23-11-00-990-827

───── EFFECTIVITY ─────
SHZ 820, 888-899; SHZ 866 POST SB 737-23-1560

23-11 TASK 801

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```
                                                         COLLINS

                 ○  LRU STATUS

                 ○  KEY INTERLOCK

                 ○  CONTROL FAIL

                 ◉  TEST

    HFS-900D
                                           PHONE MIC
```

HF TRANSCEIVER

L36671 S0000146937_V1

HF Transceiver Front Panel
Figure 206/23-11-00-990-820

23-11 TASK 801

— EFFECTIVITY —
SHZ 002, 009-699, 801-825, 827-847, 850-852,
855-859, 865, 866, 871-874, 876-899, 901-999

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COLLINS

○ LRU FAIL

○ KEY INTERLOCK

○ CONTROL INPUT FAIL

◉ SQL/LAMP TEST

PHONE MIC

HF TRANSCEIVER

N56070 S0000146940_V1

HF Transceiver Front Panel
Figure 207/23-11-00-990-817

──── EFFECTIVITY ────
SHZ 721-799

23-11 TASK 801

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```
┌────────────────────────────────────────┐
│                                        │
├────────────────────────────────────────┤
│                                        │
│     ◎  LRU FAIL                        │
│                                        │
│     ◎  COUPLER FAIL                    │
│                                        │
│     ◎  EXTERNAL INPUT FAIL             │
│                                        │
│     ◉  TEST                            │
│                                        │
│   ┌──────────┐                         │
│   │          │        ALLIED SIGNAL    │
├───┴──────────┴─────────────────────────┤
│                                        │
```

HF TRANSCEIVER

L37927 S0000146938_V1

HF Transceiver Front Panel
Figure 208/23-11-00-990-819

──── EFFECTIVITY ────
SHZ 860-863

23-11 TASK 801

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802. **HF Transceiver CONTROL INPUT FAIL Problem - Fault Isolation**

    A. **Description**

        (1)   This task is for these maintenance messages:

        SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-859, 865, 866, 871-874, 876-899, 901-999

            (a)   CONTROL INPUT FAIL

        SHZ 860-863

            (b)   EXTERNAL INPUT FAIL

        SHZ 002, 009-699, 721-799, 860-863, 865, 866

        (2)   The HF transceiver receives no input from the HF control panel.

        SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

        (3)   The HF transceiver receives no input from the radio tuning panel.

        SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

    B. **Possible Causes**

        SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560

        (1)   HF control panel, P8-11 (HF-1).

        SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

        (2)   HF control panel, P8-11 (HF-1) or P8-12 (HF-2).

        SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

        (3)   Radio tuning panel, P8-71 (RTP-1) or P8-72 (RTP-2).

        SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

        (4)   Wiring problem.

        SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

        (5)   HF transceiver, M226 (HF-1).

        SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

        (6)   HF transceiver, M226 (HF-1) or M439 (HF-2).

        SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

    C. **Circuit Breakers**

        (1)   These are the primary circuit breakers related to the fault:

            CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1
E	11	C00839	COMMUNICATIONS HF 1

            F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	3	C00166	COMMUNICATIONS VHF 2

┌─── EFFECTIVITY ───
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-11 TASK 802

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(Continued)

F/O Electrical System Panel, P6-1

Row	Col	Number	Name

SHZ 002, 721-799, 805-820, 888-899; SHZ 866 POST SB 737-23-1560

| D | 2 | C00857 | COMMUNICATIONS HF 2 |

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

This circuit breaker is inoperative and should remain open:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name

SHZ 009-699, 801-804, 821-825, 827-847, 850-852, 855-859, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

| D | 2 | C00857 | COMMUNICATIONS HF 2 (INOP) |

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

D. **Related Data**

SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

(1) (SSM 23-11-11)

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

(2) (SSM 23-11-11, 23-11-21)

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

(3) (WDM 23-11-11)

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

(4) (WDM 23-11-11, 23-11-21)

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

E. **Initial Evaluation**

SHZ 002, 009-699, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(1) Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

(a) If the maintenance message does not show on the front panel of the transceiver, then there was an intermittent fault.

(b) If the maintenance message shows on the front panel of the transceiver, then continue.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(2) Do these steps at the HF control panel, P8-11 (HF-1), on the aft electronic panel, P8:

(a) Set the mode selector switch to the AM or USB position.

(b) Set the HF frequency display to an approved test HF frequency.

(c) Make sure that the frequency display shows the set frequency.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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| **SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999**

(3)   Do these steps at the radio tuning panel, P8-71 (RTP-1) or P8-72 (RTP-2), on the aft electronic panel, P8:

| **SHZ 801-819, 821-825, 827-847, 850-852, 855-859, 871-874, 876-887, 901-999**

    (a)   Push the HF 1 switch light.

        1)   Make sure that the switch light comes on.

SHZ 820, 888-899

    (b)   Push the applicable HF switch light (HF 1 or HF 2).

        1)   Make sure that the switch light comes on.

| **SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999**

    (c)   Set the STANDBY frequency window to an approved test frequency.

    (d)   Push the display transfer switch.

    (e)   Make sure that the ACTIVE frequency display shows the set frequency.

| **SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999**

  F.   **Fault Isolation Procedure - Frequency Is Not Shown**

SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560

(1)   Do this check for 115V AC at the HF control panel:

    (a)   Remove the HF control panel, P8-11 (HF-1). To remove it, do this task: HF Control Panel - Removal, AMM TASK 23-11-31-000-801.

    (b)   Close this circuit breaker:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	11	C00839	COMMUNICATIONS HF 1

    (c)   Do a check for 115V AC at pin 3 of connector, D419, to structure ground.

    (d)   Open this circuit breaker:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	11	C00839	COMMUNICATIONS HF 1

    (e)   If there was 115V AC at pin 3 of connector, D419, then do these steps:

        1)   Install a new HF control panel, P8-11 (HF-1). To install it, do this task: HF Control Panel - Installation, AMM TASK 23-11-31-400-801.

        2)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

          a)   If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

    (f)   If there was no 115V AC at pin 3 of connector D419, then continue.

23-11 TASK 802

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

(2)   Do this check for 115V AC at the HF control panel:

(a)   Remove the HF control panel, P8-11 (HF-1) or P8-12 (HF-2). To remove it, do this task: HF Control Panel - Removal, AMM TASK 23-11-31-000-801.

(b)   Close these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	11	C00839	COMMUNICATIONS HF 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	2	C00857	COMMUNICATIONS HF 2

(c)   Do a check for 115V AC between pin 3 of connector D419 (HF-1) or D773 (HF-2), and structure ground.

(d)   Open these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	11	C00839	COMMUNICATIONS HF 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	2	C00857	COMMUNICATIONS HF 2

(e)   If there was 115V AC at pin 3 of connector D419 (HF-1) or D773 (HF-2), then do these steps:

1)   Install a new HF control panel, P8-11 (HF-1) or P8-12 (HF-2). To install it, do this task: HF Control Panel - Installation, AMM TASK 23-11-31-400-801.

2)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

a)   If the maintenance message CONTROL INPUT FAIL does not show on the front panel of the transceiver, then you corrected the fault.

(f)   If there was no 115V AC at pin 3 of connector D419 (HF-1) or D773 (HF-2), then continue.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(3)   Do this check for 28V DC at the radio tuning panel:

(a)   Remove the radio tuning panel, P8-71 (RTP-1) or P8-72 (RTP-2). To remove it, do this task: Radio Tuning Panel (RTP) - Removal, AMM TASK 23-12-41-000-801.

(b)   Close these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999 (Continued)

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	3	C00166	COMMUNICATIONS VHF 2

   (c)   Do a check for 28V DC at pin 40 of connector D203 (RTP-1) or D209 (RTP-2), to structure ground.

   (d)   Open these circuit breakers:

        CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	3	C00166	COMMUNICATIONS VHF 2

   (e)   If there was 28V DC at pin 40 of connector D203 (RTP-1) or D209 (RTP-2), then do these steps:

     1)   Install a new radio tuning panel, P8-71 (RTP-1) or P8-72 (RTP-2). To install it, do this task: Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801.

     2)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

        a)   If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

   (f)   If there was no 28V DC at pin 40 of connector D203 (RTP-1) or D209 (RTP-2), then continue.

SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560

  (4)   Do this check for 115V AC at the circuit breaker:

   (a)   Do a check for 115V AC from the load terminal of HF-1 circuit breaker, C839, to structure ground.

   (b)   If there is no 115V AC at the load terminal of HF-1 circuit breaker, C839, then do these steps:

     1)   Replace this circuit breaker:

        CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	11	C00839	COMMUNICATIONS HF 1

     2)   Re-install the HF control panel, P8-11 (HF-1). To install it, do this task: HF Control Panel - Installation, AMM TASK 23-11-31-400-801.

     3)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

        a)   If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

   (c)   If there is 115V AC at the load terminal of HF-1 circuit breaker, C839, then do these steps:

┌─ EFFECTIVITY ─┐
**SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999**

23-11 TASK 802

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SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560 (Continued)

  1) Repair the wiring between pin 3 of connector D419, at the HF control panel, P8-11 (HF-1), to the load terminal of HF-1 circuit breaker, C839, at the circuit breaker panel, P18-2.

  2) Re-install the HF control panel, P8-11 (HF-1). To install it, do this task: HF Control Panel - Installation, AMM TASK 23-11-31-400-801.

  3) Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

    a) If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

(5) Do this check for 115V AC at the circuit breaker:

(a) Do a check for 115V AC between the load terminal of HF-1 circuit breaker C839, or HF-2 circuit breaker C857, and structure ground.

(b) If there is no 115V AC at the load terminal of HF-1 circuit breaker C839, or HF-2 circuit breaker C857, then do these steps:

  1) Replace one of these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	11	C00839	COMMUNICATIONS HF 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	2	C00857	COMMUNICATIONS HF 2

  2) Re-install the HF control panel, P8-11 (HF-1) or P8-12 (HF-2). To install it, do this task: HF Control Panel - Installation, AMM TASK 23-11-31-400-801.

  3) Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

    a) If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

(c) If there is 115V AC at the load terminal of HF-1 circuit breaker C839, or HF-2 circuit breaker C857, then do these steps:

  1) Repair the wiring between pin 3 of connector D419 (HF-1) or D773 (HF-2), at the HF control panel, P8-11 (HF-1) or P8-12 (HF-2), and the load terminal of HF-1 circuit breaker C839, or HF-2 circuit breaker C857, at the circuit breaker panel, P18-2 (HF-1) or P6-1 (HF-2).

  2) Re-install the HF control panel, P8-11 (HF-1) or P8-12 (HF-2). To install it, do this task: HF Control Panel - Installation, AMM TASK 23-11-31-400-801.

  3) Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

    a) If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(6)   Do this check for 28V DC at the circuit breaker:

    (a)   Do a check for 28V DC between the load terminal of VHF-1 circuit breaker C165, or VHF-2 circuit breaker C166, and structure ground.

    (b)   If there is no 28V DC at the load terminal of VHF-1 circuit breaker C165, or VHF-2 circuit breaker C166, then do these steps:

        1)   Replace one of these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	3	C00166	COMMUNICATIONS VHF 2

        2)   Re-install the radio tuning panel, P8-71 (RTP-1) or P8-72 (RTP-2). To install it, do this task: Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801.

        3)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

          a)   If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

    (c)   If there is 28V DC at the load terminal of VHF-1 circuit breaker C165, or VHF-2 circuit breaker C166, then do these steps:

        1)   Repair the wiring between pin 40 of connector, D203 (RTP-1) or D209 (RTP-2), at the radio tuning panel, P8-71 (RTP-1) or P8-72 (RTP-2), and the load terminal of VHF-1 circuit breaker, C165, or VHF-2 circuit breaker, C166, at the circuit breaker panel, P18-2 (VHF-1) or P6-1 (VHF-2)

        2)   Re-install the radio tuning panel, P8-71 (RTP-1) or P8-72 (RTP-2). To install it, do this task: Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801

        3)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

          a)   If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

G.   **Fault Isolation Procedure - Frequency Is Shown**

SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560

(1)   Replace the HF control panel, P8-11 (HF-1).

These are the tasks:

HF Control Panel - Removal, AMM TASK 23-11-31-000-801,

HF Control Panel - Installation, AMM TASK 23-11-31-400-801.

┌─── EFFECTIVITY ───
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

(2)   Replace the HF control panel, P8-11 (HF-1) or P8-12 (HF-2).

These are the tasks:

HF Control Panel - Removal, AMM TASK 23-11-31-000-801,

HF Control Panel - Installation, AMM TASK 23-11-31-400-801.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(3)   Replace the radio tuning panel, P8-71 (RTP-1) or P8-72 (RTP-2).

These are the tasks:

Radio Tuning Panel (RTP) - Removal, AMM TASK 23-12-41-000-801,

Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(4)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

(a)   If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

(b)   If the maintenance message shows on the front panel of the transceiver, then continue.

SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

(5)   Replace the HF transceiver, M226 (HF-1).

These are the tasks:

HF Transceiver - Removal, AMM TASK 23-11-21-000-801,

HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

(a)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

1)   If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

2)   If the maintenance message shows on the front panel of the transceiver, then continue.

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

(6)   Replace the HF transceiver, M226 (HF-1) or M439 (HF-2).

These are the tasks:

HF Transceiver - Removal, AMM TASK 23-11-21-000-801,

HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

(a)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

1)   If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

2)   If the maintenance message shows on the front panel of the transceiver, then continue.

SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560

(7)   Do this check of the wiring:

(a)   Remove the HF control panel, P8-11 (HF-1). To remove it, do this task: HF Control Panel - Removal, AMM TASK 23-11-31-000-801.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560 (Continued)

(b)   Remove the HF transceiver, M226 (HF-1). To remove it, do this task: HF Transceiver - Removal, AMM TASK 23-11-21-000-801.

(c)   Do a wiring check between these pins of connector D419, at the aft electronic panel, P8, and these pins of transciever tray connector D345B, on the electronic equipment shelf:

	HF CONTROL PANEL	
	PANEL CONNECTOR	**XCVR CONNECTOR**
HF-1 (P8-11)	**D419**	**D345B**
	pin 9	pin G3
	pin 10	pin H3

(d)   Repair any airplane wiring problems you find.

(e)   Re-install the HF control panel, P8-11 (HF-1). To install it, do this task: HF Control Panel - Installation, AMM TASK 23-11-31-400-801.

(f)   Re-install the HF transceiver, M226 (HF-1). To install it, do this task: HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

(g)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

    1)   If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

(8)   Do this check of the wiring:

(a)   Remove the HF control panel, P8-11 (HF-1) or P8-12 (HF-2). To remove it, do this task: HF Control Panel - Removal, AMM TASK 23-11-31-000-801.

(b)   Remove the HF transceiver, M226 (HF-1) or M439 (HF-2). To remove it, do this task: HF Transceiver - Removal, AMM TASK 23-11-21-000-801.

(c)   Do a wiring check between these pins of connector, D419 (HF-1) or D773 (HF-2), at the aft electronic panel, P8, and these pins of transceiver tray connector, D345B (HF-1) or D623B (HF-2), on the electronic equipment shelf:

	HF CONTROL PANEL	
	PANEL CONNECTOR	**XCVR CONNECTOR**
HF-1 (P8-11)	**D419**	**D345B**
	pin 9	pin G3
	pin 10	pin H3

	HF CONTROL PANEL	
	PANEL CONNECTOR	**XCVR CONNECTOR**
HF-2 (P8-12)	**D773**	**D623B**
	pin 9	pin G3
	pin 10	pin H3

(d)   Repair any airplane wiring problems you find.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560 (Continued)

(e) Re-install the HF control panel, P8-11 (HF-1) or P8-12 (HF-2). To install it, do this task: HF Control Panel - Installation, AMM TASK 23-11-31-400-801.

(f) Re-install the HF transceiver, M226 (HF-1) or M439 (HF-2). To install it, do this task: HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

(g) Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

  1) If the maintenance message CONTROL INPUT FAIL does not show on the front panel of the transceiver, then you corrected the fault.

SHZ 801-819, 821-825, 827-847, 850-852, 855-859, 871-874, 876-887, 901-999

(9) Do this check of the wiring:

(a) Remove the radio tuning panels, P8-71 (RTP-1) and P8-72 (RTP-2). To remove them, do this task: Radio Tuning Panel (RTP) - Removal, AMM TASK 23-12-41-000-801.

(b) Remove the HF transceiver, M226 (HF-1). To remove it, do this task: HF Transceiver - Removal, AMM TASK 23-11-21-000-801.

(c) Do a wiring check between these pins of connector, D203 (RTP-1) and D209 (RTP-2), at the aft electronic panel, P8, and these pins of connector, D345B, at the electronic equipment shelft:

	RTP	
	RTP CONNECTOR	XCVR CONNECTOR
RTP-1 (P8-71)	**D203**	**D345B**
	pin 2	pin E3
	pin 3	pin F3

	RTP	
	RTP CONNECTOR	XCVR CONNECTOR
RTP-2 (P8-72)	**D209**	**D345B**
	pin 2	pin G3
	pin 3	pin H3

(d) Repair any airplane wiring problems you find.

(e) Re-install the radio tuning panels, P8-71 (RTP-1) and P8-72 (RTP-2). To install them, do this task: Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801.

(f) Re-install the HF transceiver, M226 (HF-1). To install it, do this task: HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

(g) Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

  1) If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

SHZ 820, 888-899

(10) Do this check of the wiring:

(a) Remove the radio tuning panels, P8-71 (RTP-1) and P8-72 (RTP-2). To remove them, do this task: Radio Tuning Panel (RTP) - Removal, AMM TASK 23-12-41-000-801.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 820, 888-899 (Continued)

(b)   Remove the HF transceiver, M226 (HF-1) or M439 (HF-2). To remove it, do this task: HF Transceiver - Removal, AMM TASK 23-11-21-000-801.

(c)   Do a wiring check between these pins of connector, D203 (RTP-1) and D209 (RTP-2), at the aft electronic panel, P8, and these pins of tranceiver tray connector, D345B (HF-1) or D623B (HF-2), at the electronic equipment shelf:

	RTP	
	RTP CONNECTOR	XCVR CONNECTOR
RTP-1 (P8-71)	**D203**	**D345B**
	pin 2	pin E3
	pin 3	pin F3

	RTP	
	RTP CONNECTOR	XCVR CONNECTOR
RTP-2 (P8-72)	**D209**	**D345B**
	pin 2	pin G3
	pin 3	pin H3
RTP-1 (P8-71)	**D203**	**D623B**
	pin 2	pin G3
	pin 3	pin H3
RTP-2 (P8-72)	**D209**	**D623B**
	pin 2	pin E3
	pin 3	pin F3

(d)   Repair any airplane wiring problems you find.

(e)   Re-install the radio tuning panels, P8-71 (RTP-1) and P8-72 (RTP-2). To install them, do this task: Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801.

(f)   Re-install the HF transceiver, M226 (HF-1) or M439 (HF-2). To install it, do this task: HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

(g)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

1)   If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

─────── END OF TASK ───────

803. **HF Transceiver LRU FAIL Problem - Fault Isolation**

A.   **Description**

(1)   This task is for this maintenance message:

(a)   LRU FAIL

(2)   The HF Transceiver has an internal fault.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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B. **Possible Causes**

SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

(1) HF-1 Transceiver, M226

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

(2) HF-1 (2) Transceiver, M226 (M439)

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

C. **Circuit Breakers**

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	11	C00839	COMMUNICATIONS HF 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name

SHZ 002, 721-799, 805-820, 888-899; SHZ 866 POST SB 737-23-1560

D	2	C00857	COMMUNICATIONS HF 2

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

This circuit breaker is inoperative and should remain open:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name

SHZ 009-699, 801-804, 821-825, 827-847, 850-852, 855-859, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

D	2	C00857	COMMUNICATIONS HF 2 (INOP)

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

D. **Related Data**

(1) WDM 23-11-11

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

(2) WDM 23-11-21

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(3) SSM 23-11-11

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

(4) SSM 23-11-21)

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

E. **Initial Evaluation**

(1) Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

    (a) If the maintenance message LRU FAIL does not show on the HF Transceiver Front Panel, then there was an intermittent fault.

    (b) If the maintenance message LRU FAIL shows on the HF Transceiver Front Panel, then do the Fault Isolation Procedure below.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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F. **Fault Isolation Procedure**

SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

(1) Replace the HF Transceiver-1, M226. These are the tasks:

• HF Transceiver - Removal, AMM TASK 23-11-21-000-801

• HF Transceiver - Installation, AMM TASK 23-11-21-400-801

(a) Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

1) If the maintenance message LRU FAIL does not show on the HF Transceiver Front Panel, then you corrected the problem.

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

(2) Replace the applicable HF Transceiver-1 (2), M226 (M439). These are the tasks:

• HF Transceiver - Removal, AMM TASK 23-11-21-000-801

• HF Transceiver - Installation, AMM TASK 23-11-21-400-801

(a) Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

1) If the maintenance message LRU FAIL does not show on the HF Transceiver Front Panel, then you corrected the problem.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

——————— END OF TASK ———————

804. **KEY INTERLOCK or COUPLER FAIL Fault - Fault Isolation**

A. **Description**

(1) This task is for maintenance message:

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-859, 865, 866, 871-874, 876-899, 901-999

(a) KEY INTERLOCK

SHZ 860-863

(b) COUPLER FAIL

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(2) The HF transceiver detects an antenna coupler failure.

B. **Possible Causes**

SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

(1) HF antenna coupler, M227 (HF-1).

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

(2) HF antenna coupler, M227 (HF-1) or M440 (HF-2).

SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

(3) HF transceiver, M226 (HF-1).

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

(4) HF transceiver, M226 (HF-1) or M439 (HF-2).

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(5) Wiring problem.

(6) HF antenna, M228.

C. **Circuit Breakers**

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1
E	11	C00839	COMMUNICATIONS HF 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	3	C00166	COMMUNICATIONS VHF 2

SHZ 002, 721-799, 805-820, 888-899; SHZ 866 POST SB 737-23-1560

Row	Col	Number	Name
D	2	C00857	COMMUNICATIONS HF 2

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

This circuit breaker is inoperative and should remain open:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name

SHZ 009-699, 801-804, 821-825, 827-847, 850-852, 855-859, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

Row	Col	Number	Name
D	2	C00857	COMMUNICATIONS HF 2 (INOP)

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

D. **Related Data**

SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

(1) (SSM 23-11-11)

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

(2) (SSM 23-11-11, 23-11-21)

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

(3) (WDM 23-11-11)

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

(4) (WDM 23-11-11, 23-11-21)

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

E. **Initial Evaluation**

(1) Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

─── EFFECTIVITY ───
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-859, 865, 866, 871-874, 876-899, 901-999

    (a)   If the maintenance message does not show on the front panel of the transceiver, then there was an intermittent fault.

SHZ 860-863

    (b)   If the maintenance message does not show on the front panel of the transceiver, then there was an intermittent fault.

        NOTE: Low pressure in the HF coupler will cause the system to fail in flight (continues tune tone), but the system may function satisfactorily when the airplane is on the ground (when in the air in the coupler has warmed up).

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

    (c)   If the maintenance message shows on the front panel of the transceiver, then continue.

F.   Fault Isolation Procedure

> ⚠️ **WARNING**   DO NOT OPERATE THE HF SYSTEM WHILE THE AIRPLANE IS REFUELED OR DEFUELED. AN EXPLOSION CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO THE AIRPLANE.

> ⚠️ **WARNING**   MAKE SURE THAT PERSONNEL STAY A MINIMUM OF 10 FT (3 M) AWAY FROM THE VERTICAL STABILIZER WHEN THE HF SYSTEM TRANSMITS. RF ENERGY FROM THE HF ANTENNA CAN CAUSE INJURIES TO PERSONNEL.

    (1)   Do not operate the HF system while a fuel operation is done on the airplane.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-859, 865, 866, 871-874, 876-899, 901-999

SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-859, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

    (2)   Replace the HF antenna coupler, M227 (HF-1).

        These are the tasks:

        HF Antenna Coupler - Removal, AMM TASK 23-11-61-000-801,

        HF Antenna Coupler - Installation, AMM TASK 23-11-61-400-801.

        (a)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

            1)   If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

            2)   If the maintenance message shows on the front panel of the transceiver, then continue.

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

    (3)   Replace the HF antenna coupler, M227 (HF-1) or M440 (HF-2).

        These are the tasks:

        HF Antenna Coupler - Removal, AMM TASK 23-11-61-000-801,

        HF Antenna Coupler - Installation, AMM TASK 23-11-61-400-801.

        (a)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

┌─ EFFECTIVITY ─
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560 (Continued)

        1)   If the maintenance message shows on the front panel of the transceiver, then continue.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

(4)   Replace the HF transceiver, M226 (HF-1).

    These are the tasks:

    HF Transceiver - Removal, AMM TASK 23-11-21-000-801,

    HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

    (a)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

        1)   If the maintenance message shows on the front panel of the transceiver, then continue.

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

(5)   Replace the HF transceiver, M226 (HF-1) or M439 (HF-2).

    These are the tasks:

    HF Transceiver - Removal, AMM TASK 23-11-21-000-801,

    HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

    (a)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

        1)   If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

        2)   If the maintenance message shows on the front panel of the transceiver, then continue.

SHZ 860-863

(6)   Replace the HF antenna coupler, M227 (HF-1).

    These are the tasks:

    HF Antenna Coupler - Removal, AMM TASK 23-11-61-000-801,

    HF Antenna Coupler - Installation, AMM TASK 23-11-61-400-801.

    (a)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

        1)   If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

        2)   If the maintenance message shows on the front panel of the transceiver, then continue.

SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

(7)   Do this check of the coaxial cable:

    (a)   Remove the HF transceiver, M226 (HF-1). To remove it, do this task: HF Transceiver - Removal, AMM TASK 23-11-21-000-801.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560 (Continued)

(b)   Remove this access panel:

Number	Name/Location
322AL	Vertical Fin, Fixed Leading Edge

(c)   Disconnect the coaxial cable connector, D337, at the HF antenna coupler, M227 (HF-1).

(d)   Do a time domain reflectometry check of the coaxial cable between connector, D345B, at the HF transceiver, M226 (HF-1), and connector, D337, at the HF antenna coupler, M227 (HF-1) (WDM 23-11-11), do this task: Coaxial Cable Inspection, AMM TASK 20-10-72-210-801.

(e)   Repair any problems that you find.

(f)   Re-connect the coaxial cable connector, D337, at the HF antenna coupler, M227 (HF-1).

(g)   Install this access panel:

Number	Name/Location
322AL	Vertical Fin, Fixed Leading Edge

(h)   Re-install the HF transceiver, M226 (HF-1). To install it, do this task: HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

(i)   Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1
E	11	C00839	COMMUNICATIONS HF 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	3	C00166	COMMUNICATIONS VHF 2

(j)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

   1)   If the maintenance message shows on the front panel of the transceiver, then continue.

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

(8)   Do this check of the coaxial cable:

(a)   Remove the HF transceiver, M226 (HF-1) or M439 (HF-2). To remove it, do this task: HF Transceiver - Removal, AMM TASK 23-11-21-000-801.

(b)   Remove the applicable access panels:

Number	Name/Location
322AL	Vertical Fin, Fixed Leading Edge
322AR	Vertical Fin, Fixed Leading Edge

NOTE: The HF-1 antenna coupler is installed on the left side of the vertical stabilizer. The HF-2 antenna coupler is installed on the right side of the vertical stabilizer.

(c)   Disconnect the coaxial cable connector, D337 (HF-1) or D625 (HF-2), at the HF antenna coupler, M227 (HF-1) or M440 (HF-2).

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560 (Continued)

(d) Do a time domain reflectometry check of the coaxial cable between connector, D345B (HF-1) or D623B (HF-2), at the HF transceiver, M226 (HF-1) or M439 (HF-2), and connector, D337 (HF-1) or D625 (HF-2), at the HF antenna coupler, M227 (HF-1) or M440 (HF-2) (WDM 23-11-11, -21), do this task: Coaxial Cable Inspection, AMM TASK 20-10-72-210-801.

(e) Repair any problems that you find.

(f) Re-connect the coaxial cable connector, D337 (HF-1) or D625 (HF-2), at the HF antenna coupler, M227 (HF-1) or M440 (HF-2).

(g) Install the applicable access panels:

Number	Name/Location
322AL	Vertical Fin, Fixed Leading Edge
322AR	Vertical Fin, Fixed Leading Edge

(h) Re-install the HF transceiver, M226 (HF-1) or M439 (HF-2). To install it, do this task: HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

(i) Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

1) If the maintenance message shows on the front panel of the transceiver, then continue.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(9) Do a check of the electrical bond of the HF antenna, do this task: HF Antenna - Electrical Bond Check, AMM TASK 23-11-51-760-801

(a) Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801

1) If the maintenance message does not show on the front panel of the transceiver, then you corrected the fault.

———— **END OF TASK** ————

SHZ 002, 009-699, 721-799, 860-863, 865, 866

805. HF Control Panel Problem - Fault Isolation

A. **Description**

(1) The HF control panel does not operate correctly.

B. **Possible Causes**

SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560
(1) HF control panel, P8-11 (HF-1).

SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560
(2) HF control panel, P8-11 (HF-1) or P8-12 (HF-2).

SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560
(3) HF transceiver, M226 (HF-1).

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

(4)   HF transceiver, M226 (HF-1) or M439 (HF-2).

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(5)   Wiring problem.

C.   **Circuit Breakers**

SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560

(1)   This is the primary circuit breaker related to the fault:

    CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	11	C00839	COMMUNICATIONS HF 1

SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

(2)   These are the primary circuit breakers related to the fault:

    CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	11	C00839	COMMUNICATIONS HF 1

    F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	2	C00857	COMMUNICATIONS HF 2

SHZ 002, 009-699, 721-799, 860-863, 865, 866

D.   **Related Data**

SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560

(1)   (SSM 23-11-11)

SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

(2)   (SSM 23-11-11, 23-11-21)

SHZ 002, 009-699, 721-799, 860-863, 865, 866

SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560

(3)   (WDM 23-11-11)

SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

(4)   (WDM 23-11-11, 23-11-21)

SHZ 002, 009-699, 721-799, 860-863, 865, 866

E.   **Initial Evaluation**

(1)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

    (a)   If there is a maintenance message shown on the front panel of the transceiver, then do the fault isolation procedure for the maintenance message.

┌─ EFFECTIVITY ─┐
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 002, 009-699, 721-799, 860-863, 865, 866 (Continued)

⚠️ **WARNING**	DO NOT OPERATE THE HF SYSTEM WHILE THE AIRPLANE IS REFUELED OR DEFUELED. THIS CAN CAUSE INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT.

⚠️ **WARNING**	MAKE SURE PERSONNEL STAY A MINIMUM OF 6 FEET AWAY FROM THE VERTICAL STABILIZER WHEN THE HF SYSTEM TRANSMITS. RF ENERGY FROM THE HF ANTENNA CAN CAUSE INJURIES TO PERSONNEL.

    (2)   Do not operate the HF system while a fuel operation is done on the airplane.

    (3)   Do this reception/transmission test of the HF communication system:

    NOTE: HF communication can be degraded while the airplane is on the ground due to external interference or signal blockage. Before you identify a HF communication system fault, make sure you try to transmit and receive at several frequencies across the HF frequency band. Make sure the airplane is not in or near any large metal structures. In some cases, you can move the airplane to correct the problem.

    (a)   Connect a headset/boom microphone, M428 (captain's), to the boom microphone jack, D6027 (captain's).

    (b)   Do these steps at the audio control panel, P8-6 (captain's ACP):

SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560

    1)   Push and release the HF-1 switch.

        a)   Make sure that the switch light comes on.

SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

    2)   Push and release the applicable HF-1 or HF-2 switch.

        a)   Make sure that the switch light comes on.

SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560

    3)   Push and release the HF-1 volume control.

        a)   Make sure that the volume control indicator light comes on.

SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

    4)   Push and release the applicable HF-1 or HF-2 volume control.

        a)   Make sure that the volume control indicator light comes on.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

    5)   Set the volume control to the middle position.

    6)   Set the MASK/BOOM switch (if installed) to the BOOM position.

SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560

    (c)   Do these steps at the HF control panel, P8-11 (HF-1):

    1)   Set the mode selector switch to the AM or USB position.

    2)   Turn the RF SENS control fully clockwise.

    3)   Set the HF frequency display to an approved test frequency.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

(d) Do these steps at the applicable HF control panel, P8-11 (HF-1) or P8-12 (HF-2):

1) Set the mode selector switch to the AM or USB position.

2) Turn the RF SENS control fully clockwise.

3) Set the HF frequency display to an approved test frequency.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(e) Push and release the captain's push-to-talk (PTT) switch.

1) Make sure you hear a 1 kHz tune-in-progress tone in the headset.

NOTE: A continuous or pulsed tone indicates that the coupler is tuning to a new frequency. The coupler tune tone will sound no longer than 15 seconds. The average coupler tune time is approximately 1 to 7 seconds.

NOTE: Some coupler types are able to tune quickly when previously used frequencies are selected, in which case the tune tone may be only a momentary beep.

(f) Do these steps to do a voice communication test with a radio tower operator:

1) Push and hold the PTT switch while you speak.

a) Make sure you hear the sidetone in the headset while you speak.

2) Release the PTT switch while you listen.

a) Make sure the quality of the transmitted and received voice is satisfactory.

b) Make sure the sound of the received voice decreases and increases when you turn the RF SENS control counterclockwise and clockwise on the HF control panel.

SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560

c) Make sure the sound of the received voice changes when you turn the HF-1 volume control on the ACP, P8-6 (captain's), with no change in voice quality.

SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

d) Make sure the sound of the received voice changes when you turn the applicable HF-1 or HF-2 volume control on the ACP, P8-6 (captain's), with no change in voice quality.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(g) If more than one mode of operation (AM and USB) is available at your location, do this step:

1) Set the mode selector switch to the other mode of operation and make a voice transmission.

(4) If the HF control panel operates satisfactorily, then there was an intermittent fault.

(5) If the HF control panel does not operate satisfactorily, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560

(1)   Replace the HF control panel, P8-11 (HF-1).

These are the tasks:

HF Control Panel - Removal, AMM TASK 23-11-31-000-801,

HF Control Panel - Installation, AMM TASK 23-11-31-400-801.

SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

(2)   Replace the HF control panel, P8-11 (HF-1) or P8-12 (HF-2).

These are the tasks:

HF Control Panel - Removal, AMM TASK 23-11-31-000-801,

HF Control Panel - Installation, AMM TASK 23-11-31-400-801.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(3)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

(4)   Do a voice communication test with a radio tower operator.

(a)   Make sure that the quality of the transmitted and received voice is satisfactory.

(b)   If the HF control panel operates satisfactorily, then you corrected the fault.

(c)   If the HF control panel does not operate satisfactorily, then continue.

SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560

(5)   Replace the HF transceiver, M226 (HF-1).

These are the tasks:

HF Transceiver - Removal, AMM TASK 23-11-21-000-801,

HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

(6)   Replace the HF transceiver, M226 (HF-1) or M439 (HF-2).

These are the tasks:

HF Transceiver - Removal, AMM TASK 23-11-21-000-801,

HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(7)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

(8)   Do a voice communication test with a radio tower operator.

(a)   Make sure that the quality of the transmitted and received voice is satisfactory.

(b)   If the HF control panel operates satisfactorily, then you corrected the fault.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

——— **END OF TASK** ———

806.   **HF Communication System Receive/Transmit Problem - Fault Isolation**

A.   Description

(1)   The HF communication system does not operate correctly.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

    (a)   Poor reception and/or poor transmission at any or all audio control panel (ACP) locations for the HF-1 communication system.

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

    (b)   Poor reception and/or poor transmission at any or all audio control panel (ACP) locations for the HF-1 or HF-2 communication system.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

    (c)   HF operation while the airplane is in flight is intermittent, but is satisfactory when the airplane is on the ground.

B.   **Possible Causes**

    (1)   HF-1 transceiver, M226.

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

    (2)   HF-2 transceiver, M4396.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

    (3)   HF-1 antenna coupler, M227.

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

    (4)   HF-2 antenna coupler, M440.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

    (5)   HF antenna, M228.

SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560

    (6)   HF-1 control panel, P8-11.

SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

    (7)   HF-2 control panel, P8-12.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

    (8)   Radio tuning panel, P8-71 (RTP-1).

    (9)   Radio tuning panel, P8-72 (RTP-2).

  (10)   Radio tuning panel, P8-72 (RTP-3).

  (11)   Audio control panel, P8-6 (captain's)

  (12)   Audio control panel, P8-7 (first officer's)

  (13)   Audio control panel, P8-6 (first observer's)

  (14)   Remote electronics unit, M1353 (REU).

  (15)   Wiring.

C.   **Circuit Breakers**

    (1)   These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	11	C00839	COMMUNICATIONS HF 1

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	21	C00560	INTERPHONE POWER F/O DC 2
C	22	C00561	INTERPHONE POWER F/O BAT
C	23	C00239	INTERPHONE POWER CAPT DC 2
C	24	C00240	INTERPHONE POWER CAPT BAT
D	21	C00084	INTPH AND WARN
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

D.   Related Data

(1)   (SSM 23-11-11)

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

(2)   (SSM 23-11-21

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(3)   WDM 23-11-11

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

(4)   WDM 23-11-21

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

E.   Initial Evaluation

⚠️ **WARNING**	DO NOT OPERATE THE HF SYSTEM WHILE THE AIRPLANE IS REFUELED OR DEFUELED. AN EXPLOSION CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO THE AIRPLANE.

⚠️ **WARNING**	MAKE SURE THAT PERSONNEL STAY A MINIMUM OF 10 FT (3 M) AWAY FROM THE VERTICAL STABILIZER WHEN THE HF SYSTEM TRANSMITS. RF ENERGY FROM THE HF ANTENNA CAN CAUSE INJURIES TO PERSONNEL.

(1)   Do not operate the HF system while a fuel operation is done on the airplane.

(2)   Do this reception/transmission test of the HF communication system:

NOTE: HF communication can be degraded while the airplane is on the ground due to external interference or signal blockage. Before you identify a HF communication system fault, make sure you try to transmit and receive at several frequencies across the HF frequency band. Make sure the airplane is not in or near any large metal structures. In some cases, you can move the airplane to correct the problem.

(a)   Connect a headset/boom microphone, M428 (captain's), to the boom microphone jack, D6027 (captain's).

(b)   Do these steps at the audio control panel, P8-6 (captain's ACP):

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

    1)   Push and release the HF-1 switch.

        a)   Make sure that the switch light comes on.

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

    2)   Push and release the applicable HF-1 or HF-2 switch.

        a)   Make sure that the switch light comes on.

SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

    3)   Push and release the HF-1 volume control.

        a)   Make sure that the volume control indicator light comes on.

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

    4)   Push and release the applicable HF-1 or HF-2 volume control.

        a)   Make sure that the volume control indicator light comes on.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

    5)   Set the volume control to the middle position.

    6)   Set the MASK/BOOM switch (if installed) to the BOOM position.

SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

    (c)   Do these steps at the applicable HF control panel, P8-11 (HF-1) or P8-12 (HF-2):

    1)   Set the mode selector switch to the AM or USB position.

    2)   Turn the RF SENS control fully clockwise.

    3)   Set the HF frequency display to an approved test frequency.

SHZ 009-699, 860-863, 865; SHZ 866 PRE SB 737-23-1560

    (d)   Do these steps at the HF control panel, P8-11:

    1)   Set the mode selector switch to the AM or USB position.

    2)   Turn the RF SENS control fully clockwise.

    3)   Set the HF frequency display to an approved test frequency.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

    (e)   Do these steps at the radio tuning panel, P8-71 (RTP-1):

SHZ 801-819, 821-825, 827-847, 850-852, 855-859, 871-874, 876-887, 901-999

    1)   Push the HF 1 switch light.

        a)   Make sure that the switch light comes on.

SHZ 820, 888-899

    2)   Push the applicable HF switch light (HF 1 or HF 2).

        a)   Make sure that the switch light comes on.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

    3)   Push the AM switch light for AM or USB mode of operation.

        a)   Make sure the switch light is on for AM, or off for USB.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999 (Continued)

       4)   Turn the SENS control clockwise to the maximum position.

       5)   Set the STANDBY frequency window to an approved test frequency.

       6)   Push the display transfer switch.

          a)   Make sure the STANDBY frequency moves to the ACTIVE frequency window.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

    (f)   Push and release the captain's push-to-talk (PTT) switch.

       1)   Make sure you hear a 1 kHz tune-in-progress tone in the headset.

         NOTE: A continuous or pulsed tone indicates that the coupler is tuning to a new frequency. The coupler tune tone will sound no longer than 15 seconds. The average coupler tune time is approximately 2 to 4 seconds typical, 7 seconds maximum. A continous tone indicates a failed HF coupler and as long as this failure exists, it will be annunciated on the front of the HF transceiver.

         NOTE: Some coupler types are able to tune quickly when previously used frequencies are selected (about 1 second), in which case the tune tone may be only a momentary beep or may not be audible. But at the first tuning after a cold start, the tune tone is always audible regardless of whether this frequency is stored (average 2 to 4 seconds, 7 seconds maximum).

         NOTE: Data for the last 100 tuned frequencies is stored in memeory. When either HF antenna or HF transceiver is replaced, the frequency memory is reset.

    (g)   Do these steps to do a voice communication test with a radio tower operator:

       1)   Push and hold the PTT switch while you speak.

         NOTE: If no audio sidetone is heard, the HF transceiver has failed and as long as this failure exists, it will be annunciated on the front of the HF transceiver.

         a)   Make sure you hear the sidetone in the headset while you speak.

         b)   Make sure the HF transceiver blower fan operates when you transmit.

         c)   Make sure the FAIL lights on the front panel of the HF transceiver are not on.

       2)   Release the PTT switch while you listen.

         a)   Make sure the quality of the transmitted and received voice is satisfactory.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

         b)   Make sure the sound of the received voice decreases and increases when you turn the RF SENS control counterclockwise and clockwise on the HF control panel.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

         c)   Make sure the sound of the received voice decreases and increases when you turn the SENS control counterclockwise and clockwise on the RTP.

SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

         d)   Make sure the sound of the received voice changes when you turn the HF-1 volume control on the ACP, P8-6 (captain's), with no change in voice quality.

┌─── EFFECTIVITY ───
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

      e) Make sure the sound of the received voice changes when you turn the applicable HF-1 or HF-2 volume control on the ACP, P8-6 (captain's), with no change in voice quality.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

    (h) If more than one mode of operation (AM and USB) is available at your location, do this step:

SHZ 002, 009-699, 721-799, 860-863, 865, 866

      1) Set the mode selector switch to the other mode of operation and make a voice transmission.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

      2) Push the AM switch light to the other mode of operation and make a voice transmission.

SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

    (i) At each remaining ACP, set the HF-1 switch and make a voice transmission.

      1) Make sure the quality of the transmitted and received voice is satisfactory.

      2) Make sure the sound of the received voice changes when you turn the HF-1 volume control on the applicable ACP with no change in voice quality.

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

    (j) At each remaining ACP, set the applicable HF-1 or HF-2 switch and make a voice transmission.

      1) Make sure the quality of the transmitted and received voice is satisfactory.

      2) Make sure the sound of the received voice changes when you turn the applicable HF-1 or HF-2 volume control on the applicable ACP with no change in voice quality.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(3) If the HF communication system operates satisfactorily, then there was an intermittent fault.

(4) If the HF communication system does not operate satisfactorily at one location, then do the Fault Isolation Procedure - Problem At One Location below.

(5) If the HF communication system does not operate satisfactorily at all locations, then do the Fault Isolation Procedure - Problem At All Locations below.

(6) If the HF communication system does not operate satisfactorily or is intermittent while in flight, but operates satisfactorily on the ground, do the Fault Isolation Procedure - Intermittent Operation In Flight, Ground Operation OK below.

  F. **Fault Isolation Procedure - Problem At One Location**

(1) Replace the audio control panel, P8-6 (captain's ACP), P8-7 (first officer's ACP) or P5-15 (first observer's ACP).

    These are the tasks:

    Audio Control Panel Removal, AMM TASK 23-51-02-000-801,

    Audio Control Panel Installation, AMM TASK 23-51-02-400-801.

    (a) Do a voice communication test with a radio tower operator using the applicable ACP.

      1) Make sure the quality of the transmitted and received voice is satisfactory.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-11 TASK 806

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    (b)   If the HF communication system operates satisfactorily, then you corrected the fault.

    (c)   If the HF communication system does not operate satisfactorily, then continue.

(2)   Replace the remote electronics unit, M1353 (REU).

These are the tasks:

Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801,

Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

    (a)   Do a voice communication test with a radio tower operator using the applicable ACP.

       1)   Make sure the quality of the transmitted and received voice is satisfactory.

    (b)   If the HF communication system operates satisfactorily, then you corrected the fault.

G.   Fault Isolation Procedure - Problem At All Locations

SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

(1)   Replace the HF transceiver, M226 (HF-1).

These are the tasks:

HF Transceiver - Removal, AMM TASK 23-11-21-000-801,

HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

    (a)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

    (b)   Do a voice communication test with a radio tower operator.

       1)   Make sure the quality of the transmitted and received voice is satisfactory.

    (c)   If the HF communication system operates satisfactorily, then you corrected the fault.

    (d)   If the HF communication system does not operate satisfactorily, then continue.

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

(2)   Do this exchange check of the HF transceiver, M226 (HF-1) or M439 (HF-2):

    (a)   Put a tag that reads SUSPECT on the HF transceiver, M226 (HF-1) or M439 (HF-2), with poor reception or transmission.

    (b)   Put a tag that reads OK on the other HF transceiver, M226 (HF-1) or M439 (HF-2).

    (c)   Exchange the locations of the HF transceivers, M226 (HF-1) and M439 (HF-2).

These are the tasks:

HF Transceiver - Removal, AMM TASK 23-11-21-000-801,

HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

    (d)   Do a BITE test of the HF transceivers, M226 (HF-1) and M439 (HF-2). To do the BITE test, do this task: HF Communication System - BITE Procedure, 23-11 TASK 801

    (e)   Do a voice communication test with a radio tower operator.

       1)   Make sure the quality of the transmitted and received voice is satisfactory.

    (f)   If the poor reception or transmission moves with the HF transceiver tagged SUSPECT, then do these steps:

       1)   Replace the HF transceiver, M226 (HF-1) or M439 (HF-2), tagged SUSPECT.

These are the tasks:

HF Transceiver - Removal, AMM TASK 23-11-21-000-801,

┌─ EFFECTIVITY ─┐
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560 (Continued)

HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

NOTE: If it is your airlines' policy, you must install the HF transceiver with the OK tag in its initial location.

2) Do a BITE test of the HF transceiver that replaced the HF transceiver tagged SUSPECT. To do the BITE test, do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

   a) Do a voice communication test with a radio tower operator.

   b) Make sure the quality of the transmitted and received voice is satisfactory.

3) If the HF communication system operates satisfactorily, then you corrected the fault.

4) Remove the tags from the HF transceivers, M226 (HF-1) and M439 (HF-2).

(g) If the poor reception or transmission goes away after you exchange the HF transceivers, M226 (HF-1) and M439 (HF-2), then do these steps to complete the task:

NOTE: There was an intermittent fault in either the equipment rack connector, D345B (HF-1) or D623B (HF-2), or in the HF transceiver, M226 (HF-1) or M439 (HF-2), with the SUSPECT tag.

1) If it is your airlines' policy, you must install the HF transceivers, M226 (HF-1) and M439 (HF-2), in their initial locations.

   These are the tasks:

   HF Transceiver - Removal, AMM TASK 23-11-21-000-801,

   HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

2) Remove the tags from the HF transceivers, M226 (HF-1) and M439 (HF-2).

(h) If the poor reception or transmission stays with the HF-1 or HF-2 communication system after you exchange the HF transceivers, M226 (HF-1) and M439 (HF-2), then do these steps and continue:

1) If it is your airlines' policy, you must install the HF transceivers, M226 (HF-1) and M439 (HF-2), in their initial locations.

   These are the tasks:

   HF Transceiver - Removal, AMM TASK 23-11-21-000-801,

   HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

2) Remove the tags from the HF transceivers, M226 (HF-1) and M439 (HF-2).

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(3) Replace the HF control panel, P8-11 (HF-1).

These are the tasks:

HF Control Panel - Removal, AMM TASK 23-11-31-000-801,

HF Control Panel - Installation, AMM TASK 23-11-31-400-801.

(a) Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

(b) Do a voice communication test with a radio tower operator.

   1) Make sure the quality of the transmitted and received voice is satisfactory.

(c) If the HF communication system operates satisfactorily, then you corrected the fault.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 002, 009-699, 721-799, 860-863, 865, 866 (Continued)

    (d)   If the HF communication system does not operate satisfactorily, then continue.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(4)   Replace the radio tuning panel, P8-71 (RTP-1) or P8-72 (RTP-2).

    These are the tasks:

    Radio Tuning Panel (RTP) - Removal, AMM TASK 23-12-41-000-801,

    Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801.

    (a)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

    (b)   Do a voice communication test with a radio tower operator.

        1)   Make sure the quality of the transmitted and received voice is satisfactory.

    (c)   If the HF communication system operates satisfactorily, then you corrected the fault.

    (d)   If the HF communication system does not operate satisfactorily, then continue.

SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560

(5)   Do this exchange check of the HF control panel, P8-11 (HF-1) or P8-12 (HF-2):

    (a)   Put a tag that reads SUSPECT on the HF control panel, P8-11 (HF-1) or P8-12 (HF-2), with poor reception or transmission.

    (b)   Put a tag that reads OK on the other HF control panel, P8-11 (HF-1) or P8-12 (HF-2).

    (c)   Exchange the locations of the HF control panels, P8-11 (HF-1) and P8-12 (HF-2).

    These are the tasks:

    HF Control Panel - Removal, AMM TASK 23-11-31-000-801,

    HF Control Panel - Installation, AMM TASK 23-11-31-400-801.

    (d)   Do a BITE test of the HF transceivers, M226 (HF-1) and M439 (HF-2). To do the BITE test, do this task: HF Communication System - BITE Procedure, 23-11 TASK 801

    (e)   Do a voice communication test with a radio tower operator.

        1)   Make sure the quality of the transmitted and received voice is satisfactory.

    (f)   If the poor reception or transmission moves with the HF control panel tagged SUSPECT, then do these steps:

        1)   Replace the HF control panel, P8-11 (HF-1) or P8-12 (HF-2), tagged SUSPECT.

        These are the tasks:

        HF Control Panel - Removal, AMM TASK 23-11-31-000-801,

        HF Control Panel - Installation, AMM TASK 23-11-31-400-801.

        NOTE: If it is your airlines' policy, you must install the HF control panel with the OK tag in its initial location.

        2)   Do a BITE test of the HF transceiver system for the replaced HF control panel tagged SUSPECT. To do the BITE test, do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

        3)   Do a voice communication test with a radio tower operator.

            a)   Make sure the quality of the transmitted and received voice is satisfactory.

        4)   If the HF communication system operates satisfactorily, then you corrected the fault.

            a)   Remove the tags from the HF control panels, P8-11 (HF-1) and P8-12 (HF-2).

┌──── EFFECTIVITY ────
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 002, 721-799; SHZ 866 POST SB 737-23-1560 (Continued)

(g)   If the poor reception or transmission goes away after you exchange the HF control panels, P8-11 (HF-1) and P8-12 (HF-2), then do these steps to complete the task:

NOTE: There was an intermittent fault in either the HF control panel connector, D419 (HF-1) or D773 (HF-2), or in the HF control panel, P8-11 (HF-1) or P8-12 (HF-2), with the SUSPECT tag.

1)   If it is your airlines' policy, you must install the HF control panels, P8-11 (HF-1) and P8-12 (HF-2), in their initial locations.

These are the tasks:

HF Control Panel - Removal, AMM TASK 23-11-31-000-801,

HF Control Panel - Installation, AMM TASK 23-11-31-400-801.

2)   Remove the tags from the HF control panels, P8-11 (HF-1) and P8-12 (HF-2).

(h)   If the poor reception or transmission stays with the HF-1 or HF-2 communication system after you exchange the HF control panels, P8-11 (HF-1) and P8-12 (HF-2), then continue:

1)   If it is your airlines' policy, you must install the HF control panels, P8-11 (HF-1) and P8-12 (HF-2), in their initial locations.

These are the tasks:

HF Control Panel - Removal, AMM TASK 23-11-31-000-801,

HF Control Panel - Installation, AMM TASK 23-11-31-400-801.

2)   Remove the tags from the HF control panels, P8-11 (HF-1) and P8-12 (HF-2).

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(6)   Replace the remote electronics unit, M1353 (REU).

These are the tasks:

Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801,

Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

(a)   Do a voice communication test with a radio tower operator.

1)   Make sure the quality of the transmitted and received voice is satisfactory.

(b)   If the HF communication system operates satisfactorily, then you corrected the fault.

(c)   If the HF communication system does not operate satisfactorily, then continue.

SHZ 009-699, 801-804, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

(7)   Replace the HF antenna coupler, M227 (HF-1).

These are the tasks:

HF Antenna Coupler - Removal, AMM TASK 23-11-61-000-801,

HF Antenna Coupler - Installation, AMM TASK 23-11-61-400-801.

(a)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

(b)   Do a voice communication test with a radio tower operator.

1)   Make sure the quality of the transmitted and received voice is satisfactory.

(c)   If the HF communication system operates satisfactorily, then you corrected the fault.

(d)   If the HF communication system does not operate satisfactorily, then continue.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 002, 721-799, 805-820, 888-899; SHZ 866 POST SB 737-23-1560

(8)   Replace the HF antenna coupler, M227 (HF-1) or M440 (HF-2).

These are the tasks:

HF Antenna Coupler - Removal, AMM TASK 23-11-61-000-801,

HF Antenna Coupler - Installation, AMM TASK 23-11-61-400-801.

    (a)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

    (b)   Do a voice communication test with a radio tower operator.

        1)   Make sure the quality of the transmitted and received voice is satisfactory.

    (c)   If the HF communication system operates satisfactorily, then you corrected the fault.

    (d)   If the HF communication system does not operate satisfactorily, then continue.

SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

(9)   Do this check of the coaxial cable:

    (a)   Remove the HF transceiver, M226 (HF-1). To remove it, do this task: HF Transceiver - Removal, AMM TASK 23-11-21-000-801.

    (b)   Remove this access panel:

Number	Name/Location
322AL	Vertical Fin, Fixed Leading Edge

    (c)   Disconnect the coaxial cable connector, D337, at the HF antenna coupler, M227 (HF-1).

    (d)   Do a time domain reflectometry check of the coaxial cable between connector, D345B, at the HF transceiver, M226 (HF-1), and connector, D337, at the HF antenna coupler, M227 (HF-1) (WDM 23-11-11), do this task: Coaxial Cable Inspection, AMM TASK 20-10-72-210-801.

    (e)   Repair any problems that you find.

    (f)   Re-connect the coaxial cable connector, D337, at the HF antenna coupler, M227 (HF-1).

    (g)   Install this access panel:

Number	Name/Location
322AL	Vertical Fin, Fixed Leading Edge

    (h)   Re-install the HF transceiver, M226 (HF-1). To install it, do this task: HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

    (i)   Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1
E	11	C00839	COMMUNICATIONS HF 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	3	C00166	COMMUNICATIONS VHF 2

    (j)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

    (k)   Do a voice communication test with a radio tower operator.

┌─── EFFECTIVITY ───
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-11 TASK 806

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SHZ 009-699, 801-819, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560 (Continued)

       1)   Make sure the quality of the transmitted and received voice is satisfactory.

    (l)   If the HF communication system operates satisfactorily, then you corrected the fault.

   (m)   If the HF communication system does not operate satisfactorily, then continue.

SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560

(10)   Do this check of the coaxial cable:

   (a)   Remove the HF transceiver, M226 (HF-1) or M439 (HF-2). To remove it, do this task: HF Transceiver - Removal, AMM TASK 23-11-21-000-801.

   (b)   Remove the applicable access panel:

Number	Name/Location
322AL	Vertical Fin, Fixed Leading Edge

or open this access panel:

Number	Name/Location
322AR	Vertical Fin, Fixed Leading Edge

      NOTE: The HF-1 antenna coupler is installed on the left side of the vertical stabilizer. The HF-2 antenna coupler is installed on the right side of the vertical stabilizer.

   (c)   Disconnect the coaxial cable connector, D337 (HF-1) or D625 (HF-2), at the HF antenna coupler, M227 (HF-1) or M440 (HF-2).

   (d)   Do a time domain reflectometry check of the coaxial cable between connector, D345B (HF-1) or D623B (HF-2), at the HF transceiver, M226 (HF-1) or M439 (HF-2), and connector, D337 (HF-1) or D625 (HF-2), at the HF antenna coupler, M227 (HF-1) or M440 (HF-2) (WDM 23-11-11, -21), do this task: Coaxial Cable Inspection, AMM TASK 20-10-72-210-801.

   (e)   Repair any problems that you find.

   (f)   Re-connect the coaxial cable connector, D337 (HF-1) or D625 (HF-2), at the HF antenna coupler, M227 (HF-1) or M440 (HF-2).

   (g)   Install the applicable access panel:

Number	Name/Location
322AL	Vertical Fin, Fixed Leading Edge

or close this access panel:

Number	Name/Location
322AR	Vertical Fin, Fixed Leading Edge

   (h)   Re-install the HF transceiver, M226 (HF-1) or M439 (HF-2). To install it, do this task: HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

   (i)   Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1
E	11	C00839	COMMUNICATIONS HF 1

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 002, 721-799, 820, 888-899; SHZ 866 POST SB 737-23-1560 (Continued)

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	3	C00166	COMMUNICATIONS VHF 2
D	2	C00857	COMMUNICATIONS HF 2

   (j)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

   (k)   Do a voice communication test with a radio tower operator.

      1)   Make sure the quality of the transmitted and received voice is satisfactory.

   (l)   If the HF communication system operates satisfactorily, then you corrected the fault.

   (m)   If the HF communication system does not operate satisfactorily, then continue.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(11)   Do a check of the electrical bond of the HF antenna, do this task: HF Antenna - Electrical Bond Check, AMM TASK 23-11-51-760-801.

   (a)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

   (b)   Do a voice communication test with a radio tower operator.

      1)   Make sure the quality of the transmitted and received voice is satisfactory.

   (c)   If the HF communication system operates satisfactorily, then you corrected the fault.

  H. **Fault Isolation Procedure - Intermittent Operation In Flight, Ground Operation OK below.**

  NOTE: This fault indicates that a HF antenna coupler has a pressurization leak. Make sure that the replacement HF coupler is fully pressurized with dry nitrogen in accordance with the applicable Component Maintenance Manual (CMM).

SHZ 002, 721-799, 805-820, 888-899; SHZ 866 POST SB 737-23-1560

(1)   Replace the applicable HF antenna coupler, M227 (HF-1) or M440 (HF-2).

These are the tasks:

HF Antenna Coupler - Removal, AMM TASK 23-11-61-000-801,

HF Antenna Coupler - Installation, AMM TASK 23-11-61-400-801.

   (a)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

   (b)   Monitor HF system performance on subsequent flights.

   (c)   If the HF communication system operates satisfactorily while in flight, then you corrected the fault.

SHZ 009-699, 801-804, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560

(2)   Replace the HF antenna coupler, M227 (HF-1).

These are the tasks:

HF Antenna Coupler - Removal, AMM TASK 23-11-61-000-801,

HF Antenna Coupler - Installation, AMM TASK 23-11-61-400-801.

   (a)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

   (b)   Monitor HF system performance on subsequent flights.

EFFECTIVITY
**SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999**

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737-600/700/800/900
FAULT ISOLATION MANUAL

SHZ 009-699, 801-804, 821-825, 827-847, 850-852, 855-863, 865, 871-874, 876-887, 901-999; SHZ 866 PRE SB 737-23-1560 (Continued)

     (c)   If the HF communication system operates satisfactorily while in flight, then you corrected the fault.

———— **END OF TASK** ————

┌─ EFFECTIVITY ─┐
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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801. VHF Communication Transceiver System - BITE Procedure

    A. General

    (1) You do the Very High Frequency (VHF) Communication System Built-In-Test Equipment (BITE) Test at the Front Panel of the VHF Communication Transceiver.

    (2) The No. 1 VHF Communication Transceiver is located on the E1-3 Shelf and the No. 2 VHF Communication Transceiver is located on the E1-5 Shelf in the Main Equipment Center.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

    (3) The No. 3 VHF Communication Transceiver is located on the E3-3 Shelf in the Main Equipment Center.

SHZ ALL

    (4) The VHF Communication System BITE Test does a self check for existing internal and external faults.

SHZ 860-863, 865, 866

        (a) Results of the BITE Test are displayed on the Liquid Crystal Display (LCD) Screen on the Front Panel of the VHF Communication Transceiver.

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

        (b) Results of the BITE Test are displayed by fault lights on the Front Panel of the VHF Communication Transceiver.

SHZ ALL

    (5) The VHF Communication Transceiver flight fault memory stores fault data from previous flight legs. You can view faults that occurred on previous flight legs to help isolate an intermittent fault that is not found by the BITE Self-Test.

    B. BITE Procedure

SHZ 860-863, 865, 866

    (1) Do these steps to do the BITE procedure for the VHF Communication System:

        (a) Push and release one of the two TEST Switches on the front panel of the applicable VHF Communication Transceiver.

          NOTE: If no switch is pushed for five minutes on the VHF Communication Transceiver while in the self-test mode, the LCD Screen will return to the normal mode screen automatically.

          1) Make sure the LCD Screen shows VHF DATA RADIO TEST IN PROGRESS.

        (b) If the LCD Screen shows VHF DATA RADIO TEST COMPLETE - NO FAILURES, then the BITE Test passed.

        (c) If the LCD Screen shows VHF DATA RADIO TEST COMPLETE - FAILURES, then do these steps:

          1) Push the right switch under the WHY? prompt.

          2) If the LCD Screen shows VHF DATA RADIO FAILED, then refer to the Maintenance Message Table at the end of this task to find the Fault Isolation Task.

          3) If the LCD Screen shows VHF DATA RADIO OK - EXTERNAL FAILURES PRESENT, then do these steps:

EFFECTIVITY

SHZ ALL

23-12 TASK 801

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SHZ 860-863, 865, 866 (Continued)

    a)   Push the right switch under the MORE prompt.

        NOTE: The LCD Screen will show the first maintenance message. The LCD Screen can show only one maintenance message at a time.

    b)   Push the right switch under the MORE prompt to view more maintenance messages if multiple maintenance messages exist.

        NOTE: If you continue to push the MORE Switch, you will see all of the maintenance messages that are present. You will return to the first maintenance message when you push the MORE Switch after the last maintenance message.

    c)   Refer to the maintenance message table at the end of this task to find the Fault Isolation Task for the applicable maintenance messages.

  4)   If the LCD Screen shows VHF DATA RADIO FAILED - EXTERNAL FAILURES PRESENT, then do these steps:

    a)   The first maintenance message is VHF DATA RADIO FAILED.

    b)   Push the right switch under the MORE prompt to show the external failure maintenance messages.

        NOTE: The LCD Screen will show the first maintenance message. The LCD Screen can show only one maintenance message at a time.

    c)   Push the right switch under the MORE prompt to view more maintenance messages if multiple maintenance messages exist.

        NOTE: If you continue to push the MORE Switch, you will see all of the maintenance messages that are present. You will return to the first maintenance message when you push the MORE Switch after the last maintenance message.

    d)   Refer to the Maintenance Message Table at the end of this task to find the Fault Isolation Task for the applicable maintenance messages.

  5)   Push the left switch under the RETURN prompt to return to the normal mode screen.

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(2)   Do these steps to do the BITE procedure for the VHF Communication System:

SHZ 901-999

    NOTE: Before you do the BITE Test, make sure that VHF-3 is in the voice mode (a voice frequency shows in the active (left) display of the Radio Tuning Panel (RTP)).

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(a)   Push and release the TEST Switch on the Front Panel of the applicable VHF Communication Transceiver.

  1)   Make sure these conditions occur:

    a)   All three Light Emitting Diode (LED)s on the VHF Transceiver Front Panel turn red for about two seconds.

    b)   The LRU STATUS LED turns green and the CONTROL FAIL and ANTENNA FAIL LEDs remain red for about two seconds.

┌─ EFFECTIVITY ─────────
SHZ ALL

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23-12 TASK 801

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SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899

    c)   All three LEDs go OFF for about two seconds.

SHZ 901-999

    d)   All three LEDs go OFF for about five seconds.

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(b)   If the LRU STATUS LED comes ON green for about 30 seconds and the CONTROL FAIL and ANTENNA FAIL LEDs remain OFF, then the BITE Test passed.

(c)   If the red LRU STATUS, CONTROL FAIL, or ANTENNA FAIL LED is ON, then refer to the table at the end of this task to find the Fault Isolation Task for the applicable maintenance message.

SHZ 860-863, 865, 866

C. Flight-Fault Memory History Procedure

(1)   Do this procedure, if required, to examine the Flight-Fault Memory history for hard or intermittent faults.

(a)   Push and release one of the two TEST Switches on the Front Panel of the applicable VHF Communication Transceiver to start the BITE Self-Test.

(b)   Do these steps when the BITE Self-Test is complete to show Maintenance Mode pages.

NOTE: There is no five minute time-out in the Maintenance Mode if a switch is not pushed while the airplane is on the ground.

1)   Push the MAINT Switch to enter the Maintenance Mode.

2)   Push the MORE Switch to scroll through the Maintenance Mode pages.

NOTE: After the last page is shown and no failures are stored for previous flight legs, a push of the MORE Switch returns to the first Maintenance Mode page.

3)   If the LCD Screen shows FAILURES HAVE BEEN RECORDED FOR PREVIOUS FLIGHT LEGS, this begins the Flight-Fault Memory Mode.

4)   Push the YES Switch to see the most recent flight leg (00).

NOTE: The unit stores data for 64 flight legs that contain faults or no faults. Four pages are required for each flight leg. The first page contains the date, flight number, aircraft number, and departure/destination stations. Three data pages follow for each flight leg to contain the possible failures. The data page shows FC (fault code), UTC (time), R (fault repetition count), P (phase), and O (origin).

NOTE: R greater than 0 indicates an intermittent fault. The number shows how many times the fault occurred.

5)   Push the MORE Switch to scroll through the flight leg data pages.

NOTE: After the last page is shown for the oldest flight leg, a push of the MORE Switch returns to the first flight leg page.

6)   Check the data pages for fault codes (FC).

a)   See the Fault Code Table to determine fault location.

EFFECTIVITY
SHZ ALL

23-12 TASK 801

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SHZ 860-863, 865, 866 (Continued)

Fault Code Table

FAULT CODE (FC)	FAULT LOCATION	REFERENCE DATA
Any A code	Rear connector program pin (strap) input	23-12 TASK 816
All B, C, D, E, F, G, L, R, Qa, Qb, Qc, Qd and X codes	VHF Communication Transceiver	23-12 TASK 811
Any J code	Hardware or external activity	23-12 TASK 816
Any Q code except Qa, Qb, Qc, and Qd	DP common application	23-12 TASK 816

     b)   If you have an intermittent fault, then follow your airline's policy for intermittent faults.

    7)   Review previous flight legs as necessary.

SHZ ALL

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
VHF XCVR	ANTENNA FAIL	23-12 TASK 813
VHF XCVR	CONTROL FAIL	23-12 TASK 812
VHF XCVR	LRU STATUS	23-12 TASK 811
VHF XCVR	LRU STATUS	23-12 TASK 818
VHF XCVR	TUNING PORT B MISSING INPUT	23-12 TASK 812
VHF XCVR	VHF DATA RADIO FAILED	23-12 TASK 811

———— **END OF TASK** ————

EFFECTIVITY
SHZ ALL
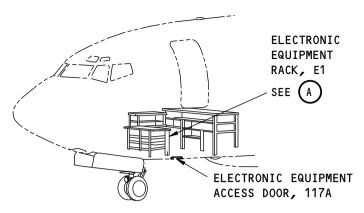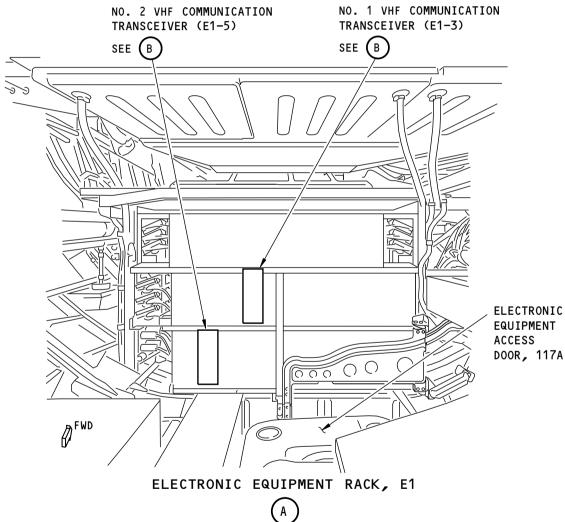
23-12 TASK 801

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ELECTRONIC
EQUIPMENT
RACK, E1

SEE Ⓐ

ELECTRONIC EQUIPMENT
ACCESS DOOR, 117A

NO. 2 VHF COMMUNICATION
TRANSCEIVER (E1-5)

SEE Ⓑ

NO. 1 VHF COMMUNICATION
TRANSCEIVER (E1-3)

SEE Ⓑ

ELECTRONIC
EQUIPMENT
ACCESS
DOOR, 117A

FWD

ELECTRONIC EQUIPMENT RACK, E1

Ⓐ

G54519 S0000146941_V1
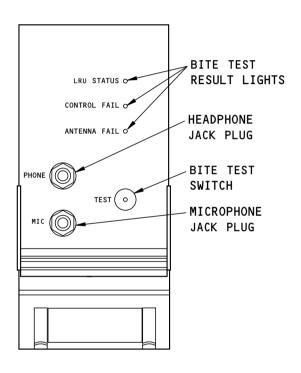
VHF Communication System Installation
Figure 201/23-12-00-990-803 (Sheet 1 of 5)

EFFECTIVITY
SHZ 706

23-12 TASK 801

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BITE TEST
RESULT LIGHTS

LRU STATUS ○

CONTROL FAIL ○

ANTENNA FAIL ○

HEADPHONE
JACK PLUG

PHONE

BITE TEST
SWITCH

TEST ○

MICROPHONE
JACK PLUG

MIC

VHF COMMUNICATION TRANSCEIVER

Ⓑ

H45417 S0000146945_V1
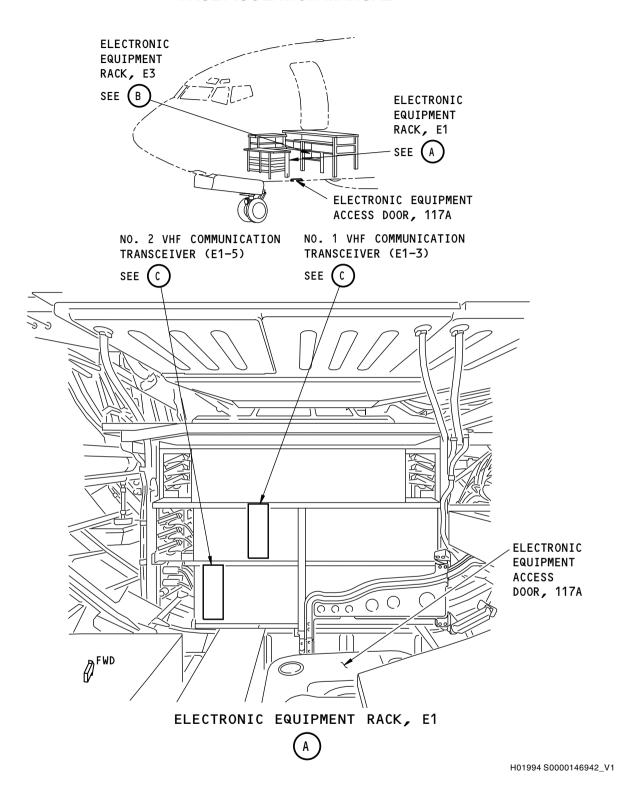
VHF Communication System Installation
Figure 201/23-12-00-990-803 (Sheet 2 of 5)

── EFFECTIVITY ──

SHZ 706

23-12 TASK 801

D633A103-SHZ

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ELECTRONIC
EQUIPMENT
RACK, E3

SEE (B)

ELECTRONIC
EQUIPMENT
RACK, E1

SEE (A)

ELECTRONIC EQUIPMENT
ACCESS DOOR, 117A

NO. 2 VHF COMMUNICATION
TRANSCEIVER (E1-5)

SEE (C)

NO. 1 VHF COMMUNICATION
TRANSCEIVER (E1-3)

SEE (C)

ELECTRONIC
EQUIPMENT
ACCESS
DOOR, 117A

FWD

ELECTRONIC EQUIPMENT RACK, E1

(A)

H01994 S0000146942_V1

VHF Communication System Installation
Figure 201/23-12-00-990-803 (Sheet 3 of 5)
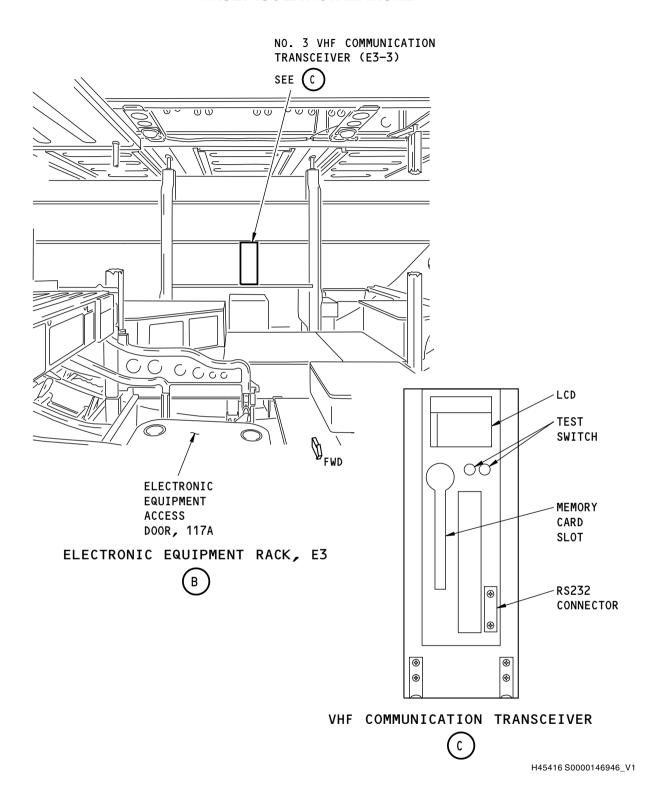
EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-12 TASK 801

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NO. 3 VHF COMMUNICATION
TRANSCEIVER (E3-3)

SEE Ⓒ

ELECTRONIC
EQUIPMENT
ACCESS
DOOR, 117A

FWD

ELECTRONIC EQUIPMENT RACK, E3

Ⓑ

LCD

TEST
SWITCH

MEMORY
CARD
SLOT

RS232
CONNECTOR

VHF COMMUNICATION TRANSCEIVER

Ⓒ

H45416 S0000146946_V1
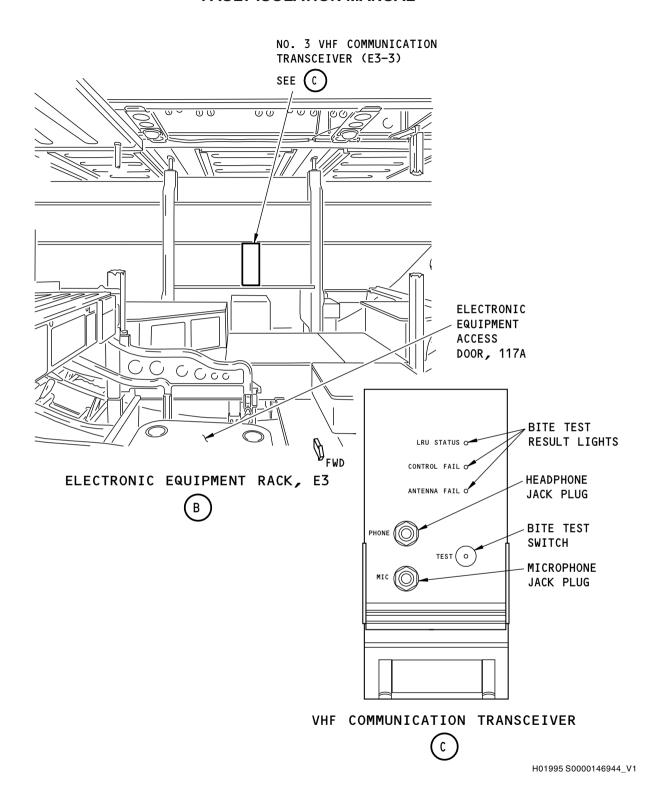
VHF Communication System Installation
Figure 201/23-12-00-990-803 (Sheet 4 of 5)

EFFECTIVITY
SHZ 860-863, 865, 866

23-12 TASK 801

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ECCN 9E991 BOEING PROPRIETARY - See title page for details

NO. 3 VHF COMMUNICATION
TRANSCEIVER (E3-3)

SEE (C)

ELECTRONIC
EQUIPMENT
ACCESS
DOOR, 117A

FWD

ELECTRONIC EQUIPMENT RACK, E3

(B)

LRU STATUS ○
CONTROL FAIL ○
ANTENNA FAIL ○

BITE TEST
RESULT LIGHTS

PHONE

HEADPHONE
JACK PLUG

TEST ○

BITE TEST
SWITCH

MIC

MICROPHONE
JACK PLUG

VHF COMMUNICATION TRANSCEIVER

(C)

H01995 S0000146944_V1

VHF Communication System Installation
Figure 201/23-12-00-990-803 (Sheet 5 of 5)

23-12 TASK 801

EFFECTIVITY
**SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-859, 871-874, 876-899, 901-999**

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811. **VHF Transceiver VHF DATA RADIO FAILED Problem - Fault Isolation**

    A. **Description**

        (1)   This task is for this maintenance message:

            (a)   VHF DATA RADIO FAILED

        (2)   The VHF communication transceiver has an internal fault.

    B. **Possible Causes**

        SHZ 706

        (1)   VHF communication transceiver, M149 (VHF-1) or M150 (VHF-2).

        SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

        (2)   VHF communication transceiver, M149 (VHF-1), M150 (VHF-2), or M411 (VHF-3).

        SHZ ALL

    C. **Circuit Breakers**

        (1)   These are the primary circuit breakers related to the fault:

        CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1

        SHZ 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

Row	Col	Number	Name
D	12	C00471	COMMUNICATIONS VHF 3

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name

        SHZ ALL

Row	Col	Number	Name
C	3	C00166	COMMUNICATIONS VHF 2

        This circuit breaker is inoperative and should remain open:

        CAPT Electrical System Panel, P18-2

Row	Col	Number	Name

        SHZ 002

Row	Col	Number	Name
D	12	C00471	COMMUNICATIONS VHF 3 (INOP)

        SHZ ALL

    D. **Related Data**

        SHZ 706

        (1)   (SSM 23-12-11,-21)

        SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

        (2)   (SSM 23-12-11,-21, -31)

        SHZ ALL

    EFFECTIVITY
SHZ ALL

23-12 **TASK 811**

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SHZ 706

(3)　(WDM 23-12-11,-21)

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(4)　(WDM 23-12-11,-21,-31)

SHZ ALL

E.　**Initial Evaluation**

(1)　Do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

(a)　If VHF DATA RADIO FAILED does not show on the LCD screen of the transceiver, then there was an intermittent fault.

(b)　If VHF DATA RADIO FAILED shows on the LCD screen of the transceiver, then continue.

F.　**Fault Isolation Procedure**

SHZ 706

(1)　Replace the VHF communication transceiver, M149 (VHF-1) or M150 (VHF-2).

These are the tasks:

VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801,

VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

(a)　Do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

1)　If VHF DATA RADIO FAILED does not show on the LCD screen of the transceiver, then you corrected the fault.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(2)　Replace the VHF communication transceiver, M149 (VHF-1), M150 (VHF-2), or M411 (VHF-3).

These are the tasks:

VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801,

VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

(a)　Do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

1)　If VHF DATA RADIO FAILED does not show on the LCD screen of the transceiver, then you corrected the fault.

SHZ ALL

———— **END OF TASK** ————

812.　**VHF Transceiver CONTROL Problem or TUNING PORT B MISSING INPUT Problem - Fault Isolation**

A.　**Description**

(1)　This task is for these maintenance messages:

SHZ 860-863, 865, 866

(a)　TUNING PORT B - MISSING INPUT

┌─ EFFECTIVITY ─
SHZ ALL

23-12 TASKS 811-812

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SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

    (b)   CONTROL FAIL

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(2)   The VHF Communication Transceiver receives no input from the VHF Communication Control Panel.

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(3)   The VHF Communication Transceiver receives no input from the RTP.

SHZ ALL

B.   **Possible Causes**

SHZ 860-863

(1)   VHF Communication Control Panel, P8-2 (VHF-1) or P8-3 (VHF-2)

SHZ 002, 009-699, 721-799, 865, 866

(2)   VHF Communication Control Panel, P8-2 (VHF-1), P8-3 (VHF-2), or P8-8 (VHF-3)

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(3)   RTP, P8-71 (RTP-1), P8-72 (RTP-2), or P8-73 (RTP-3)

SHZ 706

(4)   VHF Communication Transceiver, M149 (VHF-1) or M150 (VHF-2)

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(5)   VHF Communication Transceiver, M149 (VHF-1), M150 (VHF-2), or M411 (VHF-3)

SHZ ALL

(6)   Wiring

C.   **Circuit Breakers**

(1)   These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1

SHZ 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

Row	Col	Number	Name
D	12	C00471	COMMUNICATIONS VHF 3

F/O Electrical System Panel, P6-1

Row	Col	Number	Name

SHZ ALL

Row	Col	Number	Name
C	3	C00166	COMMUNICATIONS VHF 2

This circuit breaker is inoperative and should remain open:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name

SHZ 002

Row	Col	Number	Name
D	12	C00471	COMMUNICATIONS VHF 3 (INOP)

┌─── EFFECTIVITY ───
SHZ ALL

23-12 TASK 812

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SHZ 002 (Continued)

    SHZ ALL

  D.   **Related Data**

    SHZ 706

    (1)   SSM 23-12-11, 23-12-21

    SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

    (2)   SSM 23-12-11,-21, -31

    SHZ 706

    (3)   WDM 23-12-11, 23-12-21

    SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

    (4)   WDM 23-12-11,-21,-31

    SHZ ALL

  E.   **Initial Evaluation**

    (1)   Do the VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

        (a)   If the maintenance message or fail light does not show on the transceiver, then there was an intermittent fault.

        (b)   If the maintenance message or fail light shows on the transceiver, then continue.

    SHZ 865, 866

    (2)   Set the TFR Switch on the applicable VHF Communication Control Panel to the left position.

        (a)   Make sure the active frequency light, above the left frequency indicator, is ON.

        (b)   If the active frequency light is not ON, then do the Fault Isolation Procedure - Active Frequency Light Not On/Frequency Is Not Shown below.

        (c)   If the active frequency light is ON, then do the Fault Isolation Procedure - Active Frequency Light Is On/Frequency Is Shown below.

    SHZ 002, 009-699, 721-799, 860-863

    (3)   Set the applicable VHF Communication Control Panel to an approved test frequency.

        (a)   Make sure the STANDBY Frequency Display shows the set frequency.

        (b)   If the frequency is not shown, then do the Fault Isolation Procedure - Active Frequency Light Not On/Frequency Is Not Shown below.

        (c)   If the frequency is shown, then do the Fault Isolation Procedure - Active Frequency Light Is On/Frequency Is Shown below.

    SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

    (4)   Set the radio tuning panels for the applicable VHF Communication System.

        (a)   Set the STANDBY frequency to an approved test frequency.

        (b)   If the frequency is not shown, then do the Fault Isolation Procedure - Frequency Is Not Shown below.

        (c)   If the frequency is shown, then do the Fault Isolation Procedure - Frequency Is Shown below.

EFFECTIVITY
SHZ ALL

23-12 TASK 812

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SHZ 002, 009-699, 721-799, 860-863, 865, 866

F. **Fault Isolation Procedure - Active Frequency Light Not On**

(1)   Do this check for 28 VDC at the VHF Control Panel:

SHZ 860-863

(a)   Remove the VHF Communication Control Panel, P8-2 (VHF-1) or P8-3 (VHF-2). This is the task: VHF Communication Control Panel - Removal, AMM TASK 23-12-31-000-801.

SHZ 002, 009-699, 721-799, 865, 866

(b)   Remove the VHF Communication Control Panel, P8-2 (VHF-1), P8-3 (VHF-2), or P8-8 (VHF-3). This is the task: VHF Communication Control Panel - Removal, AMM TASK 23-12-31-000-801.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(c)   Close these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1

SHZ 009-699, 721-799, 860-863, 865, 866

Row	Col	Number	Name
D	12	C00471	COMMUNICATIONS VHF 3

F/O Electrical System Panel, P6-1

Row	Col	Number	Name

SHZ 002, 009-699, 721-799, 860-863, 865, 866

Row	Col	Number	Name
C	3	C00166	COMMUNICATIONS VHF 2

This circuit breaker is inoperative and should remain open:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name

SHZ 002

Row	Col	Number	Name
D	12	C00471	COMMUNICATIONS VHF 3 (INOP)

SHZ 860-863

(d)   Do a check for 28V DC at pin 13 of connector D203 (VHF-1) or D209 (VHF-2), to Structure Ground.

SHZ 002, 009-699, 721-799, 865, 866

(e)   Do a check for 28V DC at pin 13 of connector D203 (VHF-1), D209 (VHF-2), or D549 (VHF-3), to Structure Ground.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(f)   Open these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1

SHZ 009-699, 721-799, 860-863, 865, 866

Row	Col	Number	Name
D	12	C00471	COMMUNICATIONS VHF 3

EFFECTIVITY
SHZ ALL

23-12 TASK 812

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SHZ 009-699, 721-799, 860-863, 865, 866 (Continued)

F/O Electrical System Panel, P6-1

Row   Col   Number   Name

SHZ 002, 009-699, 721-799, 860-863, 865, 866

C   3   C00166   COMMUNICATIONS VHF 2

This circuit breaker is inoperative and should remain open:

CAPT Electrical System Panel, P18-2

Row   Col   Number   Name

SHZ 002

D   12   C00471   COMMUNICATIONS VHF 3 (INOP)

SHZ 860-863

(g)   If there is 28V DC at pin 13 of connector D203 (VHF-1) or D209 (VHF-2), then do these
steps:

1)   Install a new VHF Communication Control Panel, P8-2 (VHF-1) or P8-3 (VHF-2).
This is the task: VHF Communication Control Panel - Installation, AMM
TASK 23-12-31-400-801.

2)   Do the Repair Confirmation at the end of this task.

SHZ 002, 009-699, 721-799, 865, 866

(h)   If there is 28V DC at pin 13 of connector D203 (VHF-1), D209 (VHF-2), or D549 (VHF-3),
then do these steps:

1)   Install a new VHF Communication Control Panel, P8-2 (VHF-1), P8-3 (VHF-2), or
P8-8 (VHF-3). This is the task: VHF Communication Control Panel - Installation,
AMM TASK 23-12-31-400-801.

2)   Do the Repair Confirmation at the end of this task.

SHZ 860-863

(i)   If there is not 28V DC at pin 13 of connector D203 (VHF-1) or D209 (VHF-2), then
continue.

SHZ 002, 009-699, 721-799, 865, 866

(j)   If there is not 28V DC at pin 13 of connector D203 (VHF-1), D209 (VHF-2), or D549
(VHF-3), then continue.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(2)   Do this check for 28 VDC at the circuit breaker.

SHZ 860-863

(a)   Do a check for 28V DC from the load terminal of VHF COMM 1 circuit breaker, C165, or
VHF COMM 2 circuit breaker, C166, to Structure Ground.

SHZ 002, 009-699, 721-799, 865, 866

(b)   Do a check for 28V DC from the load terminal of VHF COMM 1 circuit breaker, C165,
VHF COMM 2 circuit breaker, C166, or VHF COMM 3 circuit breaker, C471, to Structure
Ground.

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SHZ 860-863

    (c)   If there is not 28V DC at the load terminal of VHF COMM 1 circuit breaker, C165, or VHF COMM 2 circuit breaker, C166, then do these steps:

        1)   Replace the applicable circuit breaker, VHF COMM 1, C165, or VHF COMM 2, C166.

        2)   Re-install the Communication Control Panel, P8-2 (VHF-1) or P8-3 (VHF-2). This is the task: VHF Communication Control Panel - Installation, AMM TASK 23-12-31-400-801.

        3)   Do the Repair Confirmation at the end of this task.

SHZ 002, 009-699, 721-799, 865, 866

    (d)   If there is not 28V DC at the load terminal of VHF COMM 1 circuit breaker, C165, VHF COMM 2 circuit breaker, C166, or VHF COMM 3 circuit breaker, C471, then do these steps:

        1)   Replace the applicable circuit breaker, VHF COMM 1, C165, VHF COMM 2, C166, or VHF COMM 3, C471.

        2)   Re-install the VHF Communication Control Panel, P8-2 (VHF-1), P8-3 (VHF-2), or P8-8 (VHF-3). This is the task: VHF Communication Control Panel - Installation, AMM TASK 23-12-31-400-801.

        3)   Do the Repair Confirmation at the end of this task.

SHZ 860-863

    (e)   If there is 28V DC at the load terminal of VHF COMM 1 circuit breaker, C165, or VHF COMM 2 circuit breaker, C166, then do these steps:

        1)   Repair the wiring between pin 13 of connector D203 (VHF-1) or D209 (VHF-2), at the VHF Communication Control Panel, P8-2 (VHF-1) or P8-3 (VHF-2), to the load terminal of VHF COMM 1 circuit breaker, C165, or VHF COMM 2 circuit breaker, C166, at the Circuit Breaker Panel, P18-1 (VHF-1) or P6-1 (VHF-2).

        2)   Re-install the VHF Communication Control Panel, P8-2 (VHF-1) or P8-3 (VHF-2). This is the task: VHF Communication Control Panel - Installation, AMM TASK 23-12-31-400-801.

        3)   Do the Repair Confirmation at the end of this task.

SHZ 002, 009-699, 721-799, 865, 866

    (f)   If there is 28V DC at the load terminal of VHF COMM 1 circuit breaker, C165, VHF COMM 2 circuit breaker, C166, or VHF COMM 3 circuit breaker, C471, then do these steps:

        1)   Repair the wiring between pin 13 of connector D203 (VHF-1), D209 (VHF-2), or D549 (VHF-3), at the VHF Communication Control Panel, P8-2 (VHF-1), P8-3 (VHF-2), or P8-8 (VHF-3), to the load terminal of VHF COMM 1 circuit breaker, C165, VHF COMM 2 circuit breaker, C166, or VHF COMM 3 circuit breaker, C471, at the Circuit Breaker Panel, P18-1 (VHF-1), P6-1 (VHF-2), or P18-2 (VHF-3).

        2)   Re-install the VHF Communication Control Panel, P8-2 (VHF-1), P8-3 (VHF-2), or P8-8 (VHF-3). This is the task: VHF Communication Control Panel - Installation, AMM TASK 23-12-31-400-801.

        3)   Do the Repair Confirmation at the end of this task.

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SHZ 002, 009-699, 721-799, 860-863, 865, 866

G. Fault Isolation Procedure - Active Frequency Light Is On or Frequency Is Shown

(1) Replace the VHF communications transceiver, M149 (VHF-1), M150 (VHF-2), or M411 (VHF-3). These are the tasks:

• VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801

• VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801

(a) Do the Repair Confirmation at the end of this task.

(2) Do this check of the wiring:

SHZ 860-863

(a) Remove the VHF Communication Control Panel, P8-2 (VHF-1) or P8-3 (VHF-2). This is the task: VHF Communication Control Panel - Removal, AMM TASK 23-12-31-000-801.

SHZ 002, 009-699, 721-799, 865, 866

(b) Remove the VHF Communication Control Panel, P8-2 (VHF-1), P8-3 (VHF-2), or P8-8 (VHF-3). This is the task: VHF Communication Control Panel - Removal, AMM TASK 23-12-31-000-801.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(c) Remove the VHF Communication Transceiver, M149 (VHF-1), M150 (VHF-2), or M411 (VHF-3). This is the task: VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801.

SHZ 860-863

(d) Do a wiring check between these pins of connector D203 (VHF-1) or D209 (VHF-2), at the Aft Electronic Panel, P8, and these pins of connector D199B (VHF-1) or D201B (VHF-2), at the Shelf, E1-3 (VHF-1) or E1-5 (VHF-2), in the Electronic Equipment (EE) Compartment:

	VHF CNTRL PNL	
	PNL CONNECTOR	XCVR CONNECTOR
VHF-1 (P8-2)	**D203**	**D199B**
	pin 21	pin A7
	pin 22	pin B7
VHF-2 (P8-3)	**D209**	**D201B**
	pin 21	pin A7
	pin 22	pin B7

SHZ 002, 009-699, 721-799, 865, 866

(e) Do a wiring check between these pins of connector D203 (VHF-1), D209 (VHF-2), or D549 (VHF-3), at the Aft Electronic Panel, P8, and these pins of connector D199B (VHF-1), D201B (VHF-2), or D539B (VHF-3), at the Shelf, E1-3 (VHF-1), E1-5 (VHF-2), or E3-3 (VHF-3), in the EE Compartment:

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SHZ 002, 009-699, 721-799, 865, 866 (Continued)

VHF CNTRL PNL

	PNL CONNECTOR	XCVR CONNECTOR
VHF-1 (P8-2)	**D203**	**D199B**
	pin 21	pin A7
	pin 22	pin B7
VHF-2 (P8-3)	**D209**	**D201B**
	pin 21	pin A7
	pin 22	pin B7
VHF-3 (P8-8)	**D549**	**D539B**
	pin 21	pin A7
	pin 22	pin B7

SHZ 002, 009-699, 721-799, 860-863, 865, 866

    (f)   If you find a problem with the wiring, then do these steps:

        1)   Repair the airplane wiring.

SHZ 860-863

        2)   Re-install the VHF Communication Control Panel, P8-2 (VHF-1) or P8-3 (VHF-2). This is the task: VHF Communication Control Panel - Installation, AMM TASK 23-12-31-400-801.

SHZ 002, 009-699, 721-799, 865, 866

        3)   Re-install the VHF Communication Control Panel, P8-2 (VHF-1), P8-3 (VHF-2), or P8-8 (VHF-3). This is the task: VHF Communication Control Panel - Installation, AMM TASK 23-12-31-400-801.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

        4)   Re-install the VHF Communication Transceiver, M149 (VHF-1), M150 (VHF-2), or M411 (VHF-3). This is the task: VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

        5)   Do the Repair Confirmation at the end of this task.

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

    H.   **Fault Isolation Procedure - Frequency Is Not Shown**

    (1)   Replace the RTP, P8-71 (RTP-1), P8-72 (RTP-2), or P8-73 (RTP-3). These are the tasks:

        • Radio Tuning Panel (RTP) - Removal, AMM TASK 23-12-41-000-801

        • Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801

        (a)   Do the Repair Confirmation at the end of this task.

    (2)   Do this check for 28 VDC at the RTP:

        (a)   Remove the RTP, P8-71 (RTP-1), P8-72 (RTP-2), or P8-73 (RTP-3). This is the task: Radio Tuning Panel (RTP) - Removal, AMM TASK 23-12-41-000-801.

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SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999 (Continued)

(b)   Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1
D	12	C00471	COMMUNICATIONS VHF 3

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	3	C00166	COMMUNICATIONS VHF 2

(c)   Do a check for 28V DC at pin 40 of connector D203 (RTP-1), D209 (RTP-2), or D549 (RTP-3) to Structure Ground.

   1)   If there is not 28V DC at pin 40 of connector D203 (RTP-1), D209 (RTP-2), or D549 (RTP-3), then do this check for 28 VDC at the circuit breaker:

   2)   Do a check for 28V DC from the load terminal of VHF 1 circuit breaker, C165, VHF 2 circuit breaker, C166, or VHF 3 circuit breaker, C471, to Structure Ground.

   3)   If there is not 28V DC at the load terminal, then do these steps:

      a)   Replace the applicable circuit breaker, VHF 1, C165, VHF 2, C166, or VHF 3, C471.

      b)   Re-install the RTP. This is the task: Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801.

      c)   Do the Repair Confirmation at the end of this task.

I.   Fault Isolation Procedure - Frequency Is Shown

(1)   Replace the RTP, P8-71 (RTP-1) for VHF-1, P8-72 (RTP-2) for VHF-2, or P8-73 (RTP-3) for VHF-3. These are the tasks:

• Radio Tuning Panel (RTP) - Removal, AMM TASK 23-12-41-000-801

• Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801

(a)   Do the Repair Confirmation at the end of this task.

SHZ 706

(2)   Replace the VHF communications transceiver, M149 (VHF-1) or M150 (VHF-2). These are the tasks:

• VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801

• VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801

(a)   Do the Repair Confirmation at the end of this task.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(3)   Replace the VHF communications transceiver, M149 (VHF-1), M150 (VHF-2), or M411 (VHF-3). These are the tasks:

• VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801

• VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801

(a)   Do the Repair Confirmation at the end of this task.

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

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SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999 (Continued)

    (4)   Do this check of the wiring:

        SHZ 706

        (a)   Remove the applicable VHF Communication Transceiver, M149 (VHF-1) or M150 (VHF-2). This is the task: VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801.

        SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

        (b)   Remove the applicable VHF Communication Transceiver, M149 (VHF-1), M150 (VHF-2), or M411 (VHF-3). This is the task: VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801.

        SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

        (c)   Remove the applicable radio tuning panels (see table below): P8-71 (RTP-1), P8-72 (RTP-2), or P8-73 (RTP-3). This is the task: Radio Tuning Panel (RTP) - Removal, AMM TASK 23-12-41-000-801.

        (d)   Do a wiring check between these pins of the applicable VHF Communication Transceiver in the EE Compartment, and the specified RTPs at the Aft Electronic Panel, P8, (WDM 23-12-11,-21,-31):

VHF COMM TRANSCEIVER	TRANS CONNECTOR		RTP CONNECTOR	RTP
VHF-1 (M149)	D199B pin A11 pin B11	----- -----	D203 pin 2 pin 3	RTP-1 (P8-71)
	D199B pin A7 pin B7	----- -----	D209 pin 2 pin 3	RTP-2 (P8-72)
VHF-2 (M150)	D201B pin A7 pin B7	----- -----	D203 pin 2 pin 3	RTP-1 (P8-71)
	D201B pin A11 pin B11	----- -----	D209 pin 2 pin 3	RTP-2 (P8-72)

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

VHF COMM TRANSCEIVER	TRANS CONNECTOR		RTP CONNECTOR	RTP
VHF-3 (M411)	D539B pin A7 pin B7	----- -----	D549 pin 2 pin 3	RTP-3 (P8-73)

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

        (e)   If you find a problem with the wiring, then do these steps:

            1)   Repair the wiring.

            2)   Re-install the VHF Communication Transceiver. This is the task: VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

            3)   Re-install the RTPs. This is the task: Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801.

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SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999 (Continued)

    4)   Do the Repair Confirmation at the end of this task.

SHZ ALL

J. Repair Confirmation

(1)   Do the VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

    (a)   If the maintenance message or fail light does not show on the transceiver, then you corrected the problem.

    (b)   If the maintenance message or fail light shows on the transceiver, then continue the applicable Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

813. VHF Transceiver ANTENNA FAIL or RF FAULT Problem - Fault Isolation

A. Description

(1)   This task is for these maintenance messages:

    (a)   ANTENNA FAIL

(2)   The VHF Communication Transceiver BITE detects an Radio Frequency (RF) fault.

B. Possible Causes

SHZ 706

(1)   VHF Communication Transceiver, M149 (VHF-1) or M150 (VHF-2).

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(2)   VHF Communication Transceiver, M149 (VHF-1), M150 (VHF-2), or M411 (VHF-3).

SHZ 706

(3)   VHF Communication Antenna, M57 (VHF-1) or M58 (VHF-2).

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(4)   VHF Communication Antenna, M57 (VHF-1), M58 (VHF-2), or M225 (VHF-3).

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(5)   Coaxial Cable

C. Circuit Breakers

(1)   These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1

SHZ 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

Row	Col	Number	Name
D	12	C00471	COMMUNICATIONS VHF 3

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SHZ 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999 (Continued)

      F/O Electrical System Panel, P6-1

Row	Col	Number	Name

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

Row	Col	Number	Name
C	3	C00166	COMMUNICATIONS VHF 2

This circuit breaker is inoperative and should remain open:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name

SHZ 002

Row	Col	Number	Name
D	12	C00471	COMMUNICATIONS VHF 3 (INOP)

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

  D. **Related Data**

    SHZ 706

    (1) SSM 23-12-11,-21

    SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

    (2) SSM 23-12-11,-21, -31

    SHZ 706

    (3) WDM 23-12-11,-21

    SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

    (4) WDM 23-12-11,-21,-31

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

  E. **Initial Evaluation**

    (1) Do the VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

      (a) If the red ANTENNA FAIL LED is not ON, on the front panel of the transceiver, then there was an intermittent fault.

      (b) If the red ANTENNA FAIL LED is ON, on the front panel of the transceiver, then do the Fault Isolation Procedure below.

  F. **Fault Isolation Procedure**

    SHZ 706

    (1) Replace the VHF Communication Transceiver, M149 (VHF-1) or M150 (VHF-2). These are the tasks:

      • VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801

      • VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801

      (a) Do the Repair Confirmation at the end of this task.

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SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999 (Continued)

(e)   Re-install the VHF Communication Transceiver, M149 (VHF-1), M150 (VHF-2), or M411 (VHF-3). This is the task: VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

(f)   Do the Repair Confirmation at the end of this task.

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

G.   **Repair Confirmation**

(1)   Do the VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

(a)   If the red ANTENNA FAIL LED is not ON, on the front panel of the transceiver, then you corrected the problem.

(b)   If the red ANTENNA FAIL LED is ON, on the front panel of the transceiver, then continue the Fault Isolation Procedure at the subsequent step.

——— **END OF TASK** ———

SHZ 002, 009-699, 721-799, 860-863, 865, 866

814.   **VHF Communication Control Panel Problem - Fault Isolation**

A.   **Description**

(1)   The VHF Communication Control Panel does not operate correctly.

B.   **Possible Causes**

SHZ 860-863

(1)   VHF-1 (2) Communication Control Panel, P8-2 (P8-3)

SHZ 002, 009-699, 721-799, 865, 866

(2)   VHF-1 (2, 3) Communication Control Panel, P8-2 (P8-3, P8-8)

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(3)   VHF-1 (2, 3) Communication Transceiver, M149 (M150, M411)

(4)   Wiring problem.

C.   **Circuit Breakers**

(1)   These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1

SHZ 009-699, 721-799, 860-863, 865, 866

Row	Col	Number	Name
D	12	C00471	COMMUNICATIONS VHF 3

F/O Electrical System Panel, P6-1

Row	Col	Number	Name

SHZ 002, 009-699, 721-799, 860-863, 865, 866

Row	Col	Number	Name
C	3	C00166	COMMUNICATIONS VHF 2

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SHZ 002, 009-699, 721-799, 860-863, 865, 866 (Continued)

This circuit breaker is inoperative and should remain open:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
SHZ 002			
D	12	C00471	COMMUNICATIONS VHF 3 (INOP)

SHZ 002, 009-699, 721-799, 860-863, 865, 866

D. **Related Data**

(1) WDM 23-12-11, WDM 23-12-21, WDM 23-12-31

(2) SSM 23-12-11, SSM 23-12-21, SSM 23-12-31

E. **Initial Evaluation**

(1) Do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

   (a) If you find a maintenance messages on the front panel of the Transceiver, refer to the table at the end of the BITE Task to find the applicable Fault Isolation Tasks for the maintenance messages that show.

   (b) If you do not find a maintenance message on the front panel of the Transceiver, then continue.

(2) Do this Reception/Transmission Test of the VHF Communication System:

   NOTE: VHF communication can be degraded while the airplane is on the ground due to external interference or signal blockage. Before you identify a VHF communication system fault, make sure you try to transmit and receive at several frequencies across the VHF frequency band. Make sure the airplane is not in or near any large metal structures. In some cases, you can move the airplane to correct the problem.

   (a) Connect a headset/boom microphone, M428 (captain's), to the boom microphone jack, D6027 (captain's).

   (b) Do these steps at the audio control panel, P8-6 (captain's ACP):

SHZ 860-863

   1) Push and release the applicable VHF-1 or VHF-2 switch.

      a) Make sure the switch light comes on.

SHZ 002, 009-699, 721-799, 865, 866

   2) Push and release the applicable VHF-1, VHF-2, or VHF-3 switch.

      a) Make sure the switch light comes ON.

SHZ 860-863

   3) Push and release the applicable VHF-1 or VHF-2 volume control.

      a) Make sure the volume control indicator light comes ON.

SHZ 002, 009-699, 721-799, 865, 866

   4) Push and release the applicable VHF-1, VHF-2, or VHF-3 volume control.

      a) Make sure the volume control indicator light comes ON.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

   5) Set the volume control to the middle position.

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SHZ 002, 009-699, 721-799, 860-863, 865, 866 (Continued)

    6)   Set the MASK/BOOM switch (if installed) to the BOOM position.

SHZ 865, 866

(c)   Do these steps at the VHF communication control panel, P8-2 (VHF-1), P8-3 (VHF-2), or P8-8 (VHF-3):

    1)   Use the right frequency select knobs to set the right frequency display to an approved test frequency.

    2)   Use the left frequency select knobs to set the left frequency display to an approved test frequency.

    3)   Set the TFR switch to the left position.

        a)   Make sure the light above the left frequency display comes ON.

        b)   Make sure the light above the right frequency display is not ON.

    4)   Set the TFR switch to the right position.

        a)   Make sure the light above the right frequency display comes ON.

        b)   Make sure the light above the left frequency display is not ON.

SHZ 860-863

(d)   Do these steps at the VHF communication control panel, P8-2 (VHF-1) or P8-3 (VHF-2):

    1)   Use the freqency select knobs to set the STANDBY frequency display to an approved test frequency.

    2)   Push the TFR switch.

        a)   Make sure the number in the STANDBY frequency display moved to the ACTIVE frequency display.

SHZ 002, 009-699, 721-799

(e)   Do these steps at the VHF communication control panel, P8-2 (VHF-1), P8-3 (VHF-2), or P8-8 (VHF-3):

    1)   Use the freqency select knobs to set the STANDBY frequency display to an approved test frequency.

    2)   Push the TFR switch.

        a)   Make sure the number in the STANDBY frequency display moved to the ACTIVE frequency display.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(f)   Do these steps to do a voice communication test with a radio tower operator:

    1)   Push and hold a push-to-talk (PTT) switch while you speak.

        a)   Make sure you hear the sidetone in the headset while you speak.

    2)   Release the PTT switch while you listen.

        a)   Make sure the quality of the transmitted and received voice is satisfactory.

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SHZ 860-863

        b)   Make sure the sound of the received voice changes when you turn the applicable VHF-1 or VHF-2 volume control on the ACP, P8-6 (captain's), with no change in voice quality.

SHZ 002, 009-699, 721-799, 865, 866

        c)   Make sure the sound of the received voice changes when you turn the applicable VHF-1, VHF-2, or VHF-3 volume control on the ACP, P8-6 (captain's), with no change in voice quality.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(3)   If the VHF Communication Control Panel operates correctly, then there was an intermittent fault.

(4)   If the VHF Communication Control Panel does not operate correctly, then do the Fault Isolation Procedure below.

F.   Fault Isolation Procedure

SHZ 860-863

(1)   Replace the applicable VHF-1 (2) Communication Control Panel, P8-2 (P8-3). These are the tasks:

    • VHF Communication Control Panel - Removal, AMM TASK 23-12-31-000-801

    • VHF Communication Control Panel - Installation, AMM TASK 23-12-31-400-801

    (a)   Do the Repair Confirmation at the end of this task.

SHZ 002, 009-699, 721-799, 865, 866

(2)   Replace the applicable VHF-1 (2, 3) Communication Control Panel, P8-2 (P8-3, P8-8). These are the tasks:

    • VHF Communication Control Panel - Removal, AMM TASK 23-12-31-000-801

    • VHF Communication Control Panel - Installation, AMM TASK 23-12-31-400-801

    (a)   Do the Repair Confirmation at the end of this task.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(3)   Replace the VHF-1 (2, 3) Communication Transceiver, M149 (M150, M411). These are the tasks:

    • VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801

    • VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801

G.   Repair Confirmation

(1)   Do a Voice Communication Test with a Radio Tower Operator.

    (a)   If the VHF Communication Control Panel operates correctly, then you corrected the problem.

    (b)   If the VHF Communication Control Panel does not operate correctly, then continue the Fault Isolation Procedure at the subsequent step.

——— **END OF TASK** ———

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SHZ ALL

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SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

815. **Radio Tuning Panel Problem - Fault Isolation**

A. **Description**

(1) The radio tuning panel (RTP) does not operate correctly.

SHZ 706, 801-820, 871-874, 876-880, 901-999

NOTE: INOP can be manually set or removed from some RTP displays. For instructions to set or remove INOP, refer to this task: Radio Tuning Panel - INOP Display Toggle (AMM TASK 23-12-41-800-802).

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

B. **Possible Causes**

(1) Radio tuning panel (RTP), P8-71 (RTP-1), P8-72 (RTP-2), or P8-73 (RTP-3).

(2) Wiring problem.

C. **Circuit Breakers**

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1
D	12	C00471	COMMUNICATIONS VHF 3

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

Row	Col	Number	Name
E	11	C00839	COMMUNICATIONS HF 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

Row	Col	Number	Name
C	3	C00166	COMMUNICATIONS VHF 2

SHZ 805-820, 888-899

Row	Col	Number	Name
D	2	C00857	COMMUNICATIONS HF 2

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

This circuit breaker is inoperative and should remain open:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name

SHZ 801-804, 821-825, 827-847, 850-852, 855-859, 871-874, 876-887, 901-999

Row	Col	Number	Name
D	2	C00857	COMMUNICATIONS HF 2 (INOP)

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

D. **Related Data**

SHZ 706

(1) (SSM 23-12-11,-21)

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SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(2)   (SSM 23-12-11,-21, -31)

SHZ 801-819, 821-825, 827-847, 850-852, 855-859, 871-874, 876-887, 901-999

(3)   (SSM 23-11-11)

SHZ 820, 888-899

(4)   (SSM 23-11-11,-21)

SHZ 706

(5)   (WDM 23-12-11,-21)

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(6)   (WDM 23-12-11,-21,-31)

SHZ 801-819, 821-825, 827-847, 850-852, 855-859, 871-874, 876-887, 901-999

(7)   (WDM 23-11-11)

SHZ 820, 888-899

(8)   (WDM 23-11-11, -21)

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

E.   **Initial Evaluation**

(1)   AIRPLANES WITH GABLES P/N G7404-XX RADIO TUNING PANELS;

Do these steps for a frequency lock-up problem:

(a)   Push the VHF-1 switch on all the RTPs.

(b)   Make sure that you can change the ACTIVE frequency for VHF-1 at each RTP.

1)   Make sure that the ACTIVE frequencies at the other RTP(s) also change to the new frequency.

(c)   If you can change the ACTIVE frequency at one RTP, but the other RTP(s) will not accept a frequency change, then do these steps:

1)   Push the OFF switch on the RTP that operates satisfactorily.

a)   Make sure the RTP is in the off condition.

2)   Set the other RTP(s) to new ACTIVE frequencies to see if they will now accept a frequency change.

3)   If the RTP(s) with the frequency lock-up problem now operate satisfactorily, then do the Fault Isolation Procedure - RTP Frequency Lock-up Problem below.

(2)   Do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

(a)   If there is a maintenance message shown on the front panel of the transceiver, then do the fault isolation procedure for the maintenance message.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(3)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

(a)   If there is a maintenance message shown on the front panel of the transceiver, then do the fault isolation procedure for the maintenance message.

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SHZ 706

(4)   Do a VHF communication test (AMM TASK 23-12-00-730-801) to confirm the problem.

(a)   If the radio tuning panel (RTP) operates satisfactorily, then there was an intermittent fault.

(b)   If the radio tuning panel (RTP) does not operate satisfactorily, then do the Fault Isolation Procedure - RTP Problem below.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

⚠️ **WARNING**	DO NOT OPERATE THE HF SYSTEM WHILE THE AIRPLANE IS REFUELED OR DEFUELED. THIS CAN CAUSE INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT.

⚠️ **WARNING**	MAKE SURE THAT PERSONNEL STAY A MINIMUM OF 10 FT (3 M) AWAY FROM THE VERTICAL STABILIZER WHEN THE HF SYSTEM TRANSMITS. RF ENERGY FROM THE HF ANTENNA CAN CAUSE INJURIES TO PERSONNEL.

(5)   Do a VHF communication test (AMM TASK 23-12-00-730-801) and/or an HF communication test (AMM TASK 23-11-00-730-801) to confirm the problem.

(a)   If the radio tuning panel (RTP) operates satisfactorily, then there was an intermittent fault.

(b)   If the radio tuning panel (RTP) does not operate satisfactorily, then do the Fault Isolation Procedure - RTP Problem below.

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

F.   **Fault Isolation Procedure - RTP Problem**

(1)   Replace the radio tuning panel (RTP), P8-71 (RTP-1), P8-72 (RTP-2), or P8-73 (RTP-3).

These are the tasks:

Radio Tuning Panel (RTP) - Removal, AMM TASK 23-12-41-000-801,

Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801.

(a)   Do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(b)   Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

SHZ 706

(c)   Do a VHF communication test with a radio tower operator.

1)   Make sure the quality of the transmitted and received voice is satisfactory.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

⚠️ **WARNING**	DO NOT OPERATE THE HF SYSTEM WHILE THE AIRPLANE IS REFUELED OR DEFUELED. THIS CAN CAUSE INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT.

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SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999 (Continued)

(WARNING PRECEDES)

⚠️ **WARNING**	MAKE SURE THAT PERSONNEL STAY A MINIMUM OF 10 FT (3 M) AWAY FROM THE VERTICAL STABILIZER WHEN THE HF SYSTEM TRANSMITS. RF ENERGY FROM THE HF ANTENNA CAN CAUSE INJURIES TO PERSONNEL.

    (d)   Do a VHF communication test and/or an HF communication test with a radio tower operator.

        1)   Make sure the quality of the transmitted and received voice is satisfactory.

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

    (e)   If the radio tuning panel (RTP) operates satisfactorily, then you corrected the fault.

    (f)   If the radio tuning panel (RTP) does not operate satisfactorily, then continue.

(2)   Do this check of the wiring:

    (a)   Remove the applicable radio tuning panel (RTP) (see table below). To remove it, do this task: Radio Tuning Panel (RTP) - Removal, AMM TASK 23-12-41-000-801.

SHZ 706

    (b)   Remove the applicable VHF communication transceiver (see table below). To remove it, do this task: VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

    (c)   Remove the applicable VHF or HF communication transceiver (see table below).

        1)   To remove the VHF communication transceiver, do this task: VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801.

        2)   To remove the HF transceiver, do this task: HF Transceiver - Removal, AMM TASK 23-11-21-000-801.

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

    (d)   Do a wiring check between these pins of the radio tuning panel (RTP) at the aft electronic panel, P8, and the applicable transceiver in the electronic equipment compartment (WDM 23-12-11,-21,-31) (WDM 23-11-11, -21):

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SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999 (Continued)

Table 201/23-12-00-993-802

RADIO TUNING PANEL (RTP)	RTP CONNECTOR		XCVR CONNECTOR	TRANSCEIVER
RTP-1	D203		D199B	VHF-1
(P8-71)	pin 2	-----	pin A11	(M149)
	pin 3	-----	pin B11	
	pin 8	-----	pin A7	
	pin 9	-----	pin B7	
	D203		D345B	HF-1
	pin 2	-----	pin E3	(M226) (if installed)
	pin 3	-----	pin F3	
	pin 8	-----	pin G3	
	pin 9	-----	pin H3	
	D203		D201B	VHF-2
	pin 2	-----	pin A7	(M150)
	pin 3	-----	pin B7	
	pin 8	-----	pin A11	
	pin 9	-----	pin B11	
	D203		D623B	HF-2 (M439)
	pin 2	-----	pin G3	(if installed)
	pin 3	-----	pin H3	
	pin 8	-----	pin E3	
	pin 9	-----	pin F3	
	D203		D539B	VHF-3 (M411)
	pin 5	-----	pin A7	(if installed)
	pin 6	-----	pin B7	

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SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999 (Continued)

Table 201/23-12-00-993-802 (Continued)

RADIO TUNING PANEL (RTP)	RTP CONNECTOR		XCVR CONNECTOR	TRANSCEIVER
RTP-2 (P8-72)	D209		D201B	VHF-2 (M150)
	pin 2	-----	pin A11	
	pin 3	-----	pin B11	
	pin 5	-----	pin A7	
	pin 6	-----	pin B7	
	D209		D623B	HF-2 (M439) (if installed)
	pin 2	-----	pin E3	
	pin 3	-----	pin F3	
	pin 5	-----	pin G3	
	pin 6	-----	pin H3	
	D209		D199B	VHF-1 (M149)
	pin 2	-----	pin A7	
	pin 3	-----	pin B7	
	pin 5	-----	pin A11	
	pin 6	-----	pin B11	
	D209		D345B	HF-1 (M226) (if installed)
	pin 2	-----	pin G3	
	pin 3	-----	pin H3	
	pin 5	-----	pin E3	
	pin 6	-----	pin F3	
	D209		D539B	VHF-3 (M411) (if installed)
	pin 8	-----	pin A7	
	pin 9	-----	pin B7	

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SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999 (Continued)

Table 201/23-12-00-993-802 (Continued)

RADIO TUNING PANEL (RTP)	RTP CONNECTOR		XCVR CONNECTOR	TRANSCEIVER
RTP-3 (P8-73) (if installed)	D549		D539B	VHF-3 (M411) (if installed)
	pin 2	-----	pin A7	
	pin 3	-----	pin B7	
	D549		D623B	HF-2 (M439) (if installed)
	pin 5	-----	pin E3	
	pin 6	-----	pin F3	
	pin 8	-----	pin G3	
	pin 9	-----	pin H3	
	D549		D199B	VHF-1 (M149)
	pin 5	-----	pin A7	
	pin 6	-----	pin B7	
	pin 8	-----	pin A11	
	pin 9	-----	pin B11	
	D549		D345B	HF-1 (M226) (if installed)
	pin 5	-----	pin G3	
	pin 6	-----	pin H3	
	pin 8	-----	pin E3	
	pin 9	-----	pin F3	
	D549		D201B	VHF-2 (M150)
	pin 5	-----	pin A11	
	pin 6	-----	pin B11	
	pin 8	-----	pin A7	
	pin 9	-----	pin B7	

    (e)   Repair any airplane wiring problems you find.

    (f)   Re-install the applicable radio tuning panel (RTP). To install it, do this task: Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801.

SHZ 706

    (g)   Re-install the applicable VHF communication transceiver. To install it, do this task: VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

    (h)   Re-install the applicable VHF or HF communication transceiver:

        1)   To install the VHF communication transceiver, do this task: VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

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SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999 (Continued)

      2) To install the HF transceiver, do this task: HF Transceiver - Installation, AMM TASK 23-11-21-400-801.

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

   (i) Do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

   (j) Do this task: HF Communication System - BITE Procedure, 23-11 TASK 801.

SHZ 706

   (k) Do a VHF communication test with a radio tower operator.

      1) Make sure the quality of the transmitted and received voice is satisfactory.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

⚠️ **WARNING**	DO NOT OPERATE THE HF SYSTEM WHILE THE AIRPLANE IS REFUELED OR DEFUELED. THIS CAN CAUSE INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT.

⚠️ **WARNING**	MAKE SURE THAT PERSONNEL STAY A MINIMUM OF 10 FT (3 M) AWAY FROM THE VERTICAL STABILIZER WHEN THE HF SYSTEM TRANSMITS. RF ENERGY FROM THE HF ANTENNA CAN CAUSE INJURIES TO PERSONNEL.

   (l) Do a VHF communication test and/or an HF communication test with a radio tower operator.

      1) Make sure the quality of the transmitted and received voice is satisfactory.

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

   (m) If the radio tuning panel (RTP) operates satsifactorily, then you corrected the fault.

G. Fault Isolation Procedure - RTP Frequency Lock-up Problem

(1) Replace the radio tuning panel, P8-71 (RTP-1), P8-72 (RTP-2), or P8-73 (RTP-3), that you set to off in the Initial Evaluation.

   NOTE: If an RTP has a cross-tuning failure, it may tune frequencies satisfactorily while it prevents other RTPs from tuning frequencies satisfactorily.

   (a) Set each RTP to a new ACTIVE frequency to make sure that each RTP will accept a frequency change.

      1) If the RTPs operate satisfactorily, then you corrected the fault.

      2) If the RTPs do not operate satisfactorily, then continue the procedure.

(2) Do this check of the wiring:

   (a) Remove the RTPs. To remove the RTPs, do this task: Radio Tuning Panel (RTP) - Removal, AMM TASK 23-12-41-000-801.

   (b) Do a wiring check between these pins of RTP connectors D203, D209 and D549 at P8 (WDM 23-12-11,-21,-31 OR -41,):

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SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999 (Continued)

D203 (RTP-1)		**D209 (RTP-2)**
pin 2	. . . .	pin 5
pin 3	. . . .	pin 6
pin 5	. . . .	pin 8
pin 6	. . . .	pin 9
pin 8	. . . .	pin 2
pin 9	. . . .	pin 3

D203 (RTP-1)		**D549 (RTP-3)**
pin 2	. . . .	pin 8
pin 3	. . . .	pin 9
pin 5	. . . .	pin 2
pin 6	. . . .	pin 3
pin 8	. . . .	pin 5
pin 9	. . . .	pin 6

D209 (RTP-2)		**D549 (RTP-3)**
pin 2	. . . .	pin 5
pin 3	. . . .	pin 6
pin 5	. . . .	pin 8
pin 6	. . . .	pin 9
pin 8	. . . .	pin 2
pin 9	. . . .	pin 3

    (c)   If you find a problem with the wiring, then do these steps:

        1)   Repair the wiring.

    (d)   Install the RTPs. To install the RTPs, do this task: Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801.

    (e)   Set each RTP to a new ACTIVE frequency to make sure that each RTP will accept a frequency change.

        1)   If the RTP operates satisfactorily, then you corrected the fault.

SHZ ALL

─────── **END OF TASK** ───────

816. <u>VHF Communication System - Receive/Transmit Problem</u>

    A. Description

    SHZ 706

    (1)   The VHF-1 or VHF-2 communication system does not operate correctly.

    SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

    (2)   The VHF-1, VHF-2, or VHF-3 communication system does not operate correctly.

    SHZ ALL

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SHZ 706

(3)   Poor reception and/or poor transmission at the audio control panel, P8-6 (captain), P8-7 (first officer) or P5-15 (first observer) on the VHF-1 or VHF-2 communication system.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(4)   Poor reception and/or poor transmission at the audio control panel, P8-6 (captain), P8-7 (first officer) or P5-15 (first observer) on the VHF-1, VHF-2, or VHF-3 communication system.

SHZ ALL

B.   **Possible Causes**

SHZ 706

(1)   VHF communication transceiver, M149 (VHF-1) or M150 (VHF-2)

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(2)   VHF communication transceiver, M149 (VHF-1), M150 (VHF-2), or M411 (VHF-3)

SHZ ALL

SHZ 860-863

(3)   VHF communication control panel, P8-2 (VHF-1) or P8-3 (VHF-2)

SHZ 002, 009-699, 721-799, 865, 866

(4)   VHF communication control panel, P8-2 (VHF-1), P8-3 (VHF-2), or P8-8 (VHF-3)

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(5)   Radio tuning panels (RTP): P8-71 (RTP-1), P8-72 (RTP-2), or P8-73 (RTP-3)

SHZ ALL

(6)   Audio control panel, P8-6 (captain), P8-7 (first officer) or P5-15 (first observer)

(7)   A push-to-talk (PTT) switch is stuck in transmit

(8)   Remote electronics unit, M1353

SHZ 706

(9)   VHF communication antenna, M57 (VHF-1) or M58 (VHF-2)

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(10)   VHF communication antenna, M57 (VHF-1), M58 (VHF-2), or M225 (VHF-3)

SHZ ALL

(11)   RF coaxial cable problem

(12)   Wiring problem

C.   **Circuit Breakers**

(1)   These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1

SHZ 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

D	12	C00471	COMMUNICATIONS VHF 3

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SHZ ALL

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SHZ 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999 (Continued)

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
SHZ ALL			
C	3	C00166	COMMUNICATIONS VHF 2

        F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	21	C00560	INTERPHONE POWER F/O DC 2
C	22	C00561	INTERPHONE POWER F/O BAT
C	23	C00239	INTERPHONE POWER CAPT DC 2
C	24	C00240	INTERPHONE POWER CAPT BAT
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

        This circuit breaker is inoperative and should remain open:

        CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
SHZ 002			
D	12	C00471	COMMUNICATIONS VHF 3 (INOP)

        SHZ ALL

   D. **Related Data**

     SHZ 706

     (1)   (SSM 23-12-11,-21)

     SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

     (2)   (SSM 23-12-11,-21, -31)

     SHZ ALL

     (3)   (SSM 23-51-11,-21,-31)

     SHZ 706

     (4)   (WDM 23-12-11,-21)

     SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

     (5)   (WDM 23-12-11,-21,-31)

     SHZ ALL

     (6)   (WDM 23-51-11,-21,-31)

   E. **Initial Evaluation**

     (1)   Make sure that none of the push-to-talk (PTT) switches are stuck in transmit (AMM TASK 23-51-00-710-801).

         <u>NOTE</u>: A stuck PTT can be a cause of a temporary VHF transmit failure.

        (a)   Do these steps to do a fast check for a PTT that is stuck in transmit:

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1) Set all the audio control panels to the Flight Interphone (or Interphone) transmit position.

2) Without pushing a PTT switch, speak into the microphones at the different crew stations.

3) If the station transmits, then it has a stuck PTT switch.

(2) Do a BITE test of the VHF communication transceivers. To do the BITE test, do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

   (a) If the BITE test finds a fault, then do the fault isolation procedure for the maintenance message.

(3) Do this reception/transmission test of the VHF communication system:

NOTE: VHF communications can be degraded while the airplane is on the ground due to external interference or signal blockage. Before you identify a VHF communication system fault, make sure you try to transmit and receive at several frequencies across the VHF frequency band. Make sure the airplane is not in or near any large metal structures. In some cases, you can move the airplane to correct the problem.

   (a) Use a boom microphone/headphone to do the test.

   (b) At the audio control panel, P8-6 (captain), P8-7 (first officer) or P5-15 (first observer), do these steps:

SHZ 706

   1) Push and release the applicable microphone selector switch (VHF-1 or VHF-2).

      a) Make sure the applicable switch light comes on.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

   2) Push and release the applicable microphone selector switch (VHF-1, VHF-2, or VHF-3).

      a) Make sure the applicable switch light comes on.

SHZ ALL

   3) Adjust the applicable volume control switch to the middle position.

   4) Make sure the BOOM/MASKS switch is set to the BOOM position.

SHZ 865, 866

   (c) At the VHF communication control panel, P8-2 (VHF-1), P8-3 (VHF-2), or P8-8 (VHF-3), do these steps:

   1) Use the right frequency select knobs to set the right frequency display to an approved test frequency.

   2) Use the left frequency select knobs to set the left frequency display to an approved test frequency.

   3) Set the TFR FREQ SEL switch to the left position.

      a) Make sure the active frequency light is on above the left frequency indicator.

      b) Make sure the active frequency light above the right frequency display is not on.

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SHZ ALL

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SHZ 002, 009-699, 721-799, 860-863

  (d) At the VHF communication control panel, P8-2 (VHF-1), P8-3 (VHF-2), or P8-8 (VHF-3), do these steps:

    1) Use the freqency select knobs to set the STANDBY frequency display to an approved test frequency.

    2) Push the TFR switch.

       a) Make sure the ACTIVE display shows the test frequency.

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

  (e) Set the radio tuning panel for the applicable VHF communication system.

    1) Set the STANDBY frequency to an approved test frequency.

    2) Push the transfer switch.

    3) Make sure the STANDBY and ACTIVE frequencies are exchanged.

SHZ ALL

  (f) Do these steps to do a voice communication test with a radio operator:

    1) Push and hold a push-to-talk (PTT) switch while you speak into the microphone.

       a) Make sure you hear the sidetone in the headset while you speak.

    2) Release the PTT switch while you listen.

       a) Make sure the quality of the transmitted and received voice is satisfactory.

       b) Make sure the volume of the received voice changes when you turn the volume control on the audio control panel, P8-6 (captain), P8-7 (first officer) or P5-15 (first observer) with no change in voice quality.

(4) If the VHF communication system operates satisfactorily, then there was an intermittent fault.

(5) If the VHF communication system does not operate satisfactorily, then do a reception/transmission test of the VHF communication system at each audio control panel.

  (a) If the problem occurs at all audio control panels, then do Problem at All Audio Control Panels - Fault Isolation Procedure below.

  (b) If the problem occurs at only one audio control panel, then do Problem at Only One Audio Control Panel - Fault Isolation Procedure below.

F. Problem at All Audio Control Panels - Fault Isolation Procedure

SHZ 706

(1) Do this exchange check of the VHF communication transceiver, M149 (VHF-1) or M150 (VHF-2):

  (a) Put a tag that reads SUSPECT on the VHF communication transceiver with poor reception or transmission.

  (b) Put a tag that reads OK on the other VHF communication transceiver.

  (c) Exchange the locations of the two VHF communication transceivers.

    These are the tasks:

    VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801,

    VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

  (d) Do a BITE test of each VHF communication transceiver. To do the BITE test, do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

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SHZ 706 (Continued)

(e)   Speak with the radio operator on each VHF communication system.

    1)   Make sure the transmitted and received voice signals are satisfactory.

(f)   If the poor reception or transmission moves with the VHF communication transceiver tagged SUSPECT, then do these steps:

    1)   Replace the VHF communication transceiver tagged SUSPECT.

    These are the tasks:

    VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801,

    VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

    NOTE: If it is your airlines' policy, you must install the VHF communication transceiver with the OK tag in its initial location.

    2)   Do a BITE test of the applicable VHF communication transceiver. To do the BITE test, do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

    3)   Speak with a radio operator on each VHF communication system.

      a)   Make sure the transmitted and received voice is satisfactory.

    4)   If the VHF communication system operates correctly, then you corrected the fault.

      a)   Remove the tags from the VHF communication transceivers.

(g)   If the poor reception or transmission goes away after you exchange the VHF communication transceivers, then do these steps to complete the task:

    NOTE: There was an intermittent fault in either the equipment rack connector, or in the VHF transceiver with the SUSPECT tag.

    1)   If it is your airlines' policy, you must install the VHF communication transceivers in their initial locations.

    These are the tasks:

    VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801,

    VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

    2)   Remove the tags from the VHF communication transceivers.

(h)   If the poor reception or transmission stays with the applicable communication system after you exchanged the VHF communication transceivers, then continue:

    1)   If it is your airlines' policy, you must install the VHF communication transceivers in their initial locations.

    These are the tasks:

    VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801,

    VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

    2)   Remove the tags from the VHF communication transceivers.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(2)   Do this exchange check of the VHF communication transceiver, M149 (VHF-1), M150 (VHF-2) or M411 (VHF-3):

(a)   Put a tag that reads SUSPECT on the VHF communication transceiver with poor reception or transmission.

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(b)   Put a tag that reads OK on the other VHF communication transceiver.

(c)   Exchange the locations of the two VHF communication transceivers.

These are the tasks:

VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801,

VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

(d)   Do a BITE test of each VHF communication transceiver. To do the BITE test, do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

(e)   Speak with the radio operator on each VHF communication system.

1)   Make sure the transmitted and received voice signals are satisfactory.

(f)   If the poor reception or transmission moves with the VHF communication transceiver tagged SUSPECT, then do these steps:

1)   Replace the VHF communication transceiver tagged SUSPECT.

These are the tasks:

VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801,

VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

NOTE: If it is your airlines' policy, you must install the VHF communication transceiver with the OK tag in its initial location.

2)   Do a BITE test of the applicable VHF communication transceiver. To do the BITE test, do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

3)   Speak with a radio operator on each VHF communication system.

a)   Make sure the transmitted and received voice is satisfactory.

4)   If the VHF communication system operates correctly, then you corrected the fault.

a)   Remove the tags from the VHF communication transceivers.

(g)   If the poor reception or transmission goes away after you exchange the VHF communication transceivers, then do these steps to complete the task:

NOTE: There was an intermittent fault in either the equipment rack connector, or in the VHF transceiver with the SUSPECT tag.

1)   If it is your airlines' policy, you must install the VHF communication transceivers in their initial locations.

These are the tasks:

VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801,

VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

2)   Remove the tags from the VHF communication transceivers.

(h)   If the poor reception or transmission stays with the applicable communication system after you exchanged the VHF communication transceivers, then continue:

1)   If it is your airlines' policy, you must install the VHF communication transceivers in their initial locations.

These are the tasks:

VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801,

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SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999 (Continued)

VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

    2)   Remove the tags from the VHF communication transceivers.

SHZ ALL

SHZ 860-863

(3)   Do this exchange check of the VHF communication control panel, P8-2 (VHF-1) and P8-3 (VHF-2):

SHZ 002, 009-699, 721-799, 865, 866

(4)   Do this exchange check of the VHF communication control panel, P8-2 (VHF-1), P8-3 (VHF-2), or P8-8 (VHF-3):

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(5)   Do this exchange check of the radio tuning panels, P8-71 (RTP-1), P8-72 (RTP-2), or P8-73 (RTP-3):

SHZ ALL

(6)   Do the following steps:

    (a)   Put a tag that reads SUSPECT on the panel that has the reception or transmission problem.

    (b)   Put a tag that reads OK on the other panel.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

    (c)   Exchange the locations of the VHF communication control panels.

        These are the tasks:

        VHF Communication Control Panel - Removal, AMM TASK 23-12-31-000-801,

        VHF Communication Control Panel - Installation, AMM TASK 23-12-31-400-801.

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

    (d)   Exchange the locations of the radio tuning panels.

        These are the tasks:

        Radio Tuning Panel (RTP) - Removal, AMM TASK 23-12-41-000-801,

        Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801.

SHZ ALL

    (e)   Do a BITE test of the VHF communication transceivers. To do the BITE test, do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

    (f)   Do a voice communication test with a radio operator on each VHF communication system.

        1)   Make sure the transmitted and received voice signals are satisfactory.

    (g)   If the fault moves with the panel tagged SUSPECT, then do these steps:

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SHZ 002, 009-699, 721-799, 860-863, 865, 866

    1)   Replace the VHF communication control panel tagged SUSPECT.

       These are the tasks:

       VHF Communication Control Panel - Removal, AMM TASK 23-12-31-000-801,

       VHF Communication Control Panel - Installation, AMM TASK 23-12-31-400-801.

       <u>NOTE</u>: If it is your airlines' policy, you must install the VHF communication control panel with the OK tag in its initial location.

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

    2)   Replace the radio tuning panel tagged SUSPECT.

       These are the tasks:

       Radio Tuning Panel (RTP) - Removal, AMM TASK 23-12-41-000-801,

       Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801.

       <u>NOTE</u>: If it is your airlines' policy, you must install the radio tuning panel with the OK tag in its initial location.

SHZ ALL

    3)   Do a BITE test of the applicable VHF communication transceiver. To do the BITE test, do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

    4)   Do a voice communication test on each VHF communication system.

       a)   Make sure the transmitted and received voice signals are satisfactory.

    5)   If the VHF communication system operates correctly, then you corrected the fault.

       a)   Remove the tags from the panels.

  (h)   If the fault goes away after you exchange the panels, then do these steps to complete the task:

       <u>NOTE</u>: There was an intermittent fault in the panel connector, or in the panel tagged SUSPECT.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

    1)   If it is your airlines' policy, you must install the VHF communication control panels in their initial locations.

       These are the tasks:

       VHF Communication Control Panel - Removal, AMM TASK 23-12-31-000-801,

       VHF Communication Control Panel - Installation, AMM TASK 23-12-31-400-801.

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

    2)   If it is your airlines' policy, you must install the radio tuning panels in their initial locations.

       These are the tasks:

       Radio Tuning Panel (RTP) - Removal, AMM TASK 23-12-41-000-801,

       Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801.

SHZ ALL

    3)   Remove the tags from the panels.

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(i) If the poor transmission or reception stays with the communication system after you exchange the panels, then continue the procedure.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

1) If it is your airlines' policy, you must install the VHF communication control panels in their initial locations.

These are the tasks:

VHF Communication Control Panel - Removal, AMM TASK 23-12-31-000-801,

VHF Communication Control Panel - Installation, AMM TASK 23-12-31-400-801.

SHZ 706, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

2) If it is your airlines' policy, you must install the radio tuning panels in their initial locations.

These are the tasks:

Radio Tuning Panel (RTP) - Removal, AMM TASK 23-12-41-000-801,

Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801.

SHZ ALL

3) Remove the tags from the panels.

(7) Replace the remote electronics unit, M1353.

These are the tasks:

Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801,

Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

(a) Do a radio check with the radio operator on the applicable VHF communication system.

1) Make sure the transmitted and received voice is satisfactory.

(b) If the VHF communication system operates correctly, then you corrected the fault.

(c) If the VHF communication system does not operate correctly, then continue.

SHZ 706

(8) Do this check of the VHF communication antenna, VHF-1 or VHF-2 and the RF coaxial cable:

(a) Remove the VHF communication transceiver, M149 (VHF-1) or M150 (VHF-2). To remove the VHF communication transceiver, do this task: VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801.

(b) Do a check of the coaxial cable from the VHF communication transceiver, M149 (VHF-1) or M150 (VHF-2) to the VHF communication antenna VHF-1 or VHF-2 (WDM 23-12-11,-21). To do the TDR (time domain reflectometer) check, do this task: Coaxial Cable Inspection, AMM TASK 20-10-72-210-801.

(c) If you find a problem with the coaxial cable, then do this step:

1) Repair or replace the coaxial cable.

(d) If you find a problem with the VHF communication antenna, then do this step:

1) Replace the VHF communication antenna, VHF-1 or VHF-2.

These are the tasks:

VHF Communication Antenna - Removal, AMM TASK 23-12-11-000-801,

VHF Communication Antenna - Installation, AMM TASK 23-12-11-400-801.

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SHZ 706 (Continued)

(e)   Re-install the VHF communication transceiver. To install the transceiver, do this task: VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

(f)   Do a BITE test of the VHF communication transceiver. To do the BITE test, do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

(g)   Do a radio check with the radio operator on the applicable VHF communication system.

   1)   Make sure the transmitted and received voice is satisfactory.

(h)   If the VHF communication system operates correctly, then you corrected the fault.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(9)   Do this check of the VHF communication antenna, VHF-1, VHF-2 or VHF-3 and the RF coaxial cable:

(a)   Remove the VHF communication transceiver, M149 (VHF-1), M150 (VHF-2), or M411 (VHF-3). To remove the VHF communication transceiver, do this task: VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801.

(b)   Do a check of the coaxial cable from the VHF communication transceiver, M149 (VHF-1), M150 (VHF-2), or M411 (VHF-3) to the VHF communication antenna, VHF-1, VHF-2, or VHF-3 (WDM 23-12-11,-21,-31). To do the TDR (time domain reflectometer) check, do this task: Coaxial Cable Inspection, AMM TASK 20-10-72-210-801.

(c)   If you find a problem with the coaxial cable, then do this step:

   1)   Repair or replace the coaxial cable.

(d)   If you find a problem with the VHF communication antenna, then do this step:

   1)   Replace the VHF communication antenna, VHF-1, VHF-2 or VHF-3.

      These are the tasks:

      VHF Communication Antenna - Removal, AMM TASK 23-12-11-000-801,

      VHF Communication Antenna - Installation, AMM TASK 23-12-11-400-801.

(e)   Re-install the VHF communication transceiver. To install the transceiver, do this task: VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

(f)   Do a BITE test of the VHF communication transceiver. To do the BITE test, do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

(g)   Do a radio check with the radio operator on the applicable VHF communication system.

   1)   Make sure the transmitted and received voice is satisfactory.

(h)   If the VHF communication system operates correctly, then you corrected the fault.

SHZ ALL

G.   Problem at Only One Audio Control Panel - Fault Isolation Procedure

(1)   Replace the applicable audio control panel, P8-6 (captain), P8-7 (first officer) or P5-15 (first observer).

   These are the tasks:

   Audio Control Panel Removal, AMM TASK 23-51-02-000-801,

   Audio Control Panel Installation, AMM TASK 23-51-02-400-801.

(a)   Do a radio check with the radio operator on the applicable VHF communication system.

   1)   Make sure the transmitted and received voice is satisfactory.

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(b)   If the VHF communication system operates correctly, then you corrected the fault.

(c)   If the VHF communication system does not operate correctly, then continue.

(2)   Replace the remote electronics unit, M1353.

These are the tasks:

Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801,

Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

(a)   Do a radio check with the radio operator on the applicable VHF communication system.

1)   Make sure the transmitted and received voice is satisfactory.

(b)   If the VHF communication system operates correctly, then you corrected the fault.

——— END OF TASK ———

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

818.   **VHF Transceiver Internal Fault Problem - Fault Isolation**

A.   **Description**

(1)   This task is for this maintenance message:

(a)   LRU STATUS

(2)   The VHF Communication Transceiver has an internal fault.

B.   **Possible Causes**

(1)   VHF Communication Transceiver, M149 (VHF-1), M150 (VHF-2), or M411 (VHF-3).

C.   **Circuit Breakers**

(1)   These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	11	C00165	COMMUNICATIONS VHF 1

SHZ 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

Row	Col	Number	Name
D	12	C00471	COMMUNICATIONS VHF 3

F/O Electrical System Panel, P6-1

Row	Col	Number	Name

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

Row	Col	Number	Name
C	3	C00166	COMMUNICATIONS VHF 2

This circuit breaker is inoperative and should remain open:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name

SHZ 002

Row	Col	Number	Name
D	12	C00471	COMMUNICATIONS VHF 3 (INOP)

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

D.   **Related Data**

┌─ EFFECTIVITY ─
SHZ ALL

23-12 TASKS 816-818

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SHZ 706

(1)   SSM 23-12-11,-21

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(2)   SSM 23-12-11,-21, -31

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

E.   **Initial Evaluation**

(1)   Do the VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

(a)   If the red LRU STATUS LED is not ON, on the front panel of the transceiver, then there was an intermittent fault.

(b)   If the red LRU STATUS LED is ON, on the front panel of the transceiver, then do the Fault Isolation Procedure below.

F.   **Fault Isolation Procedure**

SHZ 706

(1)   Replace the VHF Communication Transceiver, M149 (VHF-1) or M150 (VHF-2). These are the tasks:

• VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801

• VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801

(a)   Do the VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

1)   If the red LRU STATUS LED is not ON, on the front panel of the transceiver, then you corrected the problem.

SHZ 002, 009-699, 706, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(2)   Replace the VHF Communication Transceiver, M149 (VHF-1), M150 (VHF-2), or M411 (VHF-3). These are the tasks:

• VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801

• VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801

(a)   Do the VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

1)   If the red LRU STATUS LED is not ON, on the front panel of the transceiver, then you corrected the problem.

———— **END OF TASK** ————

┌─ EFFECTIVITY ─
SHZ ALL

23-12 TASK 818

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801. Emergency Locator Transmitter (ELT) BITE Procedure

    A. General

SHZ 801-820, 860-863, 865, 866, 871-874, 876-880

(1) You do the Emergency Locator Transmitter (ELT) BITE Procedure from the front panel of the ELT. The ELT is above an access panel in the AFT Passenger Cabin Ceiling.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(2) You can do the ELT BITE Procedure from one of these two locations:

    (a) On the front panel of the ELT Unit. The ELT Unit is above an access panel in the Passenger Cabin Ceiling (Recommended).

    (b) On the ELT Remote Control Panel (RCP) in the flight compartment (Alternate).

SHZ 801-820, 860-863, 865, 866, 871-874, 876-880

(3) The ELT BITE Test does an operational check of the Emergency Locator Transmitter System.

    (a) The Light Emitting Diode (LED) on the ELT front panel will come ON when the ELT detects a failure in the ELT 406 MHz Transmitter, the Antenna, the Battery, or the G-Switch Loop. The LED can also come ON to indicate that the interface to the Navigation System is not connected.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(4) The ELT BITE test does a self-test of the ELT system.

    (a) If the BITE test is good, the ELT annunciator on the ELT RCP or the red TX light on the ELT front panel comes ON steadily for 10 seconds during the 10 seconds ELT test report.

SHZ 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899

(5) Make sure that the airplane has electrical power.

    (a) If it is necessary, do this task: Supply Electrical Power, AMM TASK 24-22-00-860-811.

(6) Make sure that you do the ELT Test in the first five minutes of the hour (UTC).

    NOTE: The ELT will transmit the 121.5/243.0 emergency signals during the ELT Test.

    (a) If you do the ELT Test outside of the first five minutes of the hour (UTC), then do this:

        1) Speak to the applicable emergency authority (Air Traffic Control Tower or Flight Service Station) to tell them that there will be an ELT Test Transmission on the Emergency Frequency.

(7) Open the access panel to get access to the ELT Unit if applicable (Lowered Ceiling Removal, AMM TASK 25-21-71-000-801 or Lowered Ceiling Removal, AMM TASK 25-21-71-000-815).

    B. BITE Procedure

SHZ 801-820, 860-863, 865, 866, 871-874, 876-880

(1) Do the BITE Procedure for the ELT as follows (Figure 201):

    (a) Make sure that the ELT ARM/ON Switch on the ELT Remote Control Panel is in the ARM position and its guard is CLOSED.

    (b) Set the ELT ON/OFF Switch on the front panel of the ELT Unit to the ON position for one second, then move it back to the OFF position.

    (c) Make sure that the LED on the ELT Unit comes ON momentarily and then goes OFF after the switch is moved to the OFF position.

EFFECTIVITY
SHZ 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899

23-24 TASK 801

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SHZ 801-820, 860-863, 865, 866, 871-874, 876-880 (Continued)

    1)   If the LED flashes after it goes OFF, then count the number of flashes.

      NOTE: The number of flashes is the maintenance message for the fault.

      a)   If the LED flashes one time, three times, four times or seven times, there was a self-test failure.

         NOTE: If the LED flashes five times, this is not a failure. It is an indication that the interface to the Navigation System is not connected and the Navigation Interface Unit (NIU)/PPIU is not installed. Refer to WDM 23-24-11 to determine the airplane configuration.

      b)   Refer to the table at the end of this task to find the applicable Fault Isolation Manual (FIM) Tasks for the maintenance messages that show.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(2)   Do the BITE Procedure for the ELT System at the front panel of the ELT Unit (Figure 201):

(a)   Make sure that the ELT RESET/ARMED/ON Switch on the ELT Remote Control Panel is in the ARMED position and its guard is CLOSED.

(b)   Follow the local ELT operation requirements.

(c)   Read all of the instructions below before you do the next step.

    NOTE: Read all the steps that follow before you start the ELT Test Procedure. You must get familiar with the instructions. Make sure that you use a timing device to monitor the time during the ELT test. You must complete the ELT Test Procedure in less than 50 seconds. This will help prevent accidental activation of an ELT.

WARNING DO NOT STOP THIS SELF TEST UNTIL IT IS COMPLETED. IF THIS TEST DOES NOT SHOW COMPLETED, START THE TEST AGAIN. A TEST THAT IS NOT COMPLETED CAN PREVENT THE OPERATION OF THE EMERGENCY LOCATOR TRANSMITTER.

CAUTION DO NOT SET THE SWITCH TO THE ON POSITION FOR MORE THAN 50 SECONDS. READ THE STEPS BELOW UNTIL YOU KNOW THAT YOU CAN DO THEM IN LESS THAN 50 SECONDS. IF THE SWITCH IS ON MORE THAN 50 SECONDS, EMERGENCY PERSONNEL WILL GET AN EMERGENCY SIGNAL. THEY WILL DO AN EMERGENCY SEARCH OPERATION.

CAUTION IF THE EMERGENCY SIGNAL OCCURS DURING THIS TEST, IMMEDIATELY TELL THE APPLICABLE EMERGENCY PERSONNEL. THE SIGNAL TELLS EMERGENCY PERSONNEL TO DO A SEARCH FOR A MISSING AIRCRAFT.

EFFECTIVITY
SHZ 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899

23-24 TASK 801

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

(CAUTION PRECEDES)

⚠️ **CAUTION**	PULL THE SWITCH BEFORE YOU MOVE IT TO A DIFFERENT POSITION. IF YOU MOVE THE SWITCH BEFORE YOU PULL IT, YOU WILL CAUSE DAMAGE TO THE SWITCH.

(d)   Pull and move the ELT ARMED/OFF/ON switch to the ON position for less than 50 seconds on the front panel of the ELT unit.

NOTE: The Lever Lock Toggle Switch on the ELT front panel is locked into the position in which it is placed. Pull out on the toggle to allow movement before attempting to move switch to another position. The toggle will lock into the new position when released.

1)   Monitor the ELT BITE Test sequence as follows:

NOTE: All times are approximate.

a)   In 0-10 seconds:

<1>   Make sure that the red TX Light flashes two times.

<2>   After approximately three seconds, make sure that the red TX Light comes ON continuously and the buzzer sounds for six seconds.

<3>   Make sure that the red TX Light goes OFF momentarily after six seconds prior to show the ELT Test report.

b)   In 10-20 seconds:

<1>   Make sure that the red TX Light comes ON continuously and the buzzer sounds for 10 seconds. This shows that the BITE Test is good.

NOTE: The ELT shows a test report during this 10 seconds.

<a>   If the red TX Light flashes or stays OFF, then record the flashing rates of the red TX Light.

NOTE: The flashing rates of the red TX Light shows the maintenance message of the fault as follows:

- 125 ms ON, 125 ms OFF (4 Hz) is an ELT Check Sum failure (software problem).
- 250 ms ON, 250 ms OFF (2 Hz) is an ELT Power failure (UHF and/or VHF).
- 500 ms ON, 500 ms OFF (1 Hz) is an external antenna connection failure or a signal identification missing failure.

<b>   Refer to the table at the end of this task to find the applicable FIM Tasks for the maintenance messages that show.

c)   In 20-50 seconds:

EFFECTIVITY
SHZ 801-825, 827-847, 850-852, 855-863, 865, 866,
871-874, 876-899

23-24 TASK 801

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

<1> When the 10 seconds test report is completed, make sure that the red TX light changes from ON continuously to flashing slowly for 30 seconds.

NOTE: During this 30 seconds after the ELT shows the 10 seconds test report, the ELT is in a wait condition. The flashing rates of the red TX light are 1.75 seconds ON, 0.25 second OFF (0.5 Hz). You must do the subsequent steps to reset the ELT during this 30 seconds wait condition.

<2> Make sure that you set the ARMED/OFF/ON Switch to the ARMED position in less than 30 seconds after the 10 seconds ELT Test report is completed.

(e) Pull and move the ELT ARMED/OFF/ON Switch to the ARMED position while the red TX Light is flashing slowly.

NOTE: The Lever Lock Toggle Switch on the ELT front panel is locked into the position in which it is placed. Pull out on the toggle to allow movement before attempting to move switch to another position. The toggle will lock into the new position when released.

1) Make sure that the red TX Light goes OFF.

2) Make sure that the Buzzer sound stops.

(3) Do the BITE Procedure for the ELT System at the ELT Remote Control Panel (RCP):

(a) Set the No. 2 VHF Communication System (VHF COMM 2) to a frequency of 121.5 MHz (VHF Communication System - System Test, AMM TASK 23-12-00-730-801).

NOTE: Any VHF COMM System with a bottom mounted antenna can be used for this test. If the VHF antenna is on the top, it is possible to hear the ELT signal even though the ELT antenna has failed.

(b) Prepare one of the Audio Control Panel (ACP) in the flight compartment to listen for No. 2 VHF communication system:

1) Push all Audio Monitor Switches to OFF.

2) Push the Volume Control for the VHF-2 Selector Switch.

   a) Make sure that its light comes ON.

3) Rotate the Volume Control for the VHF-2 Selector Switch clockwise to the middle position.

4) Push the SPKR Volume Control Switch to ON.

   a) Make sure that its light comes ON.

5) Rotate the SPKR Volume Control Switch clockwise to the middle position.

⚠️ **CAUTION**	OBEY LOCAL REGULATIONS ABOUT THE OPERATION OF THE ELT FOR TESTS. FAILURE TO OBEY REGULATIONS CAN CAUSE AN OPERATION TO LOOK FOR THE AIRPLANE THAT IS NOT NECESSARY.

(c) Follow the local ELT operation requirements.

EFFECTIVITY
SHZ 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899

23-24 TASK 801

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

(d)   Read all the steps that follow before you continue to the subsequent steps.

NOTE: Read all the steps that follow before you start the ELT Test Procedure. You must get familiar with the instructions. Make sure that you use a timing device to monitor the time during the ELT Test. You must complete the ELT Test Procedure in less than 50 seconds. This will help prevent accidental activation of an ELT.

(e)   Push and hold the ELT Annunciator.

1)   Make sure that the ELT Annunciator comes ON.

(f)   Release the ELT Annunciator.

1)   Make sure that the ELT Annunciator goes OFF.

(g)   Push and release the MASTER CAUTION Reset Button on the P7 Glareshield.

1)   Make sure that the MASTER CAUTION and OVERHEAD Annunciators on the P7 Glareshield are OFF.

⚠️ **CAUTION**	IF THE EMERGENCY SIGNAL OCCURS DURING THIS TEST, IMMEDIATELY TELL THE APPLICABLE EMERGENCY PERSONNEL. THE SIGNAL TELLS EMERGENCY PERSONNEL TO DO A SEARCH FOR A MISSING AIRCRAFT.

(h)   OPEN the guard on the ELT RESET/ARMED/ON Switch.

(i)   Make sure that the ELT RESET/ARMED/ON Switch is in the ARMED position

(j)   Set and hold the ELT RESET/ARMED/ON Switch to the RESET position until the ELT Annunciator flashes two times but no more than three seconds, then release the switch.

(k)   Monitor the ELT BITE test sequence as follows:

NOTE: All times are approximate.

1)   In 0-10 seconds:

a)   The ELT Annunciator flashes two times and stays OFF for approximately six seconds.

b)   You hear the one second test transmission on the VHF Communication System.

c)   The MASTER CAUTION and OVERHEAD Annunciators on the P7 Gareshield come ON.

2)   In 10-20 seconds:

a)   The ELT Annunciator comes ON continuously for 10 seconds to show the ELT BITE Test report. This shows that the ELT BITE Test is good.

<1>   If the ELT Annunciator stays OFF or flashes during these 10 seconds, then record the flashing rates that the ELT Annunciator shows.

NOTE: The flashing rates of the ELT Annunciator shows the maintenance message of the fault as follows:

• 125 ms ON, 125 ms OFF (4 Hz) is an ELT Check Sum failure (software problem).

• 250 ms ON, 250 ms OFF (2 Hz) is an ELT Power failure (UHF and/or VHF).

EFFECTIVITY
SHZ 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899

23-24 TASK 801

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

- 500 ms ON, 500 ms OFF (1 Hz) is an external antenna connection failure or a signal identification missing failure.

    <2>   Refer to the table at the end of this task to find the applicable FIM Tasks for the maintenance messages that show.

    3)   In 20-50 seconds:

      a)   When the 10 seconds ELT test report is completed, the ELT annunciator goes OFF and stays OFF for at least 30 seconds.

          NOTE: The ELT will go back to the ARMED mode automatically after the ELT BITE Test. it is necessary to make sure that the ELT Annunciator stays OFF a minimum of 30 seconds after the ELT BITE Test report completed.

    (l)   Push and release the MASTER CAUTION reset button on the P7Gglareshield.

      1)   Make sure that the MASTER CAUTION and OVERHEAD Annunciators on the P7 Gareshield are OFF.

    (m)   Make sure that the ELT RESET/ARMED/ON Switch is in the ARMED position.

    (n)   CLOSE the guard on the ELT RESET/ARMED/ON Switch on the ELT Remote Control Panel.

SHZ 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899
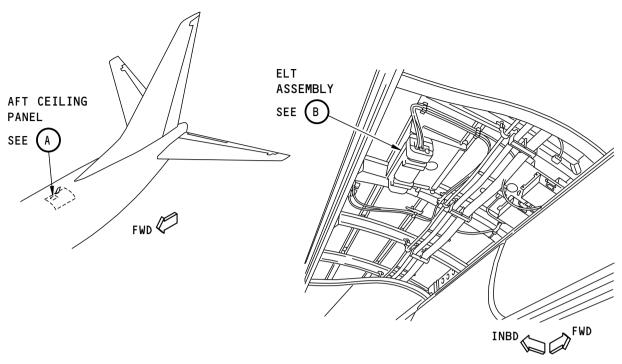
(4)   Speak to the applicable emergency authority to tell them that the ELT Test is completed if applicable.

(5)   CLOSE the access panel for the ELT Unit if applicable (Lowered Ceiling Installation, AMM TASK 25-21-71-400-801 or Lowered Ceiling Installation, AMM TASK 25-21-71-400-815).

(6)   If the electrical power is not necessary, do this task: Remove Electrical Power, AMM TASK 24-22-00-860-812.

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
ELT	LED flashes 1 time per second	23-24 TASK 808
ELT	LED flashes 2 times per second	23-24 TASK 810
ELT	LED flashes 4 times per second	23-24 TASK 809
ELT	LED flashes one time	23-24 TASK 802
ELT	LED flashes seven times	23-24 TASK 804
ELT	LED flashes three or four times	23-24 TASK 803

———— **END OF TASK** ————

EFFECTIVITY
**SHZ 801-825, 827-847, 850-852, 855-863, 865, 866,
871-874, 876-899**

23-24 TASK 801

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AFT CEILING
PANEL

SEE Ⓐ

FWD

ELT
ASSEMBLY

SEE Ⓑ

INBD   FWD
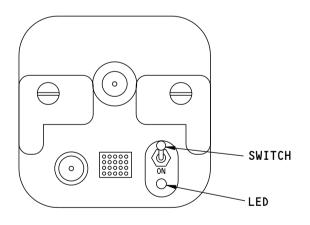
AFT CEILING PANEL
(REMOVED)

Ⓐ

SWITCH

ON

LED

EMERGENCY LOCATOR
TRANSMITTER (ELT)

Ⓑ
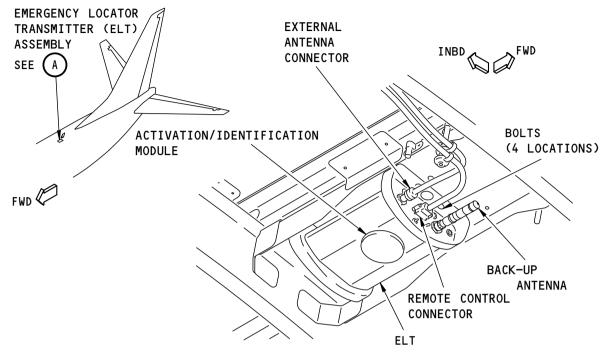
H34067 S0000146958_V1

**Emergency Locator Transmitter (ELT)
Figure 201/23-24-00-990-803 (Sheet 1 of 2)**

EFFECTIVITY
SHZ 801-820, 860-863, 865, 866, 871-874, 876-880

23-24 TASK 801

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EMERGENCY LOCATOR
TRANSMITTER (ELT)
ASSEMBLY
SEE (A)

EXTERNAL
ANTENNA
CONNECTOR

INBD   FWD

FWD

ACTIVATION/IDENTIFICATION
MODULE

BOLTS
(4 LOCATIONS)

BACK-UP
ANTENNA

REMOTE CONTROL
CONNECTOR

ELT

**EMERGENCY LOCATOR TRANSMITTER (ELT)
ASSEMBLY**

(A)

ACTIVATION/IDENTIFICATION
MODULE

TX LED

BACK-UP
ANTENNA

ARMED/ON/OFF
TOGGLE SWITCH

EXTERNAL
ANTENNA
CONNECTOR

ARMED/ON/OFF
TOGGLE SWITCH

TX LED

ARMED OFF
O
N
TX

BACK UP ANT.   REMOTE CONTROL   EXT. ANT.

SWITCH OFF FOR MAINTENANCE

BACK-UP
ANTENNA

REMOTE
CONTROL
CONNECTOR

EXTERNAL
ANTENNA
CONNECTOR

ELT TRANSMITTER

1328492 S0000234906_V1

**Emergency Locator Transmitter (ELT)
Figure 201/23-24-00-990-803 (Sheet 2 of 2)**

── EFFECTIVITY ──
SHZ 821-825, 827-847, 850-852, 855-859, 881-899

23-24 TASK 801

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SHZ 801-820, 860-863, 865, 866, 871-874, 876-880

802. ELT G-Switch Loop Problem - Fault Isolation

A. Description

(1) This task is for the maintenance message:

(a) LED flashes one time.

(2) The ELT BITE test does an operational check of the emergency locator transmitter system. The LED on the ELT front panel will flash one time when the ELT detects a failure in the G-switch loop.

B. Possible Cause

(1) G-switch loop

C. Related Data

(1) (WDM 23-24-11)

(2) (SSM 23-24-11)

D. Initial Evaluation

(1) Do this task: ELT System - System Test, AMM TASK 23-24-00-730-804-001.

(a) If there is one flash, then do the Fault Isolation Procedure below.

(b) If there is no flash, then there was an intermittent fault.

E. Fault Isolation Procedure

(1) Do this check of the G-switch loop on the emergency locator transmitter (ELT), M1523:

(a) Remove the bottom cover of the ELT (AMM TASK 23-24-00-000-801-001).

NOTE: The ELT is above an access panel in the aft passenger cabin ceiling.

(b) Make sure the G-switch loop that connects between pin 5 and pin 8 is installed correctly.

1) If the G-switch loop is missing or not installed correctly, then install the G-switch loop.

(c) Re-install the bottom cover of the ELT.

(d) Do this task: ELT System - System Test, AMM TASK 23-24-00-730-804-001.

(e) If there is no flash, then you corrected the fault.

———— END OF TASK ————

803. ELT 406 MHz Transmitter or Bad Antenna Problem - Fault Isolation

A. Description

(1) This task is for the maintenance message:

(a) LED flashes three or four times.

1) ELT Model B406-1: LED flashes four times

2) ELT Model B406-4: LED flashes three times

(2) The ELT BITE test does an operational check of the emergency locator transmitter system. The LED on the ELT front panel will flash three or four times when the ELT detects a failure in the ELT 406 MHz transmitter or the antenna.

┌─ EFFECTIVITY ─
SHZ 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899

23-24 TASKS 801-803

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SHZ 801-820, 860-863, 865, 866, 871-874, 876-880 (Continued)

    B.   Related Data

        (1)   (WDM 23-24-11)

        (2)   (SSM 23-24-11)

    C.   Possible Causes

        (1)   ELT

        (2)   ELT antenna

        (3)   Wiring

    D.   Equipment

        (1)   PE6029-50 or PE6066-50 or equivalent (50 ohm resistor termination - TNC female, 0.5 watt minimum power dissipation), Pasternack Enterprises, LLC, P.O. Box 16759, Irvine, CA, 92623-6759

    E.   Initial Evaluation

        (1)   Do this task: ELT System - System Test, AMM TASK 23-24-00-730-804-001.

           (a)   If there are three or four flashes, then do the Fault Isolation Procedure below.

           (b)   If there are no flashes, then there was an intermittent fault.

    F.   Fault Isolation Procedure

        (1)   Do this check of the emergency locator transmitter (ELT):

           (a)   Remove the bottom cover of the ELT (AMM TASK 23-24-00-000-801-001).

               NOTE: The ELT is above an access panel in the aft passenger cabin ceiling.

           (b)   Disconnect coaxial cable connector D10585 from the antenna.

               NOTE: The ELT antenna mounted on the top of the fuselage near the transmitter (STA 796.5, LBL 4.5).

           (c)   Connect 50 ohms resistor termination to the coaxial cable connector D10585.

               NOTE: Terminator must be 50 ohm resistance, TNC female and minimum 0.5 watt power dissipation.

           (d)   Turn the ELT to the ON position for about one second, and then back to the OFF position.

              1)   If the flashes come on again, then do this step:

                 a)   Replace the ELT.

                    These are the tasks:

                    Emergency Locator Transmitter Removal, AMM TASK 23-24-00-000-801-001,

                    Emergency Locator Transmitter Installation, AMM TASK 23-24-00-400-801-001.

                 b)   Remove the 50 ohms resistor termination from connector D10585.

                 c)   Connect coaxial cable connector D10585 to the antenna.

                 d)   Do this task: ELT System - System Test, AMM TASK 23-24-00-730-804-001.

                 e)   If there are no flashes, then you corrected the fault.

              2)   If there are no flashes, then remove the 50 ohms resistor termination from coaxial cable connector D10585 and continue.

        (2)   Do this check of the wiring:

EFFECTIVITY
SHZ 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899

23-24 TASK 803

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SHZ 801-820, 860-863, 865, 866, 871-874, 876-880 (Continued)

  (a) Disconnect coaxial cable connector D10583 from the ELT.

  (b) Do a check of the coaxial cable from connector D10583 to connector D10585. To do the check, do this task: Coaxial Cable Inspection, AMM TASK 20-10-72-210-801.

D10583	**D10585**
pin A1	pin A1

  (c) If you find a problem with the wiring, then do these steps:

    1) Repair the wiring.

    2) Re-connect the connector D10583.

    3) Re-connect the connector D10585.

    4) Install the bottom cover of the ELT.

    5) Do this task: ELT System - System Test, AMM TASK 23-24-00-730-804-001.

    6) If there are no flashes, then you corrected the fault.

  (d) If you do not find a problem with the wiring, then do these steps and continue:

    1) Re-connect the connector D10583.

    2) Re-connect the connector D10585.

    3) Install the bottom cover of the ELT.

    4) Do this task: ELT System - System Test, AMM TASK 23-24-00-730-804-001.

    5) If there are no flashes, then you corrected the fault.

    6) If the flashes come on again, then continue.

 (3) Replace the ELT antenna.

  These are the tasks:

  ELT Antenna - Removal, AMM TASK 23-24-01-000-802,

  ELT Antenna - Installation, AMM TASK 23-24-01-400-802.

  (a) If there are no flashes, then you corrected the fault.

<div align="center">———— END OF TASK ————</div>

804. ELT Battery Problem - Fault Isolation

 A. Description

  (1) This task is for the maintenance message:

    (a) LED flashes seven times.

  (2) The ELT BITE test does an operational check of the emergency locator transmitter system. The LED on the ELT front panel will flash seven times when the ELT detects a failure in the battery.

 B. Related Data

  (1) (WDM 23-24-11)

  (2) (SSM 23-24-11)

┌─── EFFECTIVITY ───
SHZ 801-825, 827-847, 850-852, 855-863, 865, 866,
871-874, 876-899

23-24 TASKS 803-804

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SHZ 801-820, 860-863, 865, 866, 871-874, 876-880 (Continued)

    C.   **Possible Cause**

        (1)   ELT battery

    D.   **Initial Evaluation**

        (1)   Do this task: ELT System - System Test, AMM TASK 23-24-00-730-804-001.

            (a)   If there are seven flashes, then do the Fault Isolation Procedure below.

            (b)   If there are no flashes, then there was an intermittent fault.

    E.   **Fault Isolation Procedure**

        (1)   Replace the ELT battery assembly. To replace it, do this task: Emergency Locator Transmitter Battery Replacement, AMM TASK 23-24-00-900-801-001.

            (a)   If there are no flashes, then you corrected the fault.

SHZ 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899

——————— **END OF TASK** ———————

    807.   <u>**ELT On - Fault Isolation**</u>

        A.   **Initial Evaluation**

        SHZ 801-820, 860-863, 865, 866, 871-874, 876-880

        (1)   The emergency locator transmitter (ELT) is on. Set the ELT ARM/ON switch on the overhead panel, P5, to the ON position for approximately one second and move it back to the ARM position (ELT System - Operational Test, AMM TASK 23-24-00-710-801-001).

            (a)   If the ELT annunciator goes OFF, then no maintenance action is necessary.

            (b)   If the ELT annunciator stays ON, then do the Fault Isolation Procedure below.

        SHZ 821-825, 827-847, 850-852, 855-859, 881-899

        (2)   The emergency locator transmitter (ELT) is on. Set and hold the ELT RESET/ARMED/ON switch on the overhead panel, P5, to the RESET position for one to three seconds, then release the switch to the ARMED position (Emergency Locator Transmitter (ELT) BITE Procedure, 23-24 TASK 801).

            (a)   If the ELT annunciator goes OFF, then no maintenance action is necessary.

            (b)   If the ELT annunciator stays ON, then do the Fault Isolation Procedure below.

        SHZ 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899

        B.   **Fault Isolation Procedure**

        (1)   Disconnect connector D3003 from the ELT, M1523.

            (a)   If the ELT annunciator goes OFF, then do the steps that follow:

               1)   Replace the ELT, M1523.

                  These are the tasks:

                  Emergency Locator Transmitter Removal, AMM TASK 23-24-00-000-801-001 or Emergency Locator Transmitter Removal, AMM TASK 23-24-00-000-804-001

                  Emergency Locator Transmitter Installation, AMM TASK 23-24-00-400-801-001 or Emergency Locator Transmitter Installation, AMM TASK 23-24-00-400-804-001

                  a)   If the ELT annunciator goes OFF, then you corrected the fault.

EFFECTIVITY
SHZ 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899

23-24 TASKS 804-807

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      b)   If the ELT annunciator stays ON, then continue the procedure.

  (b)   If the ELT annunciator stays ON, then do these steps:

      1)   Connect the connector D3003 back to the ELT, M1523.

      2)   Continue the procedure.

SHZ 801-820, 860-863, 865, 866, 871-874, 876-880

(2)   Do a wiring check of the ELT ARM/ON switch on the ELT control panel, P5–80 (P5) (WDM 23-24-11).

  (a)   If you find a problem with the switch, then replace the ELT control panel.

      These are the tasks:

      Emergency Locator Transmitter (ELT) Control Panel Removal, AMM TASK 23-24-02-000-801

      Emergency Locator Transmitter (ELT) Control Panel Installation, AMM TASK 23-24-02-400-801

      1)   If the ELT annunciator goes OFF, then you corrected the fault.

      2)   If the ELT annunciator stays ON, then continue the procedure.

  (b)   If you do not find a problem with the switch, then continue the procedure.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(3)   Do a wiring check of the ELT RESET/ARMED/ON switch on the ELT control panel, P5–80 (P5) (WDM 23-24-11).

  (a)   If you find a problem with the switch, then replace the ELT control panel.

      These are the tasks:

      Emergency Locator Transmitter (ELT) Control Panel Removal, AMM TASK 23-24-02-000-801

      Emergency Locator Transmitter (ELT) Control Panel Installation, AMM TASK 23-24-02-400-801

      1)   If the ELT annunciator goes OFF, then you corrected the fault.

      2)   If the ELT annunciator stays ON, then continue the procedure.

  (b)   If you do not find a problem with the switch, then continue the procedure.

SHZ 801-820, 860-863, 865, 866, 871-874, 876-880

(4)   Do a wiring check between the ELT ARM/ON switch on the ELT control panel, P5–80 (P5) and the ELT, M1523 (WDM 23-24-11).

  (a)   Repair the problems that you find.

  (b)   If the ELT annunciator goes OFF, then you corrected the fault.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(5)   Do a wiring check between the ELT RESET/ARMED/ON switch on the ELT control panel, P5–80 (P5) and the ELT, M1523 (WDM 23-24-11).

  (a)   Repair the problems that you find.

  (b)   If the ELT annunciator goes OFF, then you corrected the fault.

—————— **END OF TASK** ——————

EFFECTIVITY
SHZ 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899

23-24 TASK 807

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

808. **ELT External Antenna Connection Failure - Fault Isolation**

   A. **Description**

   (1) Use this FIM task when the Emergency Locator Transmitter (ELT) BITE Procedure, 23-24 TASK 801 gives these results:

   (a) The transmitter (TX) LED on the ELT shows a failure blinking rate of 500 ms on and 500 ms off. This converts to an on/off blink rate of 1 time per second and indicates an ELT external antenna connection failure or ELT internal programming fault.

   B. **Possible Causes**

   (1) External antenna connection problem.

   (2) Internal ELT programming problem.

   C. **Fault Isolation Procedure**

   (1) Do the steps that follow:

   (a) Do a check of the connection between the external antenna connector and the external antenna. Also, examine the connection between the external antenna connector and the ELT (WDM 23-24-11).

   1) Correct any problems that you find.

   (b) If you do not find a problem with the external antenna connection, replace the ELT, M1523.

   These are the tasks:

   Emergency Locator Transmitter Removal, AMM TASK 23-24-00-000-804-001

   Emergency Locator Transmitter Installation, AMM TASK 23-24-00-400-804-001

   (c) Do this FIM task: Emergency Locator Transmitter (ELT) BITE Procedure, 23-24 TASK 801.

   1) If the ELT test shows no failures (the TX LED is on steady for 10 seconds), then you corrected the fault.

——————— END OF TASK ———————

809. **ELT Checksum Failure - Fault Isolation**

   A. **Description**

   (1) Use this FIM task when the Emergency Locator Transmitter (ELT) BITE Procedure, 23-24 TASK 801 gives these results:

   (a) The transmitter (TX) LED on the ELT shows a failure blinking rate of 125 ms on and 125 ms off. This converts to an on/off blink rate of 4 times per second and indicates an ELT checksum failure (ELT internal software problem).

   B. **Possible Causes**

   (1) ELT, M1523.

   C. **Fault Isolation Procedure**

   (1) Replace the ELT, M1523.

   These are the tasks:

   Emergency Locator Transmitter Removal, AMM TASK 23-24-00-000-804-001

EFFECTIVITY
SHZ 801-825, 827-847, 850-852, 855-863, 865, 866,
871-874, 876-899

23-24 TASKS 807-809

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

Emergency Locator Transmitter Installation, AMM TASK 23-24-00-400-804-001

(a) Do this FIM task: Emergency Locator Transmitter (ELT) BITE Procedure, 23-24 TASK 801.

1) If the ELT test shows no failures (the TX LED is on steady for 10 seconds), you corrected the fault.

——— **END OF TASK** ———

810. ELT Power Failure - Fault Isolation

A. Description

(1) Use this FIM task when the Emergency Locator Transmitter (ELT) BITE Procedure, 23-24 TASK 801 gives these results:

(a) The transmitter (TX) LED shows a failure blinking rate of 250 ms on, and 250 ms off. This converts to an on/off blink rate of 2 times per second and indicates an ELT power failure.

B. Possible Causes

(1) ELT, M1523.

C. Fault Isolation Procedure

(1) Replace the ELT, M1523.

These are the tasks:

Emergency Locator Transmitter Removal, AMM TASK 23-24-00-000-804-001

Emergency Locator Transmitter Installation, AMM TASK 23-24-00-400-804-001

(a) Do this FIM task: Emergency Locator Transmitter (ELT) BITE Procedure, 23-24 TASK 801.

1) If the ELT test shows no failures (the TX LED is on steady for 10 seconds), you corrected the fault.

——— **END OF TASK** ———

┌─── EFFECTIVITY ───
SHZ 801-825, 827-847, 850-852, 855-863, 865, 866,
871-874, 876-899

23-24 TASKS 809-810

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801. ACARS System Problem - Fault Isolation

SHZ 801-820, 871-874, 901-999

    A. Description

       (1)   The Aircraft Communications Addressing and Reporting System (ACARS) has one of these problems:

          (a)   The Aircraft Communications Addressing and Reporting System (ACARS) communications management unit cannot communicate with an ACARS ground station (NO COMM shows in the CDU scratchpad display).

          (b)   The ACARS menu selection prompt (<ACARS) is missing from line 2 on one of the CDU Main Menu displays.

          (c)   The ACARS menu selection prompt (<ACARS) is missing from line 2 on both of the CDU Main Menu displays.

          (d)   The ACARS does not respond to CDU key pushes.

          (e)   The ground station reports that downlink messages from the ACARS system are incomplete.

          (f)   The ACARS communications management unit cannot print data on the multi-input printer.

          (g)   The flight compartment chime does not sound for an ACARS uplink message.

      SHZ 801-806, 871-874, 901-999

          (h)   The VHF-C lamp on the SELCAL control panel does not come on for an ACARS uplink message.

          (i)   Pushing the VHF-C switchlight on the SELCAL control panel does not acknowledge the ACARS uplink message (VHF-C CALL lamp does not go out).

      SHZ 807-820

          (j)   The VHF-C lamp on the audio control panels does not come on for an ACARS uplink message.

          (k)   Pushing the VHF-C switchlight on the audio control panel does not acknowledge the ACARS uplink message (VHF-C CALL lamp does not go out).

      SHZ 801-820, 871-874, 901-999

    B. Corrective Action

       (1)   If the CMU cannot communicate with an ACARS ground station, do this task: ACARS Communication Problem - Fault Isolation, 23-27 TASK 814

       (2)   If the <ACARS prompt is missing from one, or both, of the CDU Main Menu Displays, do this task: ACARS/CDU Interface Problem - Fault Isolation, 23-27 TASK 815

       (3)   If the ACARS does not respond to CDU key pushes, do this task: ACARS/CDU Interface Problem - Fault Isolation, 23-27 TASK 815

       (4)   If the ground station reports that downlink messages from the ACARS system are incomplete, do this task: ACARS Input Problem - Fault Isolation, 23-27 TASK 816

       (5)   If the ACARS communications management unit cannot print on the multi-input printer, do this task: ACARS Print Problem - Fault Isolation, 23-27 TASK 812

       (6)   If the flight compartment chime does not sound for an ACARS uplink message, do this task: ACARS Call Annunciation Problem - Fault Isolation, 23-27 TASK 818

┌─── EFFECTIVITY ───
**SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999**

23-27 TASK 801

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SHZ 801-806, 871-874, 901-999

(7)   If the VHF-C lamp on the SELCAL control panel does not come on for an ACARS uplink message, do this task: ACARS Call Annunciation Problem - Fault Isolation, 23-27 TASK 818

(8)   If pushing the VHF-C switchlight on the SELCAL control panel does not acknowledge the ACARS uplink message (VHF-C CALL lamp does not go out), do this task: ACARS Call Annunciation Problem - Fault Isolation, 23-27 TASK 818

SHZ 807-820

(9)   If the VHF-C lamp on the audio control panels does not come on for an ACARS uplink message, do this task: ACARS Call Annunciation Problem - Fault Isolation, 23-27 TASK 818

(10)   If pushing the VHF-C switchlight on the audio control panel does not acknowledge the ACARS uplink message (VHF-C CALL lamp does not go out), do this task: ACARS Call Annunciation Problem - Fault Isolation, 23-27 TASK 818

SHZ 002, 009-699, 721-799, 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

    C.   **Description**

(1)   The Aircraft Communications Addressing and Reporting System (ACARS) communication management unit does not operate correctly.

(2)   Use this procedure when one or more of these conditions exist:

    (a)   The ACARS Observed Fault is ACARS: does not operate correctly.

    (b)   The ACARS prompt does not show on the flight management computer system Control and Display Unit (CDU) MENU page.

    (c)   The DATALINK FAIL message shows on the flight management computer system Control and Display Unit (CDU).

    SHZ 821-825, 827-847, 850-852, 855-859, 876-899

    (d)   The VDR 3 FAULT message shows on the Control and Display Unit (CDU).

    (e)   The VDR 3 FAULT, ANTENNA message shows on the Control and Display Unit (CDU).

SHZ 002, 009-699, 721-799, 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

    D.   **Possible Causes**

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(1)   ACARS Management Unit (MU), M1109 software

(2)   ACARS Management Unit (MU), M1109

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

(3)   ACARS Communications Management Unit (CMU) 1, M2127 software.

(4)   ACARS Communications Management Unit (CMU) 1, M2127.

SHZ 002, 009-699, 721-799, 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

(5)   VHF Communication Transceiver No. 3, M411

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

(6)   VHF Communication Antenna No. 3, M225

SHZ 002, 009-699, 721-799, 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

(7)   Wiring problem

EFFECTIVITY
**SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999**

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SHZ 002, 009-699, 721-799, 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899 (Continued)

E. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name

SHZ 002, 009-699, 721-799, 860-863, 865, 866

Row	Col	Number	Name
E	7	C00744	ACARS MU AC

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

Row	Col	Number	Name
E	8	C01483	CMU-1 AC

SHZ 002, 009-699, 721-799, 821-825, 827-847, 850-852, 855-859, 876-899

Row	Col	Number	Name
E	9	C01500	CMU/ACARS DC

SHZ 002, 009-699, 721-799, 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

F. Related Data

(1) (SSM 23-27-11) or (SSM 23-27-31)

(2) (WDM 23-27-11) or (WDM 23-27-31) or (WDM 23-12-31)

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

G. Initial Evaluation

NOTE: This Initial Evaluation is for airplanes with an Allied Signal (Honeywell) ACARS CMU P/N 965-0758-00X connected to VHF No. 3 and controlled by MCDUs.

SHZ 860-863, 865, 866

(1) Push the MENU key on the left and right Control and Display Units (CDU-1 and CDU-2).

(2) Do these steps:

    (a) If the <ACARS prompt does not show on any CDU then do these steps:

        1) Look at the front panel of the ACARS MU, M1109.

        NOTE: The ACARS MU is on the E3-3 shelf in the electronic equipment bay.

        2) If all front panel lights are off, then do the Fault Isolation Procedure - ACARS System Problem below.

        3) If any front panel lights are on, then continue.

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

(3) If the VDR 3 FAULT message shows on the CDU, do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

(4) If the VDR 3 FAULT, ANTENNA message shows on the CDU, do this task: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801.

    (a) If the VHF BITE test does not correct the fault, then examine the VHF communication antenna and the RF coaxial cable:

        1) Remove the VHF communication transceiver, M411 (VHF-3). To remove the VHF communication transceiver, do this task: VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASK 801

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SHZ 821-825, 827-847, 850-852, 855-859, 876-899 (Continued)

    2)   Do a check of the coaxial cable from the VHF communication transceiver, M411 (VHF-3), to the VHF communication antenna, VHF-3 (WDM 23-12-31). To do the TDR (time domain reflectometer) check, do this task: Coaxial Cable Inspection, AMM TASK 20-10-72-210-801.

    3)   If you find a problem with the coaxial cable, then do this step:

        a)   Repair or replace the coaxial cable.

    4)   If you find a problem with the VHF communication antenna, then do this step:

        a)   Replace the VHF communication antenna, VHF-3.

            These are the tasks:

            VHF Communication Antenna - Removal, AMM TASK 23-12-11-000-801,

            VHF Communication Antenna - Installation, AMM TASK 23-12-11-400-801.

    5)   Re-install the VHF communication transceiver. To install the transceiver, do this task: VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

(5)   Do the ACARS CMU BITE Test:

    (a)   Push and hold the RESET button on the front of the ACARS CMU.

    (b)   Make sure that all the lights on the front of the CMU are on.

    (c)   Release the button. Wait a minimum of one minute.

    (d)   If the green XFER COMP or LOAD SW light is on, make sure that the system select switch on the data loader control panel (P61) is set to NORM or NORMAL.

    (e)   If the HW FAIL, XFER BUSY or XFER FAIL light is on, reload the correct ACARS software. To reload the software, do this task: ACARS Software Installation with a Portable Data Loader (PDL), AMM TASK 23-27-33-470-801 or ACARS Communications Management Unit Software Installation with an Airborne Data Loader (ADL), AMM TASK 23-27-33-470-802 or ACARS Communications Management Unit Software Installation with an Enhanced Airborne Data Loader (eADL), AMM TASK 23-27-33-470-805.

        NOTE: Incorrect or incomplete ACARS software can cause these lights to be on.

    (f)   Make sure that only the Green MU PASS light is on.

    (g)   If the ACARS CMU BITE Test is not satisfactory, do the Fault Isolation Procedure - ACARS Management Unit Problem below.

    (h)   If the ACARS CMU BITE Test is satisfactory, then continue.

SHZ 860-863, 865, 866

(6)   Do these steps to make sure the software is correct:

    NOTE: Make sure that you know the correct software part numbers for the ACARS Management Unit (MU). For ACARS to be an approved installation, the correct software part numbers must be installed.

    (a)   Push the MENU key on the left and right Control and Display Units (CDU-1 and CDU-2).

        1)   If the <ACARS prompt does not show on any CDU, do this task: ACARS Software Installation with a Portable Data Loader (PDL), AMM TASK 23-27-32-470-801 or ACARS Software Installation with an Airborne Data Loader (ADL), AMM TASK 23-27-32-000-801

┌─ EFFECTIVITY ─
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 860-863, 865, 866 (Continued)

or replace the ACARS MU with one that has the correct software (AMM TASK 23-27-32-020-801) (AMM TASK 23-27-32-420-801).

(b) If the <ACARS prompt shows:

1) Push the line-select-key (LSK) adjacent to the <ACARS prompt.

2) Push the LSK adjacent to the <MISC prompt.

3) Push the LSK adjacent to the MAINT> prompt.

4) Push the LSK adjacent to the <PART NUMBERS prompt.

a) Make sure that the ACARS PART NUMBERS page shows on the CDU.

b) Make sure that the correct ACARS software part numbers show on the CDU.

c) If the <ACARS software part numbers are not correct, do this task: AMM TASK 23-27-32-470-801 or AMM TASK 23-27-32-000-801 or replace the ACARS MU with one that has the correct software (AMM TASK 23-27-32-020-801) (AMM TASK 23-27-32-420-801).

(c) Push the MENU function key on both CDUs.

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

(7) Do these steps to make sure the software is correct:

NOTE: Make sure that you know the correct software part numbers for the ACARS CMU. For ACARS to be an approved installation, the correct software part numbers must be installed.

(a) Push the MENU key on the left and right Control and Display Units (CDU-1 and CDU-2).

SHZ 876-880

(b) If the <ACARS prompt shows:

1) Push the line-select-key (LSK) adjacent to the <ACARS prompt.

2) Push the LSK adjacent to the <MISC prompt.

3) Push the LSK adjacent to the MAINT> prompt.

4) Push the LSK adjacent to the <PART NUMBERS prompt.

a) Make sure that the ACARS PART NUMBERS page shows on the CDU.

b) Make sure that the correct ACARS software part numbers show on the CDU.

c) If the <ACARS software part numbers are not correct, do this task: ACARS Communications Management Unit Software Installation with an Airborne Data Loader (ADL), AMM TASK 23-27-33-470-802 or replace the ACARS CMU with one that has the correct software (AMM TASK 23-27-33-020-801) (AMM TASK 23-27-33-420-801).

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(c) If the <DLK prompt shows:

1) Push the line-select-key (LSK) adjacent to the <DLK prompt.

2) Push the LSK adjacent to the MAINT> prompt.

3) Push the LSK adjacent to the <PART NUMBERS prompt.

a) Make sure that the CMU PART NUMBERS page show on the CDU.

b) Make sure that the correct ACARS software part numbers show on the CDU.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASK 801

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

c) If the <CMU software part numbers are not correct, do this task: ACARS Software Installation with a Portable Data Loader (PDL), AMM TASK 23-27-33-470-801 or ACARS Communications Management Unit Software Installation with an Airborne Data Loader (ADL), AMM TASK 23-27-33-470-802 or ACARS Communications Management Unit Software Installation with an Enhanced Airborne Data Loader (eADL), AMM TASK 23-27-33-470-805 or replace the ACARS CMU with one that has the correct software (ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801) (ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801).

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

(d) Push the MENU function key on both CDUs.

SHZ 860-863, 865, 866

(8) Do this task: ACARS Initialization, FMC and VHF Link Test, AMM TASK 23-27-00-700-813-001.

(a) If the test is not satisfactory, do this task: NO COMM shows in the CDU display - Fault Isolation, 23-27 TASK 806.

(b) If the test is satisfactory, then continue.

(9) Do this task: ACARS Interface Out-Off-On-In Discrete Test, AMM TASK 23-27-00-700-814-001.

(a) If the test is not satisfactory, do this task: An Out-Off-On-In (OOOI) value is not correct - Fault Isolation, 23-27 TASK 807.

(b) If the test is satisfactory, then you have corrected the fault.

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

(10) Do the VHF Link Test (Subtask 23-27-00-730-082-009) contained in this task: ACARS - System Test, AMM TASK 23-27-00-700-812-009.

(a) If the test is not satisfactory, do this task: NO COMM shows in the CDU display - Fault Isolation, 23-27 TASK 806.

(b) If the test is satisfactory, then continue.

(11) Do the OOOI Sensor Test (Subtask 23-27-00-730-087-009) contained in this task: AMM TASK 23-27-00-700-812-009.

(a) If the test is not satisfactory, do this task: An Out-Off-On-In (OOOI) value is not correct - Fault Isolation, 23-27 TASK 807

(b) If the test is satisfactory, then you have corrected the fault.

SHZ 002, 009-699, 721-799

H. **Initial Evaluation**

(1) Look at the front panel of the ACARS MU, M1109.

NOTE: The ACARS MU is on the E3-3 shelf in the electronic equipment bay.

(2) Do a check of the ACARS front panel indications.

(a) If the MU FAIL light on the front of the ACARS management unit is on, then do the Fault Isolation Procedure - ACARS Management Unit Problem below.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-27 TASK 801

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SHZ 002, 009-699, 721-799 (Continued)

    (b)   If the MU FAIL light is off, then, do this task: ACARS - System Test, AMM TASK 23-27-00-730-801-005.

    (c)   If the System test is satisfactory, then there was an intermittent fault.

    (d)   Do the OOOI Sensor Test (Subtask 23-27-00-730-087-009) contained in this task: ACARS - System Test, AMM TASK 23-27-00-730-801-005

    (e)   If the System test is not satisfactory, then do the Fault Isolation Procedure - ACARS System Problem below.

    (f)   If the test is satisfactory, then there was an intermittent fault.

  (3)   If no lights are on, then do the Fault Isolation Procedure - ACARS System Problem below.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

  I.   **Fault Isolation Procedure - ACARS Management Unit Problem**

SHZ 002, 009-699, 721-799, 860-863, 865, 866

  (1)   Replace the ACARS management unit (MU), M1109.

    These are the tasks:

    ACARS Management Unit Removal, AMM TASK 23-27-32-020-801,

    ACARS Management Unit Installation, AMM TASK 23-27-32-420-801.

    (a)   If the installation test for the ACARS MU is satisfactory, then you corrected the fault.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

  (2)   Replace the ACARS communications management unit (CMU) 1, M2127.

    These are the tasks:

    ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801,

    ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801.

    (a)   If the installation test for the ACARS CMU is satisfactory, then you corrected the fault.

SHZ 002, 009-699, 721-799, 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

  J.   **Fault Isolation Procedure - ACARS System Problem**

SHZ 002, 009-699, 721-799, 860-863, 865, 866

  (1)   Do this check of the wiring:

    (a)   Remove the ACARS management unit, M1109. To remove it, do this task: ACARS Management Unit Removal, AMM TASK 23-27-32-020-801.

    (b)   Close this circuit breaker:

    F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	7	C00744	ACARS MU AC

    (c)   Do a check for 115 VAC between pins 1 and 7 of connector D1967C at the ACARS management unit, M1109.

    (d)   If there is not 115 VAC between pins 1 and 7 of connector D1967C at the ACARS management unit, M1109, then do these steps:

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASK 801

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SHZ 002, 009-699, 721-799, 860-863, 865, 866 (Continued)

  1) Do a check for 115 VAC between the load terminal of ACARS MU AC circuit breaker, C744 and structure ground.

  2) If there is not 115 VAC at the load terminal, then do these steps:

  a) Replace the applicable circuit breaker, C744 (WDM 23-27-11):

  This is the circuit breaker:

  F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	7	C00744	ACARS MU AC

  b) Do this task: ACARS - Operational Test, AMM TASK 23-27-00-740-815-001 or ACARS - Operational Test, AMM TASK 23-27-00-740-801-005.

  c) If the operational test is satisfactory, then you corrected the fault.

  3) If there is 115 VAC at the load terminal, then do these steps.

  a) Open this circuit breaker and install safety tag:

  F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	7	C00744	ACARS MU AC

  b) Do a wiring check between the load terminal of circuit breaker C744 and connector D1967C at the ACARS management unit, M1109 (WDM 23-27-11):

  C744   **D1967C**
  Load terminal . . . . pin 1

  c) If you find a problem with the wiring, then do these steps:

  <1> Repair the wiring.

  <2> Re-install the ACARS management unit, M1109. To install it, do this task: ACARS Management Unit Installation, AMM TASK 23-27-32-420-801.

  <3> If the installation test for the ACARS MU is satisfactory, then you corrected the fault.

  (e) If there is 115 VAC between pins 1 and 7 of connector D1967C at the ACARS management unit, M1109, then continue.

  (2) Install a new ACARS management unit, M1109. To install it, do this task: ACARS Management Unit Installation, AMM TASK 23-27-32-420-801.

  (a) If the installation test for the ACARS MU is satisfactory, then you corrected the fault.

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

  (3) Do this check of the wiring:

  (a) Remove the ACARS communications management unit (CMU). To remove it, do this task: ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASK 801

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SHZ 821-825, 827-847, 850-852, 855-859, 876-899 (Continued)

(b)   Close this circuit breaker:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC

(c)   Do a check for 115 VAC between pins 1 and 7 of connector D10727C at the ACARS CMU 1, M2127.

NOTE: The ACARS CMU 1 is on the E4-1 shelf.

(d)   If there is not 115 VAC between pins 1 and 7 of connector D10727C at the ACARS CMU 1, M2127, then do these steps:

1)   Do a check for 115 VAC between the load terminal of CMU 1 AC circuit breaker, C1483 and structure ground.

2)   If there is not 115 VAC at the load terminal, then do these steps:

   a)   Replace the applicable circuit breaker, C1483 (WDM 23-27-31).

   b)   Do this task: ACARS - Operational Test, AMM TASK 23-27-00-740-814-009.

   c)   If the operational test is satisfactory, then you corrected the fault.

3)   If there is 115 VAC at the load terminal, then do these steps:

   a)   Open this circuit breaker and install safety tag:

   F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC

   b)   Do a wiring check between the load terminal of circuit breaker C1483 and connector D10727C at the ACARS CMU 1, M2127 (WDM 23-27-31):

   C1483   **D10727C**
   Load terminal . . . . pin 1

   c)   If you find a problem with the wiring, then do these steps:

   <1>   Repair the wiring.

   <2>   Re-install the ACARS communications management unit. To install it, do this task: ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801.

   <3>   If the installation test for the ACARS CMU is satisfactory, then you corrected the fault.

(e)   If there is 115 VAC between pins 1 and 7 of connector D10727C at the ACARS CMU 1, then continue.

(4)   Install a new ACARS communications management unit. To install it, do this task: ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801.

(a)   If the installation test for the ACARS CMU is satisfactory, then you corrected the fault.

———— **END OF TASK** ————

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-27 TASK 801

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SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

806. NO COMM shows in the CDU display - Fault Isolation

    A. Description

        (1) A NO COMM message shows on the flight management computer system Control and Display Unit (CDU).

    B. Possible Causes

        SHZ 860-863, 865, 866

        (1) ACARS Management Unit (MU), M1109 software

        (2) ACARS Management Unit (MU), M1109

        SHZ 821-825, 827-847, 850-852, 855-859, 876-899

        (3) Communications Management Unit (CMU), M2127 or M2128 software

        (4) Communications Management Unit (CMU), M2127 or M2128

        SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

        (5) VHF Communication Transceiver No. 3, M411

        (6) VHF Communication Antenna No. 3, M225

        (7) Wiring problem

    C. Circuit Breakers

        (1) These are the primary circuit breakers related to the fault:

            F/O Electrical System Panel, P6-1

Row	Col	Number	Name
SHZ 860-863, 865, 866			
E	7	C00744	ACARS MU AC
SHZ 821-825, 827-847, 850-852, 855-859, 876-899			
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

        SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

    D. Related Data

        (1) (SSM 23-27-11) or (SSM 23-27-31)

        (2) (WDM 23-27-11) or (WDM 23-27-31)

    E. Initial Evaluation

        (1) Push the MENU key on the left and right Control and Display Units (CDU-1 and CDU-2).

        SHZ 860-863, 865, 866

            (a) Do this task: ACARS Initialization, FMC and VHF Link Test, AMM TASK 23-27-00-700-813-001.

               1) If the test is satisfactory, there was an intermittent fault.

               2) If the test is not satisfactory, do this task: ACARS - Operational Test, AMM TASK 23-27-00-740-815-001

                  a) If the ACARS Operational test is not satisfactory, do the Fault Isolation Procedure - ACARS Management Unit Problem below.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 860-863, 865, 866 (Continued)

      b)   If the ACARS Operational test was satisfactory, then do the Fault Isolation Procedure - NO COMM Message below.

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

   (b)   Do the VHF Link Test subtask (23-27-00-730-082-009) contained in this task: ACARS - System Test, AMM TASK 23-27-00-700-812-009

      1)   If the test is satisfactory, there was an intermittent fault.

      2)   If the test is not satisfactory, do this task: ACARS - Operational Test, AMM TASK 23-27-00-740-814-009

         a)   If the ACARS Operational test is not satisfactory, do the Fault Isolation Procedure - ACARS Management Unit Problem below.

         b)   If the ACARS Operational test was satisfactory, then do the Fault Isolation Procedure - NO COMM Message below.

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

F.   **Fault Isolation Procedure - NO COMM Message**

   (1)   Push the MENU key on the left or right Control and Display Unit (CDU-1 or CDU-2).

SHZ 860-863, 865, 866, 876-880

   (a)   Push the line select key (LSK) adjacent to the <ACARS prompt.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

   (b)   Push the line select key (LSK) adjacent to the <DLK prompt.

   (c)   Push LSK 2R adjacent to AOC MENU>.

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

   (d)   Push the LSK adjacent to the <MISC prompt.

SHZ 860-863, 865, 866, 876-880

   (e)   Push the LSK adjacent to the <FREQUENCY prompt.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

   (f)   Push the LSK adjacent to the <DATA FREQUENCY prompt.

SHZ 860-863, 865, 866, 876-880

   (g)   Look at the frequency that shows under the ACARS DATA FREQ prompt.

      1)   If the letter M is in front of the frequency, push the LSK adjacent to the AUTOMATIC> prompt.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

   (h)   Look at the fequency that shows under the CMU DATA FREQ prompt.

      1)   If the letter M is in front of the frequency, push the LSK adjacent to the AUTOMATIC> prompt.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-27 TASK 806

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SHZ 860-863, 865, 866, 876-880

    (i)   Make sure ACARS has selected the correct frequency.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

    (j)   Make sure that the CMU selects the correct frequency.

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

    (k)   Make sure the airplane is within range of the ground station. Also, the VHF antenna must have a clear view to the station tower.

        NOTE: It may be necessary to move the airplane to a different location for a clear view to the station tower.

        NOTE: For the ACARS system to operate correctly, it must be linked to an ACARS ground station. The ACARS ground station must be operational.

SHZ 860-863, 865, 866

(2)   Do this task: ACARS Initialization, FMC and VHF Link Test, AMM TASK 23-27-00-700-813-001.

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

(3)   Do the VHF Link Test subtask (23-27-00-730-082-009) contained in this task: ACARS - System Test, AMM TASK 23-27-00-700-812-009

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

(4)   If the VHF Link test is satisfactory, then you corrected the fault.

(5)   If the VHF Link test is not satisfactory, then do these steps:

    (a)   Make sure that the datalink service provider (DSP) received the message from the airplane.

        1)   If the DSP received the message sent from the airplane, ACARS and the VHF system are transmitting correctly.

        2)   If the DSP did not receive the message, then continue.

(6)   Do this exchange of the VHF Communication Transceiver No. 2, M150 and VHF No. 3, M411:

    (a)   Put a tag that reads SUSPECT on the VHF Communication Transceiver No. 3, M411.

    (b)   Put a tag that reads OK on the other VHF communication transceiver.

    (c)   Exchange the locations of the two VHF communication transceivers. These are the tasks:

        VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801

        VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801

SHZ 860-863, 865, 866

    (d)   Do this task: ACARS Initialization, FMC and VHF Link Test, AMM TASK 23-27-00-700-813-001.

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

    (e)   Do the VHF Link Test subtask (23-27-00-730-082-009) contained in this task: ACARS - System Test, AMM TASK 23-27-00-700-812-009

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

    (f)   If VHF Link test is satisfactory, then do these steps:

        1)   Replace the VHF communication transceiver tagged SUSPECT. These are the tasks:

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASK 806

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SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899 (Continued)

VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801,

VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

NOTE: If it is your airlines' policy, you must install the VHF communication transceiver with the OK tag in its initial location and do the VHF Link test again using the new VHF No. 3 transceiver.

2) If the VHF Link test is satisfactory, then you have corrected the fault.

(g) If the VHF Link test is not satisfactory, then do these steps:

1) If it is your airlines' policy, you must install the VHF communication transceivers in their initial locations. These are the tasks:

VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801,

VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

2) Remove the tags from the VHF communication transceivers.

3) Continue the procedure.

(7) Do these steps to do a check of the VHF Communication Antenna No. 3 system:

(a) If possible, do a voice transmission using VHF Communication Transceiver No. 3:

1) If the voice transmission was satisfactory, then do the Fault Isolation Procedure - ACARS MU and Wiring Check below.

2) If a voice transmission is not possible or the voice transmission was not satisfactory, then continue.

(b) Visually inspect the VHF Communication Antenna No. 3.

1) If you find any damage, then do these steps:

a) Replace VHF Communication Antenna No. 3 or repair any damage found (AMM TASK 23-12-11-000-801) (AMM TASK 23-12-11-400-801).

SHZ 860-863, 865, 866

b) Do this task: ACARS Initialization, FMC and VHF Link Test, AMM TASK 23-27-00-700-813-001.

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

c) Do the VHF Link Test subtask (23-27-00-730-082-009) contained in this task: ACARS - System Test, AMM TASK 23-27-00-700-812-009

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

d) If the VHF Link test is satisfactory, then you corrected the fault.

e) If the VHF Link test is not satisfactory, then continue.

2) If you do not find any damage, then continue the procedure.

(8) Do this check of the VHF Communication Antenna No. 3, M225, and the RF coaxial cable:

(a) Remove the VHF Communication Transceiver No. 3, M411. To remove it, do this task: VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801.

(b) Do a time domain reflectometry check of the coaxial cable from the VHF Communication Transceiver No. 3, M411 to the VHF Communication Antenna No. 3, M225 (WDM 23-12-31). To do the check, do this task: Coaxial Cable Inspection, AMM TASK 20-10-72-210-801.

(c) If you find a problem with the coaxial cable, repair or replace the coaxial cable.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASK 806

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SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899 (Continued)

    (d)   If you find a problem with the VHF communication antenna, replace the VHF Communication Antenna No. 3, M225. These are the tasks:

       VHF Communication Antenna - Removal, AMM TASK 23-12-11-000-801,

       VHF Communication Antenna - Installation, AMM TASK 23-12-11-400-801.

    (e)   Re-install the VHF Communication Transceiver No. 3, M411. To install it, do this task: VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801.

SHZ 860-863, 865, 866

    (f)   Do this task: ACARS Initialization, FMC and VHF Link Test, AMM TASK 23-27-00-700-813-001.

      1)   If the VHF Link test is satisfactory, then you corrected the fault.

      2)   If the VHF Link test is not satisfactory, do the Fault Isolation Procedure - ACARS MU and Wiring Check below.

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

    (g)   Do the VHF Link Test subtask (23-27-00-730-082-009) contained in this task: ACARS - System Test, AMM TASK 23-27-00-700-812-009

      1)   If the VHF Link test is satisfactory, then you corrected the fault.

      2)   If the VHF Link test is not satisfactory, do the Fault Isolation Procedure - ACARS MU and Wiring Check below.

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

G. Fault Isolation Procedure - ACARS Management Unit Problem

SHZ 860-863, 865, 866

(1)   Replace the ACARS management unit (MU), M1109. These are the tasks:

   ACARS Management Unit Removal, AMM TASK 23-27-32-020-801,

   ACARS Management Unit Installation, AMM TASK 23-27-32-420-801.

    (a)   If the installation test for the ACARS MU is satisfactory, then you corrected the fault.

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

(2)   Replace the ACARS management unit (CMU), M2127or M2128. These are the tasks:

   ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801,

   ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801.

    (a)   If the installation test for the ACARS CMU is satisfactory, then you corrected the fault.

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

H. Fault Isolation Procedure - ACARS MU and Wiring Check

(1)   Do these steps:

SHZ 860-863, 865, 866

    (a)   Replace the ACARS management unit (MU), M1109. These are the tasks:

   ACARS Management Unit Removal, AMM TASK 23-27-32-020-801,

   ACARS Management Unit Installation, AMM TASK 23-27-32-420-801.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 821-825, 827-847, 850-852, 855-859, 876-899

    (b)   Replace the ACARS communications management unit (CMU), M2127 or M2128. These are the tasks:

        ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801,

        ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801.

SHZ 860-863, 865, 866

    (c)   Do this task: ACARS Initialization, FMC and VHF Link Test, AMM TASK 23-27-00-700-813-001.

        1)   If the VHF Link test is satisfactory, then you corrected the fault.

        2)   If the VHF Link test is not satisfactory, then continue.

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

    (d)   Do the VHF Link Test subtask (23-27-00-730-082-009) contained in this task: ACARS - System Test, AMM TASK 23-27-00-700-812-009

        1)   If the VHF Link test is satisfactory, then you corrected the fault.

        2)   If the VHF Link test is not satisfactory, do the Fault Isolation Procedure - ACARS MU and Wiring Check below.

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

(2)   Do these steps:

SHZ 860-863, 865, 866

    (a)   Do a check of the wiring between between the ACARS MU, M1109 and VHF Communication Transceiver No. 3 (WDM 23-27-11 or WDM 23-27-35).

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

    (b)   Do a check of the wiring between between the ACARS communications management unit (CMU), M2127 or M2128 and VHF Communication Transceiver No. 3 (WDM 23-27-35).

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

    (c)   Repair any problems that you find.

SHZ 860-863, 865, 866

    (d)   Do this task: ACARS Initialization, FMC and VHF Link Test, AMM TASK 23-27-00-700-813-001.

        1)   If the VHF Link test is satisfactory, then you corrected the fault.

        2)   If the VHF Link test is not satisfactory, then continue.

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

    (e)   Do the VHF Link Test subtask (23-27-00-730-082-009) contained in this task: ACARS - System Test, AMM TASK 23-27-00-700-812-009

        1)   If the VHF Link test is satisfactory, then you corrected the fault.

        2)   If the VHF Link test is not satisfactory, do the Fault Isolation Procedure - ACARS MU and Wiring Check below.

——— **END OF TASK** ———

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

807. An Out-Off-On-In (OOOI) value is not correct - Fault Isolation

A. Description

(1) An Out-Off-On-In (OOOI) value is not correct.

B. Possible Causes

SHZ 860-863, 865, 866

(1) ACARS management unit (MU), M1109 software

(2) ACARS management unit (MU), M1109

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

(3) Communications Management Unit (CMU1-1), M2127 software

(4) Communications Management Unit (CMU-1), M2127

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

(5) Proximity Switch Electronics Unit, M2061

(6) Wiring problem

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
SHZ 860-863, 865, 866			
E	7	C00744	ACARS MU AC
SHZ 821-825, 827-847, 850-852, 855-859, 876-899			
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

D. Related Data

(1) (SSM 23-27-11) or (SSM 23-27-31)

(2) (WDM 23-27-11) or (WDM 23-27-31)

E. Initial Evaluation

(1) Push the MENU key on the left and right Control and Display Units (CDU-1 and CDU-2) or MIDU.

SHZ 860-863, 865, 866

(2) Do this task: ACARS Interface Out-Off-On-In Discrete Test, AMM TASK 23-27-00-700-814-001.

(a) If the OOOI test is satisfactory, then there was an intermittent fault.

(b) If the OOOI test is not satisfactory, Do the Fault Isolation Procedure - OOOI Problem below.

┌─ EFFECTIVITY ─
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 821-825, 827-847, 850-852, 855-859, 876-899

(3)   Do the OOOI Test subtask contained in this task: ACARS - System Test, AMM
TASK 23-27-00-700-812-009

(a)   If the OOOI test is satisfactory, then there was an intermittent fault.

(b)   If the OOOI test is not satisfactory, Do the Fault Isolation Procedure - OOOI Problem
below.

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

F.   Fault Isolation Procedure - OOOI Problem

(1)   Do this task: ACARS - Operational Test, AMM TASK 23-27-00-740-815-001 or ACARS -
Operational Test, AMM TASK 23-27-00-740-814-009.

(a)   If the ACARS Operational Test is satisfactory, then do the Fault Isolation Procedure -
OOOI Switch Test below.

SHZ 860-863, 865, 866

(b)   If the ACARS Operational Test is not satisfactory, then replace the ACARS management
unit (MU), M1109.

These are the tasks:

ACARS Management Unit Removal, AMM TASK 23-27-32-020-801,

ACARS Management Unit Installation, AMM TASK 23-27-32-420-801.

1)   Do this task: ACARS Interface Out-Off-On-In Discrete Test, AMM
TASK 23-27-00-700-814-001.

a)   If the OOOI test is satisfactory, then you corrected the fault.

b)   If the OOOI test is not satisfactory, then do the Fault Isolation Procedure -
OOOI Switch Test below.

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

(c)   If the ACARS Operational Test is not satisfactory, then replace the ACARS
communications management unit (CMU1), M2127.

These are the tasks:

ACARS Communications Management Unit (CMU) Removal, AMM
TASK 23-27-33-020-801,

ACARS Communications Management Unit (CMU) Installation, AMM
TASK 23-27-33-420-801.

1)   Do the OOOI Test subtask contained in this task: ACARS - System Test, AMM
TASK 23-27-00-700-812-009

a)   If the OOOI test is satisfactory, then you corrected the fault.

b)   If the OOOI test is not satisfactory, then do the Fault Isolation Procedure -
OOOI Switch Test below.

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

G.   Fault Isolation Procedure - OOOI Switch Test

(1)   Open and close a failing OOOI switch.

(a)   If the OOOI value changed correctly, there was an intermittent fault.

(b)   If the OOOI value did not change correctly, then continue.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899 (Continued)

      1)   Do a check of the OOOI switch and wiring.

             NOTE: See Related Data WDMs for additional OOOI switch information.

      2)   Repair any problems that you find.

    SHZ 860-863, 865, 866

      3)   Do this task: ACARS Interface Out-Off-On-In Discrete Test, AMM TASK 23-27-00-700-814-001.

         a)   If the OOOI test is satisfactory, then you corrected the fault.

    SHZ 821-825, 827-847, 850-852, 855-859, 876-899

      4)   Do the OOOI Test subtask contained in this task: ACARS - System Test, AMM TASK 23-27-00-700-812-009

         a)   If the OOOI test is satisfactory, then you corrected the fault.

——— **END OF TASK** ———

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

808. VHF-3 transmits continuously on the ELT VHF frequency - Fault Isolation

    A.   Description

    (1)   The #3 VHF transceiver is transmitting continuously on the ELT VHF frequency of 121.5 Mhz.

    B.   Possible Causes

    SHZ 860-863, 865, 866

    (1)   ACARS Management Unit

    SHZ 821-825, 827-847, 850-852, 855-859, 876-899

    (2)   ACARS Communications Management Unit

    SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

    (3)   VHF Communication Transceiver No. 3

    (4)   Wiring problem.

    C.   Related Data

    (1)   (SSM 23-12-31) or (SSM 23-27-31)

    (2)   (WDM 23-12-31) or (WDM 23-27-35)

    D.   Initial Evaluation

    (1)   Prepare to cycle the circuit breakers. Do the steps that follow:

       (a)   Make sure that the circuit breakers are open for a minimum of 10 seconds.

       (b)   Open these circuit breakers:

         F/O Electrical System Panel, P6-1

Row	Col	Number	Name
SHZ 860-863, 865, 866			
E	7	C00744	ACARS MU AC

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 860-863, 865, 866 (Continued)

(Continued)

F/O Electrical System Panel, P6-1

Row	Col	Number	Name

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

Row	Col	Number	Name
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

(c)   Measure the time.

(d)   Close these circuit breakers:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name

SHZ 860-863, 865, 866

Row	Col	Number	Name
E	7	C00744	ACARS MU AC

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

Row	Col	Number	Name
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

(e)   If the VHF radio does not transmit on the ground, then there was an intermittent fault.

(f)   If the VHF radio continues to transmit on the ground then continue.

(g)   Open and close this circuit breaker:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	12	C00471	COMMUNICATIONS VHF 3

(h)   If the VHF radio does not transmit on the ground, then there was an intermittent fault.

(i)   If the VHF radio continues to transmit on the ground then continue.

SHZ 860-863, 865, 866

(2)   Do the ACARS MU BITE test:

(a)   Push and hold the TEST switch on the front of the ACARS MU.

(b)   Make sure that all the lights on the front of the MU are on.

(c)   Release the switch and wait at least one minute.

(d)   If the green XFER COMP light is on, make sure the system select switch on the data loader control panel (P61) is set to NORM or NORMAL.

(e)   If the HW FAIL, LOAD SW, XFER BUSY or XFER FAIL light is on, reload the correct ACARS software. To reload the software, do this task: ACARS Software Installation with a Portable Data Loader (PDL), AMM TASK 23-27-32-470-801 or ACARS Software Installation with an Airborne Data Loader (ADL), AMM TASK 23-27-32-000-801.

NOTE: Incorrect or incomplete ACARS MU software can cause these lights to be on.

(f)   Make sure that only the green MU PASS light is on.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 860-863, 865, 866 (Continued)

(g)   If the ACARS MU BITE test is not satisfactory, do the Fault Isolation Procedure - ACARS Management Unit Problem below.

(h)   If the ACARS MU BITE test is satisfactory, do the Fault Isolation Procedure - ACARS/VHF-3 Interface Problem below.

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

(3)   Do the ACARS CMU BITE test:

(a)   Push and hold the TEST switch on the front of the ACARS CMU.

(b)   Make sure that all the lights on the front of the CMU are on.

(c)   Release the switch and wait at least one minute.

(d)   If the green XFER COMP light is on, make sure the system select switch on the data loader control panel (P61) is set to NORM or NORMAL.

(e)   If the HW FAIL, LOAD SW, XFER BUSY or XFER FAIL light is on, reload the correct ACARS software. To reload the software, do this task: ACARS Software Installation with a Portable Data Loader (PDL), AMM TASK 23-27-33-470-801 or ACARS Communications Management Unit Software Installation with an Airborne Data Loader (ADL), AMM TASK 23-27-33-470-802 or ACARS Communications Management Unit Software Installation with an Enhanced Airborne Data Loader (eADL), AMM TASK 23-27-33-470-805.

   NOTE: Incorrect or incomplete ACARS CMU software can cause these lights to be on.

SHZ 834-847, 850-852, 855-859, 881-899

(f)   f the HW FAIL, LOAD SW, XFER BUSY or XFER FAIL light is on, reload the correct ACARS software. To reload the software, do this task: ACARS Software Installation with a Portable Data Loader (PDL), AMM TASK 23-27-33-470-801 or ACARS Communications Management Unit Software Installation with an Enhanced Airborne Data Loader (eADL), AMM TASK 23-27-33-470-805

   NOTE: Incorrect or incomplete ACARS CMU software can cause these lights to be on.

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

(g)   Make sure that only the green MU PASS light is on.

(h)   If the ACARS CMU BITE test is not satisfactory, do the Fault Isolation Procedure - ACARS Communications Management Unit Problem below.

(i)   If the ACARS CMU BITE test is satisfactory, do the Fault Isolation Procedure - ACARS/VHF-3 Interface Problem below.

SHZ 860-863, 865, 866

E.   Fault Isolation Procedure - ACARS Management Unit Problem

(1)   Replace the ACARS management unit (MU). These are the tasks:

   ACARS Management Unit Removal, AMM TASK 23-27-32-020-801,

   ACARS Management Unit Installation, AMM TASK 23-27-32-420-801.

(a)   If the installation test for the ACARS MU is satisfactory, then you corrected the fault.

┌─ EFFECTIVITY ─
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 821-825, 827-847, 850-852, 855-859, 876-899

F. **Fault Isolation Procedure - ACARS Communications Management Unit Problem**

    (1)   Replace the ACARS communications management unit (CMU).

        These are the tasks:

        ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801,

        ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801.

        (a)   If the installation test for the ACARS CMU is satisfactory, then you corrected the fault.

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

G. **Fault Isolation Procedure - ACARS/VHF-3 Interface Problem**

    (1)   Open these circuit breakers and install safety tags:

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
SHZ 860-863, 865, 866			
E	7	C00744	ACARS MU AC
SHZ 821-825, 827-847, 850-852, 855-859, 876-899			
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

    (2)   If the transmission on the ELT VHF frequency stops, then do these steps:

SHZ 860-863, 865, 866

        (a)   Replace the ACARS management unit (MU). These are the tasks:

            ACARS Management Unit Removal, AMM TASK 23-27-32-020-801,

            ACARS Management Unit Installation, AMM TASK 23-27-32-420-801.

            1)   If the installation test for the ACARS MU is satisfactory, then you corrected the fault.

            2)   If the transmission on the ELT VHF frequency begins again after ACARS MU replacement, then do this check of the wiring:

                a)   Remove the ACARS management unit (MU). To remove it, do this task: AMM TASK 23-27-32-020-801.

                b)   Remove the #3 VHF communication transceiver, M411. To remove it, do this task: AMM TASK 23-12-21-020-801.

                c)   Check the wiring between ACARS MU connector D1967A, pin H5 and VHF-3 communication transceiver connector D539B, pin D7 for a short to ground.

            3)   If you find a problem with the wiring, then do these steps:

                a)   Repair the wiring.

                b)   Re-install the ACARS management unit. To install it, do this task: AMM TASK 23-27-32-420-801.

                c)   Re-install the #3 VHF communication transceiver, M411. To install it, do this task: AMM TASK 23-12-21-420-801

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 821-825, 827-847, 850-852, 855-859, 876-899

 (b) Replace the ACARS communications management unit (CMU). These are the tasks:

  ACARS Communications Management Unit (CMU) Removal, AMM
TASK 23-27-33-020-801,

  ACARS Communications Management Unit (CMU) Installation, AMM
TASK 23-27-33-420-801.

  1) If the installation test for the ACARS CMU is satisfactory, then you corrected the fault.

SHZ 821-825, 827-847, 850-852, 855-863, 865, 866, 876-899

 (3) If the transmission on the ELT VHF frequency does not stop, then do these steps:

  (a) Replace the VHF-3 communication transceiver. These are the tasks:

  AMM TASK 23-12-21-020-801

  AMM TASK 23-12-21-420-801

  1) If the installation test for the VHF-3 communication transceiver is satisfactory, then you corrected the fault.

——————— **END OF TASK** ———————

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

 812. ACARS Print Problem - Fault Isolation

  A. Description

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

  (1) The Aircraft Communications Addressing And Reporting System (ACARS)Communications Management Unit (CMU) cannot print data on the Multi-input Printer.

SHZ 002, 009-699, 721-799, 860-863, 865, 866

  (2) The ACARS Management Unit (MU) cannot print data on the Multi-input Printer.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

  B. Possible Causes

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

  (1) ACARS Communications Management Unit (CMU-1), M2127

SHZ 002, 009-699, 721-799, 860-863, 865, 866

  (2) ACARS Management Unit (MU), M1109

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

  (3) Multi-input Printer, M2195

  (4) Wiring

  C. Circuit Breakers

  (1) These are the primary circuit breakers related to the fault:

  F/O Electrical System Panel, P6-1

  <u>Row</u> <u>Col</u> <u>Number</u> <u>Name</u>

  SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 871-874, 876-899, 901-999

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 871-874, 876-899, 901-999 (Continued)

(Continued)

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	5	C01216	PRINTER

SHZ 002, 009-699, 721-799, 860-863, 865, 866

Row	Col	Number	Name
E	7	C00744	ACARS MU AC

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

Row	Col	Number	Name
E	8	C01483	CMU-1 AC

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

Row	Col	Number	Name
E	9	C01500	CMU/ACARS DC

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

D. **Related Data**

SHZ 002, 009-699, 721-799, 860-863, 865, 866

(1) SSM 23-27-14

(2) WDM 23-27-14

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(3) WDM 23-27-32

(4) WDM 31-33-01

(5) SSM 23-27-32

(6) SSM 31-33-01

E. **Initial Evaluation**

(1) Do a check of the Multi-input Printer as follows:

(a) Open these circuit breakers, wait at least 10 seconds, then close the circuit breakers:

F/O Electrical System Panel, P6-1

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 871-874, 876-899, 901-999

Row	Col	Number	Name
E	5	C01216	PRINTER

SHZ 002, 009-699, 721-799, 860-863, 865, 866

Row	Col	Number	Name
E	7	C00744	ACARS MU AC

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

Row	Col	Number	Name
E	8	C01483	CMU-1 AC

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

Row	Col	Number	Name
E	9	C01500	CMU/ACARS DC

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(b) On the CDU-1, push the MENU Key.

(c) Go to the ACARS-PART NUMBER Page.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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1)   Refer to ACARS - System Test, AMM TASK 23-27-00-730-806-010 or ACARS - System Test, AMM TASK 23-27-00-700-815-001 or ACARS - System Test, AMM TASK 23-27-00-730-803-004 or ACARS - System Test, AMM TASK 23-27-00-700-812-009 or ACARS - System Test, AMM TASK 23-27-00-730-801-005 for detailed instructions.

(d)   Push the Line Select Key (LSK) adjacent to the *PRINT prompt.

     1)   If the ACARS-PART NUMBER Page prints, then there was an intermittent fault.

     2)   If the page does not print, push and hold the PRINTER TEST push-button for 1 second, then release the push-button.

        a)   The printer does a self-test and prints a pattern on the printer paper.

        b)   The FAIL or FAULT Light stays OFF.

           <1>   If the Printer Self-Test result is not satisfactory, replace the printer. These are the tasks:

               • Printer Removal, AMM TASK 31-33-01-000-801

               • Printer Installation, AMM TASK 31-33-01-400-801

           <2>   If the Printer Self-Test result is satisfactory, then do the Fault Isolation Procedure below.

     3)   If the page does not print, then do the Fault Isolation Procedure below.

F.   Fault Isolation Procedure - MU or NON Honeywell CMU

(1)   On the Control Display Unit (CDU), access the Digital Flight Data Acquisition Unit (DFDAU) Menu and print a known printable Screen Page.

     (a)   If the page from the DFDAU printed, examine the wiring as follows:

SHZ 002, 009-699, 721-799, 860-863, 865, 866

     1)   Examine the ARINC 429 Bus wiring from pins J12 and K12 of CMU connector D1967B to the common point TB3201 (WDM 31-33-01).

     2)   Examine the ARINC 429 Bus wiring from pins A and B of printer connector D2649 to the common point TB3301 (WDM 23-27-14).

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

     3)   Examine the ARINC 429 Bus wiring from pins J12 and K12 of CMU connector D10727B to the common point TB3201 (WDM 31-33-01).

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

     4)   If you find a problem with the wiring, then repair the wiring.

        a)   Do the Repair Confirmation below.

     (b)   If the page from the DFDAU does not print, examine the wiring as follows:

     1)   Examine the ARINC 429 Bus wiring from pins E and F, of printer connector D2649 to the common point TB3201 (WDM 31-33-01).

     2)   If you find a problem with the wiring, then repair the wiring.

        a)   Do the Repair Confirmation below.

(2)   Replace the Printer. These are the tasks:

     • Printer Removal, AMM TASK 31-33-01-000-801

     • Printer Installation, AMM TASK 31-33-01-400-801

     (a)   Do the Repair Confirmation below.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-27 TASK 812

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G. **Repair Confirmation**

(1) On CDU-1, push the MENU key.

(2) Go to the ACARS-PART NUMBER Page.

(a) Refer to ACARS - System Test, AMM TASK 23-27-00-730-806-010 or ACARS - System Test, AMM TASK 23-27-00-700-815-001 or ACARS - System Test, AMM TASK 23-27-00-730-803-004 or ACARS - System Test, AMM TASK 23-27-00-700-812-009 or ACARS - System Test, AMM TASK 23-27-00-730-801-005 for detailed instructions.

(3) Push the LSK adjacent to the PRINT* prompt.

(a) If the ACARS-PART NUMBER Page prints on the printer, then you have corrected the problem.

(b) If the ACARS-PART NUMBER Page does not print, then continue the Fault Isolation Procedure at the subsequent step.

——— **END OF TASK** ———

SHZ 801-820, 871-874, 901-999

814. **ACARS Communication Problem - Fault Isolation**

A. **General**

(1) There are several conditions that may result in a NO COMM condition. Only a few of these conditions are the result of an airplane system failure.

(2) This may include a VHF failure, a wiring problem, or an incorrect configuration setting.

(3) At times, a NO COMM condition is normal:

(a) When the airplane is out of range of ground stations

(b) RF shadowing (VHF)

(c) VHF mode (POA/AOA) transitions

(4) Under these "normal" conditions, the NO COMM goes away by itself when the communication link with the ground network is reestablished.

(5) In addition, the ACARS keeps messages queued up during the NO COMM condition and transmits them when communication is again available.

B. **Description**

(1) The Aircraft Communications Addressing and Reporting System (ACARS) communications management unit (CMU) cannot communicate with an ACARS ground station (NO COMM shows in the CDU scratchpad display).

C. **Possible Causes**

(1) ACARS Communications Management Unit (CMU-1), M2127

(2) VHF-3 Communications Transceiver (VHF-3), M411

(3) Airplane Programming Module (APM), M2502

(4) APM settings

(5) #1 Radio Tuning Panel (RTP-1), P8-71

(6) #2 Radio Tuning Panel (RTP-2), P8-72

(7) #3 Radio Tuning Panel (RTP-3), P8-73

(8) Wiring

EFFECTIVITY
**SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999**

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SHZ 801-820, 871-874, 901-999 (Continued)

> **D. Circuit Breakers**
>
> > (1) These are the primary circuit breakers related to the fault:
> >
> > > **CAPT Electrical System Panel, P18-2**
> > >
> > > | <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u> |
> > > |---|---|---|---|
> > > | D | 12 | C00471 | COMMUNICATIONS VHF 3 |
> > >
> > > **F/O Electrical System Panel, P6-1**
> > >
> > > | <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u> |
> > > |---|---|---|---|
> > >
> > > **SHZ 805-820**
> > >
> > > | | | | |
> > > |---|---|---|---|
> > > | D | 2 | C00857 | COMMUNICATIONS HF 2 |
> > >
> > > **SHZ 801-820, 871-874, 901-999**
> > >
> > > | | | | |
> > > |---|---|---|---|
> > > | E | 8 | C01483 | CMU-1 AC |
> > > | E | 9 | C01500 | CMU/ACARS DC |
> > >
> > > This circuit breaker is inoperative and should remain open:
> > >
> > > **F/O Electrical System Panel, P6-1**
> > >
> > > | <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u> |
> > > |---|---|---|---|
> > >
> > > **SHZ 801-804, 871-874, 901-999**
> > >
> > > | | | | |
> > > |---|---|---|---|
> > > | D | 2 | C00857 | COMMUNICATIONS HF 2 (INOP) |

> **SHZ 801-820, 871-874, 901-999**
>
> **E. Related Data**
>
> > (1) SSM 23-27-35
> >
> > (2) WDM 23-27-35
>
> **F. Fault Isolation Procedure**
>
> > (1) On the CMU front panel, push and release the RESET switch.
> >
> > > (a) Make sure the SYSTEM FAIL indicator stays off.
> > >
> > > (b) Make sure the LRU PASS/FAIL indicator is red for 2 seconds, then is green for 2 seconds, then is off for at least 2 seconds and no more than 5 seconds.
> > >
> > > (c) If the test passes, the LRU PASS/FAIL indicator is green for 30 seconds, then is off.
> > >
> > > (d) If the test fails, the LRU PASS/FAIL indicator is red for 30 seconds, then is off.
> > >
> > > > 1) If these indications did occur, go to the VHF Link Test step.
> > > >
> > > > 2) If these indications did not occur, replace the ACARS CMU. These are the tasks:
> > > >
> > > > ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801
> > > >
> > > > ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801
> >
> > (2) On the left CDU, access the ACARS-IDENT BLK PGM page 1.
> >
> > > (a) If the airplane registration number that shows adjacent to the REG NUM prompt on the CDU screen agrees with the airplane registration number on the captain's instrument panel placard, then continue.
> > >
> > > (b) If the registration numbers do not agree, do these steps:

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

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SHZ 801-820, 871-874, 901-999 (Continued)

    1)   Do this task: ACARS Airplane Personality Module (APM) Software Installation, AMM TASK 23-27-35-700-802

    2)   If the APM will not accept data, replace the APM, M2502. These are the tasks:

        ACARS Airplane Personality Module (APM) Removal, AMM TASK 23-27-35-020-801

        ACARS Airplane Personality Module (APM) Installation, AMM TASK 23-27-35-420-801

(c)   If the airline ID code adjacent to the AIRLINE ID prompt on the CDU screen is correct, continue to the captain's radio tuning panel step.

(d)   If the airline ID code is incorrect or is missing, do these steps:

    1)   Do this task: ACARS Airplane Personality Module (APM) Software Installation, AMM TASK 23-27-35-700-802

    2)   Also do subtask 23-27-00-730-081-009 of ACARS - System Test, AMM TASK 23-27-00-730-806-010 or ACARS - System Test, AMM TASK 23-27-00-730-803-004.

(3)   On the captain's radio tuning panel (RTP), select VHF-3.

(a)   If "ACARS" or "DATA" shows in the active (left) display, go to the VHF Link Test step.

(b)   If "ACARS" or "DATA" shows in the standby (right) display, do these steps:

    1)   Push the transfer switch on the captain's RTP to move "ACARS" or "DATA" to the active display.

    2)   Continue with the VHF Link Test step.

(c)   If "ACARS" or "DATA" does not show in the standby (right) display, do these steps:

    1)   Use the frequency select knob to select a frequency in the standby (right) display that is outside the range of the normal VHF voice frequency range.

    2)   If "ACARS" or "DATA" now shows in the standby (right) display, push the transfer switch on the captain's RTP to move "ACARS" or "DATA" to the active (left) display, then continue with the VHF Link Test step.

    3)   If "ACARS" or "DATA" does not show in the standby (right) display, do these steps:

        a)   On the first officers RTP, select VHF-3.

        b)   Use the frequency select knob to select a frequency in the standby (right) display that is outside the range of the normal VHF voice frequency range.

        c)   If "ACARS" or "DATA" now shows in the standby (right) display, replace the captains RTP. These are the tasks:

            Radio Tuning Panel (RTP) - Removal, AMM TASK 23-12-41-000-801

            Radio Tuning Panel (RTP) - Installation, AMM TASK 23-12-41-400-801

        d)   If "ACARS" or "DATA" still does not show in the standby (right) display, examine the wiring between the CMU and the RTPs (WDM 23-27-35).

        e)   If no wiring faults are found, replace the ACARS CMU. These are the tasks:

            ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801

            ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801

┌─── EFFECTIVITY ───
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASK 814

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SHZ 801-820, 871-874, 901-999 (Continued)

    (4)   Do the VHF Link Test subtask (AMM 23-27-00-730-115) of the ACARS System Test (AMM TASK 23-27-00-730-806-010 or AMM TASK 23-27-00-730-803-004).

        (a)   If the VHF Link Test completes with a "PASS" indication, then there was an intermittent fault.

        (b)   If the VHF Link Test completes with a "FAIL" indication, then do these steps:

          1)   Do a voice communications test over VHF-3 (subtask 23-12-00-730-004 of VHF Communication System - System Test, AMM TASK 23-12-00-730-801).

            a)   If the voice communications test results are not satisfactory:

              <1>   Make sure there no obstructions between the VHF-3 antenna and the ACARS VHF ground station.

              <2>   If the fault continues, refer to PAGEBLOCK 23-12-00/201 for further fault isolation.

            b)   If the voice communications test results are satisfactory:

              <1>   Make sure there no obstructions between the VHF-3 antenna and the ACARS VHF ground station.

              <2>   Make sure the ACARS VHF ground station and network is operational.

              <3>   Check for messages on the ACARS network from the airplane. If the airplane is not in the ground station database, messages will not be acknowledged.

              <4>   If the fault continues, replace VHF-3 transceiver, M411. These are the tasks:

                    VHF Communication Transceiver - Removal, AMM TASK 23-12-21-020-801

                    VHF Communication Transceiver - Installation, AMM TASK 23-12-21-420-801

              <5>   If the fault continues, replace the ACARS CMU, M2127. These are the tasks:

                    ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801

                    ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801

              <6>   If the fault continues, examine the wiring between the ACARS CMU and the #3 VHF Transceiver WDM 23-27-37. Repair the problems that you find.

          2)   If the VHF frequency is not correct for the area that the airplane is located in, do these steps:

            a)   Open the ACARS DATA FREQUENCY page.

            b)   Push the LSK adjacent to the region where the airplane is located.

               <1>   The new region selected is indicated by an arrow.

            c)   Access the ACARS COMM STATUS page.

            d)   Wait approximately 2 minutes, then go back to the VHF Link Test step.

————— **END OF TASK** —————

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASK 814

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815.   **ACARS/CDU Interface Problem - Fault Isolation**

    A.   Description

       (1)   The Aircraft Communications Addressing and Reporting System (ACARS) menu selection prompt (<ACARS) is missing from line 2 on one of the CDU Main Menu displays.

       (2)   The ACARS does not respond to CDU key pushes.

    B.   Possible Causes

       (1)   ACARS Communications Management Unit (CMU-1), M2127

       (2)   Left Flight Management Control Display Unit, P9-65

       (3)   Right Flight Management Control Display Unit, P9-66

       (4)   Wiring

    C.   Circuit Breakers

       (1)   These are the primary circuit breakers related to the fault:

           CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	7	C01238	FMCS MCDU 1

           F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	15	C01239	FMCS MCDU 2
E	8	C01483	CMU-1 AC

    D.   Related Data

       (1)   SSM 23-27-32, 23-27-33

       (2)   WDM 23-27-32, 23-27-33

    E.   Fault Isolation Procedure

       (1)   On CDU-1 and CDU-2, push the MENU function key.

       (2)   If the <ACARS prompt shows on the two CDU screens, then there was an intermittent fault.

       (3)   If the <ACARS prompt does not show on one of the two CDU screens, do these steps:

          (a)   Open these circuit breakers:

            F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

          (b)   Wait 30 sceonds.

          (c)   Close these circuit breakers:

            F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

┌─ EFFECTIVITY ─
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-27 TASKS 814-815

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SHZ 801-820, 871-874, 901-999 (Continued)

    (d)   If the fault continues, install the ACARS software. This is the task: ACARS Communications Management Unit Software Installation with an Airborne Data Loader (ADL), AMM TASK 23-27-33-470-802

    (e)   If the fault continues after the software is installed, replace the ACARS CMU. These are the tasks:

        • ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801

        • ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801

  (4)   If the <ACARS prompt shows on only one of the CDU screens, then do these steps:

    (a)   Open these circuit breakers:

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

    (b)   If the fault occurred on CDU-1, open this circuit breaker:

        CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	7	C01238	FMCS MCDU 1

    (c)   If the fault occurred on CDU-2, open this circuit breaker:

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	15	C01239	FMCS MCDU 2

    (d)   Wait 30 seconds.

    (e)   Close these circuit breakers:

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

    (f)   If the fault occurred on CDU-1, close this circuit breaker:

        CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
A	7	C01238	FMCS MCDU 1

    (g)   If the fault occurred on CDU-2, close this circuit breaker:

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	15	C01239	FMCS MCDU 2

┌─── EFFECTIVITY ───
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-27 TASK 815

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SHZ 801-820, 871-874, 901-999 (Continued)

(h) If the <ACARS prompt now shows on the two CDU screens, then there was an intermittent fault.

(i) If the <ACARS prompt continues to show on only one of the CDU screens, do these steps:

   1) Interchange the positions of CDU-1 and CDU-2. These are the tasks:

   • FMCS Control Display Unit (CDU) Removal, AMM TASK 34-61-01-000-802

   • FMCS Control Display Unit (CDU) - Installation, AMM TASK 34-61-01-400-802

   2) Open these circuit breakers:

   F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

   3) Wait 30 sceonds.

   4) Close these circuit breakers:

   F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

   5) If the fault moved to the other CDU position (1 to 2 or 2 to 1), replace the CDU that is now missing the <ACARS prompt. These are the tasks:

   • FMCS Control Display Unit (CDU) Removal, AMM TASK 34-61-01-000-802

   • FMCS Control Display Unit (CDU) - Installation, AMM TASK 34-61-01-400-802

   6) If the <ACARS prompt did not show on CDU-1 and still does not show on CDU-1, do these steps:

   a) Access the ACARS-SYSTEM CONFIG page on CDU-2.

   b) Push the LSK adjacent to the * PRINT prompt.

   c) If the ACARS-SYSTEM CONFIG page prints on the multifunction printer, do this check of the wiring:

      <1> Remove the ACARS CMU. This is the task: ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801.

      <2> Remove CDU-1. This is the task: FMCS Control Display Unit (CDU) Removal, AMM TASK 34-61-01-000-802.

      <3> Do a check for an open circuit between these pins of connector D10727A of the ACARS CMU and connector D2181 of CDU-1 (WDM 23-27-32):

ACARS CMU D10727B	CDU-1 D2181
E15	14
F15	15

      <4> If you find a problem with the wiring, then do these steps:

┌─ EFFECTIVITY ─
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASK 815

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SHZ 801-820, 871-874, 901-999 (Continued)

   <a> Repair the wiring.

   <b> Re-install the ACARS CMU. This is the task: ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801.

   <c> Re-install CDU-1. This is the task: FMCS Control Display Unit (CDU) - Installation, AMM TASK 34-61-01-400-802.

  d) If the ACARS-SYSTEM CONFIG page does not print, replace the ACARS CMU. These are the tasks:

   • ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801

   • ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801

 7) If the <ACARS prompt did not show on CDU-2 and still does not show on CDU-2, do these steps:

  a) Attempt to access a Digital Flight Data Acquisition Unit (DFDAU) screen that shows the status of the ARINC 429 data bus input from the CMU.

  b) If the status shows that the data bus is active, do this check of the wiring:

   <1> Remove the ACARS CMU. This is the task: ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801.

   <2> Remove CDU-2. This is the task: FMCS Control Display Unit (CDU) Removal, AMM TASK 34-61-01-000-802.

   <3> Do a check for an open circuit between these pins of connector D10727A of the ACARS CMU and connector D2221 of CDU-2 (WDM 23-27-33):

ACARS CMU	CDU-2
D10727B	D2221
E12	14
F12	15

   <4> If you find a problem with the wiring, then do these steps:

    <a> Repair the wiring.

    <b> Re-install the ACARS CMU. This is the task: ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801.

    <c> Re-install CDU-2. This is the task: FMCS Control Display Unit (CDU) - Installation, AMM TASK 34-61-01-400-802.

  c) If the status shows that the data bus is inactive, replace the ACARS CMU. These are the tasks:

   • ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801

   • ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801

——— **END OF TASK** ———

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASK 815

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SHZ 801-820, 871-874, 901-999 (Continued)

816. ACARS Input Problem - Fault Isolation

A. Description

(1) The ground station reports that downlink messages from the ACARS system are incomplete

B. Possible Causes

(1) ACARS Communications Management Unit (CMU-1), M2127

(2) Flight Management Computer 1 (FMC-1), M1175

(3) Flight Management Computer 2 (FMC-2), M1632 (if installed)

(4) Digital Flight Data Acquisition Unit (DFDAU), M675

(5) Proximity Switch Electronics Unit (PSEU), M2061

(6) Wiring

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

D. Related Data

(1) SSM 23-27-33, 23-27-35, 23-27-36, 23-27-38

(2) WDM 23-27-33, 23-27-35, 23-27-36, 23-27-38

E. Initial Evaluation

(1) If the data reported missing from the downlink messages is from flight crew manual entries, make sure the flight crew enters their data correctly.

(2) If the data reported missing from the downlink messages is OOOI data (Out, Off, On, In), do the Missing OOOI Data - Fault Isolation Procedure below.

(3) If the data reported missing from the downlink messages is from a LRU that talks to the ACARS CMU over a ARINC-429 data bus, do the Missing ARINC Data - Fault Isolation Procedure below.

F. Missing OOOI Data - Fault Isolation Procedure

(1) On a CDU, access the ACARS-SENSORS page.

(a) Do the Out-Off-On-In (OOOI) Sensor Test subtask of the ACARS System Test (AMM TASK 23-27-00-730-806-010 or AMM TASK 23-27-00-730-803-004). If one of the sensors fails the OOOI Sensor Test, do the fault isolation procedure for the failed sensor:

1) PSEU Entry and Galley Service Door Monitored Problem - Fault Isolation, 52-10 TASK 801 for entry and galley doors.

2) PSEU Cargo Door Monitored Problem - Fault Isolation, 52-30 TASK 803 for cargo doors.

3) Parking Brake Switch Problem - Fault Isolation, 32-09 TASK 806 for the parking brake.

EFFECTIVITY
**SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999**

23-27 TASKS 815-816

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SHZ 801-820, 871-874, 901-999 (Continued)

    4)   Nose Landing Gear Air/Ground Sensor Fault - Fault Isolation, 32-09 TASK 802 for the air/ground sensor.

  (b)   If all of the sensors passed the OOOI Sensor Test, do these steps:

    1)   Open these circuit breakers:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

    2)   Wait 30 seconds.

    3)   Close these circuit breakers:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

    4)   If the fault continues, install the ACARS software. This is the task: ACARS Communications Management Unit Software Installation with an Airborne Data Loader (ADL), AMM TASK 23-27-33-470-802.

    5)   If the fault continues after the software is installed, replace the ACARS CMU. These are the tasks:

        ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801

        ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801

G.   Missing ARINC Data - Fault Isolation Procedure

  (1)   On a CDU, access the ACARS-PERIPHERALS screen, pages 1, 2 and 3.

    (a)   If the state of each connected input LRU (except for MCDU and PRINTER) shows "PRESENT" under the CONNECT prompt and "OK" under the STAT prompt, do the fault isolation procedure for the failed source LRU:

    1)   DFDAU - DFDAU Internal Failure - Fault Isolation, 31-31 TASK 802

    2)   FMC - FMC Hardware/Software Faults - Fault Isolation, 34-61 TASK 807

SHZ 801-820, 901-999

    3)   VHF-3 - VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801

SHZ 801-820, 871-874, 901-999

    (b)   If the state of one of the connected input LRUs (except for MCDU and PRINTER) shows "ABSENT" under the CONNECT prompt, do these steps:

    1)   Cycle the power for the source LRU that shows "ABSENT".

    2)   If the fault continues, replace the source LRU.

    3)   If the fault continues after source LRU replacement, examine the ARINC 429 data bus wiring between the source LRU and the ACARS CMU.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASK 816

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SHZ 801-820, 871-874, 901-999 (Continued)

    a)   DFDAU - WDM 23-27-33 and WDM 31-35-02

    b)   FMC-1 - WDM 23-27-32 and WDM 34-61-25

    c)   FMC-2 (if installed) - WDM 23-27-33 and WDM 34-61-25

    SHZ 801-820, 901-999

        d)   VHF-3 - VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801

—————— **END OF TASK** ———————

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

818. ACARS Call Annunciation Problem - Fault Isolation

  A. Description

    (1)   The flight compartment chime does not sound for an ACARS uplink message.

  SHZ 801-806, 871-874, 876-880, 901-999

    (2)   The VHF-C lamp on the SELCAL control panel does not come on for an ACARS uplink message.

    (3)   Pushing the VHF-C switchlight on the SELCAL control panel does not acknowledge the ACARS uplink message (VHF-C CALL lamp does not go out).

  SHZ 807-825, 827-847, 850-852, 855-859, 881-899

    (4)   The VHF-C lamp on the audio control panels does not come on for an ACARS uplink message.

    (5)   Pushing the VHF-C switchlight on the audio control panel does not acknowledge the ACARS uplink message (VHF-C CALL lamp does not go out).

  SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

  B. Possible Causes

    (1)   ACARS Communications Management Unit (CMU-1), M2127

  SHZ 801-806, 871-874, 876-880, 901-999

    (2)   SELCAL Control Panel, P8-66

  SHZ 807-825, 827-847, 850-852, 855-859, 881-899

    (3)   Audio Control Panels, P8-6 (Capt), P8-7 (F/O), P5-15 (Observer)

  SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

    (4)   Aural Warning Unit Module, M315

    (5)   Wiring

  C. Circuit Breakers

    (1)   These are the primary circuit breakers related to the fault:

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASKS 816-818

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SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999 (Continued)

D. **Related Data**

(1) SSM 23-22-11

(2) SSM 23-27-31

(3) WDM 23-22-11

(4) WDM 23-27-31

E. **Initial Evaluation**

(1) Have an ACARS ground station send an uplink message to the airplane on VHF-3.

SHZ 801-806, 871-874, 876-880, 901-999

(a) If the SELCAL control panel VHF-3 switch lamp comes on and the flight compartment chime sounds, continue with step (2).

(b) If the VHF-3 switch lamp does not come on, but the chime sounds, do the Call Indicator Problem - Fault Isolation Procedure below.

(c) If the VHF-3 switch lamp comes on, but the chime does not sound, do the Flight Compartment Chime Problem - Fault Isolation Procedure below.

SHZ 807-825, 827-847, 850-852, 855-859, 881-899

(d) If the VHF-3 CALL lamp on the audio control panels comes on and the flight compartment chime sounds, continue with step (2).

(e) If the VHF-3 CALL lamp does not come on, but the chime sounds, do the Call Indicator Problem - Fault Isolation Procedure below.

(f) If the VHF-3 CALL comes on, but the chime does not sound, do the Flight Compartment Chime Problem - Fault Isolation Procedure below.

SHZ 801-806, 871-874, 876-880, 901-999

(2) On the SELCAL control panel, push and release the VHF-3 switch lamp.

(a) If the VHF-3 switch lamp goes out, then there was an intermittent fault.

(b) If the VHF-3 switch lamp does not go out, do the Call Reset Problem - Fault Isolation Procedure below.

SHZ 807-825, 827-847, 850-852, 855-859, 881-899

(3) On one of the audio control panels, push and release the VHF-3 CALL switch.

(a) If the VHF-3 CALL lamps on the audio control panels go out, then there was an intermittent fault.

(b) If the VHF-3 CALL lamps on the audio control panels do not go out, do the Call Reset Problem - Fault Isolation Procedure below.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

F. **Call Indicator Problem - Fault Isolation Procedure**

SHZ 801-806, 871-874, 876-880, 901-999

(1) Do the test for a defective VHF-3 lamp on the SELCAL control panel. This is the task: Master Dim and Test - Operational Test, AMM TASK 33-18-00-710-802

(a) If the VHF-3 lamp tests OK, continue with step (2).

(b) If a defective VHF-3 lamp is found, replace the bulb in the switch lamp.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

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SHZ 801-806, 871-874, 876-880, 901-999 (Continued)

    (c)   If the fault continues after bulb replacement, replace the SELCAL Control Panel. These are the tasks:

        SELCAL Control Panel - Removal, AMM TASK 23-28-21-000-801

        SELCAL Control Panel - Installation, AMM TASK 23-28-21-400-801

(2)   Have an SELCAL ground station make a call to the airplane on VHF-3.

    (a)   If the VHF-3 switch lamp on the SELCAL control panel does not come on, replace the SELCAL Control Panel. These are the tasks:

        SELCAL Control Panel - Removal, AMM TASK 23-28-21-000-801

        SELCAL Control Panel - Installation, AMM TASK 23-28-21-400-801

    (b)   If the VHF-3 switch lamp on the SELCAL control panel comes on, then continue.

SHZ 871-874

(3)   Do these steps:

    (a)   On a CDU, access the ACARS-RELAYS page.

    (b)   Push the line select key (LSK) adjacent to the TEST SET2 * prompt.

        1)   If the VHF-3 switch lamp on the SELCAL control panel comes on, then there was an intermittent fault.

        2)   If the VHF-3 switch lamp on the SELCAL control panel does not come on, then continue.

    (c)   Examine the circuit from pin F9 of ACARS CMU connector D10727B to pin N of the SELCAL control panel connector D551 for an open wire (WDM 23-22-11 and WDM 23-27-31).

        1)   Repair the problems that you find.

SHZ 801-806, 901-999

(4)   Do these steps:

    (a)   Examine the circuit from pin F9 of ACARS CMU connector D10727B to pin N of the SELCAL control panel connector D551 for an open wire (WDM 23-22-11 and WDM 23-27-31).

        1)   Repair the problems that you find.

SHZ 807-825, 827-847, 850-852, 855-859, 881-899

(5)   Do the test for a bad VHF-3 CALL lamp on the audio control panels. This is the task: Master Dim and Test - Operational Test, AMM TASK 33-18-00-710-802

    (a)   If the VHF-3 CALL lamps test OK, continue with step (2).

    (b)   If a defective VHF-3 CALL lamp is found, replace the bulb in the CALL switch.

    (c)   If the fault continues after bulb replacement, replace the audio control panel: These are the tasks:

        Audio Control Panel Removal, AMM TASK 23-51-02-000-801

        Audio Control Panel Installation, AMM TASK 23-51-02-400-801

(6)   Have an SELCAL ground station make a call to the airplane on VHF-3.

    (a)   If the VHF-3 CALL lamp on the audio control panels does not come on, replace the audio control panel: These are the tasks:

┌─── EFFECTIVITY ───
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-27 TASK 818

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SHZ 807-825, 827-847, 850-852, 855-859, 881-899 (Continued)

Audio Control Panel Removal, AMM TASK 23-51-02-000-801

Audio Control Panel Installation, AMM TASK 23-51-02-400-801

    (b)   If the VHF-3 CALL lamp on the audio control panels comes on, then continue.

SHZ 807-820

(7)   Do these steps:

    (a)   On a CDU, access the ACARS-RELAYS page.

    (b)   Push the LSK adjacent to the CLOSE/OPEN prompt under the RELAY SET2 line more than once until CLOSE shows in large font and OPEN shows in small font.

    (c)   Push the LSK adjacent to the *TEST prompt.

       1)   If the VHF-3 CALL lamp on the audio control panels comes on, then there was an intermittent fault.

       2)   If the VHF-3 CALL lamp on the audio control panels does not come on, then continue.

    (d)   Examine the circuit from pin F9 of ACARS CMU connector D10727B to pin 13 of the audio control panel connectors D131 (capt), D135 (F/O) and D141 (Obs) for an open wire (WDM 23-22-11 and WDM 23-27-31).

       1)   Repair the problems that you find.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

G.   **Call Reset Problem - Fault Isolation Procedure**

SHZ 801-806, 871-874, 876-880, 901-999

SHZ 871-874

(1)   On a CDU, access the ACARS-DISC INPUTS page 3.

SHZ 801-806, 901-999

(2)   On a CDU, access the ACARS-DISC IN page 3.

SHZ 801-806, 871-874, 876-880, 901-999

(3)   Push and release the SELCAL control panel VHF-3 switch lamp more than once while watching the state of the GO-AHEAD input (MP09C).

    (a)   If the state of the pin alternated between "0" (ground) and "1" (open) as the switch was pushed and released, then there was an intermittent fault.

    (b)   If the state of the pin remained at "0" (ground) as the switch was pushed and released, do these steps:

       1)   Disconnect plug D551 from the SELCAL control panel.

         a)   If the state of the pin changes to "1" (open), replace the SELCAL Control Panel. These are the tasks:

             SELCAL Control Panel - Removal, AMM TASK 23-28-21-000-801

             SELCAL Control Panel - Installation, AMM TASK 23-28-21-400-801

         b)   If the state of the pin remains at "0" (ground), examine the wire from pin F of SELCAL Control Panel connector D551 to pin C9 of the ACARS CMU connector DB10727B for a short to ground (WDM 23-22-11 and WDM 23-27-31).

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27   TASK 818

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SHZ 801-806, 871-874, 876-880, 901-999 (Continued)

           <1>   Repair the problems that you find.

  (c)   If the state of the pin remained at "1" (open) as the switch was pushed and released, do these steps:

     1)   Disconnect plug D551 from the SELCAL control panel.

     2)   Connect a jumper wire between pins F and S of the SELCAL control panel connector D551.

        a)   If the state of the pin changes to "0" (ground), replace the SELCAL Control Panel. These are the tasks:

           SELCAL Control Panel - Removal, AMM TASK 23-28-21-000-801

           SELCAL Control Panel - Installation, AMM TASK 23-28-21-400-801

        b)   If the state of the pin remains at "1" (open), examine the wire from pin F of SELCAL Control Panel connector D551 to pin C9 of the ACARS CMU connector DB10727B for an open wire (WDM 23-22-11 and WDM 23-27-31).

           <1>   Repair the problems that you find.

SHZ 807-825, 827-847, 850-852, 855-859, 881-899

SHZ 807-820

(4)   On a CDU, access the ACARS-DISC IN page 3.

SHZ 807-825, 827-847, 850-852, 855-859, 881-899

(5)   Push and release the VHF-3 CALL switch lamp on each of the audio control panels (ACP) more than once while watching the state of the GO-AHEAD input (MP09C).

  (a)   If the state of the pin alternated between "0" (ground) and "1" (open) as the switch was pushed and released on all three ACPs, then there was an intermittent fault.

  (b)   If only one audio control panel was defective, do these steps:

     1)   Replace the defective audio control panel: These are the tasks:

        Audio Control Panel Removal, AMM TASK 23-51-02-000-801

        Audio Control Panel Installation, AMM TASK 23-51-02-400-801

     2)   If the fault continues after panel replacement, examine the wire from pin 11 of the audio control panel connector D131 (capt), D135 (F/O) or D141 (obs) to the common point (WDM 23-27-31).

        a)   Repair the problems that you find.

  (c)   If all three audio control panels were defective and the state of the pin remained at "0" (ground) as the switches were pushed and released, do these steps:

     1)   Examine the wire from the common point to pin C9 of the ACARS CMU connector D10727B for a short to ground (WDM 23-27-31).

        a)   Repair the problems that you find.

  (d)   If all three audio control panels were defective and the state of the pin remained at "1" (open) as the switch was pushed and released, do these steps:

     1)   Examine the wire from the common point to pin C9 of the ACARS CMU connector D10727B for an open wire (WDM 23-27-31).

┌─── EFFECTIVITY ───
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-27 TASK 818

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SHZ 807-825, 827-847, 850-852, 855-859, 881-899 (Continued)

        a)   Repair the problems that you find.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

H.   Flight Compartment Chime Problem - Fault Isolation Procedure

   (1)   Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	9	C01500	CMU/ACARS DC

   (2)   Do a BITE test of the Aural Warning. This is the task: Aural Warning Module BITE Test, AMM TASK 31-51-00-740-801.

      (a)   If the test results are satisfactory, continue with step (2).

      (b)   If the test results are not satisfactory, replace the aural warning module. These are the tasks:

         Aural Warning Module Removal, AMM TASK 31-51-04-000-801

         Aural Warning Module Installation, AMM TASK 31-51-04-400-801

SHZ 871-874

   (3)   Do these steps:

      (a)   On a CDU, access the ACARS-RELAYS page.

      (b)   Push the line select key (LSK) adjacent to the * TEST SET1 prompt.

         1)   If the flight compartment chime sounds, then there was an intermittent fault.

         2)   If the flight compartment chime does not sound, then continue.

      (c)   Examine the circuit from pin G9 of ACARS CMU connector D10727A to pin 8 of the aural warning module connector D940 for an open wire (WDM 23-22-11 and WDM 23-27-31).

         1)   Repair the problems that you find.

SHZ 801-820, 901-999

   (4)   Do these steps:

      (a)   Examine the circuit from pin G9 of ACARS CMU connector D10727A to pin 8 of the aural warning module connector D940 for an open wire (WDM 23-22-11 and WDM 23-27-31).

         1)   Repair the problems that you find.

——————— **END OF TASK** ———————

SHZ 801-820, 871-874, 901-999

825. ACARS Message APM WARN - Fault Isolation

A.   Description

   (1)   Use this task when the scratchpad on the Aircraft Communications Addressing and Reporting System (ACARS) pages shows the message "APM WARN" while on the ground.

B.   Possible Causes

   (1)   ACARS Communications Management Unit (CMU).

   (2)   Aircraft Personality Module (APM).

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASKS 818-825

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SHZ 801-820, 871-874, 901-999 (Continued)

(3) Wiring

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

D. Related Data

(1) (SSM 23-27-31)

(2) (SSM 23-27-39)

(3) (WDM 23-27-31)

(4) (WDM 23-27-39)

E. Initial Evaluation

(1) If the APM WARN message does not show in the CDU scratchpad, then there was an intermittent fault.

(2) If the APM WARN message shows in the CDU scratchpad, then do the applicable fault isolation procedure below.

F. ACARS Message APM WARN - Fault Isolation Procedure

(1) Prepare to cycle the circuit breakers. Do the steps that follow:

(a) Make sure that the circuit breakers are open for a minimum of 10 seconds.

(b) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC

(c) Measure the time.

(d) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

(e) If the APM WARN message does not show in the CDU scratchpad, then there was an intermittent fault.

(f) If the APM WARN message still shows in the CDU scratchpad, then continue.

(2) Do the ACARS - Operational Test. This is the task:ACARS - Operational Test, AMM TASK 23-27-00-740-816-010 or ACARS - Operational Test, AMM TASK 23-27-00-740-806-004

(a) If the test fails, replace the ACARS Communications Management Unit (CMU) 1, M2127. These are the tasks:

ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-27 TASK 825

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SHZ 801-820, 871-874, 901-999 (Continued)

ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801

(b) If the test passes and the APM WARN message still shows in the CDU scratchpad, then continue.

(3) Do this check of the wiring between the CMU and the APM.

(a) Remove the CMU. This is the task: ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801

(b) Remove the APM. This is the task: ACARS Airplane Personality Module (APM) Removal, AMM TASK 23-27-35-020-801

(c) Use the table that follows to do continuity checks between the pins of the APM (M2502) connector D11813 and the CMU (M2127) connector D10727A.

M2502 D11813	M2127 D10727A
1	H1
2	E1
3	C1
4	K1
5	D1
6	A2
7	A1
8	B1
9	J1

(d) If you find a problem with the wiring, then repair it as necessary.

(e) If the wiring checks good, then continue.

(4) Replace the APM module. This is the task:

ACARS Airplane Personality Module (APM) Installation, AMM TASK 23-27-35-420-801

G. Repair Confirmation

(1) If the APM WARN fault message does not show, then you corrected the fault.

——— END OF TASK ———

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

826. ACARS Message CHECK TRANSPONDER I/F - Fault Isolation

A. Description

(1) Use this task when the scratchpad on the ACARS pages shows the message "CHECK TRANSPONDER I/F" while on the ground.

B. Possible Causes

(1) ATC CP Switch Settings.

(2) Wiring.

C. Related Data

(1) WDM 23-27-37.

(2) WDM 34-45-21.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASKS 825-826

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SHZ 821-825, 827-847, 850-852, 855-859, 876-899 (Continued)

    D.   **Initial Evaluation**

      (1)   Set the ATC Transponder Control Panel reply select switch to not be in STBY, TA/RA, or TA ONLY position.

        (a)   If the CHECK TRANSPONDER I/F fault message does not show, it is because of a known condition in the CMU Software. There is no problem with the CMU/transponder interface.

        (b)   If the CHECK TRANSPONDER I/F fault message shows, then do the fault isolation procedure below.

    E.   **ACARS Message CHECK TRANSPONDER I/F - Fault Isolation Procedure**

      (1)   If the fault continues, examine the wiring between the CMU and the ATC Transponder (WDM 23-27-37 and WDM 34-45-21).

        (a)   Remove ACARS CMU-1, M2127. To remove it, do this task: ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801.

        (b)   Remove ATC-1 Transponder, M163 and ATC-2 Transponder, M381. To remove them, do this task: ATC Transponder Removal, AMM TASK 34-53-02-020-801.

	E4-1 SHELF		
	CMU-1, M2127	**ATC-1 Transponder, M163**	
E4-1, SHELF	**D10727B**	**D149A**	**0**
	C8	G5	0
	D8	H5	0

          1)   If the resistance check does not show continuity, repair the problems with the wiring.

	E4-1 SHELF		
	CMU-1, M2127	**ATC-2 Transponder, M381**	
E4-1, SHELF	**D10727B**	**D155A**	**0**
	A10	G5	0
	B10	H5	0

          1)   If the resistance check does not show continuity, repair the problems with the wiring.

        (e)   Install the ACARS CMU-1, M2127. To install it, do this task: ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801.

        (f)   Install ATC-1 Transponder, M163 and ATC-2 Transponder, M381. To install them, do this task: ATC Transponder Installation, AMM TASK 34-53-02-400-801.

    F.   **Repair Confirmation**

      (1)   If the CHECK TRANSPONDER I/F fault message does not show, then you corrected the fault.

———— **END OF TASK** ————

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-27 TASK 826

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827. **ACARS Input Problem - Fault Isolation**

    A.   **Description**

        (1)   The Ground Station tells the Flight Crew that the Downlink Messages from the ACARS System are incomplete.

    B.   **Possible Causes**

        (1)   ACARS CMU-1, M2127

        (2)   Flight Management Computer (FMC)-1, M1175

        (3)   FMC-2), M1632 (if installed)

        (4)   DFDAU, M675

        (5)   Proximity Switch Electronic Unit (PSEU), M2061

        (6)   Wiring

    C.   **Circuit Breakers**

        (1)   These are the primary circuit breakers related to the fault:

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

    D.   **Related Data**

        (1)   WDM 23-27-33

        (2)   WDM 23-27-35

        (3)   WDM 23-27-36

        (4)   WDM 23-27-38

        (5)   SSM 23-27-33

        (6)   SSM 23-27-35

        (7)   SSM 23-27-36

        (8)   SSM 23-27-38

    E.   **Initial Evaluation**

        (1)   If the missing data from the Downlink Messages is from Flight Crew manual entries, make sure that the Flight Crew records the data correctly.

        (2)   If the missing data from the Downlink Messages is OOOI Data (OUT, OFF, ON, IN), do the "Missing OOOI Data - Fault Isolation Procedure" below.

        (3)   If the missing data from the Downlink Messages is from a Line Replaceable Unit (LRU) that talks to the ACARS CMU over a ARINC-429 Data Bus, do the "Missing ARINC Data - Fault Isolation Procedure" below.

    F.   **Missing OOOI Data - Fault Isolation Procedure**

        (1)   On the CMU front panel, look at the FAIL Indicator.

            (a)   If the FAIL Indicator is ON, replace the ACARS CMU. These are the tasks:

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847,
850-852, 855-863, 865, 866, 871-874, 876-899,
901-999

23-27 TASKS 826-827

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SHZ 821-825, 827-847, 850-852, 855-859, 876-899 (Continued)

- ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801

- ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801

    (b)   If the FAIL Indicator is OFF, continue.

  (2)   On a CDU, access the ACARS OOOI STATUS Screen.

    (a)   If one of the sensor states disagrees with the actual position of the sensor, do the Fault Isolation Procedure for the failed sensor. These are the applicable tasks:

      1)   Entry and Galley Doors: PSEU Entry and Galley Service Door Monitored Problem - Fault Isolation, 52-10 TASK 801

      2)   Cargo Doors: PSEU Cargo Door Monitored Problem - Fault Isolation, 52-30 TASK 803

      3)   Parking Brake: Parking Brake Switch Problem - Fault Isolation, 32-09 TASK 806

      4)   Air/Ground Sensor: Nose Landing Gear Air/Ground Sensor Fault - Fault Isolation, 32-09 TASK 802

    (b)   If all sensor states agree with the actual sensor position, do these steps:

      1)   Open these circuit breakers, wait 30 seconds, then close these circuit breakers:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC
E	9	C01500	CMU/ACARS DC

      2)   If the problem continues, install the ACARS Software. This is the task: ACARS Software Installation with a Portable Data Loader (PDL), AMM TASK 23-27-33-470-801 or ACARS Communications Management Unit Software Installation with an Airborne Data Loader (ADL), AMM TASK 23-27-33-470-802 or ACARS Communications Management Unit Software Installation with an Enhanced Airborne Data Loader (eADL), AMM TASK 23-27-33-470-805.

      3)   If the problem continues after the software installation, replace the ACARS CMU. These are the tasks:

- ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801

- ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801

G.   Missing ARINC Data - Fault Isolation Procedure

  (1)   On the CMU front panel, look at the FAIL Indicator.

    (a)   If the FAIL Indicator is ON, replace the ACARS CMU. These are the tasks:

- ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801

- ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801

    (b)   If the FAIL indicator is OFF, continue.

  (2)   On a CDU, access the CMU LRU STATUS Screen, pages 1 thru 6.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASK 827

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SHZ 821-825, 827-847, 850-852, 855-859, 876-899 (Continued)

    (a)   If the state of each connected Input LRU (except for MCDU and PRINTER) shows "ACTIVE", do the Fault Isolation Procedure for the failed Source LRU:

        1)   DFDAU: DFDAU Internal Failure - Fault Isolation, 31-31 TASK 802

        2)   FMC: FMC Hardware/Software Faults - Fault Isolation, 34-61 TASK 807

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

        3)   HFDR-1: HF Communication System - BITE Procedure, 23-11 TASK 801

        4)   HFDR-2: HF Communication System - BITE Procedure, 23-11 TASK 801

SHZ 821-825, 827-847, 850-852, 855-859, 876-899

        5)   VHF-3: VHF Communication Transceiver System - BITE Procedure, 23-12 TASK 801

    (b)   If the state of one of the connected Input LRUs (except for MCDU and PRINTER) shows "INACTIVE", then do these steps:

        1)   Cycle the power for the Source LRU that shows INACTIVE.

        2)   If the problem continues, replace the applicable Source LRU.

——— **END OF TASK** ———

830. ACARS Message APM HARDWARE FAULT or INITIALIZE APM - Fault Isolation

    A.   **Description**

    (1)   The ACARS pages on the Multifunction Control Display Unit (MCDU) scratch pad shows the message APM HARDWARE FAULT in these conditions:

       • The CMU cannot write data to the Airplane Personality Module (APM)

       • The values returned from the APM do not match the values the CMU attempted to write to the APM (corrupted)

    (2)   The ACARS pages on the MCDU scratch pad shows the message INITIALIZE APM in these conditions:

       • A new APM is installed

       • A new software is installed to the APM

       • One or more pieces of the mandatory data missing between the APM to CMU (from APM to CMU)

       • APM sent the blank data to the CMU

    B.   **Possible Causes**

    (1)   CMU 1, M2127

    (2)   APM

    (3)   Wiring

    C.   **Circuit Breakers**

    (1)   These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	8	C01483	CMU-1 AC

——— EFFECTIVITY ———
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASKS 827-830

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SHZ 821-825, 827-847, 850-852, 855-859, 876-899 (Continued)

(Continued)

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	9	C01500	CMU/ACARS DC

D. Related Data

(1)   SSM 23-27-39

(2)   WDM 23-27-39

E. Initial Evaluation

(1)   If the new APM or new software is installed to the APM and INITIALIZE APM message shows, then refer to the AMM PAGEBLOCK 23-27-35/201 to clear the message.

(a)   If the message still shows, then continue.

(2)   Do the ACARS - Operational Test, AMM TASK 23-27-00-740-814-009.

(a)   If the message does not show on the MCDU scratch pad, then there was an intermittent problem.

(b)   If the message shows on the MCDU scratch pad, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1)   Do this wiring check (WDM 23-27-39):

(a)   Remove the CMU 1, M2127. This is the task: ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801.

(b)   Remove the APM. This is the task: ACARS Airplane Personality Module (APM) Removal, AMM TASK 23-27-35-020-801.

(c)   Do a wiring check as follows:

E4 SHELF

AIRPLANE PERSONALITY MODULE CONNECTOR	CMU 1 D10727A
pin 1	pin H1
pin 2	pin E1
pin 3	pin C1
pin 4	pin K1
pin 5	pin D1
pin 6	pin A2
pin 7	pin A1
pin 8	pin B1
pin 9	pin J1

(d)   If you find a problem with the wiring, then do these steps:

1)   Repair the wiring.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASK 830

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SHZ 821-825, 827-847, 850-852, 855-859, 876-899 (Continued)

      2)   Re-install the CMU 1, M2127. This is the task: ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801.

      3)   Re-install the APM. This is the task: ACARS Airplane Personality Module (APM) Installation, AMM TASK 23-27-35-420-801.

      4)   Do the Repair Confirmation at the end of this task.

    (e)   If you do not find a problem with the wiring, then continue.

      1)   Re-install the CMU 1, M2127. This is the task: ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801.

(2)   Install a new APM. This is the task: ACARS Airplane Personality Module (APM) Installation, AMM TASK 23-27-35-420-801.

    (a)   Do the Repair Confirmation at the end of this task.

(3)   Replace the CMU 1, M2127. These are the tasks:

    • ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801

    • ACARS Communications Management Unit (CMU) Installation, AMM TASK 23-27-33-420-801

    (a)   Do the Repair Confirmation at the end of this task.

G.   Repair Confirmation

(1)   If you replaced the APM or/and CMU, then do the ACARS Airplane Personality Module (APM) Software Installation, AMM TASK 23-27-35-700-802.

(2)   Do the ACARS - Operational Test, AMM TASK 23-27-00-740-814-009.

(3)   If the message does not show on the MCDU scratchpad, then you corrected the problem.

(4)   If the message shows on the MCDU scratchpad, then continue the Fault Isolation Procedure at the subsequent step.

——— **END OF TASK** ———

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

23-27 TASK 830

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801. <u>SELCAL Call Switch Problem - Fault Isolation</u>

    A. **Description**

        SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

        (1)   The call switch on SELCAL control panel, P8-66 does not operate correctly.

        SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

        (2)   A call switch on Audio control panel, does not operate correctly.

        SHZ ALL

    B. **Possible Causes**

        SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

        (1)   SELCAL control panel, P8-66.

        SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

        (2)   Audio control panel, P8-6 (captain's), P8-7 (first officer's) or P5-15 (first observer's).

        SHZ ALL

        (3)   SELCAL decoder, M25

        (4)   Wiring problem

    C. **Circuit Breakers**

        (1)   This is the primary circuit breaker related to the fault:

            CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	15	C00058	COMMUNICATIONS SELCAL

    D. **Related Data**

        (1)   (SSM 23-22-11)

        (2)   (WDM 23-22-11)

    E. **Initial Evaluation**

        SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

        (1)   Do this check of the SELCAL control panel:

            (a)   Push the call switch to reset for the applicable HF switch or VHF switch.

                1)   If the call light goes off for the applicable HF switch or VHF switch, then there was an intermittent fault.

                2)   If the call light does not go off for the applicable HF switch or VHF switch, then do the Fault Isolation Procedure below.

        SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

        (2)   Do this check of the Audio control panel:

            (a)   Push the PTT for the applicable HF switch or VHF switch to reset the Call Light.

                1)   If the call light goes off for the applicable HF switch or VHF switch, then there was an intermittent fault.

     EFFECTIVITY
SHZ ALL

23-28 TASK 801

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SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899 (Continued)

    2)   If the call light does not go off for the applicable HF switch or VHF switch, then do the Fault Isolation Procedure below.

SHZ ALL

F. Fault Isolation Procedure

SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

(1)   Replace the SELCAL control panel.

    These are the tasks:

    SELCAL Control Panel - Removal, AMM TASK 23-28-21-000-801,

    SELCAL Control Panel - Installation, AMM TASK 23-28-21-400-801.

    (a)   If the call switch does reset correctly, then you corrected the fault.

    (b)   If the call switch does not reset correctly, then continue.

SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

(2)   Replace the Audio control panel.

    These are the tasks:

    Audio Control Panel Removal, AMM TASK 23-51-02-000-801,

    Audio Control Panel Installation, AMM TASK 23-51-02-400-801.

    (a)   If the call switch resets correctly, then you corrected the fault.

    (b)   If the call switch does not reset correctly, then continue.

SHZ ALL

(3)   Replace the SELCAL decoder unit.

    These are the tasks:

    SELCAL Decoder Unit Removal, AMM TASK 23-28-11-020-801,

    SELCAL Decoder Installation, AMM TASK 23-28-11-420-801.

    (a)   If the call switch does reset correctly, then you corrected the fault.

    (b)   If the call switch does not reset correctly, then continue.

SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

(4)   Do this check of the wiring:

    (a)   Remove the SELCAL control panel (SCP), P8-66. To remove it, do this task: SELCAL Control Panel - Removal, AMM TASK 23-28-21-000-801.

    (b)   Remove the SELCAL decoder unit, M00025. To remove it, do this task: SELCAL Decoder Unit Removal, AMM TASK 23-28-11-020-801.

    (c)   Do a wiring check between these pins of connector D551 for the SELCAL control panel and connector D2555B for the SELCAL decoder unit: Refer to WDM 23-22-11 for details.

EFFECTIVITY
SHZ ALL

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SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999 (Continued)

FUNCTION KEY

	SCP CONNECTOR	SELCAL DECODER CONNECTOR
HF1 (if applicable)	**D551**	**D2555B**
	pin G	pin D1
HF2 (if applicable)	**D551**	**D2555B**
	pin H	pin A2
VHF1	**D551**	**D2555B**
	pin D	pin A1
VHF2	**D551**	**D2555B**
	pin E	pin B1
VHF3 (if applicable)	**D551**	**D2555B**
	pin F	pin C1

    (d)   If you find a problem with the wiring, then do these steps:

        1)   Repair the wiring.

        2)   Re-connect the connectors.

        3)   Re-install the SELCAL control panel. To install it, do this task: SELCAL Control Panel - Installation, AMM TASK 23-28-21-400-801.

        4)   Re-install the SELCAL decoder unit. To install it, do this task: SELCAL Decoder Installation, AMM TASK 23-28-11-420-801.

        5)   If the call switch does reset correctly, then you corrected the fault.

SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

    (5)   Do this check of the wiring:

        (a)   Remove the Remote Electronics Unit. To remove it, do this task: AMM TASK 23-51-01-000-801.

        (b)   Remove the SELCAL decoder unit, M00025. To remove it, do this task: SELCAL Decoder Unit Removal, AMM TASK 23-28-11-020-801.

        (c)   Do a wiring check between the pins of connector D2501A for the Remote Electronics Unit (REU), and connector D2555B for the SELCAL decoder unit: Refer to WDM 23-22-11 for details.

EFFECTIVITY
SHZ ALL

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SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899 (Continued)

FUNCTION KEY

	REU CONNECTOR	SELCAL DECODER CONNECTOR
HF1 (if applicable)	**D2501A** pin C10	**D2555B** pin C7
HF2 (if applicable)	**D2501A** pin J7	**D2555B** pin D7
VHF1	**D2501A** pin H6	**D2555B** pin D6
VHF2	**D2501A** pin A9	**D2555B** pin A7
VHF3 (if applicable)	**D2501A** pin F7	**D2555B** pin B7

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the connectors.

3) Re-install the Remote Electronics Unit. To install it, do this task: AMM TASK 23-51-01-000-802.

4) Re-install the SELCAL decoder unit. To install it, do this task: SELCAL Decoder Installation, AMM TASK 23-28-11-420-801.

5) If the call switch does reset correctly, then you corrected the fault.

SHZ ALL

——— **END OF TASK** ———

802. **SELCAL Call Light Problem - Fault Isolation**

    A. Description

    SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

    (1) The call light on the SELCAL control panel, P8-66 does not operate correctly.

    SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

    (2) The mic/call light on the Audio Control Panel does not operate correctly.

    SHZ ALL

    B. Possible Causes

EFFECTIVITY
SHZ ALL

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SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

(1)   SELCAL control panel, P8-66

SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

(2)   Audio Control Panel, captain's, first officer's, or observer's.

SHZ ALL

(3)   SELCAL decoder, M25

(4)   Wiring problem

C.   **Circuit Breakers**

(1)   This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	15	C00058	COMMUNICATIONS SELCAL

D.   **Related Data**

(1)   (SSM 23-22-11)

(2)   (WDM 23-22-11)

E.   **Initial Evaluation**

SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

(1)   Push the call light.

   (a)   If the light comes on, then do these steps:

      1)   Push the call light again.

         a)   If the call light goes off, then there was an intermittent fault.

         b)   If the call light stays on, then, do this task: SELCAL Call Switch Problem - Fault Isolation, 23-28 TASK 801.

   (b)   If the light does not come on, then do the Fault Isolation Procedure below.

SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

(2)   Push the mic/call light.

   (a)   If the light comes on, then do these steps:

      1)   Push the mic call light again.

         a)   If the mic/call light goes off, then there was an intermittent fault.

         b)   If the mic/call light stays on, then, do this task: SELCAL Call Switch Problem - Fault Isolation, 23-28 TASK 801.

   (b)   If the light does not come on, then do the Fault Isolation Procedure below.

SHZ ALL

F.   **Fault Isolation Procedure**

SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

(1)   Replace the SELCAL control panel.

These are the tasks:

SELCAL Control Panel - Removal, AMM TASK 23-28-21-000-801,

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SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999 (Continued)

SELCAL Control Panel - Installation, AMM TASK 23-28-21-400-801.

(a)   If the call light does reset correctly, then you corrected the fault.

(b)   If the call light does not reset correctly, then continue.

SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

(2)   Replace the Audio Control Panel.

These are the tasks:

AMM TASK 23-51-02-000-801,

AMM TASK 23-51-02-400-801.

(a)   If the call light does reset correctly, then you corrected the fault.

(b)   If the call light does not reset correctly, then continue.

SHZ ALL

(3)   Replace the SELCAL decoder unit.

These are the tasks:

SELCAL Decoder Unit Removal, AMM TASK 23-28-11-020-801,

SELCAL Decoder Installation, AMM TASK 23-28-11-420-801.

(a)   If the call switch does reset correctly, then you corrected the fault.

(b)   If the call switch does not reset correctly, then continue.

SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

(4)   Do this check of the wiring:

(a)   Remove the SELCAL control panel, P8-66. To remove it, do this task: SELCAL Control Panel - Removal, AMM TASK 23-28-21-000-801.

(b)   Remove the SELCAL decoder unit, M00025. To remove it, do this task: SELCAL Decoder Unit Removal, AMM TASK 23-28-11-020-801.

(c)   Do a wiring check between these pins of connector D551 for the SELCAL control panel and connector D2555B for the SELCAL decoder unit: Refer to WDM 23-22-11 for details.

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SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999 (Continued)

FUNCTION KEY

	SCP CONNECTOR	SELCAL DECODER CONNECTOR
HF1 (if applicable)	**D551**	**D2555B**
	pin P	pin C7
HF2 (if applicable)	**D551**	**D2555B**
	pin R	pin D7
VHF1	**D551**	**D2555B**
	pin L	pin D6
VHF2	**D551**	**D2555B**
	pin M	pin A7
VHF3 (if applicable)	**D551**	**D2555B**
	pin N	pin B7

    (d)   If you find a problem with the wiring, then do these steps:

       1)   Repair the wiring.

       2)   Re-connect the connectors.

       3)   Re-install the SELCAL control panel. To install it, do this task: SELCAL Control Panel - Installation, AMM TASK 23-28-21-400-801.

       4)   Re-install the SELCAL decoder unit. To install it, do this task: SELCAL Decoder Installation, AMM TASK 23-28-11-420-801.

       5)   If the call switch does reset correctly, then you corrected the fault.

SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

(5)   Do this check of the wiring:

    (a)   Remove the Audio Control Panel. To remove it, do this task: Audio Control Panel Removal, AMM TASK 23-51-02-000-801.

    (b)   Remove the SELCAL decoder unit, M00025. To remove it, do this task: SELCAL Decoder Unit Removal, AMM TASK 23-28-11-020-801.

    (c)   Do a wiring check between the pins of connector D141 for the Audio Control Panel (observer's) and connector D2555B for the SELCAL decoder unit: Refer to WDM 23-22-11 for details.

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SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899 (Continued)

FUNCTION KEY

	ACP CONNECTOR	SELCAL DECODER CONNECTOR
HF1 (if applicable)	**D141**	**D2555B**
	pin 4	pin C7
HF2 (if applicable)	**D141**	**D2555B**
	pin 5	pin D7
VHF1	**D141**	**D2555B**
	pin 1	pin D6
VHF2	**D141**	**D2555B**
	pin 2	pin A7
VHF3 (if applicable)	**D141**	**D2555B**
	pin 3	pin B7

(d) Do the wiring check for the captain's ACP and the first officer's ACP. Refer to WDM 23-22-11 for ACP connector numbers.

(e) If you find a problem with the wiring, then do these steps:

    1) Repair the wiring.

    2) Re-connect the connectors.

    3) Re-install the Audio Control Panel. To install it, do this task: Audio Control Panel Installation, AMM TASK 23-51-02-400-801.

    4) Re-install the SELCAL decoder unit. To install it, do this task: SELCAL Decoder Installation, AMM TASK 23-28-11-420-801.

    5) If the call switch does reset correctly, then you corrected the fault.

      SHZ ALL

——— **END OF TASK** ———

803. Aural Warning Unit Chimes Problem - Fault Isolation

  A. Description

    (1) The chime on the aural warning unit module, M315 does not operate correctly for calls on VHF or HF.

  B. Possible Causes

    (1) Remote electronics unit, M1353

    (2) Aural warning unit, M315

    (3) Wiring problem

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C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	15	C00058	COMMUNICATIONS SELCAL

D. Related Data

(1) (SSM 23-22-11)

(2) (WDM 23-22-11)

E. Initial Evaluation

(1) Initiate the chime in the aural warning unit, M315.

(a) If the chime comes on, then there was an intermittent fault.

(b) If the chime does not come on, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Replace the aural warning unit, M315.

These are the tasks:

Aural Warning Module Removal, AMM TASK 31-51-04-000-801,

Aural Warning Module Installation, AMM TASK 31-51-04-400-801.

(a) If the chime operates correctly, then you corrected the fault.

(b) If the chime does not operate correctly, then continue.

(2) Replace the remote electronics unit, M1353.

These are the tasks:

Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801,

Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

(a) If the chime operates correctly, then you corrected the fault.

(b) If the chime does not operate correctly, then continue.

SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

(3) Do this check of the wiring:

(a) Remove the SELCAL control panel, P8-66. To remove it, do this task: SELCAL Control Panel - Removal, AMM TASK 23-28-21-000-801.

(b) Remove the aural warning unit, M315. To remove it, do this task: Aural Warning Module Removal, AMM TASK 31-51-04-000-801.

(c) Do a wiring check between these pins of connector D551 for the SELCAL control panel and connector D940 for the aural warning unit:

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SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999 (Continued)

	SCP CONNECTOR	AURAL WARN UNIT CONNECTOR
HF1 (if applicable)	**D551** pin P	**D940** pin 8
HF2 (if applicable)	**D551** pin R	**D940** pin 8
VHF1	**D551** pin L	**D940** pin 8
VHF2	**D551** pin M	**D940** pin 8
VHF3 (if applicable)	**D551** pin N	**D940** pin 8

(d)   If you find a problem with the wiring, then do these steps:

   1)   Repair the wiring.

   2)   Re-connect the connectors.

   3)   Re-install the SELCAL control panel. To install it, do this task: SELCAL Control Panel - Installation, AMM TASK 23-28-21-400-801.

   4)   Re-install the aural warning unit. To install it, do this task: Aural Warning Module Installation, AMM TASK 31-51-04-400-801.

   5)   If the chime operates correctly, then you corrected the fault.

SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

(4)   Do this check of the wiring:

(a)   Remove the Audio Selector Panel P5-15, P8-6, and P8-7. To remove it, do this task: AMM TASK 23-51-02-000-801.

(b)   Remove the aural warning unit, M315. To remove it, do this task: AMM TASK 31-51-04-000-801.

(c)   Do a wiring check between these pins of connector D141 for the Audio control panel and connector D940 for the aural warning unit:

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SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899 (Continued)

	ASP CONNECTOR		AURAL WARN UNIT CONNECTOR
HF1 (if applicable)	**D141**		**D940**
	pin 4	. . . .	pin 8
HF2 (if applicable)	**D141**		**D940**
	pin 5	. . . .	pin 8
VHF1	**D141**		**D940**
	pin 1	. . . .	pin 8
VHF2	**D141**		**D940**
	pin 2	. . . .	pin 8
VHF3 (if applicable)	**D141**		**D940**
	pin 3	. . . .	pin 8

    (d)   If you find a problem with the wiring, then do these steps:

        1)   Repair the wiring.

        2)   Re-connect the connectors.

        3)   Re-install the Audio Selector Panel P5-15, P8-6, and P8-7. To remove it, do this task: AMM TASK 23-51-02-400-801.

        4)   Re-install the aural warning unit. To install it, do this task: AMM TASK 31-51-04-400-801.

        5)   If the chime operates correctly, then you corrected the fault.

    SHZ ALL

——— **END OF TASK** ———

804. SELCAL Operation Problem - Fault Isolation

    A.   Description

      (1)   The SELCAL system does not operate correctly for VHF or HF calls.

    B.   Possible Causes

      (1)   SELCAL decoder unit, M25

      (2)   Wiring problem

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C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	15	C00058	COMMUNICATIONS SELCAL

D. Related Data

(1) (SSM 23-22-11)

(2) (WDM 23-22-11)

E. Fault Isolation Procedure

(1) Replace the SELCAL decoder unit.

These are the tasks:

SELCAL Decoder Unit Removal, AMM TASK 23-28-11-020-801,

SELCAL Decoder Installation, AMM TASK 23-28-11-420-801.

(a) If the call switch does reset correctly, then you corrected the fault.

(b) If the call switch does not reset correctly, then continue.

SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

(2) Do this check of the wiring:

(a) Remove the SELCAL control panel, P8-66. To remove it, do this task: SELCAL Control Panel - Removal, AMM TASK 23-28-21-000-801.

(b) Remove the SELCAL decoder unit, M25. To remove it, do this task: SELCAL Decoder Unit Removal, AMM TASK 23-28-11-020-801.

(c) Do a wiring check between these pins of connector D551 for the SELCAL control panel and connector D2555B for the SELCAL decoder unit:

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SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999 (Continued)

FUNCTION KEY

	SCP CONNECTOR	SELCAL DECODER CONNECTOR
HF1 (if applicable)	**D551**	**D2555B**
	pin P	pin C7
HF2 (if applicable)	**D551**	**D2555B**
	pin R	pin D7
VHF1	**D551**	**D2555B**
	pin L	pin D6
VHF2	**D551**	**D2555B**
	pin M	pin A7
VHF3 (if applicable)	**D551**	**D2555B**
	pin N	pin B7

    (d)   If you find a problem with the wiring, then do these steps:

        1)   Repair the wiring.

        2)   Re-connect the connectors.

        3)   Re-install the SELCAL control panel. To install it, do this task: SELCAL Control Panel - Installation, AMM TASK 23-28-21-400-801.

        4)   Re-install the SELCAL decoder unit. To install it, do this task: SELCAL Decoder Installation, AMM TASK 23-28-11-420-801.

        5)   If the chime operates correctly, then you corrected the fault.

SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

(3)   Do this check of the wiring:

    (a)   Remove the Audio Selector Panel P5-15, P8-6, and P8-7. To remove it, do this task: AMM TASK 23-51-02-000-801.

    (b)   Remove the SELCAL decoder unit, M25. To remove it, do this task: AMM TASK 23-28-11-020-801.

    (c)   Do a wiring check between the pins of connector D141 for the Audio Selector Panel, and connector D2555B for the SELCAL decoder unit:

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SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899 (Continued)

FUNCTION KEY

	AUDIO SELECTOR PANEL	SELCAL DECODER CONNECTOR
HF1 (if applicable)	**D141**	**D2555B**
	pin 4	pin C7
HF2 (if applicable)	**D141**	**D2555B**
	pin J7	pin D7
VHF1	**D141**	**D2555B**
	pin 1	pin D6
VHF2	**D141**	**D2555B**
	pin 2	pin A7
VHF3 (if applicable)	**D141**	**D2555B**
	pin	pin B7

    (d)   If you find a problem with the wiring, then do these steps:

        1)   Repair the wiring.

        2)   Re-connect the connectors.

        3)   Re-install the Audio Selector Panel. To install it, do this task: AMM TASK 23-51-02-400-801.

        4)   Re-install the SELCAL decoder unit. To install it, do this task: AMM TASK 23-28-11-420-801.

        5)   If the call switch does reset correctly, then you corrected the fault.

——— **END OF TASK** ———

SHZ ALL

805. **All SELCAL Call Lights On - Fault Isolation**

    A. **Description**

       (1) This task is for these Observed Faults:

      SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

        (a)   All call lights on the Selective Call System (SELCAL) Control Panel, P8-66 come ON.

      SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

        (b)   All mic/call lights on all the Audio Control Panel (ACP) come ON.

      SHZ ALL

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B.   Possible Causes

SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

(1)   SELCAL Control Panel, P8-66

SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

(2)   Captain ACP, P8-6

(3)   First Officer ACP, P8-7

(4)   Observer ACP, P5-15

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(5)   SELCAL Decoder, M25

C.   Initial Evaluation

SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

(1)   Push the call light on the SELCAL Control Panel, P8-66.

   (a)   If all call lights go OFF, then there was an intermittent fault.

   (b)   If all call lights stay ON, then do the Fault Isolation Procedure below.

SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

(2)   Push the mic/call light on the applicable ACP.

   (a)   If all mic/call lights go OFF, then there was an intermittent fault.

   (b)   If all mic/call lights stay ON, then do the Fault Isolation Procedure below.

SHZ ALL

D.   Fault Isolation Procedure

(1)   Replace the SELCAL Decoder, M25. These are the tasks:

   • SELCAL Decoder Unit Removal, AMM TASK 23-28-11-020-801

   • SELCAL Decoder Installation, AMM TASK 23-28-11-420-801

   (a)   Do the Repair Confirmation at the end of this task.

SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

(2)   Replace the SELCAL Control Panel, P8-66. These are the tasks:

   • SELCAL Control Panel - Removal, AMM TASK 23-28-21-000-801

   • SELCAL Control Panel - Installation, AMM TASK 23-28-21-400-801

   (a)   Do the Repair Confirmation at the end of this task.

SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

(3)   Replace the applicable ACP. These are the tasks:

   • Audio Control Panel Removal, AMM TASK 23-51-02-000-801

   • Audio Control Panel Installation, AMM TASK 23-51-02-400-801

   (a)   Do the Repair Confirmation at the end of this task.

SHZ ALL

E.   Repair Confirmation

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SHZ 002, 009-699, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

(1) Look at the call lights on the SELCAL Control Panel, P8-66.

    (a) If all call lights go OFF, you corrected the problem.

    (b) If all call lights do not go OFF, then continue the Fault Isolation Procedure at the subsequent step.

SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

(2) Look at the mic/call lights on the applicable ACP.

    (a) If all mic/call lights go OFF, you corrected the problem.

    (b) If all mic/call lights do not go OFF, then continue the Fault Isolation Procedure at the subsequent step.

———— END OF TASK ————

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801. Passenger Address Does Not Operate from Flight Deck - Fault Isolation

A. Description

(1) No, intermittent, or poor quality audio can be heard from the passenger address (PA) speakers when the flight crew makes a PA announcement.

B. Possible Causes

(1) Microphone

(2) Wiring

(3) Control Wheel PTT switch.

(4) Passenger address amplifier, M63

(5) Remote electronic unit (REU), M1353.

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	4	C00082	COMMUNICATIONS PA AMPL BAT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	21	C00560	INTERPHONE POWER F/O DC 2
C	22	C00561	INTERPHONE POWER F/O BAT
C	23	C00239	INTERPHONE POWER CAPT DC 2
C	24	C00240	INTERPHONE POWER CAPT BAT
D	21	C00084	INTPH AND WARN
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

D. Related Data

(1) (SSM 23-31-11)

(2) (SSM 23-31-12)

(3) (SSM 23-31-13)

(4) (SSM 23-31-14)

(5) (SSM 23-51-11)

(6) (SSM 23-51-21)

(7) (SSM 23-51-31)

(8) (WDM 23-31-01)

(9) (WDM 23-31-02)

(10) (WDM 23-31-03)

(11) (WDM 23-31-04)

(12) (WDM 23-51-11)

(13) (WDM 23-51-21)

(14) (WDM 23-51-31)

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E.   **Fault Isolation Procedure**

(1)   Do this check of the microphone:

(a)   Use a microphone in the flight deck, other than where the problem was reported, to make an announcement over the passenger address system.

1)   Make sure you can hear the announcement on all of the applicable speakers.

(b)   If you can hear the announcement on the speakers, then replace the microphone where the problem was reported.

1)   Do the Repair Confirmation at the end of this task.

a)   If the Repair Confirmation is not satisfactory, then continue.

(c)   If you cannot hear the announcement on the speakers, or the announcement is intermittent, then continue.

(2)   Do these steps to examine and repair the wires to the applicable microphone:

(a)   For the PA microphone at the aft end of the control stand, use the 23-31 SSM and WDM listed in Related Data To examine these wires:

1)   Examine and repair the wires between the connector D2639B at the passenger address amplifier and the connector D6001 in the control stand.

a)   If you found a problem, then do the Repair Confirmation at the end of this task.

b)   If the Repair Confirmation is not OK, then continue.

(b)   For other flight deck microphones, use the 23-51 SSM and WDM listed in Related Data to examine these wires:

NOTE: Other microphones are the Captains's or First Officer's hand microphone, boom microphone, oxygen mask microphone or the Observer seat microphones.

1)   Remove the remote electronic unit (REU). To remove it, do this task: Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801.

2)   Examine and repair the wires between the connector D2501B at the REU and the applicable microphone jack:

NOTE: Airplanes without active noise suppression may use a three wire or four wire microphone connector. Airplanes with active noise suppression may use a three wire, four wire, or five wire microphone connector.

(c)   If you found and repaired a wire problem, then do these steps:

1)   Re-install the REU. To install it, do this task: Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

2)   If it is necessary, re-install the applicable microphone.

3)   Do the Repair Confirmation at the end of this task.

a)   If the Repair Confirmation is not satisfactory, then continue.

(d)   If no wire problem was found, then re-install the REU. To install it, do this task: Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

(3)   Do this check of the Control Wheel PTT switch:

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(a)   Press and hold the control wheel PTT switch in the interphone position.

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    (b)   Press and latch the control wheel PTT switch in the interphone position.

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    (c)   Use a microphone in the flight deck to make an announcement over the passenger address system.

        1)   Make sure you can hear the announcement on all of the applicable speakers.

        2)   If you can hear the announcement on the speakers, do the Repair Confirmation at the end of this task.

        3)   If you cannot hear the announcement on the speakers, or the announcement is intermittent, then continue.

SHZ 002, 721-799, 860-863

    (d)   Do the following steps:

        1)   Replace the control wheel PTT switch trigger and switch mount.

            These are the tasks:

            Control Wheel PTT Switch Removal, AMM TASK 23-51-04-000-801

            Control Wheel PTT Switch Installation, AMM TASK 23-51-04-400-801

        2)   Replace the remote electronic unit, M1353.

            <u>NOTE</u>: REU part number 10-62090-112 must be replaced with REU part number 10-2090-113.

            These are the tasks:

            Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801

            Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802

SHZ ALL

(4)   Replace the passenger address amplifier, M63.

    These are the tasks:

    Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801,

    Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

    (a)   Do the Repair Confirmation at the end of this task.

        1)   If the Repair Confirmation is not satisfactory, then continue.

(5)   Replace the remote electronic unit, M1353.

    These are the tasks:

    Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801,

    Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

    (a)   Do the Repair Confirmation at the end of this task.

F. **Repair Confirmation**

    (1)   Do this test of the passenger address system:

        (a)   Set the PA microphone selector switch on the audio control panel (ACP) to ON.

            1)   Make sure its light comes on.

        (b)   Push and hold the R/T - I/C switch on the ACP in the R/T position.

        (c)   Speak into the microphone.

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1) Make sure you can hear the announcement on all of the applicable speakers.

(d) If you can hear the announcement on the speakers, then you corrected the fault.

——— **END OF TASK** ———

802. Passenger Address Volume Problem - Fault Isolation

A. **Description**

(1) The audio heard from the passenger address speakers is too loud or too quiet.

(2) The audio heard on the attendant and lavatory speakers is too loud or too quiet.

B. **Possible Causes**

(1) Master gain on PA amplifier

(2) PA Gain on Remote Electronic Unit (REU), M1353

(3) Passenger address (PA) amplifier, M63

(4) Wiring

(5) Remote electronic unit (REU), M1353

C. **Related Data**

(1) (SSM 73-22-31)

(2) (WDM 23-31-01)

(3) (WDM 23-31-02)

(4) (WDM 23-31-03)

(5) (WDM 23-31-04)

(6) (WDM 23-51-11)

(7) (WDM 23-51-21)

(8) (WDM 23-51-31)

D. **Fault Isolation Procedure**

SHZ 721-799

(1) Adjust the master gain on the PA amplifier:

(a) Set and hold the TEST/NORM/CAL switch on the PA amplifier front panel to CAL.

(b) Turn the master gain screw, located below the handle on the front panel, clockwise or counterclockwise to the desired level.

NOTE: To get the maximum undistorted audio, turn the master gain screw clockwise until the -1 and 0 dB LED comes on.

(c) Do the Repair Confirmation at the end of this task.

1) If the Repair Confirmation is not satisfactory, then continue.

(2) Adjust the PA Gain on the Remote Electronic Unit (REU):

(a) Turn the PA Gain, located on the front panel of the REU clockwise or counterclockwise to the desired level.

(b) Do the Repair Confirmation at the end of this task:

1) If the Repair Confirmation is not satisfactory, then continue.

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SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999; AIRPLANES WITH PA P/N 622-5342-101

(3)   Adjust the master gain on the PA amplifier:

    (a)   Set and hold the test mode switch on the PA amplifier front panel to LEVEL.

    (b)   Turn the MASTER GAIN screw on the front panel clockwise or counterclockwise to the desired level.

        NOTE: To get the maximum undistorted audio, turn the master gain screw clockwise until the front panel LEDs show 70.7.

    (c)   Do the Repair Confirmation at the end of this task.

        1)   If the Repair Confirmation is not satisfactory, then continue.

SHZ ALL

(4)   Replace the passenger address (PA) amplifier, M63.

    These are the tasks:

    Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801,

    Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

    (a)   Do the Repair Confirmation at the end of this task.

        1)   If the Repair Confirmation is not satisfactory, then continue.

(5)   Do this check of the wiring:

    (a)   Remove the remote electronic unit (REU). To remove it, do this task: Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801.

    (b)   Open this access panel to get access to junction box J22:

Number	Name/Location
113AW	Forward Nose Wheel Well Panel

    (c)   Disconnect electrical connector D10918 from the engine 1 running relay, R564.

    (d)   Open this access panel to get access to junction box J24:

Number	Name/Location
114AW	Forward Nose Wheel Well Panel

    (e)   Disconnect electrical connector D10916 from the engine 2 running relay, R563.

    (f)   Do a continuity check between these pins:

	REU CONNECTOR	RELAY CONNECTOR
ENGINE 1 RUNNING RELAY (R564)	D2501A	D10918
	pin F5	pin A3
ENGINE 2 RUNNING RELAY (R563)	D2501A	D10916
	pin K5	pin A3

    (g)   If there is not continuity between the pins, then do these steps:

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1) Repair the wiring.

2) Re-connect electrical connector D10918 to R564.

3) Close this access panel:

Number	Name/Location
113AW	Forward Nose Wheel Well Panel

4) Re-connect electrical connector D10916 to R563.

5) Close this access panel:

Number	Name/Location
114AW	Forward Nose Wheel Well Panel

6) Re-install the REU. To install it, do this task: Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

7) Do the Repair Confirmation at the end of this task.

  a) If the Repair Confirmation is not OK, then continue.

(h) If there is continuity, then do these steps and continue:

1) Re-connect electrical connector D10918 to R564.

2) Close this access panel:

Number	Name/Location
113AW	Forward Nose Wheel Well Panel

3) Re-connect electrical connector D10916 to R563.

4) Close this access panel:

Number	Name/Location
114AW	Forward Nose Wheel Well Panel

(6) Install a new remote electronic unit (REU), M1353. To install it, do this task: Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

   (a) Do the Repair Confirmation at the end of this task.

E. Repair Confirmation

(1) Do this test of the passenger address system:

   (a) Set the PA microphone selector switch on the audio control panel (ACP) to ON.

   1) Make sure its light comes on.

   (b) Push and hold the R/T - I/C switch on the ACP in the R/T position.

   (c) Speak into the microphone.

   1) Make sure you can hear the announcement from the passenger address speakers.

   (d) If you can hear the announcement on the speakers, then you corrected the fault.

———— **END OF TASK** ————

803. Chime Does Not Go OFF - Fault Isolation

A. Description

(1) The chime in the Passenger Cabin does not go OFF.

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B. **Fault Isolation Procedure**

(1) Replace the Passenger Address (PA) Amplifier, M63. These are the tasks:

- Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801

- Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801

SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999; AIRPLANES WITH PA P/N 622-5342-101

(a) Do these steps to make sure that you corrected the problem:

1) On the PA Amplifier front panel, put the OPERATE/TONE Switch to the TONE position.

   a) Make sure that you can hear a high chime sound on the PA Speakers.

2) Put the OPERATE/TONE Switch to the OPERATE position.

   a) Make sure that the chime does not sound.

3) If you cannot hear the chime sound, then you corrected the problem.

SHZ 721-799

(b) Do these steps to make sure that you corrected the problem:

1) On the PA Amplifier front panel, put the TEST/NORM/CAL Switch to the TEST position.

   a) Make sure that you can hear a high chime sound on the PA Speakers.

2) Put the TEST/NORM/CAL Switch to the NORM position.

   a) Make sure that the chime does not sound.

3) If you cannot hear the chime sound, then you corrected the problem.

SHZ ALL

─────── **END OF TASK** ───────

804. **Cabin Chime Does Not Operate - Fault Isolation**

A. **Description**

(1) The chime in the Passenger Cabin does not sound when one or more of these conditions occurs:

(a) Passenger call button on the Passenger Service Unit (PSU) is pushed

(b) Lavatory Call Button is pushed

(c) NO SMOKING Switch is set to the ON position

(d) FASTEN BELTS Switch is set to the ON position.

B. **Possible Causes**

(1) PA Amplifier

(2) Wiring

(3) PSU

(4) Lavatory Call Switch

(5) No Smoking Switch, S45

(6) No power to the No Smoking Relay

(7) No Smoking Relay, R25

┌─── EFFECTIVITY ───
│ **SHZ ALL**

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(8)   Fasten Belts Switch, S46

(9)   No power to the Fasten Belts Relay

(10)   Fasten Belts Relay, R26

C.   Circuit Breakers

(1)   These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	8	C01403	PASSENGER CABIN PASS CALL LEFT
B	8	C01404	PASSENGER CABIN PASS CALL RIGHT
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	4	C00082	COMMUNICATIONS PA AMPL BAT

D.   Related Data

(1)   WDM 23-31-01

(2)   WDM 33-25-11

(3)   WDM 33-27-11

(4)   SSM 23-31-11

(5)   SSM 33-25-11

(6)   SSM 33-27-11

E.   Initial Evaluation

SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999; AIRPLANES WITH PA P/N 622-5342-101

(1)   Do this test of the PA Amplifier:

(a)   Put the OPERATE/TONE Switch on the front panel of the PA Amplifier to the TONE position.

1)   Make sure you can hear a high chime sound on the Attendant, Lavatory, and PSU speakers.

(b)   Put the OPERATE/TONE Switch to the OPERATE position.

(c)   If you do not hear a high chime on the speakers, then do the Fault Isolation Procedure - No Chime below.

(d)   If you hear a high chime on the speakers, then continue.

SHZ 721-799

(2)   Do this test of the passenger call:

(a)   Put the TEST/NORM/CAL Switch to the TEST position.

1)   Make sure you can hear a high chime sound on the Attendant, Lavatory, and PSU speakers.

(b)   Put the TEST/NORM/CAL Switch to the NORM position.

(c)   If you do not hear a high chime on the speakers, then do the Fault Isolation Procedure - No Chime below.

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SHZ 721-799 (Continued)

(d)   If you hear a high chime on the speakers, then continue.

SHZ ALL

(3)   Do this test of the passenger call:

(a)   Push the Attendant Call Button on the PSU.

1)   Make sure you hear a high chime on the Attendant, Lavatory, and PSU speakers.

(b)   If you do not hear a high chime on the speakers, then do the Fault Isolation Procedure - Passenger Call below.

(c)   If you hear a high chime on the speakers, then continue.

(4)   Do this test of the Lavatory Call:

(a)   Push the Call Button in the Lavatory.

1)   Make sure you hear a high chime on the Attendant, Lavatory, and PSU speakers.

(b)   If you do not hear a high chime on the speakers, then do the Fault Isolation Procedure - Lavatory Call below.

(c)   If you hear a high chime on the speakers, then continue.

(5)   Do this test of the NO SMOKING Switch:

(a)   Set the NO SMOKING Switch, on the P5 Overhead Panel in the Flight Compartment, to the ON position.

1)   Make sure you hear a low chime on the Attendant, Lavatory, and PSU speakers.

(b)   If you do not hear a low chime on the speakers, then do the Fault Isolation Procedure - No Smoking Chime below.

(c)   If you hear a low chime on the speakers, then continue.

(6)   Do this test of the FASTEN BELTS Switch:

(a)   Set the FASTEN BELTS Switch, on the P5 Overhead Panel in the Flight Compartment, to the ON position.

1)   Make sure you hear a low chime on the Attendant, Lavatory, and PSU speakers.

(b)   If you do not hear a low chime on the speakers, then do the Fault Isolation Procedure - Fasten Belts Chime below.

(c)   If you hear a low chime on the speakers, then there was an intermittent fault.

F.   **Fault Isolation Procedure - No Chime**

(1)   Replace the PA Amplifier. These are the tasks:

• Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801

• Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801

SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999; AIRPLANES WITH PA P/N 622-5342-101

(a)   Do these steps to make sure that you corrected the problem:

1)   On the PA Amplifier front panel, put the OPERATE/TONE Switch to the TONE position.

a)   Make sure that you can hear a high chime sound at the Attendant, Lavatory, and PSU speakers.

2)   Put the OPERATE/TONE Switch to the OPERATE position.

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SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999; AIRPLANES WITH PA P/N 622-5342-101 (Continued)

   a) If you can hear a chime, then you corrected the problem.

SHZ 721-799

   (b) Do these steps to make sure that you corrected the problem:

   1) On the PA Amplifier front panel, put the TEST/NORM/CAL Switch to the TEST position.

   a) Make sure that you can hear a high chime sound at the Attendant, Lavatory, and PSU speakers.

   2) Put the TEST/NORM/CAL Switch to the NORM position.

   a) If you hear the chime, then you corrected the problem.

SHZ ALL

G. **Fault Isolation Procedure - Passenger Call**

   (1) Do this check of the wiring:

   (a) Open these circuit breakers and install safety tags:

   CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	8	C01403	PASSENGER CABIN PASS CALL LEFT
B	8	C01404	PASSENGER CABIN PASS CALL RIGHT

   F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	4	C00082	COMMUNICATIONS PA AMPL BAT

   (b) Remove the PSU. This is the task: Passenger Service Unit (PSU) - Removal, AMM TASK 25-23-61-000-801 or Passenger Service Unit - Removal, AMM TASK 25-23-61-000-804.

   (c) Remove the PA Amplifier. This is the task: Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801.

   (d) Do a continuity check as follows:

SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

PA AMP, M63 D2639B	PSU CONNECTOR
pin A11	pin 2

SHZ 721-799

PA AMP, M63 D147	PSU CONNECTOR
pin 7	pin 2

SHZ ALL

   1) If there is not continuity, then do these steps:

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a) Repair the wiring.

b) Re-install the PA Amplifier. This is the task: Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

c) Re-install the PSU. This is the task: Passenger Service Unit (PSU) - Installation, AMM TASK 25-23-61-400-801 or Passenger Service Unit - Installation, AMM TASK 25-23-61-400-804.

d) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	8	C01403	PASSENGER CABIN PASS CALL LEFT
B	8	C01404	PASSENGER CABIN PASS CALL RIGHT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	4	C00082	COMMUNICATIONS PA AMPL BAT

e) Push the Attendant Call Button on the PSU.

   <1> Make sure you hear a chime over the Attendant, Lavatory, and PSU speakers.

f) If you hear a chime over the speakers, then you corrected the problem.

g) If you did not hear a chime over the speakers, then continue.

2) If there is continuity, then do these steps:

a) Install a new PSU. This is the task: Passenger Service Unit (PSU) - Installation, AMM TASK 25-23-61-400-801 or Passenger Service Unit - Installation, AMM TASK 25-23-61-400-804.

b) Re-install the PA Amplifier. This is the task: Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

c) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	8	C01403	PASSENGER CABIN PASS CALL LEFT
B	8	C01404	PASSENGER CABIN PASS CALL RIGHT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	4	C00082	COMMUNICATIONS PA AMPL BAT

d) Push the Attendant Call Button on the PSU.

   <1> Make sure you hear a chime over the Attendant, Lavatory, and PSU speakers.

e) If you hear a chime over the speakers, then you corrected the problem.

H. Fault Isolation Procedure - Lavatory Call

(1) Do this test of the Lavatory Call:

(a) Push the Call Button in the Lavatory.

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        1)   Make sure the Amber Light on the Exit locator Signs comes ON.

    (b)   If the light does not come ON, then do these steps:

        1)   Open these circuit breakers and install safety tags:

        CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	8	C01403	PASSENGER CABIN PASS CALL LEFT
B	8	C01404	PASSENGER CABIN PASS CALL RIGHT

        2)   Replace the Lavatory Call Switch.

          a)   To replace it, do this task: Lavatory Call Light - Light/Switch Replacement, AMM TASK 33-27-00-960-802.

        3)   Remove the safety tags and close these circuit breakers:

        CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	8	C01403	PASSENGER CABIN PASS CALL LEFT
B	8	C01404	PASSENGER CABIN PASS CALL RIGHT

        4)   Push the Call Button in the Lavatory.

          a)   Make sure you hear a high chime on the Attendant, Lavatory, and PSU speakers.

        5)   If you hear a high chime on the speakers, then you corrected the problem.

        6)   If you do not hear a high chime on the speakers, then continue.

    (c)   If the light comes ON, then continue.

  (2)   Do this check of the wiring (WDM 33-27-11):

    (a)   Open these circuit breakers and install safety tags:

        CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	8	C01403	PASSENGER CABIN PASS CALL LEFT
B	8	C01404	PASSENGER CABIN PASS CALL RIGHT

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	4	C00082	COMMUNICATIONS PA AMPL BAT

    (b)   Disconnect applicable connector from the Lavatory Module.

    (c)   Remove the PA Amplifier. This is the task: Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801.

    (d)   Do a continuity check as follows:

SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

PA AMP, M63 D2639B	LAV MODULE CONNECTOR
pin A11	pin A2

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PA AMP, M63	LAV MODULE
D147	CONNECTOR
pin 7	pin A2

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1) If there is not continuity, then do these steps:

2) Repair the wiring.

3) Re-install the PA Amplifier. This is the task: Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

4) Re-connect connector to the Lavatory Module.

5) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	8	C01403	PASSENGER CABIN PASS CALL LEFT
B	8	C01404	PASSENGER CABIN PASS CALL RIGHT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	4	C00082	COMMUNICATIONS PA AMPL BAT

6) Push the Lavatory Call Button.

   a) Make sure you hear a chime over the Attendant, Lavatory, and PSU speakers.

7) If you hear a chime over the speakers, then you corrected the problem.

I. **Fault Isolation - No Smoking Chime**

(1) Do this check of the NO SMOKING Switch (WDM 33-25-11):

(a) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

(b) Disconnect connector D1620 from the No Smoking Relay, R25 in the P6 Panel.

(c) Set the NO SMOKING Switch, on the P5 Overhead Panel in the Flight Compartment, to the ON position.

(d) Do a continuity check as follows:

NO SMOKING SIGN RELAY, R25 D1620
pin X2 . . . . GND

1) If there is not continuity, then do these steps:

   a) Replace the NO SMOKING Switch, S45.

   b) Make sure the NO SMOKING Switch is in the OFF position.

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c) Re-connect connector D1620 to the No Smoking Relay, R25 in the P6 Panel.

d) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

e) Set the NO SMOKING Switch to the ON position.

    <1> Make sure you hear a low chime on the Attendant, Lavatory, and PSU speakers.

f) If you hear a chime on the speakers, then you corrected the problem.

g) If you did not hear a chime on the speakers, then do these steps:

    <1> Set the NO SMOKING Switch to the OFF position.

    <2> Open this circuit breaker and install safety tag:

      CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

    <3> Repair the wiring between pin X2 of connector D1620 on the No Smoking Relay, R25 and the NO SMOKING Switch, S45.

    <4> Remove the safety tag and close this circuit breaker:

      CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

    <5> Set the NO SMOKING Switch to the ON position.

    <6> Make sure you hear a low chime on the Attendant, Lavatory, and PSU speakers.

h) If you hear a chime on the speakers, then you corrected the problem.

2) If there is continuity, then continue.

(2) Do this check for power to the No Smoking Relay (WDM 33-25-11):

(a) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

(b) Do a voltage check at these pins of connector at the No Smoking Relay, R25 and Structure Ground:

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NO SMOKING
SING RELAY,
R25
D1620

pin X1 . . . . GND
pin B2 . . . . GND

1) If there is not voltage, then do these steps:

    a) Open this circuit breaker and install safety tag:

    CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

    b) Repair the wiring between the No Smoking Relay, R25 and this circuit breaker:

    CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

    c) Re-connect electrical connector D1620 to the No Smoking Relay, R25 in the P6 Panel.

    d) Set the NO SMOKING Switch to the OFF position.

    e) Remove the safety tag and close this circuit breaker:

    CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

    f) Set the NO SMOKING Switch to the ON position.

      <1> Make sure you hear a chime on the Attendant, Lavatory, and PSU speakers.

    g) If you hear a chime on the speakers, then you corrected the problem.

2) If there is voltage, then continue.

(3) Do this check of the wiring (WDM 33-25-11):

    (a) Open these circuit breakers and install safety tags:

    CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

    F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	4	C00082	COMMUNICATIONS PA AMPL BAT

    (b) Remove the PA Amplifier. This is the task: Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801.

    (c) Do a continuity check as follows:

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SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

	NO SMOKING SIGN RELAY,
PA AMP, M63	**R25**
D2639B	**D1620**
pin D11	pin B1

SHZ 721-799

	NO SMOKING SIGN RELAY,
PA AMP, M63	**R25**
D147	**D1620**
pin 10	pin B1

SHZ ALL

1) If there is not continuity, then do these steps:

   a) Repair the wiring.

   b) Re-install the PA Amplifier. This is the task: Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

   c) Re-connect connector D1620 to the No Smoking Relay, R25 in the P6 Panel.

   d) Set the NO SMOKING Switch to the OFF position.

   e) Remove the safety tags and close these circuit breakers:

      CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

      F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	4	C00082	COMMUNICATIONS PA AMPL BAT

   f) Set the NO SMOKING Switch to the ON position.

      <1> Make sure you hear a chime on the Attendant, Lavatory, and PSU speakers.

   g) If you hear a chime on the speakers, then you corrected the problem.

2) If there is continuity, then continue.

   a) Re-install the PA Amplifier. This is the task: Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

(4) Replace the No Smoking Relay:

   (a) Replace the No Smoking Relay, R25.

      1) Re-connect connector D1620 to the No Smoking Relay, R25 in the P6 Panel.

      2) Set the NO SMOKING Switch to the OFF position.

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    3)   Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C00082	COMMUNICATIONS PA AMPL BAT

    4)   Set the NO SMOKING Switch to the ON position.

        a)   Make sure you hear a chime on the Attendant, Lavatory, and PSU speakers.

    5)   If you hear a chime on the speakers, then you corrected the problem.

  J.   Fault Isolation - Fasten Belts Chime

    (1)   Do this check of the FASTEN BELTS Switch (WDM 33-25-11):

        (a)   Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

        (b)   Disconnect connector D1622 from the Fasten Belts Relay, R26 in the P6 Panel.

        (c)   Set the FASTEN BELTS Switch, on the P5 Overhead Panel in the Flight Compartment, to the ON position.

        (d)   Do a check for continuity as follows:

SEAT BELT
RELAY, R26
D1622
pin X2 . . . . GND

        1)   If there is not continuity, then do these steps:

           a)   Replace the FASTEN BELTS Switch, S46.

           b)   Make sure the FASTEN BELTS Switch is in the OFF position.

           c)   Re-connect connector D1622 to the Fasten Belts Relay, R26 in the P6 Panel.

           d)   Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

           e)   Set the FASTEN BELTS Switch to the ON position.

              <1>   Make sure you hear a low chime on the Attendant, Lavatory, and PSU speakers.

           f)   If you hear a chime on the speakers, then you corrected the problem.

           g)   If you did not hear a chime on the speakers, then do these steps:

              <1>   Set the FASTEN BELTS Switch to the OFF position.

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<2> Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

<3> Repair the wiring between pin X2 of connector D1622 on the Fasten Belts Relay, R26 and the FASTEN BELTS Switch, S46.

<4> Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

<5> Set the FASTEN BELTS Switch to the ON position.

<6> Make sure you hear a low chime on the Attendant, Lavatory, and PSU speakers.

h) If you hear a chime on the speakers, then you corrected the problem.

2) If there is continuity, then continue.

(2) Do this check for power to the Fasten Belts Relay (WDM 33-25-11):

(a) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

(b) Do a voltage check at these pins of connector at the Fasten Belts Relay, R26 and Structure Ground:

SEAT BELT RELAY, R26

D1622		VOLTAGE
pin X1	GND	28V DC
pin B2	GND	28V DC

1) If there is not voltage, then do these steps:

a) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

b) Repair the wiring between the Fasten Belts Relay, R26 and this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

c) Re-connect connector D1622 to the Fasten Belts Relay, R26 in the P6 Panel.

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d) Set the FASTEN BELTS Switch to the OFF position.

e) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

f) Set the FASTEN BELTS Switch to the ON position.

<1> Make sure you hear a chime on the Attendant, Lavatory, and PSU speakers.

g) If you hear a chime on the speakers, then you corrected the problem.

2) If there is voltage, then continue.

(3) Do this check of the wiring (WDM 33-25-11):

(a) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	4	C00082	COMMUNICATIONS PA AMPL BAT

(b) Remove the PA Amplifier. This is the task: Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801.

(c) Do a continuity check as follows:

SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

	SEAT BELT
PA AMP, M63	**RELAY, R26**
D2639B	**D1622**
pin C11	pin B1

SHZ 721-799

	SEAT BELT
PA AMP, M63	**RELAY, R26**
D147	**D1622**
pin 8	pin B1

SHZ ALL

1) If there is not continuity, then do these steps:

a) Repair the wiring.

b) Re-install the PA Amplifier. This is the task: Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

c) Re-connect connector D1622 to the Fasten Belts Relay, R26 in the P6 Panel.

d) Set the FASTEN BELTS Switch to the OFF position.

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e) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	4	C00082	COMMUNICATIONS PA AMPL BAT

f) Set the FASTEN BELTS Switch to the ON position.

    <1> Make sure you hear a chime on the Attendant, Lavatory, and PSU speakers.

g) If you hear a chime on the speakers, then you corrected the problem.

2) If there is continuity, then do this step and continue:

a) Re-install the PA Amplifier. This is the task: Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

(4) Replace the Fasten Belts Relay:

(a) Replace the Fasten Belts Relay, R26.

1) Re-connect connector D1622 to the Fasten Belts Relay, R26 in the P6 Panel.

2) Set the FASTEN BELTS Switch to the OFF position.

3) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
D	11	C00442	PASSENGER CABIN SIGNS PASS SIGN CONT

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	4	C00082	COMMUNICATIONS PA AMPL BAT

4) Set the FASTEN BELTS Switch to the ON position.

a) Make sure you hear a chime on the Attendant, Lavatory, and PSU speakers.

5) If you hear a chime on the speakers, then you corrected the problem.

——————— **END OF TASK** ———————

805. Passenger Address System Problem - Fault Isolation

A. Description

(1) No audio, intermittent, or poor quality audio is heard from the PA Amplifier Speakers during an announcement.

B. Possible Causes

(1) Attendant's Handset

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SHZ 002, 009-699, 865, 866

(2) Hand Microphone on the P-8 Aisle Stand (in the flight compartment)

SHZ ALL

(3) FWD (AFT) Cabin Attendant's Control Panel, P13 (P14)

(4) Wiring

(5) PA Amplifier, M63

(6) Remote Electronics Unit (REU), M1353

SHZ 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

(7) Pre-Recorded Announcement Machine (PRAM), M1276

SHZ ALL

C. **Circuit Breakers**

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	6	C01583	ENTERTAINMENT PA SYS BAT

SHZ 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

Row	Col	Number	Name
C	9	C00080	ENTERTAINMENT PA TAPE RPDR AC

SHZ ALL

Row	Col	Number	Name
D	4	C00082	COMMUNICATIONS PA AMPL BAT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	21	C00560	INTERPHONE POWER F/O DC 2
C	22	C00561	INTERPHONE POWER F/O BAT
C	23	C00239	INTERPHONE POWER CAPT DC 2
C	24	C00240	INTERPHONE POWER CAPT BAT
D	21	C00084	INTPH AND WARN
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

This circuit breaker is inoperative and should remain open:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name

SHZ 002, 009-699

Row	Col	Number	Name
C	9	C00080	ENTERTAINMENT PA TAPE RPDR AC (INOP)

SHZ ALL

(SSM 23-31-11)

D. **Related Data**

(1) SSM 23-31-11

(2) SSM 23-31-12

(3) SSM 23-31-13

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(4)   SSM 23-31-14

(5)   WDM 23-31-01

(6)   WDM 23-31-02

(7)   WDM 23-31-03

(8)   WDM 23-31-04

(9)   WDM 23-31-06

E.   Fault Isolation Procedure

SHZ 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

(1)   Open, wait a minimum of 15 seconds, then close this circuit breaker:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	9	C00080	ENTERTAINMENT PA TAPE RPDR AC

(a)   Do the Repair Confirmation at the end of this task.

SHZ ALL

(2)   Do this check of the Attendant's Handset:

(a)   Use an Attendant's Handset, other than where the problem was reported, to make an announcement over the Passenger Address System.

1)   Make sure you can hear the announcement on the Attendant, PSU, and Lavatory Speakers.

(b)   If you can hear the announcement on the speakers, then replace the Attendant's Handset where the problem was reported. These are the tasks:

• Attendant Handset Removal, AMM TASK 23-42-01-000-801

• Attendant Handset Installation, AMM TASK 23-42-01-400-803

1)   Do the Repair Confirmation at the end of this task.

a)   If the Repair Confirmation is not satisfactory, then continue.

(c)   If you cannot hear the announcement on the speakers, or the announcement is intermittent, then continue.

SHZ 002, 009-699, 865, 866

(3)   Do a check of the Hand Microphone on the aft end of P-8 Aisle Stand in the flight compartment.

(a)   Disconnect the Hand Microphone from the P-8 Aisle Stand.

(b)   Do the Repair Confirmation at the end of the this task.

1)   If the Repair Confirmation is satisfactory, do these steps:

a)   Replace the Hand Microphone at the P-8 Aisle Stand in the flight compartment.

b)   Do the Repair Confirmation at the end of this test again.

<1>   If the Repair Confirmation is satisfactory, then you corrected the problem.

2)   If the Repair Confirmation is not satisfactory, put the Hand Microphone back on the P-8 Aisle Stand, and continue.

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(4)   Replace the applicable Cabin Attendant's Control Panel. These are the tasks:

• Attendant's Panel and Components Removal, AMM TASK 25-25-11-000-801 or Attendant's Panel with LCD Touch Panel - Removal, AMM TASK 25-25-11-000-802

• Attendant's Panel and Components Installation, AMM TASK 25-25-11-400-801 or Attendant's Panel with LCD Screen - Installation, AMM TASK 25-25-11-400-802

(a)   Do the Repair Confirmation at the end of this task.

(5)   Do this check of the wiring between the PA Amplifier and the Attendant's Handset:

(a)   Remove the PA Amplifier. This is the task: Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801.

SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(b)   Do a continuity check between the PA Amplifier and the Attendant Panel:

Table 201

ATTENDANT PANEL	PA AMP CONNECTOR		ATTENDANT PANEL CONNECTOR
SHZ 002, 009-699, 706, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999			
FORWARD ATTENDANT'S PANEL	D2639B		D10019
	pin A2	--------	pin 20
	pin B2	--------	pin 21
SHZ 821-825, 827-847, 850-852, 855-859, 881-899			
FORWARD ATTENDANT'S PANEL	D2639B		D14366
	pin A2	--------	pin 20
	pin B2	--------	pin 21
SHZ 002, 009-699, 706, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999			
AFT ATTENDANT'S PANEL	D2639B		D10021
	pin A2	--------	pin 20
	pin B2	--------	pin 21
SHZ 821-825, 827-847, 850-852, 855-859, 881-899			
AFT ATTENDANT'S PANEL	D2639B		D14374
	pin A2	--------	pin 20
	pin B2	--------	pin 21
SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999			
LAV D ATTENDANT'S PANEL	D2639B		D10021
	pin A2	--------	pin 20
	pin B2	--------	pin 21
LAV E ATTENDANT'S PANEL	D2639B		D10021
	pin A2	--------	pin 23
	pin B2	--------	pin 24

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SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999 (Continued)

        SHZ 721-799

           (c)   Do a continuity check between the PA Amplifier and the Attendant Panel:

Table 202

ATTENDANT PANEL	PA AMP CONNECTOR		ATTENDANT PANEL CONNECTOR
FORWARD ATTENDANT'S PANEL	D121		D10019
	pin 4	--------	pin 20
	pin 5	--------	pin 21
AFT ATTENDANT'S PANEL	D121		D10021
	pin 4	--------	pin 20
	pin 5	--------	pin 21

        SHZ ALL

           (d)   If there is no continuity between the pins, then do these steps:

               1)   Repair the wiring.

               2)   Re-install the PA Amplifier. This is the task: Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

               3)   Do the Repair Confirmation at the end of this task.

           (e)   If there is continuity between the pins, then continue.

               1)   Re-install the PA Amplifier. This is the task: Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

    (6)   Replace the PA Amplifier, M63. These are the tasks:

        • Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801

        • Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801

        (a)   Do the Repair Confirmation at the end of this task.

    (7)   Replace the REU, M1353. These are the tasks:

        • Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801

        • Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802

        (a)   Do the Repair Confirmation at the end of this task.

    SHZ 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

    (8)   Replace the PRAM, M1276. These are the tasks:

        • Pre-Recorded Announcement Machine (PRAM) Removal, AMM TASK 23-31-07-000-801

        • Pre-Recorded Announcement Machine (PRAM) Installation, AMM TASK 23-31-07-400-801

        (a)   Do the Repair Confirmation at the end of this task.

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SHZ 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999 (Continued)

(9) Do a wiring check between the PRAM and the PA Amplifier (Look at INPUT 1 PTT signal (SSM 23-31-12)).

NOTE: The PRAM has an effect on the PA Announcements made from the handsets, but not on the Flight Deck Handset. The PA System gives the highest priority for input 1 (pilot input). If the PTT 1 is pushed, all PA Handsets and PRAM Messages and Boarding Music will be overridden.

(a) If you find a problem, repair the wiring.

(b) Do the Repair Confirmation at the end of this task.

SHZ ALL

F. **Repair Confirmation**

(1) Do this check of the Passenger Address System:

(a) Set the Attendant's Handset to the PA Mode.

(b) Push the PTT button on the Attendant's Handset.

(c) Speak into the Attendant's Handset.

1) Make sure that you can hear the announcement on the other Attendant, PSU, and Lavatory Speakers.

(d) If you can hear the announcement on the speakers, then you corrected the fault.

———— END OF TASK ————

806. **Passenger Address Speaker Problem - Fault Isolation**

A. **Description**

(1) No, intermittent, or poor quality audio can be heard on one of these passenger address speakers during an announcement:

(a) Attendant

(b) Lavatory

(c) Passenger service unit.

B. **Possible Causes**

(1) Speaker

(2) Wiring

(3) Remote electronic unit, M1353

C. **Related Data**

(1) SSM 23-31-11

(2) SSM 23-31-12

(3) SSM 23-31-13

(4) SSM 23-31-14

(5) WDM 23-31-01

(6) WDM 23-31-02

(7) WDM 23-31-03

(8) WDM 23-31-04

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(9)   WDM 23-31-06

D.   Initial Evaluation

(1)   Do this test of the passenger address system:

(a)   Use a microphone in the flight deck to make an announcement on the passenger address system.

1)   Make sure you can hear the announcement on the attendant, lavatory, and passenger service unit speakers.

(b)   If you cannot hear the announcement on both forward attendant speakers or both aft attendant speakers, then do the Fault Isolation Procedure - Both Attendant Speakers below.

(c)   If you cannot hear the announcement, or the quality of the audio is bad, on an attendant speaker, then do the Fault Isolation Procedure - One Attendant Speaker below.

(d)   If you cannot hear the announcement, or the quality of the audio is bad, on a lavatory speaker, then do the Fault Isolation Procedure - Lavatory Speaker below.

(e)   If you cannot hear the announcement, or the quality of the audio is bad, on a passenger service unit (PSU) speaker, then do the Fault Isolation Procedure - PSU Speaker below.

(f)   If you hear the announcement on all speakers, then there was an intermittent fault.

E.   Fault Isolation Procedure - Both Attendant Speakers

(1)   Replace the remote electronic unit (REU), M1353. These are the tasks:

• Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801

• Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802

(a)   Use a microphone in the flight deck to make an announcement over the passenger address system.

1)   Make sure you can hear the announcement on both attendant's speakers.

(b)   If you heard the announcement on both attendant's speakers, then you corrected the fault.

(c)   If you did not hear the announcement on the attendant's speaker, then continue.

(2)   Do this check of the wiring:

(a)   Remove the remote electronic unit (REU), M1353. This is the task: Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801.

(b)   Remove the passenger address (PA) amplifier, M63. This is the task: Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801.

(c)   Remove the attendant speakers. This is the task: Attendant Speaker - Removal, AMM TASK 23-31-03-000-801.

NOTE: Record the wiring terminal connections. When you re-install or replace the attendant speakers, put the electrical wires to the same terminals.

SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(d)   Do a check for continuity between connector D2501A of the REU, or connector D2639B of the PA amplifier, and the attendant speakers:

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SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999 (Continued)

Table 203

ATTENDANT SPEAKER	PA OR REU CONNECTOR		ATTENDANT SPEAKER
RIGHT FORWARD ATTENDANT'S SPEAKER (M1464)	D2501A		M1464
	pin H2	----------	1K/2K/4K terminal wire
	D2639B		
	pin B15	----------	COM terminal wire
LEFT FORWARD ATTENDANT'S SPEAKER (M157)	D2501A		M157
	pin H2	----------	1K/2K/4K terminal wire
	D2639B		
	pin B15	----------	COM terminal wire
RIGHT AFT ATTENDANT'S SPEAKER (M1212)	D2501A		M1212
	pin C1	----------	1K/2K/4K terminal wire
	D2639B		
	pin B15	----------	COM terminal wire
LEFT AFT ATTENDANT'S SPEAKER (M1213)	D2501A		M1213
	pin C1	----------	1K/2K/4K terminal wire
	D2639B		
	pin B15	----------	COM terminal wire

SHZ 721-799

    (e)   Do a check for continuity between connector D2501A of the REU, or connector D121 of the PA amplifier, and the attendant speakers:

Table 204

ATTENDANT SPEAKER	PA OR REU CONNECTOR		ATTENDANT SPEAKER
RIGHT FORWARD ATTENDANT'S SPEAKER (M1464)	D2501A		M1464
	pin H2	----------	1K/2K/4K terminal wire
	D121		
	pin 14	----------	COM terminal wire
LEFT FORWARD ATTENDANT'S SPEAKER (M157)	D2501A		M157
	pin H2	----------	1K/2K/4K terminal wire

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Table 204 (Continued)

ATTENDANT SPEAKER	PA OR REU CONNECTOR		ATTENDANT SPEAKER
	D121		
	pin 14	----------	COM terminal wire
RIGHT AFT ATTENDANT'S SPEAKER (M1212)	D2501A		M1212
	pin C1	----------	1K/2K/4K terminal wire
	D121		
	pin 14	----------	COM terminal wire
LEFT AFT ATTENDANT'S SPEAKER (M1213)	D2501A		M1213
	pin C1	----------	1K/2K/4K terminal wire
	D121		
	pin 14	----------	COM terminal wire

SHZ ALL

    (f)   If there is not continuity between the pins, then do these steps:

       1)   Repair the wiring.

       2)   Re-install the speakers. This is the task: Attendant Speaker - Installation, AMM TASK 23-31-03-400-801.

          NOTE: Make sure that the electrical connectors are connected to the same terminals that they were removed from.

       3)   Re-install the PA amplifier. This is the task: Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

       4)   Re-install the REU. This is the task: Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

       5)   Use a microphone in the flight deck to make an announcement over the passenger address system.

         a)   Make sure you can hear the announcement on both attendant's speakers.

       6)   If you heard the announcement on both attendant's speakers, then you corrected the fault.

F.   Fault Isolation Procedure - One Attendant Speaker

   (1)   Replace the attendant speaker. These are the tasks:

      • Attendant Speaker - Removal, AMM TASK 23-31-03-000-801

      • Attendant Speaker - Installation, AMM TASK 23-31-03-400-801

   (a)   Use a microphone in the flight deck to make an announcement over the passenger address system.

      1)   Make sure you can hear the announcement on the attendant's speaker.

   (b)   If you heard the announcement on the attendant's speaker, then you corrected the fault.

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(c)   If you did not hear the announcement on the attendant's speaker, then continue.

(2)   Do this check of the wiring.

(a)   Remove the remote electronic unit (REU), M1353. This is the task: Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801.

(b)   Remove the passenger address (PA) amplifier, M63. This is the task: Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801.

(c)   Remove the attendant speakers. This is the task: Attendant Speaker - Removal, AMM TASK 23-31-03-000-801.

NOTE: Record the wiring terminal connections. When you re-install or replace the attendant speakers, put the electrical wires to the same terminals.

SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(d)   Do a check for continuity between connector D2501A of the REU, or connector D2639B of the PA amplifier, and the attendant speakers:

Table 205

ATTENDANT SPEAKER	PA OR REU CONNECTOR		ATTENDANT SPEAKER
RIGHT FORWARD ATTENDANT'S SPEAKER (M1464)	D2501A		M1464
	pin H2	----------	1K/2K/4K terminal wire
	D2639B		
	pin B15	----------	COM terminal wire
LEFT FORWARD ATTENDANT'S SPEAKER (M157)	D2501A		M157
	pin H2	----------	1K/2K/4K terminal wire
	D2639B		
	pin B15	----------	COM terminal wire
RIGHT AFT ATTENDANT'S SPEAKER (M1212)	D2501A		M1212
	pin C1	----------	1K/2K/4K terminal wire
	D2639B		
	pin B15	----------	COM terminal wire
LEFT AFT ATTENDANT'S SPEAKER (M1213)	D2501A		M1213
	pin C1	----------	1K/2K/4K terminal wire
	D2639B		
	pin B15	----------	COM terminal wire

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SHZ 721-799

(e) Do a check for continuity between connector D2501A of the REU, or connector D121 of the PA amplifier, and the attendant speakers:

Table 206

ATTENDANT SPEAKER	PA OR REU CONNECTOR		ATTENDANT SPEAKER
RIGHT FORWARD ATTENDANT'S SPEAKER (M1464)	D2501A		M1464
	pin H2	----------	1K/2K/4K terminal wire
	D121		
	pin 14	----------	COM terminal wire
LEFT FORWARD ATTENDANT'S SPEAKER (M157)	D2501A		M157
	pin H2	----------	1K/2K/4K terminal wire
	D121		
	pin 14	----------	COM terminal wire
RIGHT AFT ATTENDANT'S SPEAKER (M1212)	D2501A		M1212
	pin C1	----------	1K/2K/4K terminal wire
	D121		
	pin 14	----------	COM terminal wire
LEFT AFT ATTENDANT'S SPEAKER (M1213)	D2501A		M1213
	pin C1	----------	1K/2K/4K terminal wire
	D121		
	pin 14	----------	COM terminal wire

Table 207

ATTENDANT SPEAKER	PA OR REU CONNECTOR		ATTENDANT SPEAKER
RIGHT FORWARD ATTENDANT'S SPEAKER (M1464)	D2501A		M1464
	pin H2	----------	1K/2K/4K terminal wire
	D121		
	pin 14	----------	COM terminal wire
LEFT FORWARD ATTENDANT'S SPEAKER (M157)	D2501A		M157
	pin H2	----------	1K/2K/4K terminal wire
	D121		
	pin 14	----------	COM terminal wire

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SHZ 721-799 (Continued)

SHZ ALL

(f)   If there is not continuity between the pins, then do these steps:

1)   Repair the wiring.

2)   Re-install the speakers. This is the task: Attendant Speaker - Installation, AMM TASK 23-31-03-400-801.

   NOTE: Make sure that the electrical connectors are connected to the same terminals that they were removed from.

3)   Re-install the PA amplifier. This is the task: Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

4)   Re-install the REU. This is the task: Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

5)   Use a microphone in the flight deck to make an announcement over the passenger address system.

   a)   Make sure you can hear the announcement on both attendant's speakers.

6)   If you heard the announcement on both attendant's speakers, then you corrected the fault.

G.   Fault Isolation Procedure - Lavatory Speaker

(1)   Replace the lavatory speaker. These are the tasks:

   • Lavatory Speaker Removal, AMM TASK 23-31-05-000-801

   • Lavatory Speaker Installation, AMM TASK 23-31-05-400-801

(a)   Use a microphone in the flight deck to make an announcement over the passenger address system.

   1)   Make sure you can hear the announcement on the lavatory speaker.

(b)   If you heard the announcement on the lavatory speaker, then you corrected the fault.

(c)   If you did not hear the announcement on the lavatory speaker, then continue.

(2)   Do this check of the wiring.

(a)   Remove the passenger address (PA) amplifier, M63. To remove it, do this task: Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801.

(b)   Disconnect electrical connector D3732 from the left forward lavatory module.

(c)   Disconnect electrical connector D3738 from the left aft lavatory module.

(d)   Disconnect electrical connector D3740 from the right aft lavatory module.

SHZ 002, 009-699, 706, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(e)   Do a check for continuity between the PA amplifier and the lavatory module connectors:

Table 208

LAVATORY SPEAKER	PA AMP CONNECTOR		LAVATORY MODULE CONNECTOR
LEFT FORWARD LAVATORY SPEAKER	D2639B		D3732
	pin A15	----------	pin 13

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Table 208 (Continued)

LAVATORY SPEAKER	PA AMP CONNECTOR		LAVATORY MODULE CONNECTOR
	pin B15	----------	pin 14
LEFT AFT LAVATORY SPEAKER	D2639B		D3738
	pin A15	----------	pin 13
	pin B15	----------	pin 14
RIGHT AFT LAVATORY SPEAKER	D2639B		D3740
	pin A15	----------	pin 13
	pin B15	----------	pin 14

SHZ 721-799

(f)   Do a check for continuity between the PA amplifier and the lavatory module connectors:

Table 209

LAVATORY SPEAKER	PA AMP CONNECTOR		LAVATORY MODULE CONNECTOR
LEFT FORWARD LAVATORY SPEAKER	D121		D3732
	pin 22	----------	pin 13
	pin 14	----------	pin 14
LEFT AFT LAVATORY SPEAKER	D121		D3738
	pin 22	----------	pin 13
	pin 14	----------	pin 14
RIGHT AFT LAVATORY SPEAKER	D121		D3740
	pin 22	----------	pin 13
	pin 14	----------	pin 14

SHZ ALL

(g)   If there is not continuity between the pins, then do these steps:

    1)   Repair the wiring.

    2)   Re-connect electrical connector D3732 to the left forward lavatory module.

    3)   Re-connect electrical connector D3738 to the left aft lavatory module.

    4)   Re-connect electrical connector D3740 to the right aft lavatory module.

    5)   Re-install the PA amplifier. This is the task: Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

    6)   Use a microphone in the flight deck to make an announcement over the passenger address system.

      a)   Make sure you can hear the announcement on the lavatory speaker.

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7) If you heard the announcement on the lavatory speaker, then you corrected the fault.

H. **Fault Isolation Procedure - PSU Speaker**

(1) Replace the PSU speaker.

(a) These are the tasks:

1) Passenger Service Unit (PSU) Speaker - Removal, AMM TASK 23-31-02-000-801

2) Passenger Service Unit (PSU) Speaker - Installation, AMM TASK 23-31-02-400-801

(b) Use a microphone in the flight deck to make an announcement over the passenger address system.

1) Make sure you can hear the announcement on the PSU speaker.

(c) If you heard the announcement on the PSU speaker, then you corrected the fault.

(d) If you did not hear the announcement on the PSU speaker, then continue.

———— END OF TASK ————

SHZ 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

807. <u>Boarding Music Problem - Fault Isolation</u>

A. **Description**

(1) The pre-recorded announcement machine (PRAM) does not operate, or the quality of the audio is bad.

B. **Possible Causes**

(1) Pre-recorded announcement machine (PRAM), M1276 or M1966

(2) Passenger address (PA) amplifier, M63

(3) Wiring

C. **Circuit Breakers**

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	9	C00080	ENTERTAINMENT PA TAPE RPDR AC
D	4	C00082	COMMUNICATIONS PA AMPL BAT

D. **Initial Evaluation**

SHZ 706, 721-799, 865, 866, 871-874

(1) Do a test of the boarding music operation:

(a) Push the keys 9 and 0 on the tape reproducer.

(b) Push the MUSIC 1 button.

1) Make sure the cassette door opens.

(c) Put the boarding music tape into the tape reproducer.

(d) Close the cassette door.

(e) Turn the volume control to the middle position.

(f) Push the MUSIC 1 button.

1) Make sure the MUSIC 1 light comes on.

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SHZ 706, 721-799, 865, 866, 871-874 (Continued)

    (g)   Push the START button.

       1)   Make sure the START light comes on.

       2)   Make sure you hear clear music on the PSU, lavatory, and attendant speakers.

    (h)   Turn the volume control clockwise.

       1)   Make sure the volume level increases at all of the speakers.

    (i)   Turn the volume control counterclockwise.

       1)   Make sure the volume level decreases at all of the speakers.

    (j)   Turn the volume control to the middle position.

    (k)   Push the MUSIC 2 button.

       1)   Make sure the MUSIC 2 light comes on.

       2)   Make sure you hear a different type of music on all of the speakers.

    (l)   Push the STOP button on the tape reproducer.

       1)   Make sure the boarding music stops.

  (m)   If the boarding music system did not pass one or all of the steps above, then do the Fault Isolation Procedure below.

    (n)   If the boarding music system operated correctly, then there was an intermittent fault.

SHZ 801-820, 876-880, 901-999

(2)   Do a test of the boarding music operation:

    (a)   Push the ENT button on the PRAM.

    (b)   Push the MUSIC button.

    (c)   Push '1' on the PRAM to select channel 1.

    (d)   Push the START button.

    (e)   Turn the volume control to the middle position.

       1)   Make sure you hear clear music on all of the PSU, lavatory, and PA speakers.

    (f)   Turn the volume control clockwise.

       1)   Make sure the volume level increases at all of the speakers.

    (g)   Turn the volume control counterclockwise.

       1)   Make sure the volume level decreases at all of the speakers.

    (h)   Turn the volume control to the middle position.

    (i)   Push the STOP button on the tape reproducer.

       1)   Make sure the boarding music stops.

    (j)   If the boarding music system did not pass any of the steps above, then do the Fault Isolation Procedure below.

    (k)   If the boarding music system operated correctly, then there was an intermittent fault.

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SHZ 860-863

(3) Do a test of the boarding music operation:

(a) Put test tape part number 980-3022-001 into the pre-recorded announcement machine (PRAM). To install the tape, do this task: Tape Replacement, AMM TASK 23-31-07-900-801.

(b) Touch the applicable selections on the video system control unit (VSCU) to turn on the boarding music.

(c) Adjust the volume so that you can hear the boarding music clearly.

   1) Make sure you can hear clear music on the PSU, lavatory, and attendant speakers.

(d) Increase the boarding music volume.

   1) Make sure the volume level increases at all of the speakers.

(e) Decrease the boarding music volume.

   1) Make sure the volume level decreases at all of the speakers.

(f) Stop the boarding music.

(g) If the boarding music system did not pass one or all of the steps above, then do the Fault Isolation Procedure below.

(h) If the boarding music system operated correctly, then there was an intermittent fault.

SHZ 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

E. Fault Isolation Procedure

(1) Do this test of the boarding music operation:

(a) Set the forward attendant's handset to the PA mode.

(b) Push the PTT button on the forward attendant's handset.

(c) Make an announcement from the forward attendant's handset.

   1) Make sure you can hear the announcement on the aft attendant, lavatory, and passenger service unit speakers.

(d) If you heard an announcement on the speakers, then do these steps:

   1) Replace the pre-recorded announcement machine (PRAM), M1276 or M1966.

   These are the tasks:

   Pre-Recorded Announcement Machine (PRAM) Removal, AMM TASK 23-31-07-000-801,

   Pre-Recorded Announcement Machine (PRAM) Installation, AMM TASK 23-31-07-400-801.

   2) Do the Repair Confirmation at the end of this task.

      a) If the Repair Confirmation is not satisfactory, then continue.

(e) If you did not hear an announcement on the speakers, then do these steps:

   1) Replace the passenger address (PA) amplifier, M63.

   These are the tasks:

   Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801,

   Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

   2) Do the Repair Confirmation at the end of this task.

      a) If the Repair Confirmation is not satisfactory, then continue.

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(2)   Do this check of the wiring:

(a)   Remove the passenger address (PA) amplifier, M63. To remove it, do this task: Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801.

(b)   Remove the pre-recorded announcements machine (PRAM). To remove it, do this task: Pre-Recorded Announcement Machine (PRAM) Removal, AMM TASK 23-31-07-000-801.

SHZ 721-799

(c)   Do a check for continuity between these pins of connector D121 on the PA amplifier, and connector D1507 of the PRAM:

D121	D1507
pin 28	pin 1
pin 25	pin 18
pin 26	pin 17

SHZ 706, 801-820, 865, 866, 871-874, 876-880, 901-999

(d)   Do a check for continuity between these pins of connector D2639B on the PA amplifier, and connector D1507 of the pre-recorded announcement/boarding music tape reproducer:

D2639B	D1507
pin D5	pin 1
pin A5	pin 18
pin B5	pin 17

SHZ 706, 721-799, 801-820, 865, 866, 871-874, 876-880, 901-999

(e)   If there is not continuity between the pins, then do these steps:

1)   Repair the wiring.

2)   Re-install the PRAM. To install it, do this task: Pre-Recorded Announcement Machine (PRAM) Installation, AMM TASK 23-31-07-400-801.

3)   Re-install the PA amplifier. To install it, do this task: Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

4)   Do the Repair Confirmation at the end of this task.

SHZ 860-863

(3)   Do this check of the wiring:

(a)   Remove the passenger address (PA) amplifier, M63. To remove it, do this task: Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801.

(b)   Remove the pre-recorded announcements machine (PRAM). To remove it, do this task: Pre-Recorded Announcement Machine (PRAM) Removal, AMM TASK 23-31-07-000-801.

(c)   Do a check for continuity between these pins of connector D2639B on the PA amplifier, and connector D10665B of the pre-recorded announcement/boarding music tape reproducer:

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D2639B		**D10665B**
pin D5	. . . .	pin A8
pin A5	. . . .	pin A5
pin B5	. . . .	pin B5

    (d)   If there is not continuity between the pins, then do these steps:

        1)   Repair the wiring.

        2)   Re-install the tape reproducer. To install it, do this task: Pre-Recorded Announcement Machine (PRAM) Installation, AMM TASK 23-31-07-400-801.

        3)   Re-install the PA amplifier. To install it, do this task: Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

        4)   Do the Repair Confirmation at the end of this task.

SHZ 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

    F.   Repair Confirmation

SHZ 706, 721-799, 865, 866, 871-874

    (1)   Do a test of the boarding music operation:

        (a)   Push the keys 9 and 0 on the tape reproducer.

        (b)   Push the MUSIC 1 button.

           1)   Make sure the cassette door opens.

        (c)   Put the boarding music tape into the tape reproducer.

        (d)   Close the cassette door.

        (e)   Turn the volume control to the middle position.

        (f)   Push the MUSIC 1 button.

           1)   Make sure the MUSIC 1 light comes on.

        (g)   Push the START button.

           1)   Make sure the START light comes on.

           2)   Make sure you hear clear music on the PSU, lavatory, and attendant speakers.

        (h)   Turn the volume control clockwise.

           1)   Make sure the volume level increases at all of the speakers.

        (i)   Turn the volume control counterclockwise.

           1)   Make sure the volume level decreases at all of the speakers.

        (j)   Turn the volume control to the middle position.

        (k)   Push the MUSIC 2 button.

           1)   Make sure the MUSIC 2 light comes on.

           2)   Make sure you hear a different type of music on all of the speakers.

        (l)   Push the STOP button on the tape reproducer.

           1)   Make sure the boarding music stops.

        (m)   If the boarding music system operated correctly, then you corrected the fault.

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(2) Do a test of the boarding music operation:

  (a) Push the ENT button on the PRAM.

  (b) Push the MUSIC button.

  (c) Push '1' on the PRAM to select channel 1.

  (d) Push the START button.

  (e) Turn the volume control to the middle position.

    1) Make sure you hear clear music on all of the PSU, lavatory, and PA speakers.

  (f) Turn the volume control clockwise.

    1) Make sure the volume level increases at all of the speakers.

  (g) Turn the volume control counterclockwise.

    1) Make sure the volume level decreases at all of the speakers.

  (h) Turn the volume control to the middle position.

  (i) Push the STOP button on the tape reproducer.

    1) Make sure the boarding music stops.

  (j) If the boarding music system operated correctly, then you corrected the fault.

SHZ 860-863

(3) Do a test of the boarding music operation:

  (a) Put test tape part number 980-3022-001 into the pre-recorded announcement machine (PRAM). To install the tape, do this task: Tape Replacement, AMM TASK 23-31-07-900-801.

  (b) Touch the applicable selections on the video system control unit (VSCU) to turn on the boarding music.

  (c) Adjust the volume so that you can hear the boarding music clearly.

    1) Make sure you can hear clear music on the PSU, lavatory, and attendant speakers.

  (d) Increase the boarding music volume.

    1) Make sure the volume level increases at all of the speakers.

  (e) Decrease the boarding music volume.

    1) Make sure the volume level decreases at all of the speakers.

  (f) Stop the boarding music.

  (g) If the boarding music system operated correctly, then you corrected the fault.

———— **END OF TASK** ————

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801. **Passenger Video Monitor Problem - Fault Isolation**

    A. **Description**

       (1) This procedure is for video monitors that have one of these problems:

          (a) The video monitor has been damaged.

          (b) Video monitor picture quality is unacceptable.

    B. **Fault Isolation Procedure**

       (1) Replace the video monitor.

          These are the tasks:

          Retractable CRT Monitor Removal, AMM TASK 23-32-11-000-801 or Non-Retractable CRT Monitor Removal, AMM TASK 23-32-12-000-801 or PSU-Mounted LCD Monitor Removal, AMM TASK 23-32-13-000-801 or Wall-Mounted LCD Monitor Removal, AMM TASK 23-32-14-000-801 or Retractable Ceiling-Mounted LCD Monitor Removal, AMM TASK 23-32-15-000-801,

          Retractable CRT Monitor Installation, AMM TASK 23-32-11-400-801 or Non-Retractable CRT Monitor Installation, AMM TASK 23-32-12-400-801 or PSU-Mounted LCD Monitor Installation, AMM TASK 23-32-13-400-801 or Wall-Mounted LCD Monitor Installation, AMM TASK 23-32-14-400-801 or Retractable Ceiling-Mounted LCD Monitor Installation, AMM TASK 23-32-15-400-801.

——————— **END OF TASK** ———————

802. **Passenger Video Monitor Does Not Operate - Fault Isolation**

    A. **Description**

       (1) One or several video monitors do not operate.

    B. **Possible Causes**

       SHZ 002, 009-699, 871-874, 876-880

       (1) VSCU programming

       SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

       (2) Video monitor

       (3) Video distribution unit (VDU)

       (4) Wiring

    C. **Circuit Breakers**

       (1) These are the primary circuit breakers related to the fault:

          F/O Electrical System Panel, P6-1

Row	Col	Number	Name

          SHZ 002, 009-699, 721-799, 801-820, 860-863, 871-874, 876-880, 901-999

Row	Col	Number	Name
C	5	C01450	ENT VID CONT CENTER DC
C	7	C01451	ENT VID CONT CENTER AC
D	5	C01452	VIDEO 1
D	6	C01453	VIDEO 2
D	7	C01454	VIDEO 3
D	8	C01455	VIDEO 4

          SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

┌─── EFFECTIVITY ───
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

23-32 TASKS 801-802

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These circuit breakers are inoperative and should remain open:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
SHZ 865, 866			
C	5	C01450	ENT VID CONT CENTER DC (INOP)
C	7	C01451	ENT VID CONT CENTER AC (INOP)
D	5	C01452	VIDEO 1 (INOP)
D	6	C01453	VIDEO 2 (INOP)
D	7	C01454	VIDEO 3 (INOP)
D	8	C01455	VIDEO 4 (INOP)

SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

D. Related Data

(1)   (WDM 23-32-3X,-4X,-5X,-6X)

(2)   (SSM 23-32-3X,-4X,-5X,-6X)

E. Initial Evaluation

(1)   Do this test of the passenger video system:

    (a)   Push the power button on the video system control unit (VSCU) to the on position.

    (b)   Make the applicable selections to display the video from VR 1 on all cabin video monitors.

        NOTE: You will make the selections on the VSCU and if it is necessary, on the VR 1.

    (c)   Make sure the applicable video monitors lower from the stowed position.

    (d)   Make sure that the video from VR 1 on all of the video monitors.

    (e)   If you see video from VR 1 on all but one video monitor, then do the Fault Isolation Procedure - Single Video Monitor, below.

    (f)   If you see the video from VR 1 on all but one row of the monitors or all but two adjacent monitors, then do the Fault Isolation Procedure - Single Row/Adjacent Video Monitors, below.

    (g)   If you do not see video from VR 1 on the forward zone of video monitors, then do the Fault Isolation Procedure - Forward Monitors, below.

    (h)   If you do not see video from VR 1 on the aft zone of video monitors, then do the Fault Isolation Procedure - Aft Monitors, below.

    (i)   If you do not see video from VR 1 on several video monitors, then do the Fault Isolation Procedure - Multiple Video Monitors, below.

    (j)   If you see video from VR 1 on all video monitors, then there was an intermittent fault.

F. Fault Isolation Procedure - Single Video Monitor

NOTE: You must do the Initial Evaluation before doing this procedure.

SHZ 002, 009-699, 871-874, 876-880

(1)   Do a check of the video system configuration. To check the configuration, do this task: Video System Configuration, AMM TASK 23-32-02-800-801.

    (a)   Do the Repair Confirmation at the end of this task.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

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SHZ 002, 009-699, 871-874, 876-880 (Continued)

       1)   If the Repair Confirmation is not OK, then continue.

SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

(2)   Move the affected video monitor to the location of a known good monitor:

    NOTE: If the affected video monitor is the forward (retractable) LCD monitor, then skip to the next subtask.

    (a)   These are the procedures to move the affected monitor. These are the tasks: Retractable CRT Monitor Removal, AMM TASK 23-32-11-000-801 or Non-Retractable CRT Monitor Removal, AMM TASK 23-32-12-000-801 or PSU-Mounted LCD Monitor Removal, AMM TASK 23-32-13-000-801 or Wall-Mounted LCD Monitor Removal, AMM TASK 23-32-14-000-801 or Retractable Ceiling-Mounted LCD Monitor Removal, AMM TASK 23-32-15-000-801Retractable CRT Monitor Installation, AMM TASK 23-32-11-400-801 or Non-Retractable CRT Monitor Installation, AMM TASK 23-32-12-400-801 or PSU-Mounted LCD Monitor Installation, AMM TASK 23-32-13-400-801 or Wall-Mounted LCD Monitor Installation, AMM TASK 23-32-14-400-801 or Retractable Ceiling-Mounted LCD Monitor Installation, AMM TASK 23-32-15-400-801.

    (b)   Repeat the initial evaluation.

    (c)   If you do not see the video on the affected monitor then re-install the known good monitor in it's original location:

        1)   These are the procedures to re-install the monitor. These are the tasks: Retractable CRT Monitor Removal, AMM TASK 23-32-11-000-801 or Non-Retractable CRT Monitor Removal, AMM TASK 23-32-12-000-801 or PSU-Mounted LCD Monitor Removal, AMM TASK 23-32-13-000-801 or Wall-Mounted LCD Monitor Removal, AMM TASK 23-32-14-000-801 or Retractable Ceiling-Mounted LCD Monitor Removal, AMM TASK 23-32-15-000-801Retractable CRT Monitor Installation, AMM TASK 23-32-11-400-801 or Non-Retractable CRT Monitor Installation, AMM TASK 23-32-12-400-801 or PSU-Mounted LCD Monitor Installation, AMM TASK 23-32-13-400-801 or Wall-Mounted LCD Monitor Installation, AMM TASK 23-32-14-400-801 or Retractable Ceiling-Mounted LCD Monitor Installation, AMM TASK 23-32-15-400-801.

    (d)   Install a replacement video monitor at the affected monitor's original location.

        1)   This is the procedure to install the monitor. Do this task: Retractable CRT Monitor Installation, AMM TASK 23-32-11-400-801 or Non-Retractable CRT Monitor Installation, AMM TASK 23-32-12-400-801 or PSU-Mounted LCD Monitor Installation, AMM TASK 23-32-13-400-801 or Wall-Mounted LCD Monitor Installation, AMM TASK 23-32-14-400-801 or Retractable Ceiling-Mounted LCD Monitor Installation, AMM TASK 23-32-15-400-801.

    (e)   Do the Repair Confirmation at the end of this task.

        1)   If the Repair Confirmation is not OK, then continue.

(3)   Do these steps to check the video monitor connectors for damage:

    (a)   Disconnect the electrical connectors from the affected video monitor.

    (b)   Make sure that there is no damage to the electrical connectors or the pins.

    (c)   If there is damage to the connectors or pins, then do these steps:

        1)   Repair the connectors or pins.

┌─ EFFECTIVITY ─┐
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

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2)   Reconnect the electrical connectors to the video monitor.

3)   Do the Repair Confirmation at the end of this task.

a)   If the Repair Confirmation is not OK, then continue.

(4)   Do these steps to check the video distribution unit (VDU):

(a)   Remove the video distribution unit (VDU) for the affected video monitor (WDM 23-32-XX). To remove it, do this task: Video Distribution Unit Removal, AMM TASK 23-32-03-000-801.

(b)   Make sure that there is no damage to the electrical connectors or the pins.

(c)   If there is damage to the connectors or pins, then do these steps:

1)   Repair the connectors or pins.

2)   Re-install the VDU. To install it, do this task: Video Distribution Unit Installation, AMM TASK 23-32-03-400-801.

3)   Do the Repair Confirmation at the end of this task.

a)   If the Repair Confirmation was not OK, then continue.

(d)   If there is no damage to the connectors or pins, then do these steps:

1)   Install a new VDU in the affected VDU's original location. To install it, do this task: Video Distribution Unit Installation, AMM TASK 23-32-03-400-801.

2)   Do the Repair Confirmation at the end of this task.

a)   If the Repair Confirmation is not OK, then continue.

(5)   Do this check of the wiring:

(a)   Remove the affected video monitor. To remove it, do this task: Retractable CRT Monitor Removal, AMM TASK 23-32-11-000-801 or Non-Retractable CRT Monitor Removal, AMM TASK 23-32-12-000-801 or PSU-Mounted LCD Monitor Removal, AMM TASK 23-32-13-000-801 or Wall-Mounted LCD Monitor Removal, AMM TASK 23-32-14-000-801 or Retractable Ceiling-Mounted LCD Monitor Removal, AMM TASK 23-32-15-000-801.

(b)   Remove the VDU for the affected monitor (WDM 23-32-XX). To remove it, do this task: Video Distribution Unit Removal, AMM TASK 23-32-03-000-801.

(c)   Do a check for continuity of all wiring between the video monitor and the VDU (WDM 23-32-XX).

(d)   If there is not continuity, then do these steps:

1)   Repair the wiring.

2)   Re-install the VDU. To install it, do this task: Video Distribution Unit Installation, AMM TASK 23-32-03-400-801.

3)   Re-install the video monitor. To install it, do this task: Retractable CRT Monitor Installation, AMM TASK 23-32-11-400-801 or Non-Retractable CRT Monitor Installation, AMM TASK 23-32-12-400-801 or PSU-Mounted LCD Monitor Installation, AMM TASK 23-32-13-400-801 or Wall-Mounted LCD Monitor Installation, AMM TASK 23-32-14-400-801 or Retractable Ceiling-Mounted LCD Monitor Installation, AMM TASK 23-32-15-400-801.

4)   Do the Repair Confirmation at the end of this task.

G.   Fault Isolation Procedure - Single Row/Adjacent Video Monitors

NOTE: You must do the Initial Evaluation before doing this procedure.

┌── EFFECTIVITY ──
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865,
866, 871-874, 876-880, 901-999

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SHZ 002, 009-699, 871-874, 876-880

    (1)   Do a check of the video system configuration. To check the configuration, do this task: Video System Configuration, AMM TASK 23-32-02-800-801.

        (a)   Do the Repair Confirmation at the end of this task.

            1)   If the Repair Confirmation is not OK, then continue.

SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

    (2)   Replace the video distribution unit (VDU) for the affected video monitors.

        These are the tasks:

        Video Distribution Unit Removal, AMM TASK 23-32-03-000-801,

        Video Distribution Unit Installation, AMM TASK 23-32-03-400-801.

        (a)   Do the Repair Confirmation at the end of this task.

            1)   If the Repair Confirmation is not OK, then continue.

    (3)   Do this check of the wiring:

        (a)   Remove the VDU for the affected video monitors (WDM 23-32-XX). To remove it, do this task: Video Distribution Unit Removal, AMM TASK 23-32-03-000-801.

        (b)   Remove the VDU for the forward video monitors (WDM 23-32-XX). To remove it, do this task: Video Distribution Unit Removal, AMM TASK 23-32-03-000-801.

        (c)   Make sure that there is no damage to the electrical connectors or the pins on both VDUs.

        (d)   If there is damage to the connectors or pins, then do these steps:

            1)   Repair the connectors or pins.

            2)   Re-install both VDUs. To install them, do this task: Video Distribution Unit Installation, AMM TASK 23-32-03-400-801.

            3)   Do the Repair Confirmation at the end of this task.

                a)   If the Repair Confirmation is not OK, then continue.

        (e)   If there is no damage to the connectors or pins, then do these steps:

            1)   Do a check for continuity of the wiring between the VDUs.

            2)   If there is not continuity then do these steps:

                a)   Repair the wiring.

                b)   Re-install both VDUs. To install them, do this task: Video Distribution Unit Installation, AMM TASK 23-32-03-400-801.

                c)   Do the Repair Confirmation at the end of this task.

  H.   **Fault Isolation Procedure - Forward Monitors**

SHZ 002, 009-699, 871-874, 876-880

    (1)   Do a check of the video system configuration. To check the configuration, do this task: Video System Configuration, AMM TASK 23-32-02-800-801.

        (a)   Do the Repair Confirmation at the end of this task.

            1)   If the Repair Confirmation is not OK, then continue.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

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SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

(2)   Replace the first video distribution unit (VDU) of the forward zone.

These are the tasks:

Video Distribution Unit Removal, AMM TASK 23-32-03-000-801,

Video Distribution Unit Installation, AMM TASK 23-32-03-400-801.

(a)   Do the Repair Confirmation at the end of this task.

1)   If the Repair Confirmation is not OK, then continue.

(3)   Do this check of the wiring:

(a)   Remove the first VDU, M1934. To remove it, do this task: Video Distribution Unit Removal, AMM TASK 23-32-03-000-801.

(b)   Remove the video system control unit (VSCU). To remove it, do this task: Video System Control Unit Removal, AMM TASK 23-32-02-000-801-001.

(c)   Do a check for continuity of the wiring between the VSCU and the VDU.

(d)   If there is not continuity, then do these steps:

1)   Repair the wiring.

2)   Re-install the VSCU. To install it, do this task: Video System Control Unit Installation, AMM TASK 23-32-02-400-801-001.

3)   Re-install the VDU. To install it, do this task: Video Distribution Unit Installation, AMM TASK 23-32-03-400-801.

4)   Do the Repair Confirmation at the end of this task.

I.   **Fault Isolation Procedure - Aft Monitors**

SHZ 002, 009-699, 871-874, 876-880

(1)   Do a check of the video system configuration. To check the configuration, do this task: Video System Configuration, AMM TASK 23-32-02-800-801.

(a)   Do the Repair Confirmation at the end of this task.

1)   If the Repair Confirmation is not OK, then continue.

SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

(2)   Replace the first video distribution unit (VDU) of the aft zone.

These are the tasks:

Video Distribution Unit Removal, AMM TASK 23-32-03-000-801,

Video Distribution Unit Installation, AMM TASK 23-32-03-400-801.

(a)   Do the Repair Confirmation at the end of this task.

1)   If the Repair Confirmation is not OK, then continue.

(3)   Do this check of the wiring:

(a)   Remove the first VDU of the aft zone. To remove it, do this task: Video Distribution Unit Removal, AMM TASK 23-32-03-000-801.

(b)   Remove the video system control unit (VSCU). To remove it, do this task: Video System Control Unit Removal, AMM TASK 23-32-02-000-801-001.

(c)   Do a check for continuity of the wiring between the VSCU and the VDU.

(d)   If there is not continuity, then do these steps:

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865,
866, 871-874, 876-880, 901-999

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1) Repair the wiring.

2) Re-install the VSCU. To install it, do this task: Video System Control Unit Installation, AMM TASK 23-32-02-400-801-001.

3) Re-install the VDU. To install it, do this task: Video Distribution Unit Installation, AMM TASK 23-32-03-400-801.

4) Do the Repair Confirmation at the end of this task.

J. Fault Isolation Procedure - Multiple Video Monitors

SHZ 002, 009-699, 871-874, 876-880

(1) Do a check of the video system configuration. To check the configuration, do this task: Video System Configuration, AMM TASK 23-32-02-800-801.

  (a) Do the Repair Confirmation at the end of this task.

    1) If the Repair Confirmation is not OK, then continue.

SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

(2) Replace the video distribution unit (VDU) for the affected video monitor closest to the front of the airplane (WDM 23-32-XX).

These are the tasks:

Video Distribution Unit Removal, AMM TASK 23-32-03-000-801,

Video Distribution Unit Installation, AMM TASK 23-32-03-400-801.

  (a) Do the Repair Confirmation at the end of this task.

    1) If the Repair Confirmation is not OK, then continue.

(3) Do this check of the wiring:

  (a) Remove the VDU for the affected video monitor closest to the front of the airplane (WDM 23-32-XX). To remove it, do this task: Video Distribution Unit Removal, AMM TASK 23-32-03-000-801.

  (b) Remove the VDU for the video monitor in front of the affected video monitors (WDM 23-32-XX). To remove it, do this task: Video Distribution Unit Removal, AMM TASK 23-32-03-000-801.

  (c) Do a check for continuity of the wiring between both VDUs.

  (d) If there is not continuity, then do these steps:

    1) Repair the wiring.

    2) Re-install both VDUs. To install them, do this task: Video Distribution Unit Installation, AMM TASK 23-32-03-400-801.

    3) Do the Repair Confirmation at the end of this task.

K. Repair Confirmation

(1) Do this test of the passenger video system:

  (a) Make the applicable selections to display the video from VR 1 on the cabin monitors.

    NOTE: You will make the selections on the VSCU and if necessary, on the VR 1.

    1) Make sure the applicable video monitors lower from the stowed position.

  (b) Look for the video display on all of the video monitors.

  (c) If you see the video on all of the video monitors then you corrected the fault.

——— **END OF TASK** ———

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

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SHZ 002, 009-699, 721-799, 801-820, 860-863, 871-874, 876-880, 901-999

803. <u>Video Reproducer Problems - Fault Isolation</u>

    A.   **Description**

        (1)   A Video Reproducer (VR) has one of these problems:

            (a)   VR does not turn on.

            (b)   VR controls do not operate.

    B.   **Possible Causes**

        SHZ 002, 721-799, 801-820, 871-874, 876-880

        (1)   Video Reproducer

        SHZ 009-699, 860-863, 901-999

        (2)   Video Reproducers

        SHZ 002, 009-699, 721-799, 801-820, 860-863, 871-874, 876-880, 901-999

        (3)   Connectors or pins

        (4)   Video System Control Unit (VSCU), M2065

        (5)   Wiring

    C.   **Circuit Breakers**

        (1)   These are the primary circuit breakers related to the fault:

            F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	5	C01450	ENT VID CONT CENTER DC
C	7	C01451	ENT VID CONT CENTER AC

    D.   **Related Data**

        (1)   WDM 23-32-11

        (2)   SSM 23-32-11

    E.   **Initial Evaluation**

        (1)   Do this test of the VR:

            (a)   Push the power button on the VSCU to the on position.

                1)   Make sure the power light on the VR comes on.

            (b)   If the light on the VR does not come on, then do the Fault Isolation Procedure - VR Does Not Turn On below.

            (c)   If the light does come on, then continue.

            (d)   Put a media source (tape, Compact Disc (CD), or DVD) into the VR if necessary.

            (e)   Make the applicable selections to display the video from VR 1 on the VSCU preview monitor.

              <u>NOTE</u>: You will make the selections on the VSCU and if it is necessary, on the VR 1.

                1)   Make sure that you see video from the VR on the VSCU preview monitor.

            (f)   If the VR plays but you do not see video from the VR on the VSCU preview monitor, then do the Fault Isolation Procedure - No Video From VR below.

┌─── EFFECTIVITY ───
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865,
866, 871-874, 876-880, 901-999

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SHZ 002, 009-699, 721-799, 801-820, 860-863, 871-874, 876-880, 901-999 (Continued)

    (g)   If the VR plays but you do not see video from the VR on the monitors, then do the Fault Isolation Procedure - No Video From VR below.

    (h)   If the VR does not play, or any other attempt to control the media source (tape, CD, or DVD) does not work, then do the Fault Isolation Procedure - VR Controls Do Not Operate below.

    (i)   If you see video from the VR on the VSCU preview monitor, then there was an intermittent fault.

    (j)   If you see video from the VR on the monitors, then there was an intermittent fault.

F.   Fault Isolation Procedure - VR Does Not Turn On

SHZ 721-799, 801-820, 860-863, 901-999

(1)   Do this check for power:

    (a)   Remove the VR. This is the task: Video Reproducer Removal, AMM TASK 23-32-01-000-801.

    (b)   Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	7	C01451	ENT VID CONT CENTER AC

    (c)   Do a check for 115V AC on pins 1 and 2 of the VR connector.

    (d)   If you do not find the 115V AC, then do these steps:

        1)   Examine and repair the wiring between the VSCU and the VR.

    (e)   If you found and repaired a wire problem, then do these steps:

        1)   Re-install the VR. This is the task: Video Reproducer Installation, AMM TASK 23-32-01-400-801.

        2)   Do the Repair Confirmation at the end of this procedure.

    (f)   If the 115V AC is OK, then do a check for 28V DC on pins 3 and 4 of the VR connector.

    (g)   If there is not 28V DC, then do these steps:

        1)   Repair the wiring between the VSCU and the VR.

        2)   Re-install the VR. This is the task: Video Reproducer Installation, AMM TASK 23-32-01-400-801.

        3)   Do the Repair Confirmation at the end of this procedure.

    (h)   If there is 28V DC, then continue.

SHZ 002, 009-699, 871-874, 876-880

(2)   Do this check for power:

    (a)   Remove the VR. This is the task: Video Reproducer Removal, AMM TASK 23-32-01-000-801.

    (b)   Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	7	C01451	ENT VID CONT CENTER AC

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

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SHZ 002, 009-699, 871-874, 876-880 (Continued)

    (c)   Do a check for 115V AC on pins 3 and 4 of the VR connector.

    (d)   If there is not 115V AC, then do these steps:

        1)   Repair the wiring between the VSCU and the VR.

        2)   Re-install the VR. This is the task: Video Reproducer Installation, AMM TASK 23-32-01-400-801.

        3)   Do the Repair Confirmation at the end of this procedure.

    (e)   If there is 115V AC, then continue.

SHZ 009-699, 860-863, 901-999

(3)   Move the VR to another location:

    (a)   Remove a working VR from another location. This is the task: Video Reproducer Removal, AMM TASK 23-32-01-000-801.

    (b)   Install the affected VR at the working VR's location. This is the task: Video Reproducer Installation, AMM TASK 23-32-01-400-801.

    (c)   Make the selections to show video from the affected VR, in the new location, on the VSCU preview monitor.

        1)   Make sure you see video from the VR on the VSCU preview monitor.

    (d)   If you do not see video from the VR on the VSCU preview monitor, then do these steps:

        1)   Remove the affected VR. This is the task: Video Reproducer Removal, AMM TASK 23-32-01-000-801.

        2)   Re-install the working VR into its original location. This is the task: Video Reproducer Installation, AMM TASK 23-32-01-400-801.

        3)   Install a new VR into the affected VR's original location. This is the task: Video Reproducer Installation, AMM TASK 23-32-01-400-801.

        4)   Do the Repair Confirmation at the end of this task.

    (e)   If you do see video from the VR on the VSCU preview monitor, then continue.

SHZ 002, 009-699, 721-799, 801-820, 860-863, 871-874, 876-880, 901-999

(4)   Do these steps to check the VR and VSCU connectors for damage:

    (a)   Remove the VR. This is the task: Video Reproducer Removal, AMM TASK 23-32-01-000-801.

    (b)   Remove the VSCU. This is the task: Video System Control Unit Removal, AMM TASK 23-32-02-000-801-001.

    (c)   Make sure that there is no damage to the electrical connectors or the pins.

    (d)   If there is damage to the connectors or pins, then do these steps:

        1)   Repair the connectors or pins.

        2)   Re-install the VSCU. This is the task: Video System Control Unit Installation, AMM TASK 23-32-02-400-801-001.

        3)   Re-install the VR. This is the task: Video Reproducer Installation, AMM TASK 23-32-01-400-801.

        4)   Do the Repair Confirmation at the end of this task.

           a)   If the Repair Confirmation is not OK, then continue.

┌─── EFFECTIVITY ───
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

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SHZ 002, 009-699, 721-799, 801-820, 860-863, 871-874, 876-880, 901-999 (Continued)

       (e)   If there is no damage to the connectors or pins, then continue.

   (5)   Do this check of the wiring:

       (a)   Remove the VR. This is the task: Video Reproducer Removal, AMM TASK 23-32-01-000-801.

       (b)   Remove the VSCU. This is the task: Video System Control Unit Removal, AMM TASK 23-32-02-000-801-001.

       (c)   Do a check for continuity of the wiring between the VR and the VSCU.

       (d)   If there is not continuity, then do these steps:

           1)   Repair the wiring.

           2)   Re-install the VSCU. This is the task: Video System Control Unit Installation, AMM TASK 23-32-02-400-801-001.

           3)   Re-install the VR. This is the task: Video Reproducer Installation, AMM TASK 23-32-01-400-801.

           4)   Do the Repair Confirmation at the end of this task.

       (e)   If there is continuity, then continue.

   (6)   Replace the VSCU, M2065. These are the tasks:

      • Video System Control Unit Removal, AMM TASK 23-32-02-000-801-001

      • Video System Control Unit Installation, AMM TASK 23-32-02-400-801-001

       (a)   Do the Repair Confirmation at the end of this task.

G.   Fault Isolation Procedure - No Video From VR

   (1)   Do this check of the wiring:

       (a)   Remove the VR. This is the task: Video Reproducer Removal, AMM TASK 23-32-01-000-801.

       (b)   Remove the VSCU. This is the task: Video System Control Unit Removal, AMM TASK 23-32-02-000-801-001.

       (c)   Make sure that there is no damage to the electrical connectors or the pins.

       (d)   If there is damage to the connectors or pins, then do these steps:

           1)   Repair the connectors or pins.

           2)   Re-install the VSCU. This is the task: Video System Control Unit Installation, AMM TASK 23-32-02-400-801-001.

           3)   Re-install the VR. This is the task: Video Reproducer Installation, AMM TASK 23-32-01-400-801.

           4)   Do the Repair Confirmation at the end of this task.

       (e)   If there is no damage to the connectors or pins, then do these steps:

┌─ EFFECTIVITY ─┐
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

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SHZ 002, 009-699, 871-874, 876-880

VR

	VR Connector	VSCU Connector
VR 1	**D10659**	**D10657B**
	pin 63	pin 9
	pin 64	pin 10
VR 2 (if installed)	**D10661**	**D10657B**
	pin 63	pin 16
	pin 64	pin 17
VR 3 (if installed)	**D10663**	**D10627B**
	pin 63	pin 24
	pin 64	pin 25

SHZ 801-820, 860-863, 901-999

    (g)   Do a check for continuity between these pins of the VR and the VSCU:

VR

	VR Connector	VSCU Connector
VR 1	**D10659**	**D10667**
	pin 30	pin 1
	pin 30	pin 1
VR 2 (if installed)	**D10661**	**D10667**
	pin 30	pin 2
	pin 30	pin 2

SHZ 721-799

    (h)   Do a check for continuity between these pins of the VR and the VSCU:

VR

	VR Connector	VSCU Connector
VR 1	**D10957**	**D10947**
	pin A1	pin 1

SHZ 009-699, 860-863, 901-999

    (i)   If there is not continuity, then do these steps:

       1)   Repair the wiring.

       2)   Re-install the VSCU. This is the task: Video System Control Unit Installation, AMM TASK 23-32-02-400-801-001.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

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SHZ 009-699, 860-863, 901-999 (Continued)

      3)   Re-install the VR. This is the task: Video Reproducer Installation, AMM TASK 23-32-01-400-801.

      4)   Do the Repair Confirmation at the end of this task.

   (j)   If there is continuity, then continue.

SHZ 002, 009-699, 721-799, 801-820, 860-863, 871-874, 876-880, 901-999

(2)   Replace the VR. These are the tasks:

- Video Reproducer Removal, AMM TASK 23-32-01-000-801

- Video Reproducer Installation, AMM TASK 23-32-01-400-801

   (a)   Do the Repair Confirmation at the end of this task.

(3)   Replace the VSCU. These are the tasks:

- Video System Control Unit Removal, AMM TASK 23-32-02-000-801-001

- Video System Control Unit Installation, AMM TASK 23-32-02-400-801-001

   (a)   Do the Repair Confirmation at the end of this task.

H. Fault Isolation Procedure - VR Controls Do Not Operate

(1)   Do this check of the connectors:

   (a)   Remove the VR. This is the task: Video Reproducer Removal, AMM TASK 23-32-01-000-801.

   (b)   Remove the VSCU. This is the task: Video System Control Unit Removal, AMM TASK 23-32-02-000-801-001.

   (c)   Make sure that there is no damage to the electrical connectors or the pins.

   (d)   If there is damage to the connectors or pins, then do these steps:

      1)   Repair the connectors or pins.

      2)   Re-install the VSCU. This is the task: Video System Control Unit Installation, AMM TASK 23-32-02-400-801-001.

      3)   Re-install the VR. This is the task: Video Reproducer Installation, AMM TASK 23-32-01-400-801.

      4)   Do the Repair Confirmation at the end of this task.

   (e)   If there is no damage to the connectors or pins, then continue.

(2)   Do this check of the wiring:

SHZ 002, 009-699, 871-874, 876-880

   (a)   Do a check for continuity between these pins of the VR and the VSCU:

┌─── EFFECTIVITY ───
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865,
866, 871-874, 876-880, 901-999

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SHZ 002, 009-699, 871-874, 876-880 (Continued)

VR

	VR Connector	VSCU Connector
VR 1	**D10659**	**D10657B**
	pin 54	pin 55
	pin 53	pin 56
VR 2 (if installed)	**D10661**	**D10657B**
	pin 54	pin 57
	pin 53	pin 58
VR 3 (if installed)	**D10663**	**D10657B**
	pin 54	pin 59
	pin 53	pin 60

SHZ 801-820, 860-863, 901-999

(b)   Do a check for continuity between these pins of the VR and the VSCU:

VR

	VR Connector	VSCU Connector
VR 1	**D10659**	**D10673**
	pin 6	pin 38
	pin 7	pin 38
VR 1	**D10659**	**D10675**
	pin 19	pin 1
	pin 20	pin 2
VR 2 (If installed)	**D10661**	**D10673**
	pin 6	pin 38
	pin 7	pin 38
VR 2 (If installed)	**D10661**	**D10675**
	pin 19	pin 4
	pin 20	pin 5

SHZ 002, 009-699, 721-799, 801-820, 860-863, 871-874, 876-880, 901-999

(c)   If there is not continuity, then do these steps:

1)   Repair the wiring.

2)   Re-install the VSCU. This is the task: Video System Control Unit Installation, AMM TASK 23-32-02-400-801-001.

┌─ EFFECTIVITY ─
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

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     3)   Re-install the VR. This is the task: Video Reproducer Installation, AMM TASK 23-32-01-400-801.

     4)   Do the Repair Confirmation at the end of this task.

  (3)   Replace the VR. These are the tasks:

     • Video Reproducer Removal, AMM TASK 23-32-01-000-801

     • Video Reproducer Installation, AMM TASK 23-32-01-400-801

    (a)   Do the Repair Confirmation at the end of this task.

  (4)   Replace the VSCU. These are the tasks:

     • Video System Control Unit Removal, AMM TASK 23-32-02-000-801-001

     • Video System Control Unit Installation, AMM TASK 23-32-02-400-801-001

    (a)   Do the Repair Confirmation at the end of this task.

I.   **Repair Confirmation**

  (1)   Do this test of the VR:

    (a)   Push the power button on the VSCU to the on position.

    (b)   Put a media source (tape, CD, or DVD) into the VR if necessary.

    (c)   Make the applicable selections to display the video from VR 1 on the VSCU preview monitor.

       NOTE: You will make the selections on the VSCU and if it is necessary, on the VR 1.

      1)   Make sure that you see video from the VR on the VSCU preview monitor.

    (d)   If you see video from the VR on the VSCU preview monitor, then you corrected the problem.

    (e)   If test was not satisfactory, then continue the applicable Fault Isolation Procedure at the subsequent step.

——— **END OF TASK** ———

804.   **Video Reproducer Video Quality Problem - Fault Isolation**

  A.   **Description**

  (1)   The quality of the video from a video reproducer (VR) is not acceptable.

  B.   **Fault Isolation Procedure**

  (1)   Replace the video reproducer.

     These are the tasks:

     Video Reproducer Removal, AMM TASK 23-32-01-000-801,

     Video Reproducer Installation, AMM TASK 23-32-01-400-801.

——— **END OF TASK** ———

805.   **Video Reproducer Audio Quality Problem - Fault Isolation**

  A.   **Description**

  (1)   The quality of the audio from a video reproducer (VR) is not acceptable.

┌─── EFFECTIVITY ───
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

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SHZ 002, 009-699, 721-799, 801-820, 860-863, 871-874, 876-880, 901-999 (Continued)

    B. Possible Causes

      SHZ 002, 721-799, 801-820, 871-874, 876-880

      (1) Video reproducer (VR)

      SHZ 009-699, 860-863, 901-999

      (2) Video reproducers

      SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

      (3) Audio multiplexer, M1956

      SHZ 002, 009-699, 721-799, 801-820, 860-863, 871-874, 876-880, 901-999

      (4) Wiring

    C. Circuit Breakers

      (1) These are the primary circuit breakers related to the fault:

      F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	7	C01451	ENT VID CONT CENTER AC

      SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

Row	Col	Number	Name
C	8	C01456	ENTERTAINMENT AUDIO

      SHZ 002, 009-699, 721-799, 801-820, 860-863, 871-874, 876-880, 901-999

    D. Related Data

      (1) (WDM 23-32-31, 23-34-01)

      (2) (SSM 23-32-11, 23-34-01)

    E. Initial Evaluation

      (1) Do this test of the video reproducer:

        (a) Push the ENTERTAINMENT IFE button on the forward attendant's panel to the on position.

        (b) Push the power button on the video system control unit (VSCU) to the on position.

        (c) Connect headphones to the headphone jack on the VSCU.

        (d) Put a media source (tape, CD, or DVD) into the VR.

        (e) Make the applicable selections to display the video from the VR on all passenger video monitors, the VSCU preview monitor, and the audio on the PA system.

           NOTE: You will make the selections on the VSCU and if it is necessary, on the VR.

          1) Make sure you hear clear audio on the headphones connected to the VSCU.

          2) Make sure you hear clear audio on the passenger address (PA) speakers.

        (f) If you do not hear clear audio on the headphones connected to the VSCU, do the Fault Isolation Procedure - VR Problem below.

        (g) If you hear clear audio on the headphones connected to the VSCU, but do not hear clear audio on the PA speakers, then do the Fault Isolation Procedure - Multiplexer Problem below.

┌─── EFFECTIVITY ───
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865,
866, 871-874, 876-880, 901-999

23-32 TASK 805

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SHZ 002, 009-699, 721-799, 801-820, 860-863, 871-874, 876-880, 901-999 (Continued)

    (h)   If you hear clear audio on the headphones connected to the VSCU and on the PA speakers, then there was an intermittent problem.

  F.   **Fault Isolation Procedure - VR Problem**

    NOTE: You must do the Initial Evaluation in this task before you do this procedure.

SHZ 009-699, 860-863, 901-999

    (1)   Move the VR to a different location:

        (a)   Remove the affected VR. To remove it, (AMM TASK 23-32-01-000-801).

        (b)   Remove a working VR. To remove it, (AMM TASK 23-32-01-000-801).

        (c)   Install the affected VR in the working VR's original location. To install it, (AMM TASK 23-32-01-400-801).

        (d)   Make the applicable selections to display the video from VR 1 on the VSCU preview monitor.

            NOTE: You will make the selections on the VSCU and if it is necessary, on the VR 1.

        (e)   Make sure you hear clear audio on the headphones connected to the VSCU.

        (f)   If you do not hear clear audio on the headphones connected to the VSCU, then do these steps:

            1)   Remove the affected VR. To remove it, (AMM TASK 23-32-01-000-801).

            2)   Re-install the working VR to its original location. To install it, (AMM TASK 23-32-01-400-801).

            3)   Install a new VR in the affected VR's original location. To install it, (AMM TASK 23-32-01-400-801).

            4)   Do the Repair Confirmation at the end of this task.

                a)   If the Repair Confirmation is not OK, then continue.

        (g)   If you do hear clear audio on the headphones connected to the VSCU, then do these steps and then continue:

            1)   Remove the affected VR. To remove it, (AMM TASK 23-32-01-000-801).

            2)   Re-install the working VR in its original location. To install it, (AMM TASK 23-32-01-400-801).

SHZ 002, 721-799, 801-820, 871-874, 876-880

    (2)   Replace the VR.

        These are the tasks:

        Video Reproducer Removal, AMM TASK 23-32-01-000-801,

        Video Reproducer Installation, AMM TASK 23-32-01-400-801.

        (a)   Do the Repair Confirmation at the end of this task.

            1)   If the Repair Confirmation is not OK, then continue.

┌─── EFFECTIVITY ───
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865,
866, 871-874, 876-880, 901-999

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SHZ 002, 009-699, 721-799, 801-820, 860-863, 871-874, 876-880, 901-999

(3)   Do this check of the wiring:

(a)   Remove the video system control unit (VSCU). To remove it, (AMM TASK 23-32-02-000-801-001).

(b)   Do a check of the wiring between the VR and the VSCU (WDM 23-32-31).

(c)   If there is a problem with the wiring, then do these steps:

1)   Repair the wiring.

2)   Re-install the VSCU. To install it, (AMM TASK 23-32-02-400-801-001).

3)   Re-install the VR. To install it, (AMM TASK 23-32-01-400-801).

4)   Do the Repair Confirmation at the end of this task.

SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

G.   **Fault Isolation Procedure - Multiplexer Problem**

(1)   Replace the audio multiplexer, M1956.

These are the tasks:

Audio Multiplexer Removal, AMM TASK 23-34-02-000-801,

Audio Multiplexer Installation, AMM TASK 23-34-02-400-801.

(a)   Do the Repair Confirmation at the end of this task.

1)   If the Repair Confirmation is not OK, then continue.

(2)   Do this check of the wiring:

(a)   Remove the video system control unit (VSCU), M2065. To remove it, do this task: Video System Control Unit Removal, AMM TASK 23-32-02-000-801-001.

(b)   Remove the audio multiplexer, M1956. To remove it, do this task: Audio Multiplexer Removal, AMM TASK 23-34-02-000-801.

(c)   Do a check for continuity of the wiring between the VSCU and the audio multiplexer (WDM 23-32-31).

(d)   If there is not continuity, then do these steps:

1)   Repair the wiring.

2)   Re-install the audio multiplexer, M1956. To install it, (AMM TASK 23-34-02-400-801).

3)   Re-install the VSCU, M2065. To install it, (AMM TASK 23-32-02-400-801-001).

4)   Do the Repair Confirmation at the end of this task.

SHZ 002, 009-699, 721-799, 801-820, 860-863, 871-874, 876-880, 901-999

H.   **Repair Confirmation**

(1)   Do this test of the video reproducer (VR):

(a)   Push the ENTERTAINMENT IFE button on the forward attendant's panel to the on position.

(b)   Push the power button on the video system control unit (VSCU) to the on position.

(c)   Connect headphones to the headphone jack on the VSCU.

(d)   Put a media source (tape, CD, or DVD) into the VR.

EFFECTIVITY
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

23-32 TASK 805

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SHZ 002, 009-699, 721-799, 801-820, 860-863, 871-874, 876-880, 901-999 (Continued)

      (e)   Make the applicable selections to display the video from the VR on the VSCU preview monitor.

            NOTE: You will make the selections on the VSCU and if it is necessary, on the VR.

         1)   Make sure you hear clear audio on the headphones connected to the VSCU.

         2)   Make sure you hear clear audio on the PA speakers.

      (f)   If you hear clear audio on the headphones connected to the VSCU and on the PA speakers, then you corrected the fault.

————— **END OF TASK** —————

SHZ 002, 009-699, 860-863, 871-874

806. Airshow Does Not Operate - Fault Isolation

    A. Description

        (1)   The airshow system does not operate.

    B. Possible Causes

        SHZ 009-699, 860-863, 871-874

        (1)   Airshow compact disc

        SHZ 002, 009-699, 860-863, 871-874

        (2)   Connectors and pins

        SHZ 002, 009-699, 871-874

        (3)   Airshow control unit (ACU), M1500

        SHZ 002, 009-699, 860-863, 871-874

        (4)   Digital interface unit (DIU), M1499

        (5)   Video system control unit (VSCU), M2065

        (6)   Wiring

    C. Circuit Breakers

        (1)   This is the primary circuit breaker related to the fault:

            F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	5	C01450	ENT VID CONT CENTER DC

    D. Related Data

        (1)   (WDM 23-32-21)

    E. Initial Evaluation

SHZ 002, 009-699, 871-874

        (1)   Do this test of the airshow system:

          (a)   Push the power button on the video system control unit (VSCU) to the on position.

             1)   Make sure you see a menu on the airshow control unit (ACU).

          (b)   If you do not see a menu on the ACU, then do the Fault Isolation Procedure below.

┌─── EFFECTIVITY ───
SHZ 002, 009-699, 721-799, 801-820, 860-863, 865,
866, 871-874, 876-880, 901-999

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SHZ 002, 009-699, 871-874 (Continued)

      (c)   If you do see a menu, then there was an intermittent fault.

    SHZ 860-863

  (2)   Do this test of the airshow system:

      (a)   Push the power button on the video system control unit (VSCU) to the on position.

      (b)   Make the selections on the VSCU to show video from the airshow system on the VSCU preview monitor.

        1)   Make sure you see video from the airshow system on the VSCU preview monitor.

      (c)   If you do not see video from the airshow system, then do the Fault Isolation Procedure below.

      (d)   If you do see video from the airshow system, then there was an intermittent fault.

    SHZ 002, 009-699, 860-863, 871-874

  F.   **Fault Isolation Procedure**

SHZ 009-699, 860-863, 871-874

  (1)   Do this check for a compact disc (CD):

      (a)   Push the button on the digital interface unit (DIU) to eject the CD caddy.

        1)   Make sure a CD is installed in the CD caddy.

      (b)   If there is no CD installed in the CD caddy, then do these steps:

        1)   Install an airshow CD into the caddy.

        2)   Put the CD caddy into the DIU.

        3)   Open this circuit breaker and install safety tag:

          F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	5	C01450	ENT VID CONT CENTER DC

        4)   Wait at least 10 seconds.

        5)   Remove the safety tag and close this circuit breaker:

          F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	5	C01450	ENT VID CONT CENTER DC

        6)   Do the Repair Confirmation at the end of this task.

          a)   If the Repair Confirmation is not OK, then continue.

      (c)   If there is a CD installed, then continue.

    SHZ 002, 009-699, 871-874

  (2)   Do this check of the connectors and pins:

      (a)   Remove the ACU. To remove it, do this task: Airshow Control Unit (ACU) Removal, AMM TASK 23-32-07-000-802.

      (b)   Remove the DIU. To remove it, do this task: Digital Interface Unit (DIU) Removal, AMM TASK 23-32-06-000-804.

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SHZ 002, 009-699, 871-874 (Continued)

    (c)   Check the connectors and pins for damage.

    (d)   If there is damage to the connectors or pins, then do these steps:

        1)   Repair the connectors or pins.

        2)   Re-install the DIU. To install it, do this task: Digital Interface Unit (DIU) Installation, AMM TASK 23-32-06-400-801.

        3)   Re-install the ACU. To install it, do this task: Airshow Control Unit (ACU) Installation, AMM TASK 23-32-07-400-801.

        4)   Do the Repair Confirmation at the end of this task.

            a)   If the Repair Confirmation is not OK, then continue.

    (e)   If there is no damage to the connectors or pins, re-install the DIU and continue. To install it, do this task: Digital Interface Unit (DIU) Installation, AMM TASK 23-32-06-400-801.

SHZ 860-863

(3)   Do this check of the connectors and pins:

    (a)   Remove the VSCU. To remove it, do this task: Video System Control Unit Removal, AMM TASK 23-32-02-000-801-001.

    (b)   Remove the DIU. To remove it, do this task: Digital Interface Unit (DIU) Removal, AMM TASK 23-32-06-000-804.

    (c)   Check the connectors and pins for damage.

    (d)   If there is damage to the connectors or pins, then do these steps:

        1)   Repair the connectors or pins.

        2)   Re-install the DIU. To install it, do this task: Digital Interface Unit (DIU) Installation, AMM TASK 23-32-06-400-801.

        3)   Re-install the VSCU. To install it, do this task: Video System Control Unit Installation, AMM TASK 23-32-02-400-801-001.

        4)   Do the Repair Confirmation at the end of this task.

            a)   If the Repair Confirmation is not OK, then continue.

    (e)   If there is no damage to the connectors or pins, do these steps and continue:

        1)   Re-install the DIU. To install it, do this task: Digital Interface Unit (DIU) Installation, AMM TASK 23-32-06-400-801.

        2)   Re-install the VSCU. To install it, do this task: Video System Control Unit Installation, AMM TASK 23-32-02-400-801-001.

SHZ 002, 009-699, 871-874

(4)   Install a new ACU. To install it, do this task: Airshow Control Unit (ACU) Installation, AMM TASK 23-32-07-400-801.

    (a)   Do the Repair Confirmation at the end of this task.

        1)   If the Repair Confirmation is not OK, then continue.

┌─── EFFECTIVITY ───┐
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(5) Replace the DIU. These are the tasks:

- Digital Interface Unit (DIU) Removal, AMM TASK 23-32-06-000-804

- Digital Interface Unit (DIU) Installation, AMM TASK 23-32-06-400-801

(a) Do the Repair Confirmation at the end of this task.

1) If the Repair Confirmation is not OK, then continue.

(6) Replace the VSCU. These are the tasks:

- Video System Control Unit Removal, AMM TASK 23-32-02-000-801-001

- Video System Control Unit Installation, AMM TASK 23-32-02-400-801-001

(a) Do the Repair Confirmation at the end of this task.

1) If the Repair Confirmation is not OK, then continue.

SHZ 002, 009-699, 871-874

(7) Do this check of the wiring:

(a) Remove the ACU. To remove it, do this task: Airshow Control Unit (ACU) Removal, AMM TASK 23-32-07-000-802.

(b) Remove the DIU. To remove it, do this task: Digital Interface Unit (DIU) Removal, AMM TASK 23-32-06-000-804.

(c) Do a check for continuity of the wiring between the DIU and the ACU (WDM 23-32-21).

(d) If there is not continuity, then do these steps:

1) Repair the wiring.

2) Re-install the DIU. To install it, do this task: Digital Interface Unit (DIU) Installation, AMM TASK 23-32-06-400-801.

3) Re-install the ACU. To install it, do this task: Airshow Control Unit (ACU) Installation, AMM TASK 23-32-07-400-801.

4) Do the Repair Confirmation at the end of this task.

SHZ 860-863

(8) Do this check of the wiring:

(a) Remove the VSCU. To remove it, do this task: Video System Control Unit Removal, AMM TASK 23-32-02-000-801-001.

(b) Remove the DIU. To remove it, do this task: Digital Interface Unit (DIU) Removal, AMM TASK 23-32-06-000-804.

(c) Do a check for continuity of the wiring between the DIU and the VSCU (WDM 23-32-21).

(d) If there is not continuity, then do these steps:

1) Repair the wiring.

2) Re-install the DIU. To install it, do this task: Digital Interface Unit (DIU) Installation, AMM TASK 23-32-06-400-801.

3) Re-install the VSCU. To install it, do this task: Video System Control Unit Installation, AMM TASK 23-32-02-400-801-001.

4) Do the Repair Confirmation at the end of this task.

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    G.   Repair Confirmation

SHZ 002, 009-699, 871-874

    (1)   Do this test of the airshow system:

        (a)   Push the power button on the video system control unit (VSCU) to the on position.

           1)   Make sure you see a menu on the airshow control unit (ACU).

        (b)   Make the selections on the ACU and the video system control unit (VSCU) to show the airshow map on the VSCU preview monitor.

           1)   Make sure you see the airshow map on the VSCU preview monitor.

        (c)   If you see the airshow map on the VSCU preview monitor, then you corrected the fault.

    SHZ 860-863

    (2)   Do this test of the airshow system:

        (a)   Push the power button on the video system control unit (VSCU) to the on position.

        (b)   Make the selections on the VSCU to show video from the airshow system on the VSCU preview monitor.

           1)   Make sure you see video from the airshow system on the VSCU preview monitor.

        (c)   If you see video from the airshow system, then you corrected the fault.

———— **END OF TASK** ————

SHZ 002, 009-699, 871-874

807. Random Access Device Does Not Operate - Fault Isolation

    A.   Description

    (1)   The random access device (RAD) in the airshow system does not operate.

    B.   Possible Causes

    (1)   Wiring

    (2)   Random access device (RAD), M2252

    (3)   Digital interface unit (DIU), M1499

    C.   Related Data

    (1)   (WDM 23-32-21)

    D.   Initial Evaluation

    (1)   Do this test of the random access device (RAD):

        (a)   Open the top disc drive of the RAD.

        (b)   Put a test CD-ROM (Airshow part number 915950-5159-xxxx) into the CD-ROM drive with the CD label up.

           NOTE: If the test CD-ROM is not available, you can use any CD-ROM with a program segment that contains both video and audio.

        (c)   Connect headphones to the audio jacks on the video system control unit (VSCU).

        (d)   Make the selections on the airshow control unit (ACU) and VSCU to show the RAD WORK segment (or segment with both audio and video) on the VSCU preview monitor.

┌─── EFFECTIVITY ───
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        1)   Make sure that video from the RAD is shown on the VSCU preview monitor.

        2)   Make sure that you hear audio from the RAD on the headphones connected to the VSCU.

    (e)   If you did not see video and hear audio from the RAD on the VSCU, then do the Fault Isolation Procedure below.

    (f)   If you saw video and heard audio from the RAD on the VSCU, then there was an intermittent fault.

E.   Fault Isolation Procedure

  (1)   Do this check of the wiring:

    (a)   Remove the digital interface unit (DIU), M1499. To remove it, do this task: Digital Interface Unit (DIU) Removal, AMM TASK 23-32-06-000-804.

    (b)   Remove the random access device (RAD), M2252. To remove it, do this task: Random Access Device (RAD) Removal, AMM TASK 23-32-08-000-802.

    (c)   Make sure that there is no damage to the connectors or pins.

    (d)   If there is damage to the connectors or pins, then do these steps:

        1)   Repair the connectors or pins.

        2)   Re-install the RAD. To install it, do this task: Random Access Device (RAD) Installation, AMM TASK 23-32-08-400-801.

        3)   Re-install the DIU. To install it, do this task: Digital Interface Unit (DIU) Installation, AMM TASK 23-32-06-400-801.

        4)   Do the Repair Confirmation at the end of this task.

           a)   If the Repair Confirmation is not OK, then continue.

    (e)   If there is no damage to the connectors or pins, then do a check for continuity between these pins of connector D2813B on the DIU and connector D10801C on the RAD:

       D2813B   **D10801C**
       pin 51 . . . . pin 19
       pin 55 . . . . pin 20

    (f)   If there is not continuity, then do these steps:

        1)   Repair the wiring.

        2)   Re-install the RAD. To install it, do this task: Random Access Device (RAD) Installation, AMM TASK 23-32-08-400-801.

        3)   Re-install the DIU. To install it, do this task: Digital Interface Unit (DIU) Installation, AMM TASK 23-32-06-400-801.

        4)   Do the Repair Confirmation at the end of this task.

           a)   If the Repair Confirmation is not OK, then continue.

    (g)   If there is continuity, then re-install the DIU and continue. To install it, do this task: Digital Interface Unit (DIU) Installation, AMM TASK 23-32-06-400-801.

  (2)   Install a new RAD. To install it, do this task: Random Access Device (RAD) Installation, AMM TASK 23-32-08-400-801.

    (a)   Do the Repair Confirmation at the end of this task.

┌─── EFFECTIVITY ───
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           1)   If the Repair Confirmation is not OK, then continue.

    (3)   Replace the DIU.

        These are the tasks:

        Digital Interface Unit (DIU) Removal, AMM TASK 23-32-06-000-804,

        Digital Interface Unit (DIU) Installation, AMM TASK 23-32-06-400-801.

        (a)   Do the Repair Confirmation at the end of this task.

F.   Repair Confirmation

    (1)   Do this test of the random access device (RAD):

        (a)   Open the top disc drive of the RAD.

        (b)   Put a test CD-ROM (Airshow part number 915950-5159-xxxx) into the CD-ROM drive with the CD label up.

               NOTE: If the test CD-ROM is not available, you can use any CD-ROM with a program segment that contains both video and audio.

        (c)   Connect headphones to the audio jacks on the video system control unit (VSCU).

        (d)   Make the selections on the airshow control unit (ACU) and VSCU to show the RAD WORK segment (or segment with both audio and video) on the VSCU preview monitor.

            1)   Make sure that video from the RAD is shown on the VSCU preview monitor.

            2)   Make sure that you hear audio from the RAD on the headphones connected to the VSCU.

        (e)   If you saw video and heard audio from the RAD on the VSCU, then you corrected the fault.

————— **END OF TASK** —————

EFFECTIVITY
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801. Damaged Passenger Control Unit - Fault Isolation

    A. Description

      (1) The passenger control unit (PCU) at a seat has been damaged or is not controllable.

    B. Fault Isolation Procedure

      (1) Replace the passenger control unit (PCU).

      These are the tasks:

      Passenger Control Unit Removal, AMM TASK 23-34-11-000-801,

      Passenger Control Unit Installation, AMM TASK 23-34-11-400-801.

——— **END OF TASK** ———

802. Seat Audio Problems - Fault Isolation

    A. Description

      (1) The passenger entertainment audio cannot be heard, or is of unacceptable quality, at one or many seats.

    B. Possible Causes

      (1) Audio system configuration

      (2) Passenger control unit (PCU)

      (3) Wiring

      (4) Seat electronic box (SEB)

      (5) Audio multiplexer (AMUX), M1956

    C. Circuit Breakers

      (1) These are the primary circuit breakers related to the fault:

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
B	10	C01584	ENTERTAINMENT AUDIO DC
C	8	C01456	ENTERTAINMENT AUDIO

        SHZ 860-863

Row	Col	Number	Name
C	10	C01101	ENTERTAINMENT MUX

SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

    D. Related Data

      (1) (WDM 23-34-01, 23-34-02)

    E. Initial Evaluation

SHZ 002, 009-699, 871-874, 876-880

      (1) Do this check of the audio BITE:

        (a) Push the ENTERTAINMENT IFE button on the forward attendant's panel to the on position.

        (b) Push the BITE and MODE SELECT buttons on the audio Built-In-Test Equipment (BITE) panel at the same time.

        (c) Enter 8131 when prompted for a PASS CODE.

        (d) Push the MODE SELECT button.

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SHZ 002, 009-699, 871-874, 876-880 (Continued)

(e)　Wait for the BITE test to complete.

(f)　If the BITE panel shows the message -NO LAYOUT DATA- then do the Fault Isolation Procedure - No Layout Data below.

(g)　If the BITE panel shows the message SEAT XXX PCU ERROR, then do the Fault Isolation Procedure - Seat PCU Error below.

(h)　If the BITE panel shows the message LT/RT XX-YY NO CONCT then do the Fault isolation Procedure - Line Fault below.

(i)　If the BITE panel shows the message LT/RT XX-YY NOT CNTC then do the Fault isolation Procedure - Multiple Line Faults below.

(j)　If the BITE panel shows the message L/R FWD/AFT LINE 1/2 ERR then do the Fault Isolation Procedure - No Communication In Column below.

(k)　If the BITE panel shows the message L/R FWD/AFT LAYOUT ERR, SEAT XX LT PCU X ERR, or COL X RW XX PCU X ERR then do the Fault Isolation Procedure - Faulty Seat Layout below.

(l)　If the BITE panel shows the message BITE OK PUSH ENT KEY then there was an intermittent fault.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

(2)　Do this test of the passenger entertainment system:

(a)　Push the ENTERTAINMENT IFE button on the forward attendant's panel to the on position.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITH CD PLAYERS

(b)　Install Compact Disc (CD)s in the Audio Entertainment Player (AEP). To install them, do this task: Compact Disc (CD) Installation, AMM TASK 23-34-01-400-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

(c)　Connect headphones to the jack at an affected seat, another seat in the same seat group, another seat in the same column (left or right), and another seat in the opposite column.

(d)　Put the channel selector switch on each Passenger Control Unit (PCU) to 7.

　1)　Make sure you hear audio from the AEP on the headphones.

(e)　If you do not hear audio on one seat, but you do hear audio on all others, then do the Fault Isolation Procedure - One Seat below.

(f)　If you do not hear audio on the seats in the same seat group, but you do hear audio on the other seats, then do the Fault Isolation Procedure - Seat Group below.

(g)　If you do not hear audio on the seats in the same column, but you do hear audio on the seat on the opposite column, then do the Fault Isolation Procedure - Column below.

(h)　If you do not hear audio on any seat, then do the Fault Isolation Procedure - All Seats below.

(i)　If you heard audio on all seats, then there was an intermittent fault.

EFFECTIVITY
SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

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F.   Fault Isolation Procedure - No Layout Data

(1)   Download BITE panel EEPROM data to the Audio Multiplexer (AMUX). To do this, do this task: Audio Multiplexer Memory Update, AMM TASK 23-34-03-700-801.

(a)   Do the Repair Confirmation at the end of this task.

(2)   Do a check of the left and right Seat Electronics Box (SEB) CCT CB on the AMUX, M1956.

(a)   If the left and right SEB CCT CB are open then close them.

(b)   Do the Repair Confirmation at the end of this task.

(3)   Replace the AMUX.

These are the tasks:

• Audio Multiplexer Removal, AMM TASK 23-34-02-000-801

• Audio Multiplexer Installation, AMM TASK 23-34-02-400-801

(a)   Do the Repair Confirmation at the end of this task.

G.   Fault Isolation Procedure - Seat PCU Error

(1)   Replace the PCU at seat XXX (as shown in the BITE message).

These are the tasks:

• Passenger Control Unit Removal, AMM TASK 23-34-11-000-801

• Passenger Control Unit Installation, AMM TASK 23-34-11-400-801

(a)   Do the Repair Confirmation at the end of this task.

H.   Fault Isolation Procedure - Line Fault

(1)   Do these steps to check the SEB connectors for damage:

(a)   Remove the SEB at row XX LT (left) or RT (right) as shown in the BITE message. To remove it, do this task: Seat Electronics Box Removal, AMM TASK 23-34-04-000-801.

(b)   Remove the SEB at seat YY LT (left) or RT (right) as shown in the BITE message. To remove it, do this task: Seat Electronics Box Removal, AMM TASK 23-34-04-000-801.

(c)   Make sure that there is no damage to the electrical connectors or pins on any of the SEB connectors.

(d)   If there is damage to the connectors or pins, then do these steps:

1)   Repair the connectors or pins.

2)   Re-install both SEBs. To install them, do this task: Seat Electronics Box Installation, AMM TASK 23-34-04-400-801.

3)   Do the Repair Confirmation at the end of this task.

(e)   If there is no damage to the connectors or pins, then continue.

(2)   Do this check of the wiring:

(a)   If necessary, remove the SEBs at rows XX and LT (left) or RT (right) as shown in the BITE message. To remove them, do this task: Seat Electronics Box Removal, AMM TASK 23-34-04-000-801.

(b)   Do a check for continuity of the wiring between the SEBs (WDM 23-34-01).

(c)   If there is not continuity, then do these steps:

1)   Repair the wiring.

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      2)   Re-install both SEBs. To install them, do this task: Seat Electronics Box Installation, AMM TASK 23-34-04-400-801.

      3)   Do the Repair Confirmation at the end of this task.

    (d)   If there is continuity, then do this step and continue:

      1)   Re-install the SEB at row YY. To install it, do this task: Seat Electronics Box Installation, AMM TASK 23-34-04-400-801.

  (3)   Install a new SEB at row XX. To install it, do this task: Seat Electronics Box Installation, AMM TASK 23-34-04-400-801.

    (a)   Do the Repair Confirmation at the end of this task.

I. Fault Isolation Procedure - Multiple Line Faults

  (1)   Do these steps to check the seat electronic box connectors for damage:

    (a)   Remove the SEB at row XX LT (left) or RT (right) as shown in the BITE message. To remove it, do this task: Seat Electronics Box Removal, AMM TASK 23-34-04-000-801.

    (b)   Remove the SEB at seat YY LT (left) or RT (right) as shown in the BITE message. To remove it, do this task: Seat Electronics Box Removal, AMM TASK 23-34-04-000-801.

    (c)   Make sure that there is no damage to the electrical connectors or pins on any of the SEB connectors.

    (d)   If there is damage to the connectors or pins, then do these steps:

      1)   Repair the connectors or pins.

      2)   Re-install both SEBs. To install them, do this task: Seat Electronics Box Installation, AMM TASK 23-34-04-400-801.

      3)   Do the Repair Confirmation at the end of this task.

    (e)   If there is no damage to the connectors or pins, then continue.

  (2)   Do this check of the wiring:

    (a)   If necessary, remove the SEBs at rows XX and YY LT (left) or RT (right) as shown in the BITE message. To remove them, do this task: Seat Electronics Box Removal, AMM TASK 23-34-04-000-801.

    (b)   Do a check for continuity of the wiring between the SEBs (WDM 23-34-01).

    (c)   If there is not continuity, then do these steps:

      1)   Repair the wiring.

      2)   Re-install both SEBs. To install them, do this task: Seat Electronics Box Installation, AMM TASK 23-34-04-400-801.

      3)   Do the Repair Confirmation at the end of this task.

  (3)   Do this check of the seat layout data:

    (a)   Push the MODE SELECT button on the BITE panel.

      1)   Make sure the correct CONFIG number is shown on the BITE panel display.

    (b)   If an incorrect CONFIG number is shown, then do these steps:

      1)   Download BITE panel EEPROM data to the AMUX. To do this, do this task: Audio Multiplexer Memory Update, AMM TASK 23-34-03-700-801.

      2)   Do the Repair Confirmation at the end of this task.

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J.   Fault Isolation Procedure - No Communication In Column

(1)   Do a check of the left and right SEB CCT CB on the AMUX, M1956.

    (a)   If the left and right SEB CCT CB are open then close them.

    (b)   Do the Repair Confirmation at the end of this task.

(2)   Do these steps to check the electrical connectors for damage:

    (a)   Remove the AMUX, M1956. To remove it, do this task: Audio Multiplexer Removal, AMM TASK 23-34-02-000-801.

    (b)   Remove the first SEB in the L (left) or R (right) FWD (forward) or AFT column as shown in the BITE message. To remove it, do this task: Seat Electronics Box Removal, AMM TASK 23-34-04-000-801.

    (c)   Make sure that there is no damage to the electrical connectors or pins on any of the audio AMUX or SEB connectors.

    (d)   If there is damage to the connectors or pins, then do these steps:

        1)   Repair the connectors or pins.

        2)   Re-install the SEB. To install it, do this task: Seat Electronics Box Installation, AMM TASK 23-34-04-400-801.

        3)   Re-install the AMUX, M1956. To install it, do this task: Audio Multiplexer Installation, AMM TASK 23-34-02-400-801.

        4)   Do the Repair Confirmation at the end of this task.

    (e)   If there is no damage to the connectors or pins, then continue.

(3)   Do this check of the wiring:

    (a)   If necessary, remove the AMUX, M1956. To remove it, do this task: Audio Multiplexer Removal, AMM TASK 23-34-02-000-801.

    (b)   If necessary, remove the first SEB in the L (left) or R (right) FWD (forward) or AFT column as shown in the BITE message. To remove it, do this task: Seat Electronics Box Removal, AMM TASK 23-34-04-000-801.

    (c)   Do a check for continuity of the wiring between the AMUX and the SEB (WDM 23-34-01).

    (d)   If there is not continuity, then do these steps:

        1)   Repair the wiring.

        2)   Re-install the SEB. To install it, do this task: Seat Electronics Box Installation, AMM TASK 23-34-04-400-801.

        3)   Re-install the AMUX, M1956. To install it, do this task: Audio Multiplexer Installation, AMM TASK 23-34-02-400-801.

        4)   Do the Repair Confirmation at the end of this task.

(4)   Do this check of the seat layout data:

    (a)   Push the MODE SELECT button on the BITE panel.

        1)   Make sure the correct CONFIG number is shown on the BITE panel display.

    (b)   If an incorrect CONFIG number is shown, then do these steps:

        1)   Download BITE panel EEPROM data to the AMUX. To do this, do this task: Audio Multiplexer Memory Update, AMM TASK 23-34-03-700-801.

        2)   Do the Repair Confirmation at the end of this task.

EFFECTIVITY
SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

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SHZ 002, 009-699, 871-874, 876-880 (Continued)

  (5) Install a new SEB. To install it, do this task: Seat Electronics Box Installation, AMM TASK 23-34-04-400-801.

    (a) Do the Repair Confirmation at the end of this task.

  K. Fault Isolation Procedure - Faulty Seat Layout

  (1) Do this check of the seat layout data:

    (a) Push the MODE SELECT button on the BITE panel.

      1) Make sure the correct CONFIG number is shown on the BITE panel display.

    (b) If an incorrect CONFIG number is shown, then do these steps:

      1) Download BITE panel EEPROM data to the AMUX. To do this, do this task: Audio Multiplexer Memory Update, AMM TASK 23-34-03-700-801.

      2) Do the Repair Confirmation at the end of this task.

SHZ 801-820, 860-863, 901-999

  L. Fault Isolation Procedure - One Seat

    SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

  (1) Move the PCU to another location:

    (a) Remove the PCU at the affected seat.

    SHZ 801-820, 860-863, 901-999

      1) To remove it, do this task: Passenger Control Unit Removal, AMM TASK 23-34-11-000-801.

    SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

    (b) Remove a PCU at an unaffected seat.

    SHZ 801-820, 860-863, 901-999

      1) To remove it, do this task: Passenger Control Unit Removal, AMM TASK 23-34-11-000-801.

    SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

    (c) Install the PCU from the affected seat at the unaffected seat location.

    SHZ 801-820, 860-863, 901-999

      1) To install it, do this task: Passenger Control Unit Installation, AMM TASK 23-34-11-400-801.

    SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

    (d) Connect headphones to the jack at the unaffected seat.

    (e) Put the channel selector switch on the PCU to 7.

      1) Make sure you hear audio from the AEP on the headphones.

    (f) If you do not hear audio at the unaffected seat location, then do these steps:

      1) Install a new PCU in the affected seat location.

┌─ EFFECTIVITY ─
SHZ 002, 009-699, 801-820, 860-863, 871-874,
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SHZ 801-820, 860-863, 901-999

     a)   To install it, do this task: Passenger Control Unit Installation, AMM TASK 23-34-11-400-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

  2)   Re-install the PCU from the unaffected seat to its original location.

SHZ 801-820, 860-863, 901-999

     a)   To install it, do this task: Passenger Control Unit Installation, AMM TASK 23-34-11-400-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

  3)   Do the Repair Confirmation at the end of this task.

(g)   If you do hear audio at the unaffected seat location, re-install the PCU to the affected seat and continue.

SHZ 801-820, 860-863, 901-999

  1)   To install it, do this task: Passenger Control Unit Installation, AMM TASK 23-34-11-400-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

(2)   Replace the SEB for the affected seat.

SHZ 801-820, 860-863, 901-999

(a)   These are the tasks:

- Seat Electronics Box Removal, AMM TASK 23-34-04-000-801
- Seat Electronics Box Installation, AMM TASK 23-34-04-400-801

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

(b)   Do the Repair Confirmation at the end of this task.

(3)   Do this check of the wiring:

(a)   Remove the PCU for the affected seat.

SHZ 801-820, 860-863, 901-999

  1)   To remove it, do this task: Passenger Control Unit Removal, AMM TASK 23-34-11-000-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

(b)   Remove the SEB for the affected seat.

SHZ 801-820, 860-863, 901-999

  1)   To remove it, do this task: Seat Electronics Box Removal, AMM TASK 23-34-04-000-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

(c)   Do a check of the wiring between the PCU and the SEB (WDM 23-34-02).

(d)   If there is a problem with the wiring, do these steps:

1)   Repair the wiring.

2)   Re-install the SEB.

EFFECTIVITY
SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

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SHZ 801-820, 860-863, 901-999

    a)   To install it, do this task: Seat Electronics Box Installation, AMM TASK 23-34-04-400-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

    3)   Re-install the PCU.

SHZ 801-820, 860-863, 901-999

    a)   To install it, do this task: Passenger Control Unit Installation, AMM TASK 23-34-11-400-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

    4)   Do the Repair Confirmation at the end of this task.

M.   **Fault Isolation Procedure - Seat Group**

(1)   Replace the SEB for the affected seat group.

SHZ 801-820, 860-863, 901-999

    (a)   These are the tasks:

      • Seat Electronics Box Removal, AMM TASK 23-34-04-000-801

      • Seat Electronics Box Installation, AMM TASK 23-34-04-400-801

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

    (b)   Do the Repair Confirmation at the end of this task.

(2)   Do this check of the wiring:

    (a)   Remove the SEB for the affected row.

SHZ 801-820, 860-863, 901-999

    1)   To remove it, do this task: Seat Electronics Box Removal, AMM TASK 23-34-04-000-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

    (b)   Remove the SEB for the row in front of the affected row.

SHZ 801-820, 860-863, 901-999

    1)   To remove it, do this task: Seat Electronics Box Removal, AMM TASK 23-34-04-000-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

    (c)   Do a check of the wiring between the SEBs (WDM 23-34-02).

    (d)   If there is a problem with the wiring, do these steps:

    1)   Repair the wiring.

    2)   Re-install both SEBs.

SHZ 801-820, 860-863, 901-999

    a)   To install them, do this task: Seat Electronics Box Installation, AMM TASK 23-34-04-400-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

    3)   Do the Repair Confirmation at the end of this task.

EFFECTIVITY
SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

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SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL (Continued)

    N. **Fault Isolation Procedure - Column**

       (1)   Do a check of the left and right SEB CCT CB on the AMUX, M1956.

          (a)   If the left and right SEB CCT CB are open then close them.

          (b)   Do the Repair Confirmation at the end of this task.

       (2)   Replace the AMUX, M1956.

SHZ 801-820, 860-863, 901-999

          (a)   These are the tasks:

              • Audio Multiplexer Removal, AMM TASK 23-34-02-000-801

              • Audio Multiplexer Installation, AMM TASK 23-34-02-400-801

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

          (b)   Do the Repair Confirmation at the end of this task.

       (3)   Do this check of the wiring:

          (a)   Remove the SEB in the first row of the affected column.

SHZ 801-820, 860-863, 901-999

            1)   To remove it, do this task: Seat Electronics Box Removal, AMM TASK 23-34-04-000-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

          (b)   Remove the AMUX, M1956.

SHZ 801-820, 860-863, 901-999

            1)   To remove it, do this task: Audio Multiplexer Removal, AMM TASK 23-34-02-000-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

          (c)   Do a check of the wiring between the SEB and the AMUX (WDM 23-34-02).

          (d)   If there is a problem with the wiring, then do these steps:

            1)   Repair the wiring.

            2)   Re-install the AMUX.

SHZ 801-820, 860-863, 901-999

              a)   To install it, do this task: Audio Multiplexer Installation, AMM TASK 23-34-02-400-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

            3)   Re-install the SEB.

SHZ 801-820, 860-863, 901-999

              a)   To install it, do this task: Seat Electronics Box Installation, AMM TASK 23-34-04-400-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

            4)   Do the Repair Confirmation at the end of this task.

┌─ EFFECTIVITY ─┐
SHZ 002, 009-699, 801-820, 860-863, 871-874,
876-880, 901-999

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SHZ 801-820, 860-863, 901-999

O. **Fault Isolation Procedure - All Seats**

(1) Do this check of the audio entertainment system configuration:

(a) Make the selections on the Video System Control Unit (VSCU) to show the VSCU configuration.

1) Make sure the VSCU Configuration display shows YES next to AMUX.

(b) If the status of AMUX is NO, then do these steps:

1) Select AMUX and then push the SELECT button.

a) Make sure the status of AMUX changes to YES.

2) Do the Repair Confirmation at the end of this test.

(c) If the status of AMUX is YES, then continue.

(d) Make the selections on the VSCU to do the AMUX INITIALIZATION.

1) Make sure the VSCU shows the correct number of SEBs in each column.

(e) If the number of SEBs is correct, then do the Repair Confirmation at the end of this task.

(f) If the number of SEBs is not correct, then continue.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

(2) Do a check of the left and right SEB CCT CB on the AMUX, M1956.

(a) If the left and right SEB CCT CB are open then close them.

(b) Do the Repair Confirmation at the end of this task.

(3) Do this check for power:

(a) Remove the AMUX, M1956.

SHZ 801-820, 860-863, 901-999

1) To remove it, do this task: Audio Multiplexer Removal, AMM TASK 23-34-02-000-801.

(b) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
B	10	C01584	ENTERTAINMENT AUDIO DC
C	8	C01456	ENTERTAINMENT AUDIO
SHZ 860-863			
C	10	C01101	ENTERTAINMENT MUX

SHZ 801-820, 860-863, 901-999

(c) Do a check for 115V AC on pins 2 and 4 on connector D10527C of the AMUX.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

(d) If there is 115V AC on the pins, then do these steps:

1) Install a new multiplexer.

┌─── EFFECTIVITY ───
SHZ 002, 009-699, 801-820, 860-863, 871-874,
876-880, 901-999

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SHZ 801-820, 860-863, 901-999

          a)   To install it, do this task: Audio Multiplexer Installation, AMM
TASK 23-34-02-400-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

    2)   Do the Repair Confirmation at the end of this task.

    (e)   If there is not 115V AC on the pins, then re-install the AMUX and continue.

SHZ 801-820, 860-863, 901-999

    1)   To install it, do this task: Audio Multiplexer Installation, AMM
TASK 23-34-02-400-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

(4)   Replace the audio entertainment multiplexer (AEM), M1891.

    (a)   Do the Repair Confirmation at the end of this task.

(5)   Replace the power relay mux/AEP, R660.

    (a)   Do the Repair Confirmation at the end of this task.

SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

    P.   **Repair Confirmation**

SHZ 002, 009-699, 871-874, 876-880

(1)   Do this check of the audio BITE:

    (a)   Push the ENTERTAINMENT IFE button on the forward attendant's panel to the ON
position.

    (b)   Push the BITE and MODE SELECT buttons on the audio BITE panel at the same time.

    (c)   Enter 8131 when prompted for a PASS CODE.

    (d)   Push the MODE SELECT button.

    (e)   Wait for the BITE test to complete.

    (f)   If the BITE panel shows the message BITE OK PUSH ENT KEY then you corrected the
fault.

    (g)   If the BITE panel does not show the message BITE OK PUSH ENT KEY, continue the
Fault Isolation Procedure at the subsequent step.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

(2)   Do this test of the passenger entertainment system:

    (a)   Push the ENTERTAINMENT IFE button on the forward attendant's panel to the ON
position.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITH CD PLAYERS

    (b)   Install CDs in the AEP. To install them, do this task: Compact Disc (CD) Installation, AMM
TASK 23-34-01-400-801.

SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL

    (c)   Connect headphones to all affected areas.

    (d)   Put the channel selector switch on each PCU to 7.

    1)   Make sure you hear audio from the AEP on the headphones.

    (e)   If you heard audio on all seats, then you corrected the fault.

    EFFECTIVITY
SHZ 002, 009-699, 801-820, 860-863, 871-874,
876-880, 901-999

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SHZ 801-820, 860-863, 901-999; AIRPLANES WITHOUT THE AUDIO BITE PANEL (Continued)

    (f)   If you cannot hear audio on all seats, continue the Fault Isolation Procedure at the subsequent step.

       SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

——————— END OF TASK ———————

803. Seat Audio Does Not Turn Off - Fault Isolation

A. Description

(1) The ENTERTAINMENT IFE button on the forward attendant's panel does not turn off the passenger entertainment system.

B. Fault Isolation Procedure

(1) Replace the audio entertainment module on the forward attendant's panel, M1891.

——————— END OF TASK ———————

804. Damaged Audio Entertainment Player - Fault Isolation

A. Description

(1) The audio entertainment player (AEP) has been damaged.

B. Fault Isolation Procedure

(1) Replace the audio entertainment player (AEP).

These are the tasks:

Audio Entertainment Player Removal, AMM TASK 23-34-01-000-803,

Audio Entertainment Player Installation, AMM TASK 23-34-01-400-803.

——————— END OF TASK ———————

805. Audio Entertainment Player Does Not Operate - Fault Isolation

A. Description

(1) There is no audio from the AEP on any channel of all passenger control units.

B. Possible Causes

(1) Audio entertainment player (AEP), M01955

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
B	10	C01584	ENTERTAINMENT AUDIO DC
C	8	C01456	ENTERTAINMENT AUDIO

SHZ 860-863

Row	Col	Number	Name
C	10	C01101	ENTERTAINMENT MUX

    SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

┌─ EFFECTIVITY ─┐
SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

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D. **Initial Evaluation**

(1)   Do this test of the audio entertainment player (AEP):

(a)   Push the ENTERTAINMENT IFE button on the forward attendant's panel to the on position.

SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999; AIRPLANES WITH CD PLAYERS

(b)   Install compact discs (CDs) in the AEP. To install them, do this task: Compact Disc (CD) Installation, AMM TASK 23-34-01-400-801.

SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

(c)   Connect headphones to the headphone jack at a seat.

(d)   Put the channel selector switch on the passenger control unit (PCU) to 7.

(e)   Adjust the volume control to a comfortable level.

1)   Make sure you hear audio from the AEP on the headphones.

(f)   If you do not hear audio from the AEP, then do the Fault Isolation Procedure below.

(g)   If you hear audio from the AEP then there was an intermittent fault.

E. **Fault Isolation Procedure**

(1)   Replace the audio entertainment player, M01955. These are the tasks:

• Audio Entertainment Player Removal, AMM TASK 23-34-01-000-803

• Audio Entertainment Player Installation, AMM TASK 23-34-01-400-803

(a)   Push the ENTERTAINMENT IFE button on the forward attendant's panel to the on position.

SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999; AIRPLANES WITH CD PLAYERS

(b)   Install compact discs (CDs) in the AEP. To install them, do this task: Compact Disc (CD) Installation, AMM TASK 23-34-01-400-801.

SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

(c)   Connect headphones to the headphone jack at a seat.

(d)   Put the channel selector switch on the passenger control unit (PCU) to 7.

(e)   Adjust the volume control to a comfortable level.

1)   Make sure you hear audio from the AEP on the headphones.

(f)   If you hear audio from the AEP then you corrected the fault.

——————— END OF TASK ———————

806. **Seat Electronics Box/Seat to Seat Cable - Fault Isolation**

A. **Description**

(1)   If all the PCU display 1-18 for channel selections there may be a problem with an SEB or the Seat to Seat Cables.

(2)   If there is a problem with the SEB or the seat to seat cables it can damage the communication circuitry in the AMUX.

B. **Possible Causes**

(1)   Seat Electronics Box (SEB)

(2)   Seat to Seat Cables

(3)   Audio Multiplexer (AMUX), M1956

EFFECTIVITY
SHZ 002, 009-699, 801-820, 860-863, 871-874,
876-880, 901-999

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C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
B	10	C01584	ENTERTAINMENT AUDIO DC
C	8	C01456	ENTERTAINMENT AUDIO

SHZ 860-863

C	10	C01101	ENTERTAINMENT MUX

SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

D. Related Data

(1) (WDM 23-34-02)

E. Fault Isolation Procedure - Channels 1-18 displayed on PCU

(1) If only one seat group displays channels 1-18, replace the SEB at that seat group or the SEB located under the seat group in front of the affected seats.

(a) Do the Repair Confirmation at the end of the task.

(2) Do a check of the wiring:

(a) Turn OFF the In-Flight Entertainment (IFE) power switch on the forward attendant's panel.

(b) Pull and collar all applicable IFE circuit breakers.

(c) Remove the sidewall disconnect for each column (WDM 23-34-02).

(d) Do the following steps to check the wiring:

1) Check the resistance between pin 4 and pin 5 on the sidewall disconnect for each column.

a) Resistance between these pins should be approximately 4.2 Kilo Ohms.

2) Measure the resistance in all 8 pins in each sidewall disconnect. Use the following table for approximate pin measurements.

PIN	PIN	Ohmmeter Reading
4	5	4.2 Kilo Ohms
14	15	4.5 Ohms
5	10	2.2 Kilo Ohms
4	10	2.2 Kilo Ohms
1	2	88 Ohms

(e) If the resistance between pin 4 and 5 is not 4.2 Kilo Ohms or there is a short between the other pins do the following:

1) Move the terminating plug forward until the resistance reads 4.2 Kilo Ohm.

2) The short between the pins disappears.

(f) You have now isolated the problem and need to replace the defective seat to seat cable (WDM 23-34-02) or the SEB (AMM PAGEBLOCK 23-34-04/401).

1) Do the Repair Confirmation at the end of the task.

(g) Do a check of the left and right SEB CCT CB on the AMUX, M1956.

EFFECTIVITY
SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

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    1) If the left and right SEB CCT CB are open then close them.

       a) Do the Repair Confirmation at the end of this task.

  (h) If there are no defects you can replace the AMUX (AMM PAGEBLOCK 23-34-02/401) and reattach all sidewall disconnects (WDM 23-34-02).

    1) Do the Repair Confirmation at the end of the task.

  (i) Reset all applicable IFE circuit breakers.

  (j) Turn ON the IFE power switch at the first attendant's front panel.

SHZ 002, 009-699, 871-874, 876-880

(3) Update AMUX memory (AMM PAGEBLOCK 23-34-03/201).

  (a) Do the Repair Confirmation at the end of the task.

SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

(4) If all PCU's display channel 1-12 you are finished.

(5) If after replacing the AMUX the PCU's still display channels 1-18 check the following:

NOTE: If the problem was not fixed prior to installing the new MUX, it may become damaged and need replacement again.

  (a) BITE Panel.

    1) Replace if necessary.

  (b) Check wiring between the AMUX and side wall disconnect.

  (c) Check wiring between BITE Panel and AMUX.

F. Repair Confirmation

(1) Do a check of the PCU display.

  (a) If the PCUs display channel 1-12, then you corrected the problem.

  (b) If the PCUs display channel 1-18, then continue the Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

EFFECTIVITY
SHZ 002, 009-699, 801-820, 860-863, 871-874, 876-880, 901-999

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801. **Service Interphone Connection Problem - Fault Isolation**

A. **Description**

(1) The service interphone does not connect to the flight interphone or other service interphone locations.

B. **Possible Causes**

(1) Remote Electronic Unit (REU), M1353

(2) SERVICE INTERPHONE switch, S50

(3) Wiring

C. **Circuit Breakers**

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	21	C00560	INTERPHONE POWER F/O DC 2
C	22	C00561	INTERPHONE POWER F/O BAT
C	23	C00239	INTERPHONE POWER CAPT DC 2
C	24	C00240	INTERPHONE POWER CAPT BAT
D	21	C00084	INTPH AND WARN
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

D. **Related Data**

(1) (SSM 23-41-11)

(2) (WDM 23-41-11)

E. **Initial Evaluation**

(1) Do these steps to prepare the service interphone system for initial evaluation and for fault isolation:

(a) Set the SERVICE INTERPHONE switch, S50, on the P5 Overhead Panel to the ON position.

(b) Connect a boom mic/headset to the pilot's station in the flight deck.

SHZ 002, 009-699, 706, 721-799, 865, 866, 871-874

(c) Connect a boom mic/headset to the service interphone jack at the external power panel near the nose wheel well area.

SHZ 801-825, 827-847, 850-852, 855-863, 876-899, 901-999

(d) Connect a boom mic/headset to the service interphone jack at the EE rack.

SHZ ALL

(e) Push the SERV INT microphone selector switch on the pilot's audio control panel (ACP).

(f) Push the volume control for the SVC microphone selector switch and turn to the middle position.

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SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(2)   Do this check of the service interphone system:

(a)   Push and hold the PTT switch on the pilot's control wheel to the INT position.

(b)   Speak into the pilot's boom microphone.

(c)   Make sure the ground crew can hear the voice clearly from the headset.

(d)   Release the PTT switch on the pilot's control wheel.

(e)   Have the ground crew speak into the boom microphone.

(f)   Make sure you can hear the voice clearly on the pilot's headset.

(g)   If the voice is not heard on either headset, then do the Fault Isolation Procedure below.

(h)   If the voice is heard on both headsets, then there was an intermittent fault.

SHZ 706

(3)   Do this check of the service interphone system:

(a)   Push the PTT switch on the pilot's control wheel to the INT position.

(b)   Speak into the pilot's boom microphone.

(c)   Make sure the ground crew can hear the voice clearly from the headset.

(d)   Push the switch to the center (OFF) position.

(e)   Have the ground crew speak into the boom microphone.

(f)   Make sure you can hear the voice clearly on the pilot's headset.

(g)   If the voice is not heard on either headset, then do the Fault Isolation Procedure below.

(h)   If the voice is heard on both headsets, then there was an intermittent fault.

SHZ ALL

F.   **Fault Isolation Procedure**

NOTE: You must do the steps to prepare for fault isolation that are in the Initial Evaluation before you can do these steps.

(1)   Replace the Remote Electronic Unit (REU), M1353.

These are the tasks:

Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801,

Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

(a)   Do the Repair Confirmation at the end of this task.

1)   If the Repair Confirmation is not OK, then continue.

(2)   Replace the SERVICE INTERPHONE switch, S50, on the P5 overhead panel.

(a)   Do the Repair Confirmation at the end of this task.

1)   If the Repair Confirmation is not OK, then continue.

(3)   Do this check of the wiring for open circuit:

(a)   Remove the REU, M1353 from the E4-1 shelf. To remove it, do this task: Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801.

(b)   Remove the SERVICE INTERPHONE switch, S50, from the P5 overhead panel.

(c)   Do a check for an open circuit between these pins of the SERVICE INTERPHONE switch, S50, and connector D2501B of the REU:

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S50	D2501B
pin 2	pin D6

(d) Remove the EE rack service interphone jack, D6025.

(e) Do a check for an open circuit between these pins of the SERVICE INTERPHONE switch, S50, and the EE rack service interphone jack, D6025:

S50	D6025
pin 1	pin R

(f) Do a check for an open circuit between these pins of connector D2501B of the REU and the EE rack service interphone jack, D6025:

D2501B	D6025
pin D7	pin S
pin E7	pin T

(g) If you find a problem with the wiring, then do these steps:

   1) Repair the wiring.

   2) Re-install the REU. To install it, do this task: Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

   3) Re-install the SERVICE INTERPHONE switch.

   4) Re-install the EE rack service interphone jack.

   5) Do the Repair Confirmation at the end of this task:

      a) If the Repair Confirmation is not OK, then continue.

(4) Do this check for short circuit:

(a) Remove the REU, M1353 from the E4-1 shelf. To remove it, do this task: Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801.

(b) Make sure the SERVICE INTERPHONE switch, S50, is at the ON position

(c) Do a check for short circuit at connector D2501B:

D2501B	D2501B
Pin D6	D7
Pin E7	D7

(d) If a short circuit is identified, then do these steps:

   1) Inspect and isolate each jack and wiring for the source of short circuit such as corrosion, fluid contamination or spring contacts touching the jeck body. Refer to WDM 23-41-11.

      NOTE: Inspect jacks D6017, D6011 and D6057 before you check the other jacks. Due to their location, they are more likely to have short circuit problems.

   2) Repair or replace the damaged jack or wiring

(e) Re-install the REU. To install it, do this task: Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

(f) Do the Repair Confirmation at the end of this task.

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G.   **Repair Confirmation**

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(1)   Do this check of the service interphone system:

NOTE: You must do the steps to prepare for fault isolation that are in the Initial Evaluation before you can do this check.

(a)   Push and hold the PTT switch on the pilot's control wheel to the INT position.

(b)   Speak into the pilot's boom microphone.

(c)   Make sure the ground crew can hear the voice clearly on the headset.

(d)   Release the PTT switch on the pilot's control wheel.

(e)   Have the ground crew speak into the boom microphone.

(f)   Make sure you can hear the voice clearly on the pilot's headset.

(g)   If the voice is heard on both headsets, then you corrected the fault.

SHZ 706

(2)   Do this check of the service interphone system:

NOTE: You must do the steps to prepare for fault isolation that are in the Initial Evaluation before you can do this check.

(a)   Push the PTT switch on the pilot's control wheel to the INT position.

(b)   Speak into the pilot's boom microphone.

(c)   Make sure the ground crew can hear the voice clearly on the headset.

(d)   Push the switch to the center (OFF) position.

(e)   Have the ground crew speak into the boom microphone.

(f)   Make sure you can hear the voice clearly on the pilot's headset.

(g)   If the voice is heard on both headsets, then you corrected the fault.

SHZ ALL

——————— END OF TASK ———————

802.   **Service Interphone Audio Problem at One Jack - Fault Isolation**

A.   **Description**

(1)   The audio heard at one of the service interphone jacks is unsatisfactory.

B.   **Possible Causes**

(1)   Service Interphone Jack

(2)   Wiring

C.   **Circuit Breakers**

(1)   These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	21	C00560	INTERPHONE POWER F/O DC 2
C	22	C00561	INTERPHONE POWER F/O BAT
C	23	C00239	INTERPHONE POWER CAPT DC 2
C	24	C00240	INTERPHONE POWER CAPT BAT

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F/O Electrical System Panel, P6-2

Row	Col	Number	Name
D	21	C00084	INTPH AND WARN
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

D. **Related Data**

(1)   (SSM 23-41-11)

(2)   (WDM 23-41-11)

E. **Initial Evaluation**

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(1)   Do this check of the service interphone jack:

(a)   Push and hold the PTT switch on the pilot's control wheel to the INT position.

(b)   Speak into the pilot's boom microphone.

(c)   Make sure the ground crew can hear the voice clearly on the headset at the applicable service interphone jack.

(d)   Release the PTT switch on the pilot's control wheel.

(e)   Have the ground crew speak into the boom microphone.

(f)   Make sure you can hear the voice clearly on the pilot's headset.

(g)   If the voice is not heard on either headset, then do the Fault Isolation Procedure below.

(h)   If the voice is heard on both headsets, then there was an intermittent fault.

SHZ 706

(2)   Do this check of the service interphone jack:

(a)   Push the PTT switch on the pilot's control wheel to the INT position.

(b)   Speak into the pilot's boom microphone.

(c)   Make sure the ground crew can hear the voice clearly on the headset at the applicable service interphone jack.

(d)   Push the switch to the center (OFF) position.

(e)   Have the ground crew speak into the boom microphone.

(f)   Make sure you can hear the voice clearly on the pilot's headset.

(g)   If the voice is not heard on either headset, then do the Fault Isolation Procedure below.

(h)   If the voice is heard on both headsets, then there was an intermittent fault.

SHZ ALL

F. **Fault Isolation Procedure**

NOTE: You must do the steps to prepare for fault isolation that are in the Initial Evaluation before you can do these steps.

(1)   Replace the applicable jack.

(a)   Do the Repair Confirmation at the end of this task.

1)   If the Repair Confirmation is not OK, then continue.

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(2)   Do this check of the wiring:

   (a)   Remove the REU from the E4-1 shelf. To remove it, do this task: Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801.

   (b)   Do a check for an open circuit between these pins of connector D2501B of the REU and the applicable service interphone jack:

SHZ 002, 009-699, 706, 721-799, 865, 866, 871-874

	JACK LOCATION	
	REU CONNECTOR	**JACK CONNECTOR**
EXTERNAL POWER RECEPTACLE PANEL	**D2501B**	**D6007**
	pin D7	pin S
	D2501B	**D6007**
	pin E7	pin T

SHZ ALL

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JACK LOCATION

	REU CONNECTOR	JACK CONNECTOR
EE RACK	**D2501B** pin D7	**D6025** pin S
	D2501B pin E7	**D6025** pin T
APU	**D2501B** pin D7	**D6017** pin S
	D2501B pin E7	**D6017** pin T
AFT ENTRY LIGHT PANEL	**D2501B** pin D7	**D6015** pin S
	D2501B pin E7	**D6015** pin T
LEFT WHEEL WELL	**D2501B** pin D7	**D6011** pin S
	D2501B pin E7	**D6011** pin T
RIGHT WHEEL WELL	**D2501B** pin D7	**D6057** pin S
	D2501B pin E7	**D6057** pin T
RIGHT WING REFUELING SLAT	**D2501B** pin D7	**D6013** pin S
	D2501B pin E7	**D6013** pin T

(c)   If you find a problem with the wiring, then do these steps:

1)   Repair the wiring.

2)   Re-install the REU. To install it, do this task: Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

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3) Do the Repair Confirmation at the end of this task.

G. **Repair Confirmation**

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(1) Do this check of the service interphone system:

NOTE: You must do the steps to prepare for fault isolation that are in the Initial Evaluation before you can do this check.

(a) Push and hold the PTT switch on the pilot's control wheel to the INT position.

(b) Speak into the pilot's boom microphone.

(c) Make sure the ground crew can hear the voice clearly on the headset at the applicable service interphone jack.

(d) Release the PTT switch on the pilot's control wheel.

(e) Have the ground crew speak into the boom microphone.

(f) Make you can hear the voice clearly on the pilot's headset.

(g) If the voice is heard on both headsets, then you corrected the fault.

SHZ 706

(2) Do this check of the service interphone system:

NOTE: You must do the steps to prepare for fault isolation that are in the Initial Evaluation before you can do this check.

(a) Push the PTT switch on the pilot's control wheel to the INT position.

(b) Speak into the pilot's boom microphone.

(c) Make sure the ground crew can hear the voice clearly on the headset at the applicable service interphone jack.

(d) Push the switch to the center (OFF) position.

(e) Have the ground crew speak into the boom microphone.

(f) Make you can hear the voice clearly on the pilot's headset.

(g) If the voice is heard on both headsets, then you corrected the fault.

SHZ ALL

————— END OF TASK —————

803. **Service Interphone Audio Problem at All Jacks - Fault Isolation**

A. **Description**

(1) The audio heard at all of the service interphone jacks is unsatisfactory.

B. **Possible Causes**

(1) Remote Electronic Unit (REU), M1353

(2) Wiring

C. **Circuit Breakers**

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	21	C00560	INTERPHONE POWER F/O DC 2

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F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	22	C00561	INTERPHONE POWER F/O BAT
C	23	C00239	INTERPHONE POWER CAPT DC 2
C	24	C00240	INTERPHONE POWER CAPT BAT
D	21	C00084	INTPH AND WARN
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

D. **Related Data**

   (1) (SSM 23-41-11)

   (2) (WDM 23-41-11)

E. **Initial Evaluation**

SHZ 002, 009-699, 706, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

   (1) Do these steps to prepare the service interphone system for initial evaluation and for fault isolation:

     (a) Set the SERVICE INTERPHONE switch, S50, on the P5 Overhead Panel to the ON position.

     (b) Connect a boom mic/headset to the pilot's station in the flight deck.

     (c) Connect a boom mic/headset to the EE rack service interphone jack.

     (d) Push the SVC microphone selector switch on the pilot's audio control panel (ACP).

     (e) Push the volume control for the SVC microphone selector switch and turn to the middle position.

SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

   (2) Do these steps to prepare the service interphone system for initial evaluation and for fault isolation:

     (a) Set the SERVICE INTERPHONE switch, S50, on the P5 Overhead Panel to the ON position.

     (b) Connect a boom mic/headset to the pilot's station in the flight deck.

     (c) Connect a boom mic/headset to the EE rack service interphone jack.

     (d) Push the CABIN microphone selector switch on the pilot's audio control panel (ACP).

     (e) Push the volume control for the CABIN microphone selector switch and turn to the middle position.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

   (3) Do this check of the service interphone system:

     (a) Push and hold the PTT switch on the pilot's control wheel to the INT position.

     (b) Speak into the pilot's boom microphone.

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SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999 (Continued)

    (c)   Make sure the ground crew can hear the voice clearly on the headset at the EE rack service interphone jack.

          NOTE: Repeat this step at several of the service interphone jack locations to make sure the problem occurs at all jacks.

    (d)   Release the PTT switch on the pilot's control wheel.

    (e)   Have the ground crew speak into the boom microphone.

    (f)   Make sure you can hear the voice clearly on the pilot's headset.

    (g)   If the voice is not heard on either headset, from each service interphone jack you tried, then do the Fault Isolation Procedure below.

    (h)   If the voice is heard on both headsets, then there was an intermittent fault.

SHZ 706

(4)   Do this check of the service interphone system:

    (a)   Push the PTT switch on the pilot's control wheel to the INT position.

    (b)   Speak into the pilot's boom microphone.

    (c)   Make sure the ground crew can hear the voice clearly on the headset at the EE rack service interphone jack.

          NOTE: Repeat this step at several of the service interphone jack locations to make sure the problem occurs at all jacks.

    (d)   Push the switch to the center (OFF) position.

    (e)   Have the ground crew speak into the boom microphone.

    (f)   Make sure you can hear the voice clearly on the pilot's headset.

    (g)   If the voice is not heard on either headset, from each service interphone jack you tried, then do the Fault Isolation Procedure below.

    (h)   If the voice is heard on both headsets, then there was an intermittent fault.

SHZ ALL

F. Fault Isolation Procedure

NOTE: You must do the steps to prepare for fault isolation that are in the Initial Evaluation before you can do these steps.

(1)   Replace the Remote Electronic Unit (REU), M1353.

    These are the tasks:

    Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801,

    Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

    (a)   Do the Repair Confirmation at the end of this task.

         1)   If the Repair Confirmation is not OK, then continue.

(2)   Do this check of the wiring:

    (a)   Remove the REU from the E4-1 shelf. To remove it, do this task: Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801.

    (b)   Remove the EE rack service interphone jack, D6025.

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(c) Do a check for an open circuit between these pins of connector D2501B of the REU and the EE rack service interphone jack, D6025:

D2501B	**D6025**
pin D7	pin S
pin E7	pin T

(d) If you find a problem with the wiring, then do these steps:

    1) Repair the wiring.

    2) Re-install the REU. To install it, do this task: Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

    3) Re-install the EE rack service interphone jack, D6025.

    4) Do the Repair Confirmation at the end of this task.

  G. Repair Confirmation

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(1) Do this check of the service interphone system:

NOTE: You must do the steps to prepare for fault isolation that are in the Initial Evaluation before you can do these steps.

(a) Push and hold the PTT switch on the pilot's control wheel to the INT position.

(b) Speak into the pilot's boom microphone.

(c) Make sure the ground crew can hear the voice clearly on the headset at the EE rack service interphone jack.

(d) Release the PTT switch on the pilot's control wheel.

(e) Have the ground crew speak into the boom microphone.

(f) Make sure you can hear the voice clearly on the pilot's headset.

(g) If the voice is heard on both headsets, then you corrected the fault.

SHZ 706

(2) Do this check of the service interphone system:

NOTE: You must do the steps to prepare for fault isolation that are in the Initial Evaluation before you can do these steps.

(a) Push the PTT switch on the pilot's control wheel to the INT position.

(b) Speak into the pilot's boom microphone.

(c) Make sure the ground crew can hear the voice clearly on the headset at the EE rack service interphone jack.

(d) Push the switch to the center (OFF) position.

(e) Have the ground crew speak into the boom microphone.

(f) Make sure you can hear the voice clearly on the pilot's headset.

(g) If the voice is heard on both headsets, then you corrected the fault.

SHZ ALL

─────── **END OF TASK** ───────

┌─ EFFECTIVITY ─
SHZ ALL

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804. Attendant Handset Problem - Fault Isolation

A. Description

(1) The audio heard at an Attendant's Handset is unsatisfactory.

(2) If the Attendant's Handset has problems with a PA Announcement, refer to Passenger Address System Problem - Fault Isolation, 23-31 TASK 805.

B. Possible Causes

(1) Attendant's Handset, M74 (M75)

NOTE: 737BCF does not have a M75 installed.

(2) FWD (AFT) Cabin Attendant's Control Panel, P13 (P14)

NOTE: 737BCF does not have a P14 installed.

(3) Remote Electronics Unit (REU), M1353

(4) Wiring

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(5) Inline Filter M2931 or M2932

SHZ ALL

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	21	C00560	INTERPHONE POWER F/O DC 2
C	22	C00561	INTERPHONE POWER F/O BAT
C	23	C00239	INTERPHONE POWER CAPT DC 2
C	24	C00240	INTERPHONE POWER CAPT BAT
D	21	C00084	INTPH AND WARN
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

D. Related Data

(1) WDM 23-41-11

(2) WDM 23-42-11

(3) SSM 23-41-11

(4) SSM 23-42-11

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(5) WDM 23-42-12

SHZ ALL

E. Initial Evaluation

(1) Do this check of the Attendant's Handset:

(a) Lift the handset from the cradle.

(b) Push the button for the attendant on the handset keypad.

┌─ EFFECTIVITY ─
SHZ ALL

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    (c)   Make sure that you hear a chime from the PA Speakers and a Master Call Light at the Attendant's Station comes ON.

    (d)   Make voice communication to the other attendant's station.

        1)   If the sound you hear on the Attendant's Handset is satisfactory, then there was an intermittent fault.

        2)   If the sound you hear on the Attendant's Handset is not satisfactory, do the Fault Isolation Procedure below.

F.   Fault Isolation Procedure

    (1)   Make sure that the connection between the handset and cord is correct.

        NOTE: To connect a cord to the handset, push the cord connector into the handset connector until you hear an audible click.

    (2)   Replace the Attendant's Handset/Cord Assembly, M74 (M75). These are the tasks:

      • Attendant Handset Removal, AMM TASK 23-42-01-000-801

      • Attendant Handset Cord Removal, AMM TASK 23-42-01-000-802

      • Attendant Handset Installation, AMM TASK 23-42-01-400-803

      • Attendant Handset Cord Installation, AMM TASK 23-42-01-400-802

      (a)   Do the Repair Confirmation at the end of this task.

    (3)   Replace the applicable Cabin Attendant's Control Panel, P13 (P14). These are the tasks:

      • Attendant's Panel and Components Removal, AMM TASK 25-25-11-000-801 or Attendant's Panel with LCD Touch Panel - Removal, AMM TASK 25-25-11-000-802

      • Attendant's Panel and Components Installation, AMM TASK 25-25-11-400-801 or Attendant's Panel with LCD Screen - Installation, AMM TASK 25-25-11-400-802

      (a)   Do the Repair Confirmation at the end of this task.

    (4)   Replace the REU, M1353. These are the tasks:

      • Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801

      • Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802

      (a)   Do the Repair Confirmation at the end of this task.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

    (5)   Replace the applicable inline filter M2931 or M2932. These are the tasks:

      • Inline Filter Removal, AMM TASK 23-42-04-000-801

      • Inline Filter Installation, AMM TASK 23-42-04-400-801

      (a)   Do the Repair Confirmation at the end of this task.

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

    (6)   Do this check of the wiring:

      (a)   Remove the Attendant's Handset. This is the task: Attendant Handset Removal, AMM TASK 23-42-01-000-801.

      (b)   Remove the REU, M1353. This is the task: Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801.

      (c)   Do a check for an open circuit between the Attendant's Handset, M74 (M75), and REU, M1353 as follows (WDM 23-41-11, WDM 23-42-11):

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SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999 (Continued)

P-A		D2501B
pin C5	. . . .	pin G8
pin C6	. . . .	pin F7
pin D5	. . . .	pin G9

    (d)   If you find a problem with the wiring, then do these steps:

        1)   Repair the wiring.

        2)   Re-install the Attendant's Handset. This is the task: Attendant Handset Installation, AMM TASK 23-42-01-400-803.

        3)   Re-install the REU, M1353. This is the task: Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

        4)   Do the Repair Confirmation at the end of this task.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(7)   Do this check of the wiring:

    (a)   Remove the attendant handset, M75. This is the task: Attendant Handset Removal, AMM TASK 23-42-01-000-801.

    (b)   Remove the inline filter, 2931. This is the task: Inline Filter Removal, AMM TASK 23-42-04-000-801.

    (c)   Do a check for an open circuit between the attendant handset and the inline filter as follows (WDM 23-42-12):

J1		D11815
C5	. . . .	4
D5	. . . .	2
C6	. . . .	3

    (d)   If you find a problem with the wiring, then do these steps:

        1)   Repair the wiring.

        2)   Re-install the Attendant's Handset, M75. This is the task: Attendant Handset Installation, AMM TASK 23-42-01-400-803.

        3)   Re-install the inline filter, 2931. This is the task: Inline Filter Installation, AMM TASK 23-42-04-400-801.

        4)   Do the Repair Confirmation at the end of this task.

(8)   Do this check of the wiring:

    (a)   Remove the inline filter, 2931. This is the task: Inline Filter Removal, AMM TASK 23-42-04-000-801.

    (b)   Remove the REU, M1353. This is the task: Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801

    (c)   Do a check for an open circuit between the inline filter and the REU as follows (WDM 23-42-12):

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

D11815	D2501B
13	G8
7	G9
6	F7

(d)   If you find a problem with the wiring, then do these steps:

    1)   Repair the wiring.

    2)   Re-install the inline filter, 2931. This is the task: Inline Filter Installation, AMM TASK 23-42-04-400-801.

    3)   Re-install the REU, M1353. This is the task: Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

    4)   Do the Repair Confirmation at the end of this task.

(9)   Do this check of the wiring:

(a)   Remove the attendant handset, M74. This is the task: Attendant Handset Removal, AMM TASK 23-42-01-000-801.

(b)   Remove the inline filter, 2932. This is the task: Inline Filter Removal, AMM TASK 23-42-04-000-801.

(c)   Do a check for an open circuit between the attendant handset and the inline filter as follows (WDM 23-42-12):

J1	D13363
15	3
16	2
14	4

(d)   If you find a problem with the wiring, then do these steps:

    1)   Repair the wiring.

    2)   Re-install the Attendant's Handset, M74. This is the task: Attendant Handset Installation, AMM TASK 23-42-01-400-803.

    3)   Re-install the inline filter, 2932. This is the task: Inline Filter Installation, AMM TASK 23-42-04-400-801.

    4)   Do the Repair Confirmation at the end of this task.

(10)   Do this check of the wiring:

(a)   Remove the inline filter, 2932 This is the task: Inline Filter Removal, AMM TASK 23-42-04-000-801.

(b)   Remove the REU, M1353. This is the task: Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801

(c)   Do a check for an open circuit between the inline filter and the REU as follows (WDM 23-42-12):

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

D13363	D2501B
3	G8
2	G9
4	F7

    (d)   If you find a problem with the wiring, then do these steps:

        1)   Repair the wiring.

        2)   Re-install the inline filter, 2932 This is the task: Inline Filter Installation, AMM TASK 23-42-04-400-801.

        3)   Re-install the REU, M1353. This is the task: Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

        4)   Do the Repair Confirmation at the end of this task.

SHZ ALL

G. Repair Confirmation

(1)   On the Handset Keypad, push the button for the attendant

    (a)   Make sure that you hear a chime from the PA Speakers and a Master Call Light at the Attendant's Station comes ON.

(2)   Make voice communication to the other Attendant's Station.

    (a)   If the sound you hear on the Attendant's Handset is satisfactory, then you corrected the problem.

    (b)   If the sound you hear on the Attendant's Handset is not satisfactory, continue the Fault Isolation Procedure at the subsequent step.

——— **END OF TASK** ———

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801. Attendant Control Panel (ACP) - BITE Procedure

   A. General

    SHZ 821-825, 827-847, 850-852, 855-859, 881-899

    (1)   This procedure provides the system test for the Attendant Control Panels (ACPs). The system test is performed at the forward ACP.

        (a)   For the system test, the forward ACP will initiate BITE test on both the forward and the aft ACPs. The BITE test will check the ACPs for internal faults and their communication status. The forward ACP will then query the light LRU's for fault information. If there are ACP or lighting faults, the ACP will show the faults at the end of the test.

    (2)   The procedure also provides the task to view faults that are generated during data loading.

    SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

    (3)   This BITE procedure is not applicable for airplanes without Boeing Sky Interior.

    SHZ ALL

   B. System Test Procedure

    SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

    (1)   NA

    SHZ 821-825, 827-847, 850-852, 855-859, 881-899

    (2)   At the forward ACP, do the steps that follow to start the system test:

        (a)   In the ACP main menu column, push the Maintenance button.

        (b)   In the Maintenance menu column, push the System Test button.

        (c)   In the control window, push the Start Test button.

        NOTE: When the system test operates, the System Test and Start Test buttons are active, the other buttons become disabled and the status bar will display the approximate percent complete. When the test completes, the System Test and the Start Test buttons remain active and other buttons will be available for selection.

        (d)   Check the result window for the system test faults.

        NOTE: The result window will show the faults with their maintenance message numbers and corrective actions. If there are no faults, a message will be displayed to indicate that there are no system test faults.

        (e)   To save the fault data on a diskette, refer to: Attendant Control Panel (ACP) - Saving Fault Data, AMM TASK 23-42-03-970-802.

        (f)   To correct the fault, do the actions recommended on the screen or use the fault maintenance message number and refer to the table at the end of this task to find the fault isolation task for the applicable maintenance message.

   C. Data Load Fault Data Review Procedure

    (1)   Do the steps that follow to view the Data Load Faults:

    NOTE: These faults are generated during data loading, user will see the warning messages about the faults.

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

(a) In the Maintenance menu column, push the Fault Data button.

NOTE: After you push the Fault Data button, four buttons will appear in the control window: System Test Faults, Data Load Faults, Save All and Exit. The result window will show instructions for user to view or save the fault data.

(b) Push the Data Load Faults button in the control window.

(c) Check the result window for the data load faults.

NOTE: The result window will show the faults with their maintenance message numbers and corrective actions. If there are no faults, a message will be displayed to indicate that there are no data load faults.

(d) To save the fault data on a diskette, refer to: Attendant Control Panel (ACP) - Saving Fault Data, AMM TASK 23-42-03-970-802.

(e) To correct the faults, do the actions recommended on the screen or using the fault maintenance message number and refer to the table at the end of this task to find the fault isolation task for the applicable maintenance messages.

SHZ ALL

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
ACP	23-11001 INTERNAL ACP FAULT DETECTED IN <FORWARD | AFT> ACP	23-42 TASK 807
ACP	23-11002 INTERNAL ACP FAULT DETECTED IN <FORWARD | AFT> ACP	23-42 TASK 807
ACP	23-11003 INTERNAL ACP FAULT DETECTED IN <FORWARD | AFT> ACP	23-42 TASK 807
ACP	23-11004 INTERNAL ACP FAULT DETECTED IN <FORWARD | AFT> ACP	23-42 TASK 807
ACP	23-11005 INTERNAL ACP FAULT DETECTED IN <FORWARD | AFT> ACP	23-42 TASK 808
ACP	23-11006 INTERNAL ACP FAULT DETECTED IN <FORWARD | AFT> ACP	23-42 TASK 808
ACP	23-11007 INTERNAL ACP FAULT DETECTED IN <FORWARD | AFT> ACP	23-42 TASK 808
ACP	23-11008 INTERNAL ACP FAULT DETECTED IN <FORWARD | AFT> ACP	23-42 TASK 809
ACP	23-11010 INTERNAL ACP FAULT DETECTED IN <FORWARD | AFT> ACP	23-42 TASK 807
ACP	23-11011 INTERNAL ACP FAULT DETECTED IN <FORWARD | AFT> ACP	23-42 TASK 807
ACP	23-11012 INTERNAL ACP FAULT DETECTED IN <FORWARD | AFT> ACP	23-42 TASK 807
ACP	23-11013 INTERNAL ACP FAULT DETECTED IN <FORWARD | AFT> ACP	23-42 TASK 807

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
ACP	23-11014 INTERNAL ACP FAULT DETECTED IN FORWARD AND AFT ACPS	23-42 TASK 809
ACP	23-11015 <FORWARD | AFT> WORK LIGHT FAULT DETECTED	23-42 TASK 811
ACP	23-11016 <FORWARD | AFT> MDCD LIGHT FAULT DETECTED	23-42 TASK 812
ACP	23-11017 28 VDC POWER FAULT DETECTED IN <FORWARD | AFT> ACP	23-42 TASK 814
ACP	23-11018 INTERNAL ACP FAULT DETECTED	23-42 TASK 808
ACP	23-11019 INTERNAL ACP FAULT DETECTED	23-42 TASK 808
ACP	23-11020 INTERNAL ACP FAULT DETECTED	23-42 TASK 808
ACP	23-11021 INTERNAL ACP FAULT DETECTED	23-42 TASK 808
ACP	23-11022 COMMUNICATION WITH AFT ACP LOST	23-42 TASK 815
ACP	23-11023 CABIN TEMPERATURE FAULT DETECTED	23-42 TASK 816
ACP	23-11024 <FORWARD | AFT> THRESHOLD LIGHT FAULT DETECTED	23-42 TASK 813
ACP	23-11025 INTERNAL ACP FAULT DETECTED	23-42 TASK 807
ACP	23-11026 LAVATORY INOPERATIVE	23-42 TASK 817
ACP	23-11027 CLEAN CHECK SENSORS	23-42 TASK 817
ACP	23-11028 LIGHT <COLUMN>-<ADDRESS> NO RESPONSE DURING ADDRESSING	23-42 TASK 810
ACP	23-11029 LIGHT <COLUMN>-<ADDRESS> OUT OF SEQUENCE RESPONSE DURING ADDRESSING	23-42 TASK 810
ACP	23-11030 LIGHT <COLUMN>-<ADDRESS> EXTRA RESPONSE DURING ADDRESSING	23-42 TASK 810
ACP	23-11031 LIGHT <COLUMN>-<ADDRESS> INCORRECT ZONE DETECTED	23-42 TASK 810
ACP	23-11032 LIGHT <COLUMN>-<ADDRESS> INCORRECT ZONE DETECTED	23-42 TASK 810
ACP	23-11033 LIGHT <COLUMN>-<ADDRESS> INCORRECT STANDARD SCENES DETECTED	23-42 TASK 810
ACP	23-11034 LIGHT <COLUMN>-<ADDRESS> INCORRECT CUSTOM SCENES DETECTED	23-42 TASK 810
ACP	23-11035 NO SYSTEM TEST LRU RESPONSES DETECTED ON COLUMN 1	23-42 TASK 819
ACP	23-11036 NO SYSTEM TEST LRU RESPONSES DETECTED ON COLUMN 2	23-42 TASK 819
ACP	23-11037 NO SYSTEM TEST LRU RESPONSES DETECTED ON COLUMN 3	23-42 TASK 819

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
ACP	23-11038 NO SYSTEM TEST LRU RESPONSES DETECTED ON COLUMN 4	23-42 TASK 819
ACP	23-11039 SYSTEM TEST RS-485 CABLE BREAK DETECTED AT LRU 1-<X>	23-42 TASK 818
ACP	23-11040 SYSTEM TEST RS-485 CABLE BREAK DETECTED AT LRU 2-<X>	23-42 TASK 818
ACP	23-11041 SYSTEM TEST RS-485 CABLE BREAK DETECTED AT LRU 3-<X>	23-42 TASK 818
ACP	23-11042 SYSTEM TEST RS-485 CABLE BREAK DETECTED AT LRU 4-<X>	23-42 TASK 818
ACP	23-11043 LIGHT <COLUMN>-<ADDRESS> NO RESPONSE DURING ADDRESSING	23-42 TASK 820
ACP	23-11044 LIGHT <COLUMN>-<ADDRESS> OUT OF SEQUENCE RESPONSE DURING ADDRESSING	23-42 TASK 820
ACP	23-11045 LIGHT <COLUMN>-<ADDRESS> EXTRA RESPONSE DURING ADDRESSING	23-42 TASK 821
ACP	23-11046 LIGHT <COLUMN>-<ADDRESS> INCORRECT LIGHT TYPE DETECTED	23-42 TASK 822
ACP	23-11047 LIGHT <COLUMN>-<ADDRESS> NO RESPONSE DURING ZONING	23-42 TASK 823
ACP	23-11048 LIGHT <COLUMN>-<ADDRESS> OUT OF SEQUENCE RESPONSE DURING ZONING	23-42 TASK 823
ACP	23-11049 LIGHT <COLUMN>-<ADDRESS> INCORRECT ZONE DETECTED	23-42 TASK 824
ACP	23-11050 LIGHT <COLUMN>-<ADDRESS> NO RESPONSE DURING STANDARD SCENE DOWNLOAD	23-42 TASK 823
ACP	23-11051 LIGHT <COLUMN>-<ADDRESS> OUT OF SEQUENCE RESPONSE DURING STANDARD SCENE DOWNLOAD	23-42 TASK 823
ACP	23-11052 LIGHT <COLUMN>-<ADDRESS> FAILED STANDARD SCENE DOWNLOAD	23-42 TASK 823
ACP	23-11053 LIGHT <COLUMN>-<ADDRESS> NO RESPONSE DURING CUSTOM SCENE DOWNLOAD	23-42 TASK 823
ACP	23-11054 LIGHT <COLUMN>-<ADDRESS> OUT OF SEQUENCE RESPONSE DURING CUSTOM SCENE DOWNLOAD	23-42 TASK 823
ACP	23-11055 LIGHT <COLUMN>-<ADDRESS> FAILED CUSTOM SCENE DOWNLOAD	23-42 TASK 823
ACP	23-11056 NO DATA LOAD LRU RESPONSES DETECTED ON COLUMN 1	23-42 TASK 825
ACP	23-11057 NO DATA LOAD LRU RESPONSES DETECTED ON COLUMN 2	23-42 TASK 825

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
ACP	23-11058 NO DATA LOAD LRU RESPONSES DETECTED ON COLUMN 3	23-42 TASK 825
ACP	23-11059 NO DATA LOAD LRU RESPONSES DETECTED ON COLUMN 4	23-42 TASK 825
ACP	23-11060 DATA LOAD RS-485 CABLE BREAK DETECTED ON COLUMN 1	23-42 TASK 826
ACP	23-11061 DATA LOAD RS-485 CABLE BREAK DETECTED ON COLUMN 2	23-42 TASK 826
ACP	23-11062 DATA LOAD RS-485 CABLE BREAK DETECTED ON COLUMN 3	23-42 TASK 826
ACP	23-11063 DATA LOAD RS-485 CABLE BREAK DETECTED ON COLUMN 4	23-42 TASK 826
ACP	23-11064 INTERNAL ACP FAULT DETECTED	23-42 TASK 827
ACP	23-11065 INTERNAL ACP FAULT DETECTED	23-42 TASK 827
ACP	23-11066 INTERNAL ACP FAULT DETECTED	23-42 TASK 827
ACP	23-11067 INTERNAL ACP FAULT DETECTED	23-42 TASK 827
ACP	23-11068 COMMUNICATIONS WITH AFT ACP LOST	23-42 TASK 828
ACP	23-11069 LSAP CONFIGURATION INVALID	23-42 TASK 829
ACP	23-11070 INTERNAL ACP FAULT DETECTED	23-42 TASK 830
ACP	23-11071 INTERNAL ACP FAULT DETECTED	23-42 TASK 830
ACP	23-11072 INTERNAL ACP FAULT DETECTED	23-42 TASK 830
ACP	23-11073 INTERNAL ACP FAULT DETECTED	23-42 TASK 830
ACP	23-11074 DISK FAULT DETECTED	23-42 TASK 831
ACP	23-11075 DISK FAULT DETECTED	23-42 TASK 831
ACP	23-11076 DISK FAULT DETECTED	23-42 TASK 831
ACP	23-11077 DISK FAULT DETECTED	23-42 TASK 831
ACP	23-11078 INCOMPATIBLE DISK DETECTED	23-42 TASK 832
ACP	23-11079 INCOMPATIBLE DISK DETECTED	23-42 TASK 832
ACP	23-11080 COMMUNICATIONS WITH ADL LOST	23-42 TASK 833
ACP	33-11001 Light <column>-<address> Component ID Error	33-20 TASK 817
ACP	33-11002 Light <column>-<address> Calibration Data CRC Error	33-20 TASK 817
ACP	33-11003 Light <column>-<address> Firmware Version Disagree Error	33-20 TASK 817
ACP	33-11004 Light <column>-<address> Power Supply Error	33-20 TASK 817
ACP	33-11005 Light <column>-<address> Temperature Sensor Error	33-20 TASK 817
ACP	33-11006 Light <column>-<address> RAM Check Error	33-20 TASK 817

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
ACP	33-11007 Light <column>-<address> Slave Token Error	33-20 TASK 817
ACP	33-11008 Light <column>-<address> Slave Communication Error	33-20 TASK 817
ACP	33-11009 Light <column>-<address> Slave Communication Error	33-20 TASK 817
ACP	33-11010 Light <column>-<address> Slave Communication Error	33-20 TASK 817
ACP	33-11011 Light <column>-<address> LED Wrap Data	33-20 TASK 817
ACP	33-11012 Light <column>-<address> Zone/Address Data CRC Error	33-20 TASK 818
ACP	33-11013 Light <column>-<address> Zone Address Disagree	33-20 TASK 818
ACP	33-11014 Light <column>-<address> Standard Scene CRC Error	33-20 TASK 818
ACP	33-11015 Light <column>-<address> Custom Scene CRC Error	33-20 TASK 818
ACP	33-11016 Light <column>-<address> Watchdog Timer Error	33-20 TASK 817
ACP	33-11017 Light <column>-<address> Master Token Timeout Error	33-20 TASK 819
ACP	33-11018 Light <column>-<address> Master Token Release Error	33-20 TASK 819
ACP	33-11019 Light <column>-<address> Loss of communication	33-20 TASK 819

——— END OF TASK ———

802. Flight Deck to Attendant, Call System Does Not Operate - Fault Isolation

   A. Description

   (1) The pink attendant call light on the Exit Locator Signs does not come on and the call chime does not sound when the flight crew presses the ATTEND button on the P5 forward overhead panel.

   B. Possible Causes

   (1) Attendant Call Switch, S36

   (2) Wiring

   C. Circuit Breakers

   (1) This is the primary circuit breaker related to the fault:

   CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	9	C00073	PASSENGER CABIN CREW CALL

   D. Related Data

   (1) (SSM 23-42-11)

   (2) (SSM 23-43-11)

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(3)   (WDM 23-42-11)

(4)   (WDM 23-43-11)

E.   Initial Evaluation

(1)   Do this check of the attendant's CALL light:

(a)   Press the ATTEND button on the P5 forward overhead panel.

1)   Make sure the pink call light on the forward and aft Exit Locator Signs comes on.

2)   Make sure you hear a chime in the passenger cabin.

(b)   Press the button for reset on the attendant's handset.

(c)   If the pink call lights do not come on and the chime does not sound, then do the Fault Isolation Procedure below.

(d)   If the pink call lights go on and the chime sounds, then there was an intermittent fault.

F.   Fault Isolation Procedure

(1)   Replace the Attendant's Call switch, S36, on the P5 forward overhead panel.

(a)   Do the Repair Confirmation at the end of this task.

1)   If the Repair Confirmation is not OK, then continue.

(2)   Do these checks of the wiring:

(a)   Remove the Exit Locator Sign, L1086 (forward) or L1223 (aft).

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

(b)   Remove the handset logic control card from the attendant's panel.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(c)   Remove the attendant control panel. To remove it, do this task: Attendant's Panel with LCD Touch Panel - Removal, AMM TASK 25-25-11-000-802

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

(d)   Do a check for an open circuit between connector D3160 (forward) or D10180 (aft), of the Exit Locator Sign, and connector D11068 (forward) or D11466 (aft) of the lavatory module. For correct pins, refer to WDM 23-42-11.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(e)   Do a check for an open circuit between connector D3160 (forward) or D10180 (aft), of the Exit Locator Sign, and connector D14368 (forward attendant control panel) or D14376 (aft attendant control panel). For correct pins, refer to WDM 23-42-11.

SHZ ALL

(f)   Remove the Attendant's Call switch, S36, from the P5 forward overhead panel.

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

(g)   Do a check for an open circuit between connector D40170J of the attendant's call switch, S36, and connector D11068 of the forward lavatory module. For correct pins, refer to WDM 23-42-11.

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(h) Do a check for an open circuit between connector D40170J of the attendant's call switch, S36, and connector D14368 of the forward attendant control panel. For correct pins, refer to WDM 23-42-11.

SHZ ALL

(i) If there is an open circuit, then do these steps:

1) Repair the wiring.

2) Re-install the Attendant's Call switch.

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

3) Re-install the handset logic control card.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

4) Re-install the attendant control panel. Do this task: Attendant's Panel with LCD Screen - Installation, AMM TASK 25-25-11-400-802.

SHZ ALL

5) Re-install the Exit Locator Sign.

6) Do the Repair Confirmation at the end of this task.

G. **Repair Confirmation**

(1) Do this check of the attendant's CALL light:

(a) Press the ATTEND button on the P5 forward overhead panel.

1) Make sure the pink call light on the forward and aft Exit Locator Signs comes on.

2) Make sure you hear a chime in the passenger cabin.

(b) Press the button for reset on the attendant's handset.

(c) If the pink call lights go on and the chime sounds, then you corrected the fault.

———— END OF TASK ————

803. **Attendant Call Chime Does Not Operate - Fault Isolation**

A. **Description**

(1) The chime from the Passenger Address system does not come on, but the call lights come on when the flight crew presses the ATTENDANT button on the P5 forward overhead panel.

B. **Possible Causes**

(1) Passenger Address Amplifier, M63

(2) Wiring

C. **Circuit Breakers**

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	9	C00073	PASSENGER CABIN CREW CALL

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	4	C00082	COMMUNICATIONS PA AMPL BAT

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D. **Related Data**

(1) (SSM 23-42-11)

(2) (SSM 23-43-11)

(3) (WDM 23-42-11)

(4) (WDM 23-43-11)

E. **Initial Evaluation**

(1) Do this check of the call chime:

(a) Press either the ATTEND button on the P5 forward overhead panel, or the button for the attendant on the attendant handset.

    1) Make sure you hear a chime in the passenger cabin.

(b) Press the button for reset on the attendant's handset.

(c) If the chime does not sound, then do the Fault Isolation Procedure below.

(d) If the chime sounds, then there was an intermittent fault.

F. **Fault Isolation Procedure**

(1) Replace the Passenger Address Amplifier, M63.

These are the tasks:

Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801,

Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

(a) Do the Repair Confirmation at the end of this task.

    1) If the Repair Confirmation is not OK, then continue.

(2) Do this check of the wiring:

(a) Remove the Passenger Address Amplifier, M63. To remove it, do this task: Passenger Address (PA) Amplifier - Removal, AMM TASK 23-31-01-000-801.

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

(b) Remove the handset logic control card from the attendant's panel.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(c) Remove the attendant control panel. To remove it, do this task: Attendant's Panel with LCD Touch Panel - Removal, AMM TASK 25-25-11-000-802

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

(d) Do a check for an open circuit between the Passenger Address Amplifier M63, and connector D11068 (forward) or D11466 (aft) of the lavatory module. Refer to WDM 23-42-11.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(e) Do a check for an open circuit between the Passenger Address Amplifier M63, and connector D14368 (forward attendant control panel) or D14376 (aft attendant control module). Refer to WDM 23-42-11.

SHZ ALL

(f) If there is an open circuit, then do these steps:

    1) Repair the wiring.

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2) Re-install the Passenger Address Amplifier. To install it, do this task: Passenger Address (PA) Amplifier - Installation, AMM TASK 23-31-01-400-801.

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

3) Re-install the handset logic control card.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

4) Re-install the attendant control panel. Do this task: Attendant's Panel with LCD Screen - Installation, AMM TASK 25-25-11-400-802.

SHZ ALL

5) Do the Repair Confirmation at the end of this task.

G. **Repair Confirmation**

(1) Do this check of the attendant's CALL light:

(a) Press either the ATTEND button on the P5 forward overhead panel, or the button for the attendant on the attendant handset.

1) Make sure you hear a chime in the passenger cabin.

(b) Press the button for reset on the attendant's handset.

(c) If you heard a chime, then you corrected the fault.

——— END OF TASK ———

804. **Flight Compartment Call Chime Does Not Operate - Fault Isolation**

A. **Description**

(1) The chime from the Aural Warning Module does not come on, but the CALL light on the P5 forward overhead panel comes on when the ground crew presses the PILOT CALL button on the P19 external power panel or an attendant presses the button for the pilot on the attendant handset.

B. **Possible Causes**

(1) Aural Warning Module, M315

(2) Handset, M74 or M75

(3) PILOT CALL switch, S33

(4) Wiring

C. **Circuit Breakers**

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	9	C00073	PASSENGER CABIN CREW CALL

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

D. **Related Data**

(1) SSM 23-42-11

(2) SSM 23-43-11

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(3)   WDM 23-42-11

(4)   WDM 23-43-11

E.   Initial Evaluation

(1)   Do this check of the call chime:

(a)   Press the PILOT CALL button on the P19 External Power panel and the button for the pilot on the forward and aft handsets.

(b)   Make sure you hear a chime in the flight deck.

(c)   If you do not hear a chime when you push the button for the pilot on one handset but you hear the chime for the other handset, then do the Fault Isolation Procedure - Handset.

(d)   If you do not hear a chime when you push the button for the pilot on the two handsets but you hear a chime when you push the PILOT CALL button on the P19 External Power panel, then do the Fault Isolation Procedure - Handset Wiring.

(e)   If you hear a chime when you push the button for the pilot on one of the handsets but you do not hear a chime when you push the PILOT CALL button on P19 panel, then do the Fault Isolation Procedure - Switch.

(f)   If you do not hear a chime when you push the button for the pilot on the two handsets and the PILOT CALL button on P19 panel, then do the Fault Isolation Procedure - Aural Warning Module.

F.   Fault Isolation Procedure - Handset

(1)   Replace the defective handset, M74 or M75. These are the tasks:

• Attendant Handset Removal, AMM TASK 23-42-01-000-801

• Attendant Handset Installation, AMM TASK 23-42-01-400-803

(a)   Do the Repair Confirmation at the end of this task.

(b)   If the Repair Confirmation is not OK, then continue.

(2)   Do this check of the wiring:

(a)   Remove the defective handset. To remove it, do this task: Attendant Handset Removal, AMM TASK 23-42-01-000-801

(b)   Do a check between the handset logic control card and the terminator box SM9 (WDM 23-42-11):

Handset Logic Control Card Handset Connector	Terminator Box SM9
	SM9
pin E13	SM9

(c)   If you find problems with the wiring, do these steps:

1)   Repair the wiring.

2)   Re-install the handset. To install it, do this task: Attendant Handset Installation, AMM TASK 23-42-01-400-803.

3)   Do the Repair Confirmation at the end of this task.

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G. Fault Isolation Procedure - Handset Wiring

(1) Do a check of the wiring from the handsets to the Aural Warning Module.

    (a) Remove the defective handset. To remove it, do this task: Attendant Handset Removal, AMM TASK 23-42-01-000-801

    (b) Remove the Aural Warning Module. To remove it, do this task: Aural Warning Module Removal, AMM TASK 31-51-04-000-801

    (c) Do a check of the wiring between the handset logic control card and the Aural Warning Module (WDM 23-42-11).

Handset Logic Control Card Handset Connector	Aural Warning Module D940
pin E13	pin 7

    (d) If you find problems with the wiring, do these steps:

        1) Repair the wiring.

        2) Re-install the handset. To install it, do this task: Attendant Handset Installation, AMM TASK 23-42-01-400-803.

        3) Re-install the Aural Warning Module. To install it, do this task: Aural Warning Module Installation, AMM TASK 31-51-04-400-801.

        4) Do the Repair Confirmation at the end of this task.

H. Fault Isolation Procedure - Switch

(1) Replace the PILOT CALL switch, S33 on the P19 External Power panel.

    (a) Do the Repair Confirmation at the end of this task.

I. Fault Isolation Procedure - Aural Warning Module

(1) Replace the Aural Warning Module, M315. These are the tasks:

    • Aural Warning Module Removal, AMM TASK 31-51-04-000-801

    • Aural Warning Module Installation, AMM TASK 31-51-04-400-801

    (a) Do the Repair Confirmation at the end of this task.

        1) If the Repair Confirmation is not OK, then continue.

(2) Do this check of the wiring:

    (a) Remove the Aural Warning Module. To remove it, do this task: Aural Warning Module Removal, AMM TASK 31-51-04-000-801.

    (b) Press and hold the PILOT CALL switch, S33, on the P19 External Power panel or the button for the pilot on the attendant's handset.

    (c) Do a check for 28 VDC at the Aural Warning Module connector D940, pin 7 (pin 6 ground).

    (d) Release the PILOT CALL switch or button for the pilot on the attendant handset.

    (e) If there is not 28 VDC, then do these steps:

        1) Repair the wiring.

        2) Re-install the Aural Warning Module. To install it, do this task: Aural Warning Module Installation, AMM TASK 31-51-04-400-801.

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3) Do the Repair Confirmation at the end of this task.

J. Repair Confirmation

(1) Do this check of the call chime:

(a) Press either the PILOT CALL button on the P19 External Power panel, or the button for the pilot on the attendant handset.

(b) Make sure you hear a chime in the flight deck.

(c) If the chime sounds, then you corrected the fault.

——————— END OF TASK ———————

805. Attendant to Flight Deck, Call System Does Not Operate - Fault Isolation

A. Description

(1) The Cabin Crew cannot communicate with the flight deck or the other Crew Stations with the Crew Call and Interphone System.

B. Possible Causes

(1) FWD (AFT) Cabin Attendant's Control Panel, P13 (P14)

(2) Magnetic Actuated Reset Switch

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	9	C00073	PASSENGER CABIN CREW CALL

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

(1) WDM 23-42-11

(2) WDM 23-43-11

(3) SSM 23-42-11

(4) SSM 23-43-11

E. Initial Evaluation

(1) Do this check of the Attendant's Handset:

(a) Lift the handset from the cradle.

(b) Push the button for the attendant on the Handset Keypad.

(c) Make sure that you hear a chime from the PA Speakers and the Pink Attendant Call Light at the other Attendant's Station comes ON.

(d) Make voice communication to the other Attendant's Station.

1) If you hear the voice on the Attendant's Handset, then there was an intermittent fault.

2) If you do not hear the voice on the Attendant's Handset, do the Fault Isolation Procedure below.

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F.   **Fault Isolation Procedure**

(1)   Replace the applicable Cabin Attendant's Control Panel. These are the tasks:

• Attendant's Panel and Components Removal, AMM TASK 25-25-11-000-801 or Attendant's Panel with LCD Touch Panel - Removal, AMM TASK 25-25-11-000-802

• Attendant's Panel and Components Installation, AMM TASK 25-25-11-400-801 or Attendant's Panel with LCD Screen - Installation, AMM TASK 25-25-11-400-802

(a)   Do the Repair Confirmation at the end of this task.

(2)   Do this check of the Cradle Reset Magnet:

(a)   Remove the Handset Handle Cradle. This is the task: Attendant Handset Cradle Removal, AMM TASK 23-42-01-000-803.

(b)   Remove the retainer.

(c)   Repair the Cradle Reset Magnet. This is the task: Attendant Handset Cradle Installation, AMM TASK 23-42-01-400-801

(d)   Re-install the retainer.

(e)   Re-install the Handset Cradle.

(f)   Put the Handset in the cradle.

(g)   Do the Repair Confirmation at the end of this task.

G.   **Repair Confirmation**

(1)   Do this check of the handset:

(a)   Lift the handset from the Handle Cradle.

(b)   Push the button for the attendant on the Handset Keypad.

1)   Make sure that you hear a chime from the PA Speakers and the Pink Attendant Call Light at the other Attendant's Station comes ON.

(c)   Make voice communication to the other Attendant's Station.

1)   If you hear the voice on the Attendant's Handset, then you corrected the problem.

2)   If you do not hear the voice on the Attendant's Handset, continue the Fault Isolation Procedure at the subsequent step.

——— **END OF TASK** ———

806.   **Attendant To Flight Deck, Captain's Call Light Does Not Operate - Fault Isolation**

A.   **Description**

(1)   The CALL light on the forward overhead panel does not come on, but the call chime sounds when the PILOT button is pushed on an attendant's handset.

B.   **Possible Causes**

(1)   Master Dim and Test switch, S3

(2)   Captain's Call Light, L19

(3)   Wiring

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C.   Circuit Breakers

(1)   This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	9	C00073	PASSENGER CABIN CREW CALL

D.   Related Data

(1)   (SSM 23-42-11)

(2)   (SSM 23-43-11)

(3)   (WDM 23-42-11)

(4)   (WDM 23-43-11)

E.   Initial Evaluation

(1)   Do this check of the captain's CALL light:

(a)   Set the Master Dim and Test switch, S3, on the P1 main instrument panel, to BRT.

(b)   Press and hold the button for the pilot on the attendant's handset.

    1)   Make sure the CALL light on the P5 forward overhead panel goes on.

(c)   Release the button on the attendant's handset.

(d)   If the CALL light does not go on, then do the Fault Isolation Procedure below.

(e)   If the CALL light goes on, then there was an intermittent fault.

F.   Fault Isolation Procedure

(1)   Do this test of the Captain's CALL light, L19:

(a)   Set the Master Dim and Test switch, S3, on the P1 main instrument panel, to TEST.

(b)   If the CALL light does not go on, then replace the Captain's CALL light.

    1)   Do the Repair Confirmation at the end of this task.

        a)   If the Repair Confirmation is not OK, then continue.

(c)   If the CALL light goes on, then continue.

(2)   Do this check of the wiring:

(a)   Remove the Captain's CALL light, L19, from the P5 forward overhead panel.

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

(b)   Remove the handset logic control card from the attendant's panel.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(c)   Remove the attendant control panel. To remove it, do this task: Attendant's Panel with LCD Touch Panel - Removal, AMM TASK 25-25-11-000-802

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

(d)   Do a check for an open circuit between connector D40170J of the Captain's CALL light, L19, and connector D11068 (forward) or D11466 (aft) of the lavatory module. For correct pins, refer to WDM 23-42-11.

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899

    (e)   Do a check for an open circuit between connector D40170J at the Captain's CALL light, L19, and connector D14368 (forward attendant control panel) or D14376 (aft attendant control panel). For correct pins, refer to WDM 23-42-11.

SHZ ALL

    (f)   If you find a problem with the wiring, then do these steps:

       1)   Repair the wiring.

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

       2)   Re-install the handset logic control card.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

       3)   Re-install the attendant control panel. Do this task: Attendant's Panel with LCD Screen - Installation, AMM TASK 25-25-11-400-802.

SHZ ALL

       4)   Re-install the Captain's CALL light.

       5)   Do the Repair Confirmation at the end of this task.

  G.   **Repair Confirmation**

    (1)   Do this check of the Captain's CALL light:

      (a)   Press and hold the button for the pilot on the attendant's handset.

       1)   Make sure the CALL light on the P5 forward overhead panel goes on.

      (b)   Release the button on the attendant's handset.

      (c)   If the CALL light goes on, then you corrected the fault.

─────── **END OF TASK** ───────

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

807. Internal ACP Fault In Forward/Aft ACP - Fault Isolation

  A.   **Description**

    (1)   This task is for the following maintenance messages:

      (a)   23-11001

      (b)   23-11002

      (c)   23-11003

      (d)   23-11004

      (e)   23-11010

      (f)   23-11011

      (g)   23-11012

      (h)   23-11013

      (i)   23-11025

    (2)   The fault(s) is generated by the system test.

  B.   **Possible Causes**

    (1)   Attendant Control Panel (ACP)

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

C. **Circuit Breakers**

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

D. **Initial Evaluation**

(1) Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

    (a) If the fault does not show, then there was an intermittent fault.

    (b) If the fault shows, then continue.

E. **Fault Isolation Procedure**

(1) Open and close the circuit breaker C01936 to cycle the power to the ACP's.

(2) Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

    (a) If the fault message does not show, then you corrected the fault. If the message shows, then continue.

(3) Replace the applicable ACP. Refer to:AMM PAGEBLOCK 25-25-11/401

(4) Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

    (a) If the maintenance message does not show, then you corrected the fault.

——— **END OF TASK** ———

808. Internal ACP Fault - Data Loading - Fault Isolation

A. **Description**

(1) This task is for the following maintenance messages:

    (a) 23-11005

    (b) 23-11006

    (c) 23-11007

    (d) 23-11018

    (e) 23-11019

    (f) 23-11020

    (g) 23-11021

(2) The fault(s) is generated by the system test.

B. **Possible Causes**

(1) Data load

C. **Initial Evaluation**

(1) Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

    (a) If the fault does not show, then there was an intermittent fault.

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

        (b)   If the fault shows, then continue.

    D.   **Fault Isolation Procedure**

        (1)   Do ADL to ACP or Phase 1 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801

        (2)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

            (a)   If the fault message does not show, then you corrected the fault.

———— END OF TASK ————

809. **Internal ACP Fault - HW Config - Fault Isolation**

    A.   **Description**

        (1)   This task is for the following maintenance messages:

            (a)   23-11008

            (b)   23-11014

        (2)   The fault(s) is generated by the system test.

    B.   **Possible Causes**

        (1)   Attendant Control Panel (ACP)

    C.   **Initial Evaluation**

        (1)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

            (a)   If the fault does not show, then there was an intermittent fault.

            (b)   If the fault shows, then continue.

    D.   **Fault Isolation Procedure**

        (1)   Replace the applicable ACP. Refer to:AMM PAGEBLOCK 25-25-11/401.

        (2)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

            (a)   If the fault does not show, then you corrected the fault.

———— END OF TASK ————

810. **Light Column Address Fault - Fault Isolation**

    A.   **Description**

        (1)   This task is for the following maintenance messages:

            (a)   23-11028

            (b)   23-11029

            (c)   23-11030

            (d)   23-11031

            (e)   23-11032

            (f)   23-11033

            (g)   23-11034

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

    (2)   The fault(s) is generated by the system test.

  B. **Possible Causes**

    (1)   Data load

  C. **Initial Evaluation**

    (1)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

        (a)   If the fault does not show, then there was an intermittent fault.

        (b)   If the fault shows, then continue.

  D. **Fault Isolation Procedure**

    (1)   Set the cabin/utility switch on the overhead panel P5 to OFF and ON position to cycle power to the light LRU's.

    (2)   Do the system test, refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

        (a)   If the fault message does not show, then you corrected the fault. If the message shows, then continue.

    (3)   Do ACP to LRU or Phase 2 Data Load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

    (4)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

        (a)   If the fault message does not show, then you corrected the fault.

———— **END OF TASK** ————

811. **Fwd/Aft Work Light Fault - Fault Isolation**

  A. **Description**

    (1)   This task is for the maintenance message 23-11015.

    (2)   The fault is generated by the system test.

  B. **Possible Causes**

    (1)   Wiring to the Fwd/Aft Work Light

    (2)   Attendant Control Panel (ACP)

  C. **Circuit Breakers**

    (1)   This is the primary circuit breaker related to the fault:

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

  D. **Initial Evaluation**

    (1)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

        (a)   If the fault does not show, then there was an intermittent fault.

        (b)   If the fault shows, then continue.

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E. Fault Isolation Procedure

(1) Open and close the circuit breaker C01936 to cycle the power to the ACP's.

(2) Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

   (a) If the fault message does not show, then you corrected the fault. If the message shows, then continue.

(3) Do the wiring check and correct problems (if applicable) for the Work Light. Refer to: Passenger Compartment Lighting Problem - Fault Isolation, 33-20 TASK 801.

(4) Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

   (a) If the fault message does not show, then you corrected the fault. If the message shows, then continue.

(5) Replace the applicable ACP. Refer to:AMM PAGEBLOCK 25-25-11/401.

(6) Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

   (a) If the maintenance message does not show, then you corrected the fault.

———— **END OF TASK** ————

812. Fwd/Aft MDCD Light Fault - Fault Isolation

A. Description

(1) This task is for the maintenance message 23-11016.

(2) The fault is generated by the system test.

B. Possible Causes

(1) Wiring to the Main Deck Cargo Door (MDCD) Light

(2) Attendant Control Panel (ACP)

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

D. Initial Evaluation

(1) Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

   (a) If the fault does not show, then there was an intermittent fault.

   (b) If the fault shows, then continue.

E. Fault Isolation Procedure

(1) Open and close the circuit breaker C01936 to cycle the power to the ACP's.

(2) Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

      (a)   If the fault message does not show, then you corrected the fault. If the message shows, then continue.

  (3)   Do the wiring check and correct problems (if applicable) for the MDCD Light. Refer to: Cargo/Service Compartment Lighting Problem - Fault Isolation, 33-30 TASK 801.

  (4)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

      (a)   If the fault message does not show, then you corrected the fault. If the message shows, then continue.

  (5)   Replace the applicable ACP. Refer to:AMM PAGEBLOCK 25-25-11/401.

  (6)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

      (a)   If the maintenance message does not show, then you corrected the fault.

———— **END OF TASK** ————

813. Fwd/Aft Threshold Light Fault - Fault Isolation

  A. Description

  (1)   This task is for the maintenance message 23-11024.

  (2)   The fault is generated by the system test.

  B. Possible Causes

  (1)   Wiring to the Fwd/Aft Threshold Light

  C. Circuit Breakers

  (1)   This is the primary circuit breaker related to the fault:

      F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

  D. Initial Evaluation

  (1)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

      (a)   If the fault does not show, then there was an intermittent fault.

      (b)   If the fault shows, then continue.

  E. Fault Isolation Procedure

  (1)   Open and close the circuit breaker C01936 to cycle the power to the ACP's.

  (2)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

      (a)   If the fault message does not show, then you corrected the fault. If the message shows, then continue.

  (3)   Do the wiring check and correct problems (if applicable) for the Threshold Light. Refer to: Passenger Compartment Lighting Problem - Fault Isolation, 33-20 TASK 801.

  (4)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

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SHZ ALL

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

      (a)   If the fault message does not show, then you corrected the fault.

————— **END OF TASK** —————

814. 28 Vdc Power Fault in Fwd/Aft ACP - Fault Isolation

    A.   Description

        (1)   This task is for the maintenance message 23-11017.

        (2)   The fault is generated by the system test.

    B.   Possible Causes

        (1)   28 Vdc Power

    C.   Circuit Breakers

        (1)   This is the primary circuit breaker related to the fault:

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

    D.   Initial Evaluation

        (1)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

            (a)   If the fault does not show, then there was an intermittent fault.

            (b)   If the fault shows, then continue.

    E.   Fault Isolation Procedure

        (1)   If the fault shows for both forward and aft ACP's, do this check for 28 Vdc at the circuit breaker:

            (a)   Do a check for 28 Vdc at the load terminal of the circuit breaker C01936 ATTENDANT PANEL to structure ground.

            (b)   If there is not 28 Vdc at the load terminal, replace the circuit breaker.

        (2)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

            (a)   If the maintenance message does not show, then you corrected the fault.

        (3)   Do a check for wiring from the circuit breaker C01936 to the applicable ACP and fix problems.

        (4)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

            (a)   If the maintenance message does not show, then you corrected the fault.

————— **END OF TASK** —————

815. Communication with Aft ACP Lost - Fault Isolation

    A.   Description

        (1)   This task is for the maintenance message 23-11022.

        (2)   The fault is generated by the system test.

    B.   Possible Causes

        (1)   Wiring

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C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

D. Initial Evaluation

(1) Do the system test. Refer to:Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

    (a) If the fault does not show, then there was an intermittent fault.

    (b) If the fault shows, then continue.

E. Fault Isolation Procedure

(1) Open and close the circuit breaker C01936 to cycle the power to the ACP's.

(2) Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

    (a) If the fault message does not show, then you corrected the fault. If the message shows, then continue.

(3) Do a check for the wiring between the forward ACP and the aft ACP and fix problems if you find them. Refer to :WDM 23-42-XX.

(4) Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

    (a) If the maintenance message does not show, then you corrected the fault.

———— **END OF TASK** ————

816. Cabin Temperature Fault - Fault Isolation

A. Description

(1) This task is for the maintenance message 23-11023.

(2) The fault is generated by the system test.

B. Possible Causes

(1) Data Load

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

D. Initial Evaluation

(1) Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

    (a) If the fault does not show, then there was an intermittent fault.

    (b) If the fault shows, then continue.

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

   E.   **Fault Isolation Procedure**

   (1)   Do data load for the CDB software. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

   (2)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

      (a)   If the fault message does not show, then you corrected the fault. If the message shows, then continue.

   (3)   Do data load for the OPS software. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

   (4)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

      (a)   If the fault message does not show, then you corrected the fault.

——————— **END OF TASK** ———————

817.   **Lavatory Inoperative / Clean Check Sensors - Fault Isolation**

   A.   **Description**

   (1)   This task is for the maintenance messages 23-11026 and 23-11027.

   (2)   The fault is generated by the system test.

   B.   **Possible Causes**

   (1)   The Lavatory Logic Control Module

   C.   **Circuit Breakers**

   (1)   This is the primary circuit breaker related to the fault:

   F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

   D.   **Initial Evaluation**

   (1)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

      (a)   If the fault does not show, then there was an intermittent fault.

      (b)   If the fault shows, then continue.

   E.   **Fault Isolation Procedure**

   (1)   Do a check of the Lavatory Logic Control Module and correct problems (if applicable). Refer to: LOGIC CONTROL MODULE - MAINTENANCE PRACTICES, AMM 38-33-03/201.

   (2)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

      (a)   If the fault message does not show, then you corrected the fault. If the message shows, then continue.

   (3)   Do a check of wiring to the Lavatory Logic Control Module and correct problems (if applicable). Refer to: WDM 38-3X.

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

    (4)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

        (a)   If the maintenance message does not show, then you corrected the fault.

———— **END OF TASK** ————

818. RS-485 Cable Break - Fault Isolation

    A. Description

        (1)   This task is for the following maintenance messages:

            (a)   23-11039

            (b)   23-11040

            (c)   23-11041

            (d)   23-11042

        (2)   The fault(s) is generated by the system test.

    B. Possible Causes

        (1)   Wiring connection

    C. Circuit Breakers

        (1)   This is the primary circuit breaker related to the fault:

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

    D. Initial Evaluation

        (1)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

            (a)   If the fault does not show, then there was an intermittent fault.

            (b)   If the fault shows, then continue.

    E. Fault Isolation Procedure

        (1)   Do a check for wiring connection and correct problems (if applicable) for the light(s) indicated on the ACP. Refer to: Passenger Compartment Lighting Problem - Fault Isolation, 33-20 TASK 801.

        (2)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

            (a)   If the maintenance message does not show, then you corrected the fault.

———— **END OF TASK** ————

819. No LRU Responses - Fault Isolation

    A. Description

        (1)   This task is for the following maintenance messages:

            (a)   23-11035

            (b)   23-11036

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  (c)   23-11037

  (d)   23-11038

(2)   The fault(s) is generated by the system test.

B.   Possible Causes

(1)   Wiring connection at the light

(2)   Wiring connection at the forward ACP

(3)   Forward ACP

C.   Circuit Breakers

(1)   This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

D.   Initial Evaluation

(1)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

  (a)   If the fault does not show, then there was an intermittent fault.

  (b)   If the fault shows, then continue.

E.   Fault Isolation Procedure

(1)   Do a wiring connection check and correct problems (if applicable) at the specified light. Refer to: Passenger Compartment Lighting Problem - Fault Isolation, 33-20 TASK 801.

(2)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

  (a)   If the fault message does not show, then you corrected the fault. If the message shows, then continue.

(3)   Do a wiring connection check and correct problems (if applicable) at the forward ACP. Refer to: WDM 23-42-XX.

(4)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

  (a)   If the fault message does not show, then you corrected the fault. If the message shows, then continue.

(5)   Replace the forward ACP. Refer to:AMM PAGEBLOCK 25-25-11/401.

(6)   Do the system test. Refer to: Attendant Control Panel (ACP) - BITE Procedure, 23-42 TASK 801.

  (a)   If the maintenance message does not show, then you corrected the fault.

——— END OF TASK ———

820. LRU Address Fault - Fault Isolation

A.   Description

(1)   This task is for the maintenance messages:

  (a)   23-11043

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    (b)   23-11044

  (2)   The fault(s) is generated during the ACP to LRU or Phase 2 data load.

B. Possible Causes

  (1)   The light LRU

C. Circuit Breakers

  (1)   This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

D. Initial Evaluation

  (1)   Do the ACP to LRU or Phase 2 data load again. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

    (a)   If the fault does not show, then there was an intermittent fault.

    (b)   If the fault shows, then continue.

E. Fault Isolation Procedure

  (1)   Do a check and correct problems (if applicable) for the light LRU. Refer to: Passenger Compartment Lighting Problem - Fault Isolation, 33-20 TASK 801.

  (2)   Do the ACP to LRU or Phase 2 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

    (a)   If the fault does not shows, then you corrected the fault.

———— **END OF TASK** ————

821. **LRU Address - Extra Response - Fault Isolation**

A. Description

  (1)   This task is for the maintenance message:

    (a)   23-11045

  (2)   The fault is generated during the ACP to LRU or Phase 2 data load.

B. Possible Causes

  (1)   The Configuration Database (CDB) software

  (2)   The light LRU

C. Circuit Breakers

  (1)   This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

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D.   **Initial Evaluation**

(1)   Do the ACP to LRU or Phase 2 data load again. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

(a)   If the fault does not show, then there was an intermittent fault.

(b)   If the fault shows, then continue.

E.   **Fault Isolation Procedure**

(1)   Make sure that the CDB part number is correct.

(a)   If the CDB part number is not correct, do the data load again with the correct CDB. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

1)   If the fault does not show, then you corrected the fault.

(b)   If the CDB part number is correct, then continue.

(2)   Make sure the CDB matches the airplane configuration.

(a)   If the CDB does not match the airplane configuration, do the ACP to LRU or Phase 2 data load again with the correct CDB that matches the airplane configuration. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

1)   If the fault does not show, then you corrected the fault.

(b)   If the CDB matches the airplane configuration, then continue.

(3)   Do a check for wiring connection and correct problems for the light LRU. Refer to: Passenger Compartment Lighting Problem - Fault Isolation, 33-20 TASK 801.

(4)   Do the ACP to LRU or Phase 2 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

(a)   If the fault does not show, then you corrected the fault.

——— END OF TASK ———

822.   LRU Address - Incorrect Light - Fault Isolation

A.   **Description**

(1)   This task is for the maintenance message:

(a)   23-11046

(2)   The fault is generated during the ACP to LRU or Phase 2 data load.

B.   **Possible Causes**

(1)   The Configuration Database (CDB) software

(2)   The light LRU

C.   **Circuit Breakers**

(1)   This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

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SHZ ALL

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

D. Initial Evaluation

(1) Do the ACP to LRU or Phase 2 data load again. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

    (a) If the fault does not show, then there was an intermittent fault.

    (b) If the fault shows, then continue.

E. Fault Isolation Procedure

(1) Make sure that the CDB part number is correct.

    (a) If the CDB part number is not correct, do the data load again with the correct CDB. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

        1) If the fault does not show, then you corrected the fault.

    (b) If the CDB part number is correct, then continue.

(2) Make sure the CDB matches the airplane configuration.

    (a) If the CDB does not match the airplane configuration, do the ACP to LRU or Phase 2 data load again with the correct CDB that matches the airplane configuration. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

        1) If the fault does not show, then you corrected the fault.

    (b) If the CDB matches the airplane configuration, then continue.

(3) Make sure the LRU light part number is correct.

    (a) If the LRU light part number is not correct, replace it with the correct light. Refer to chapter 33 for the correct procedure.

(4) Do the ACP to LRU or Phase 2 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

    (a) If the fault does not show, then you corrected the fault.

———— **END OF TASK** ————

823. LRU Address Fault - Zone/Scene Download - Fault Isolation

A. Description

(1) This task is for the maintenance messages:

    (a) 23-11047

    (b) 23-11048

    (c) 23-11050

    (d) 23-11051

    (e) 23-11052

    (f) 23-11053

    (g) 23-11054

    (h) 23-11055

(2) The fault(s) is generated during the ACP to LRU or Phase 2 data load.

B. Possible Causes

(1) The light LRU

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C.   Circuit Breakers

(1)   This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

D.   Initial Evaluation

(1)   Do the ACP to LRU or Phase 2 data load again. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

(a)   If the fault does not show, then there was an intermittent fault.

(b)   If the fault shows, then continue.

E.   Fault Isolation Procedure

(1)   Set the cabin/utility switch on the overhead panel P5 to OFF and ON position to cycle power to the light LRU's.

(2)   Do the ACP to LRU or Phase 2 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

(a)   If the fault message does not show, then you corrected the fault. If the message shows, then continue.

(3)   Replace the light LRU.

(4)   Do the ACP to LRU or Phase 2 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

(a)   If the fault does not show, then you corrected the fault.

——— **END OF TASK** ———

824.   LRU Address - Incorrect Zone - Fault Isolation

A.   Description

(1)   This task is for the maintenance message:

(a)   23-11049

(2)   The fault is generated during the ACP to LRU or Phase 2 data load.

B.   Possible Causes

(1)   The Configuration Database (CDB)

C.   Circuit Breakers

(1)   This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

D.   Initial Evaluation

(1)   Do the ACP to LRU or Phase 2 data load again. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

(a)   If the fault does not show, then there was an intermittent fault.

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SHZ ALL

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        (b)   If the fault shows, then continue.

  E. **Fault Isolation Procedure**

     (1)   Make sure that the CDB part number is correct.

        (a)   If the CDB part number is not correct, do the data load again with the correct CDB. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

            1)   If the fault does not show, then you corrected the fault.

        (b)   If the CDB part number is correct, then continue.

     (2)   Make sure the CDB matches the airplane configuration.

        (a)   If the CDB does not match the airplane configuration, do the ACP to LRU or Phase 2 data load again with the correct CDB that matches the airplane configuration. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

            1)   If the fault does not show, then you corrected the fault.

———— **END OF TASK** ————

825. **No Data Load LRU Responses - Fault Isolation**

  A. **Description**

     (1)   This task is for the maintenance messages:

        (a)   23-11056

        (b)   23-11057

        (c)   23-11058

        (d)   23-11059

     (2)   The fault(s) is generated during the ACP to LRU or Phase 2 data load.

  B. **Possible Causes**

     (1)   Wiring

     (2)   The forward ACP

  C. **Circuit Breakers**

     (1)   This is the primary circuit breaker related to the fault:

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

  D. **Initial Evaluation**

     (1)   Do the ACP to LRU or Phase 2 data load again. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

        (a)   If the fault does not show, then there was an intermittent fault.

        (b)   If the fault shows, then continue.

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    E.   **Fault Isolation Procedure**

        (1)   Set the cabin/utility switch on the overhead panel P5 to OFF and ON position to cycle power to the light LRU's.

        (2)   Do the ACP to LRU or Phase 2 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

           (a)   If the fault does not show, then you corrected the fault. If the fault shows, then continue.

        (3)   Do a wiring connection check and correct problems (if applicable) at the specified light. Refer to: Passenger Compartment Lighting Problem - Fault Isolation, 33-20 TASK 801.

        (4)   Do the ACP to LRU or Phase 2 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

           (a)   If the fault does not show, then you corrected the fault. If the fault shows, then continue.

        (5)   Replace the forward ACP. Refer to:AMM PAGEBLOCK 25-25-11/401.

        (6)   Do the ACP to LRU or Phase 2 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

           (a)   If the fault does not show, then you corrected the fault.

——— **END OF TASK** ———

826. **Data Load RS-485 Cable Break - Fault Isolation**

    A.   **Description**

        (1)   This task is for the maintenance messages:

           (a)   23-11060

           (b)   23-11061

           (c)   23-11062

           (d)   23-11063

        (2)   The fault(s) is generated during the ACP to LRU or Phase 2 data load.

    B.   **Possible Causes**

        (1)   Wiring

    C.   **Circuit Breakers**

        (1)   This is the primary circuit breaker related to the fault:

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

    D.   **Initial Evaluation**

        (1)   Do the ACP to LRU or Phase 2 data load again. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

           (a)   If the fault does not show, then there was an intermittent fault.

           (b)   If the fault shows, then continue.

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

E. Fault Isolation Procedure

(1) Set the cabin/utility switch on the overhead panel P5 to OFF and ON position to cycle power to the light LRU's.

(2) Do the ACP to LRU or Phase 2 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

  (a) If the fault does not show, then you corrected the fault. If the fault shows, then continue.

(3) Do a wiring connection check and correct problems (if applicable) at the specified light(s). Refer to: Passenger Compartment Lighting Problem - Fault Isolation, 33-20 TASK 801.

(4) Do the ACP to LRU or Phase 2 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

  (a) If the fault does not show, then you corrected the fault.

————— **END OF TASK** —————

827. Aft ACP Internal Fault - Fault Isolation

A. Description

(1) This task is for the maintenance messages:

  (a) 23-11064

  (b) 23-11065

  (c) 23-11066

  (d) 23-11067

(2) The fault is generated during the ACP to ACP or Phase 2 data load.

B. Possible Cause

(1) The aft ACP

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

D. Initial Evaluation

(1) Do the ACP to ACP or Phase 2 data load again. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

  (a) If the fault does not show, then there was an intermittent fault.

  (b) If the fault shows, then continue.

E. Fault Isolation Procedure

(1) Open and close the circuit breaker C01936 to cycle the power to the ACP's.

(2) Do the ACP to ACP or Phase 2 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

  (a) If the fault does not show, then you corrected the fault. If the fault shows, then continue.

(3) Replace the aft ACP. Refer to:AMM PAGEBLOCK 25-25-11/401.

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

    (4)   Do the ACP to ACP or Phase 2 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

        (a)   If the fault does not show, then you corrected the fault.

———— **END OF TASK** ————

828. <u>Communication with Aft ACP Lost - Fault Isolation</u>

    A.   **Description**

      (1)   This task is for the maintenance message 23-11068.

      (2)   The fault is generated during the ACP to ACP or Phase 2 data load.

    B.   **Possible Causes**

      (1)   Wiring

      (2)   The ACP's

    C.   **Circuit Breakers**

      (1)   This is the primary circuit breaker related to the fault:

         F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

    D.   **Initial Evaluation**

      (1)   Do the ACP to ACP or Phase 2 data load again. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

        (a)   If the fault does not show, then there was an intermittent fault.

        (b)   If the fault shows on the screen, then continue.

    E.   **Fault Isolation Procedure**

      (1)   Do a wiring check between the forward and the aft ACP's. Refer to: WDM 23-42-XX.

        (a)   Correct the problems that you find (if applicable).

      (2)   Do the ACP to ACP or Phase 2 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

        (a)   If the fault does not show, then you corrected the fault. If the fault shows, then continue.

      (3)   Replace the aft ACP. Refer to:AMM PAGEBLOCK 25-25-11/401.

      (4)   Do the ACP to ACP or Phase 2 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

        (a)   If the fault does not show, then you corrected the fault. If the fault shows, then continue.

      (5)   Replace the forward ACP. Refer to:AMM PAGEBLOCK 25-25-11/401.

      (6)   Do the ACP to ACP or Phase 2 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

        (a)   If the fault does not show, then you corrected the fault.

———— **END OF TASK** ————

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

829. <u>LSAP Configuration Invalid - Fault Isolation</u>

    A.   Description

        (1)   This task is for the maintenance message 23-11069.

        (2)   The fault is generated during the ACP to ACP or Phase 2 data load.

    B.   Possible Causes

        (1)   Incorrect LSAP

    C.   Circuit Breakers

        (1)   This is the primary circuit breaker related to the fault:

            F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

    D.   Initial Evaluation

        (1)   Do the ACP to ACP or Phase 2 data load again. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

            (a)   If the fault does not show, then there was an intermittent fault.

            (b)   If the fault shows, then continue.

    E.   Fault Isolation Procedure

        (1)   Make sure the LSAP part number is correct. If it is not correct, do the ACP to ACP or Phase 2 data load again with the correct LSAP part number. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

            (a)   If the fault does not show, then you corrected the fault.

        ——— **END OF TASK** ———

830. <u>Forward ACP Internal Fault - Fault Isolation</u>

    A.   Description

        (1)   This task is for the maintenance messages:

            (a)   23-11070

            (b)   23-11071

            (c)   23-11072

            (d)   23-11073

        (2)   The fault is generated during the ADL to ACP or Phase 1 data load.

    B.   Possible Causes

        (1)   The forward ACP

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C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

D. Initial Evaluation

(1) Do the ADL to ACP or Phase 1 data load again. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

    (a) If the fault does not show, then there was an intermittent fault.

    (b) If the fault shows, then continue.

E. Fault Isolation Procedure

(1) Open and close the circuit breaker C01936 to cycle the power to the ACP's.

(2) Do the ADP to ACP or Phase 1 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

    (a) If the fault does not show, then you corrected the fault. If the fault shows, then continue.

(3) Replace the forward ACP. Refer to:AMM PAGEBLOCK 25-25-11/401.

(4) Do the ADP to ACP or Phase 1 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

    (a) If the fault does not show, then you corrected the fault.

——— **END OF TASK** ———

831. LSAP Disk Fault - Fault Isolation

A. Description

(1) This task is for the maintenance messages:

    (a) 23-11074

    (b) 23-11075

    (c) 23-11076

    (d) 23-11077

(2) The fault is generated during the ADL to ACP or Phase 1 data load.

B. Possible Causes

(1) The LSAP diskette

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

D. Initial Evaluation

(1) Do the ADL to ACP or Phase 1 data load again. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

    (a) If the fault does not show, then there was an intermittent fault.

    (b) If the fault shows, then continue.

E. Fault Isolation Procedure

(1) Check the LSAP diskette, make sure that it is not physically broken. If it is broken, replace it with another diskette (same LSAP part number).

(2) Do the ADL to ACP or Phase 1 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

    (a) If the fault does not show, then you corrected the fault.

——— END OF TASK ———

832. Incompatible Disk Fault - Fault Isolation

A. Description

(1) This task is for the maintenance messages:

    (a) 23-11078

    (b) 23-11079

(2) The fault is generated during the ADL to ACP or Phase 1 data load.

B. Possible Causes

(1) Incorrect LSAP

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

D. Initial Evaluation

(1) Do the ADL to ACP or Phase 1 data load again. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

    (a) If the fault does not show, then there was an intermittent fault.

    (b) If the fault shows, then continue.

E. Fault Isolation Procedure

(1) Make sure that the LSAP diskette part number is correct. If it is not correct, replace it with the diskette with correct LSAP part number.

(2) Do the ADL to ACP or Phase 1 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

    (a) If the fault does not show, then you corrected the fault.

——— END OF TASK ———

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

833. **Communications with ADL Lost - Fault Isolation**

    A. **Description**

        (1) This task is for the maintenance message 23-11080.

        (2) The fault is generated during the ADL to ACP or Phase 1 data load.

    B. **Possible Causes**

        (1) Incorrect ADL set up

        (2) Wiring

    C. **Circuit Breakers**

        (1) This is the primary circuit breaker related to the fault:

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

    D. **Initial Evaluation**

        (1) Do the ADL to ACP or Phase 1 data load again. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

        (a) If the fault does not show, then there was an intermittent fault.

        (b) If the fault shows, then continue.

    E. **Fault Isolation Procedure**

        (1) Make sure that the ADL selector switch is in the correct position.

        (a) If the ADL selector switch is not in the correct position, reset the switch and do the data load again. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

          1) If the fault does not show, then you corrected the fault.

        (b) If the ADL selector switch is correct, then continue.

        (2) Open and close the circuit breaker C01936 to cycle the power to the ACP's.

        (3) Do the ADL to ACP or Phase 1 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

        (a) If the fault does not show, then you corrected the fault. If the fault shows, then continue.

        (4) Do a wiring check from the ACP to the ADL. Refer to: WDM 23-42-XX

        (5) Do the ADL to ACP or Phase 1 data load. Refer to: Attendant Control Panel (ACP) Software Loading, AMM TASK 23-42-03-470-801.

        (a) If the fault does not show, then you corrected the fault.

———— **END OF TASK** ————

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

839. **LED on the ACP Switch Assembly (ISA) is ON - Fault Isolation**

    A. **Description**

        (1)   When the LED on the ISA is on steadily (not flashing), this indicates an over temperature condition and the ACP is not operational.

        (2)   When the LED on the ISA is on and flashing, this indicates an internal critical fault with the ACP and the ACP is shut down.

    B. **Possible Causes**

        (1)   Ambient temperature is out of range

        (2)   ACP internal fault

    C. **Initial Evaluation**

        (1)   If the LED is on and not flashing (indicating that ambient temperature is out of range), no maintenance action is necessary. The ACP will become operational when the temperature is in range (32°F (0°C) to122°F (50°C)).

        (2)   If the LED is flashing, there is an internal fault with the ACP. Do the fault isolation procedure that follows.

    D. **Fault Isolation Procedure**

        (1)   Do the steps that follow when the LED is flashing:

            (a)   Replace the applicable ACP. Refer to:AMM PAGEBLOCK 25-25-11/401.

            (b)   If the LED on the ISA does not turn on, then you corrected the fault.

———— **END OF TASK** ————

840. **Attendant Control Panel - Touch Screen Inoperative**

    A. **Description**

        (1)   When the ACP Touch Screen is inoperative, it does not respond to any touching inputs.

    B. **Possible Causes**

        (1)   The ACP Touch Screen is locked up.

        (2)   The Touch Screen Display function is not operative.

    C. **Initial Evaluation**

        (1)   To activate the Touch Screen, touch the two opposite corners of the screen sequentially.

            (a)   If the Touch Screen responds to inputs then you corrected the problem.

            (b)   If the Touch Screen does not respond to any touching inputs, do the fault isolation procedure that follows.

    D. **Circuit Breakers**

        (1)   This is the primary circuit breaker related to the fault:

        F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

 E. Fault Isolation Procedure

  (1) Open and close the circuit breaker C01936 to cycle the power to the ACP.

   (a) Touch the two opposite corners of the Touch Screen to activate the Touch Screen

   (b) If the Touch screen responds to inputs, then there was an intermittent fault.

   (c) If the Touch Screen does not respond to touching inputs, then continue.

  (2) Replace the applicable ACP. Refer to:AMM PAGEBLOCK 25-25-11/401.

   (a) If the touch screen operates, then you corrected the fault.

<p align="center">——— END OF TASK ———</p>

841. Amber LED Light on ACP Switch Assembly does not come on during operational test

 A. Description

  (1) After power-up, the amber LED at the left corner of the ACP should turn on for about 2 seconds and then turn off. If the LED does not turn on at power-up, it might be inoperative.

 B. Circuit Breakers

  (1) This is the primary circuit breaker related to the fault:

  F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	12	C01936	ATTENDANT PANELS

 C. Fault Isolation Procedure

  (1) Open and close the circuit breaker C01936 to cycle the power to the ACP.

   (a) Check the LED again during the first 2 seconds of power-up.

   (b) If the LED light turns on during the first 2 seconds of power-up and then turn off, then there was an intermittent fault.

   (c) If the LED light does not turn on during the first 2 seconds of power-up, then continue.

  (2) Replace the applicable ACP. Refer to:AMM PAGEBLOCK 25-25-11/401.

   (a) If the LED light turns on during the first 2 seconds of power-up and then turn off, then you corrected the fault.

<p align="center">——— END OF TASK ———</p>

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801. Ground Crew Call Horn Does Not Operate - Fault Isolation

A. Description

(1) The ground crew call horn does not sound in the nose wheel well area.

B. Possible Causes

(1) Ground Crew Call Horn, M53

(2) Ground Crew Call Switch, S32

(3) Wiring

(4) No power to the Ground Crew Call Horn

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	9	C00073	PASSENGER CABIN CREW CALL

D. Related Data

(1) (SSM 23-43-11)

(2) (WDM 23-43-11)

E. Initial Evaluation

(1) Do this check of the ground crew call horn:

(a) Push and hold the GRD CALL switch on the P5 forward overhead panel.

1) Make sure that you hear the ground crew call horn in the nose wheel well area.

(b) Release the GRD CALL switch.

(c) If the ground crew call horn does not sound, then do the Fault Isolation Procedure below.

(d) If the ground crew call horn sounds, then there was an intermittent fault.

F. Fault Isolation Procedure

(1) Do this check for electrical power to the ground crew call horn:

(a) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	9	C00073	PASSENGER CABIN CREW CALL

(b) Remove the Ground Crew Call Horn, M53, from the nose wheel well area. To remove it, do this task: Ground Crew Call Horn Removal, AMM TASK 23-43-02-000-801.

(c) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	9	C00073	PASSENGER CABIN CREW CALL

(d) Push and hold the GRD CALL switch on the P5 forward overhead panel.

(e) Do a check for 28 VDC across the Ground Crew Call Horn wires (one 28 VDC, the other ground).

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(f)   Release the GRD CALL switch.

(g)   If there is 28 VDC, then do these steps:

1)   Install a new Ground Crew Call Horn. To install it, do this task: Ground Crew Call Horn Installation, AMM TASK 23-43-02-420-801.

2)   Do the Repair Confirmation at the end of this task.

(h)   If there is not 28 VDC, then continue.

(2)   Replace the Ground Crew Call Switch, S32, on the P5 forward overhead panel.

(a)   Do the Repair Confirmation at the end of this task.

(b)   If the Repair Confirmation is not OK, then continue.

(3)   Repair the wiring between the ground crew call horn, M53, and the circuit breaker, C73, on the P18-3 circuit breaker panel.

(a)   Do the Repair Confirmation at the end of this task.

G.   **Repair Confirmation**

(1)   Do this check of the ground crew call horn:

(a)   Push and hold the GRD CALL switch on the P5 forward overhead panel.

1)   Make sure that you hear the ground crew call horn in the nose wheel well area.

(b)   Release the GRD CALL switch.

(c)   If the ground crew call horn sounds, then you corrected the fault.

——— **END OF TASK** ———

802.   Ground Crew Call Horn Operates Continuously - Fault Isolation

A.   **Description**

(1)   The ground crew call horn stays on continuously.

B.   **Possible Causes**

(1)   Air Data Inertial Reference Unit (ADIRU), M1749 (left) or M1752 (right)

(2)   Ground crew call switch, S32

C.   **Circuit Breakers**

(1)   These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	9	C00073	PASSENGER CABIN CREW CALL
A	17	C01433	EQPT COOLING LOW FLOW DETECT SUPPLY
A	18	C01434	EQPT COOLING LOW FLOW DETECT EXHAUST

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
C	14	C01008	ADIRU RIGHT AC

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F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	12	C01116	EQPT COOLING SUPPLY FAN CONT-NORMAL
C	13	C01117	EQPT COOLING SUPPLY FAN CONTROL-ALTN
C	14	C01435	EQPT COOLING EXHAUST FAN CONT NORMAL
C	15	C01436	EQPT COOLING EXHAUST FAN CONT ALTN

Power Distribution Panel Number 1, P91

Row	Col	Number	Name
A	8	C00935	EQPT CLG SPLY FAN PWR-ALTN
E	1	C00836	EQPT CLG EXH FAN PWR-NORM

Power Distribution Panel Number 2, P92

Row	Col	Number	Name

SHZ 002, 009-699, 706, 721-799, 860-863, 865, 866, 871-874, 901-999

Row	Col	Number	Name
A	8	C00934	EQPT CLG SPLY FAN PWR-NORM
A	10	C00837	EQPT CLG EXH FAN PWR-ALTN

SHZ 801-825, 827-847, 850-852, 855-859, 876-899

Row	Col	Number	Name
D	10	C00934	EQPT CLG SPLY FAN PWR-NORM
D	12	C00837	EQPT CLG EXH FAN PWR-ALTN

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D. Related Data

(1)   (SSM 23-43-11)

(2)   (WDM 23-43-11)

E. Fault Isolation Procedure

(1)   Do this task: Ground Crew Call Horn Sounds - Fault Isolation, 34-21 TASK 829.

    (a)   If the ground crew call horn goes off, then you corrected the fault.

    (b)   If you still hear the ground crew call horn, then continue.

(2)   Replace the Ground Crew Call Switch, S32, on the P5 forward overhead panel.

    (a)   Do this check of the ground crew call horn:

        1)   Push and hold the GRD CALL switch on the P5 forward overhead panel.

           a)   Make sure you hear the ground crew call horn in the nose wheel well area.

        2)   Release the GRD CALL switch.

           a)   Make sure that the ground crew call horn goes off.

        3)   If the ground crew call horn sounds and goes off, then you corrected the fault.

———— **END OF TASK** ————

803. Ground Crew to Flight Deck, Call System Does Not Operate - Fault Isolation

A. Description

(1)   The CALL light on the forward overhead panel does not come on and the Aural Warning Unit does not chime when the ground crew pushes the PILOT CALL button on the External Power Panel.

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B. Possible Causes

(1) PILOT CALL Switch, S33

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	9	C00073	PASSENGER CABIN CREW CALL

D. Related Data

(1) (SSM 23-43-11)

(2) (WDM 23-43-11)

E. Initial Evaluation

(1) Do this check of the captain's CALL light:

    (a) Press and hold the PILOT CALL button on the P19 External Power panel.

        1) Make sure the CALL light on the P5 forward overhead panel goes on.

        2) Make sure that you hear a chime in the flight deck.

    (b) Release the PILOT CALL button.

    (c) If the CALL light does not go on and the chime does not sound, then do the Fault Isolation Procedure below.

    (d) If the CALL light goes on and the chime sounds, then there was an intermittent fault.

F. Fault Isolation Procedure

(1) Replace the PILOT CALL switch, S33, on the P19 External Power panel.

    (a) Do this check of the captain's CALL light:

        1) Press and hold the PILOT CALL button on the P19 External Power panel.

            a) Make sure the CALL light on the P5 forward overhead panel goes on.

            b) Make sure that you hear a chime in the flight deck.

        2) Release the PILOT CALL button.

        3) If the CALL light goes on and you hear a chime, then you corrected the fault.

———— END OF TASK ————

804. Ground Crew to Flight Deck, Call Light Does Not Operate - Fault Isolation

A. Description

(1) The CALL light on the forward overhead panel does not come on, but the call chime sounds when the ground crew pushes the PILOT CALL button on the External Power Panel.

B. Possible Causes

(1) Master Dim and Test Switch, S3

(2) Captain's Call Light, L19

(3) Wiring

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C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	9	C00073	PASSENGER CABIN CREW CALL

D. Related Data

(1) (SSM 23-43-11)

(2) (WDM 23-43-11)

E. Initial Evaluation

(1) Do this check of the captain's CALL light:

(a) Set the Master Dim and Test switch, S3, on the P1 main instrument panel, to BRT.

(b) Push and hold the PILOT CALL button, S33, on the P19 External Power panel.

   1) Make sure the CALL light on the P5 forward overhead panel goes on.

(c) Release the PILOT CALL button.

(d) If the CALL light does not go on, then do the Fault Isolation Procedure below.

(e) If the CALL light goes on, then there was an intermittent fault.

F. Fault Isolation Procedure

(1) Do this test of the Captain's CALL light, L19:

(a) Set the Master Dim and Test switch, S3, on the P1 main instrument panel, to TEST.

(b) If the CALL light does not go on, then replace the Captain's CALL light.

   1) Do the Repair Confirmation at the end of this task.

      a) If the Repair Confirmation is not OK, then continue.

(c) If the CALL light goes on, then continue.

(2) Do this check of the wiring:

(a) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	9	C00073	PASSENGER CABIN CREW CALL

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT

(b) Remove the Captain's CALL light, L19, from the P5 forward overhead panel.

(c) Remove the PILOT CALL switch, S33, from the P19 External Power panel.

(d) Do a check for an open circuit between these pins of the Captain's CALL light, L19, and the PILOT CALL switch, S33:

L19   **S33**
pin 1 . . . . pin C

(e) If you find a problem with the wiring, then do these steps:

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1) Repair the wiring.

2) Re-install the PILOT CALL switch.

3) Re-install the Captain's CALL light.

4) Remove the safety tags and close these circuit breakers:

   CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	9	C00073	PASSENGER CABIN CREW CALL

   F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT

5) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1) Do this check of the captain's CALL light:

(a) Press and hold the PILOT CALL switch, S33, on the P19 External Power panel.

   1) Make sure the captain's CALL light, L19, on the P5 forward overhead panel goes on.

(b) Release the PILOT CALL switch.

(c) If the CALL light goes on, then you corrected the fault.

——— **END OF TASK** ———

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801. **Microphone/Headset Problem - Fault Isolation**

A. **Description**

(1) A flight interphone hand microphone, headset, or boom microphone/headset does not operate.

B. **Possible Causes**

(1) Hand microphone, headset, or boom microphone/headset

(2) Microphone, headset, or boom microphone/headset jack

(3) Audio Control Panel (ACP), P8-6 (captain's), P8-7 (first officer's), or P5-15 (observer's)

(4) Oxygen Mask stowage panels.

(5) Remote Electronic Unit (REU), M1353

(6) Wiring

C. **Circuit Breakers**

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	21	C00560	INTERPHONE POWER F/O DC 2
C	22	C00561	INTERPHONE POWER F/O BAT
C	23	C00239	INTERPHONE POWER CAPT DC 2
C	24	C00240	INTERPHONE POWER CAPT BAT
D	21	C00084	INTPH AND WARN
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

D. **Related Data**

(1) SSM 23-51-11

(2) WDM 23-51-11

(3) WDM 23-51-21

(4) WDM 23-51-31

E. **Initial Evaluation**

(1) Do these steps to prepare the flight interphone for initial evaluation and for fault isolation:

SHZ 009-699, 706, 801-825, 827-847, 850-852, 855-859, 865, 866, 871-874, 876-899, 901-999

(a) Make sure the AURAL WARN MUTE switch on the front panel of the REU is not in the "Mute" position.

NOTE: The switch is in "Mute" position when it is horizontal to the bottom edge of the front panel.

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(b) Set the SERVICE INTERPHONE switch, S50, on the P5 Overhead Panel to the OFF position.

(c) Connect a microphone and headset to all flight interphone stations.

(d) Push the flight microphone selector switch on all Audio Control Panels (ACPs). The flight microphone selector switch is labelled FLT, FLT INT, or INT.

(e) Push the volume control for the flight microphone selector switch to on.

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(2) Do this check of the flight interphone:

(a) Push and hold the test switch on the affected station's Audio Control Panel in the R/T or RADIO position. The switch is labelled R/T - I/C or RADIO - INT.

(b) Speak into the affected station's microphone.

 1) Make sure you can hear the voice clearly from the other stations' headset.

(c) Release the test switch.

(d) If the voice is not heard on all headsets, then do the Fault Isolation Procedure below.

(e) If the voice is heard on all headsets, then there was an intermittent fault.

F. Fault Isolation Procedure

(1) Replace the affected hand microphone, headset, or boom microphone/headset.

(a) Do the Repair Confirmation at the end of this task.

 1) If the Repair Confirmation is not OK, then continue.

(2) Replace the affected station's hand microphone, headset, or boom microphone/headset jack.

(a) Do the Repair Confirmation at the end of this task.

 1) If the Repair Confirmation is not OK, then continue.

(3) Replace the affected Audio Control Panel (ACP):

• Audio Control Panel Removal, AMM TASK 23-51-02-000-801

• Audio Control Panel Installation, AMM TASK 23-51-02-400-801.

(a) Do the Repair Confirmation at the end of this task.

 1) If the Repair Confirmation is not OK, then continue.

(4) Replace the Remote Electronic Unit (REU), M1353:

• Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801

• Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

(a) Do the Repair Confirmation at the end of this task.

 1) If the Repair Confirmation is not OK, then continue.

(5) Use the SSM and WDM listed in Related Data to do a check of the wires from the remote electronics unit:

(a) Remove the affected station's hand microphone, headset, or boom microphone/headset jack.

(b) Remove the REU, M1353 from the E4-1 shelf (AMM TASK 23-51-01-000-801).

(c) Examine and repair the wires between the REU connector D2501B and the microphone, headset, or boom microphone/headset jack connector.

 1) If you found and repaired a wire problem, then do these steps:

 a) Re-install the REU (AMM TASK 23-51-01-000-802).

 b) If it is necessary, re-install the hand microphone, headset, or boom microphone/headset jack.

 c) Do the Repair Confirmation at the end of this task.

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G. **Repair Confirmation**

(1) If it is necessary, do these steps to prepare the flight interphone for Repair Confirmation:

(a) Make sure that the SERVICE INTERPHONE switch, S50, on the P5 Overhead Panel to the OFF position.

(b) Make sure that a microphone and headset is connected at all flight interphone stations.

(c) Makes sure that these steps are completed:

1) Push the flight microphone selector switch on all Audio Control Panels (ACPs). The flight microphone selector switch is labelled FLT, FLT INT, or INT.

2) Push the volume control for the flight microphone selector switch to on.

(2) Do this check of the flight interphone:

(a) Push and hold the test switch on the affected station's Audio Control Panel in the R/T or RADIO position. The switch is labelled R/T - I/C or RADIO - INT.

(b) Speak into the affected station's microphone.

1) Make sure you can hear the voice clearly from the other stations' headset.

(c) Release the test switch.

(d) If the voice is heard on all headsets, then you have corrected the problem.

———— **END OF TASK** ————

802. Damaged Microphone/Headset - Fault Isolation

A. **Fault Isolation Procedure**

(1) Replace the affected hand microphone, headphone, or boom microphone/headset.

———— **END OF TASK** ————

803. Flight Interphone Problem At All Stations - Fault Isolation

A. **Description**

(1) The flight interphone does not operate at any flight deck station.

B. **Possible Causes**

(1) Remote Electronics Unit (REU), M1353

C. **Circuit Breakers**

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	21	C00560	INTERPHONE POWER F/O DC 2
C	22	C00561	INTERPHONE POWER F/O BAT
C	23	C00239	INTERPHONE POWER CAPT DC 2
C	24	C00240	INTERPHONE POWER CAPT BAT
D	21	C00084	INTPH AND WARN
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

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D. **Related Data**

(1) SSM 23-51-11

(2) WDM 23-51-11

(3) WDM 23-51-21

(4) WDM 23-51-31

E. **Initial Evaluation**

(1) Do these steps to prepare the flight interphone for initial evaluation and for fault isolation:

(a) Set the SERVICE INTERPHONE switch, S50, on the P5 Overhead Panel to the OFF position.

(b) Connect a boom mic/headset to both pilots' boom microphone/headset jacks in the flight deck.

(c) Push the flight microphone selector switch on all Audio Control Panels (ACPs). The flight microphone selector switch is labelled FLT, FLT INT, or INT.

(d) Push the volume control for the flight microphone selector switch to on.

(2) Do this check of the flight interphone:

(a) Push and hold the PTT switch on the affected pilot's control wheel to the MIC position.

(b) Speak into the boom microphone.

1) Make sure you can hear the voice clearly from the other pilot's headset.

(c) Release the PTT switch on the control wheel.

(d) Push and hold the PTT switch on the other pilot's control wheel to the MIC position.

(e) Speak into the boom microphone.

1) Make sure you can hear the voice clearly from the other pilot's headset.

(f) Release the PTT switch on the control wheel.

(g) If the voice is not heard on either headset, then do the Fault Isolation Procedure below.

(h) If the voice is heard on both headsets, then there was an intermittent fault.

F. **Fault Isolation Procedure**

(1) Replace the Remote Electronic Unit (REU), M1353:

• Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801

• Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

(a) Do this check of the flight interphone:

NOTE: You must do the steps to prepare for fault isolation that are in the Initial Evaluation before you can do this check.

1) Push and hold the PTT switch on the pilot's control wheel to the MIC position.

2) Speak into the boom microphone/headset.

a) Make sure you can hear the voice clearly from the other pilot's headset.

3) Release the PTT switch on the control wheel.

4) Push and hold the PTT switch on the other pilot's control wheel to the MIC position.

5) Speak into the boom microphone.

a) Make sure you can hear the voice clearly from the other pilot's headset.

6) Release the PTT switch on the control wheel.

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7)   If the voice is heard on both headsets, then you corrected the fault.

———— **END OF TASK** ————

804. **Flight Interphone Problems At One Station - Fault Isolation**

A. **Description**

(1)   The flight interphone does not operate at one station. The other stations operate correctly.

B. **Possible Causes**

(1)   Push-To-Talk (PTT) switch, S519 (captain's) or S520 (first officer's)

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(2)   Glareshield PTT switch, S1091 (captain's) or S989 (first officer's)

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(3)   Audio Control Panel (ACP), P8-6 (captain's), P8-7 (first officer's), or P5-15 (observer's)

(4)   Remote Electronics Unit (REU), M1353

C. **Circuit Breakers**

(1)   These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	21	C00560	INTERPHONE POWER F/O DC 2
C	22	C00561	INTERPHONE POWER F/O BAT
C	23	C00239	INTERPHONE POWER CAPT DC 2
C	24	C00240	INTERPHONE POWER CAPT BAT
D	21	C00084	INTPH AND WARN
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

D. **Related Data**

(1)   SSM 23-51-11

(2)   WDM 23-51-11

(3)   WDM 23-51-21

(4)   WDM 23-51-31

E. **Initial Evaluation**

(1)   Do these steps to prepare the flight interphone for initial evaluation and for fault isolation:

(a)   Set the SERVICE INTERPHONE switch, S50, on the P5 overhead panel, to the OFF position.

(b)   Connect a microphone and headset to jacks at all flight interphone stations in the flight deck.

(c)   Push the flight microphone selector switch on all ACPs. The flight microphone selector switch is labelled FLT, FLT INT, or INT.

(d)   Push the volume control for the flight microphone selector switch to on.

(2)   Do this check of the flight interphone:

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(a) Push and hold the test switch on the affected station's ACP in the R/T or RADIO. The switch is labelled R/T - I/C or RADIO - INT.

(b) Speak into the affected station's microphone.

    1) Make sure that you can hear the voice clearly from the other stations' headset.

(c) Release the test switch.

(d) If the voice is not heard on all headsets, then do the Fault Isolation Procedure below.

(e) If the voice is heard on all headsets, then there was an intermittent fault.

F. **Fault Isolation Procedure**

(1) Replace the PTT switch, S519 (captain's) or S520 (first officer's):

• Control Wheel PTT Switch Removal, AMM TASK 23-51-04-000-801

• Control Wheel PTT Switch Installation, AMM TASK 23-51-04-400-801.

(a) Do the Repair Confirmation at the end of this task.

    1) If the Repair Confirmation is not OK, then continue.

SHZ 801-825, 827-847, 850-852, 855-859, 871-874, 876-899, 901-999

(2) Replace the glareshield PTT switch, S1091 (captain's) or S989 (first officer's):

• Glareshield PTT Switch Removal, AMM TASK 23-51-05-000-801

• Glareshield PTT Switch - Installation, AMM TASK 23-51-05-400-801.

(a) Do the Repair Confirmation at the end of this task.

    1) If the Repair Confirmation is not OK, then continue.

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(3) Replace the affected ACP:

• Audio Control Panel Removal, AMM TASK 23-51-02-000-801

• Audio Control Panel Installation, AMM TASK 23-51-02-400-801.

(a) Do the Repair Confirmation at the end of this task.

    1) If the Repair Confirmation is not OK, then continue.

(4) Replace the REU, M1353:

• Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801

• Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

(a) Do the Repair Confirmation at the end of this task.

G. **Repair Confirmation**

(1) If it is necessary, do these steps to prepare the flight interphone for Repair Confirmation:

(a) Make sure that the SERVICE INTERPHONE switch, S50, on the P5 overhead panel, to the OFF position.

(b) Make sure that a microphone and headset is connected at all flight interphone stations.

(c) Makes sure that these steps are completed:

    1) Push the flight microphone selector switch on all ACPs. The flight microphone selector switch is labelled FLT, FLT INT, or INT.

    2) Push the volume control for the flight microphone selector switch to on.

(2) Do this check of the flight interphone:

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(a)   Push and hold the test switch on the affected station's ACP in the R/T or RADIO position. The switch is labelled R/T - I/C or RADIO - INT.

(b)   Speak into the affected station's microphone.

1)   Make sure that you can hear the voice clearly from the other stations' headset.

(c)   Release the test switch.

(d)   If the voice is heard on all headsets, then you have corrected the problem.

———— **END OF TASK** ————

805. Captain's Flight Interphone Speaker Problem - Fault Isolation

A. Description

(1)   Sound is not heard from the captain's flight interphone speaker.

B. Possible Causes

(1)   Captain's Flight Interphone Speaker, M77

(2)   Captain's Audio Control Panel, P8-6

(3)   Remote Electronic Unit (REU), M1353

(4)   Wiring

C. Circuit Breakers

(1)   These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	21	C00560	INTERPHONE POWER F/O DC 2
C	22	C00561	INTERPHONE POWER F/O BAT
C	23	C00239	INTERPHONE POWER CAPT DC 2
C	24	C00240	INTERPHONE POWER CAPT BAT
D	21	C00084	INTPH AND WARN
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

D. Related Data

(1)   SSM 23-51-11

(2)   WDM 23-51-11

(3)   WDM 23-51-21

(4)   WDM 23-51-31

E. Initial Evaluation

(1)   Do these steps to prepare the flight interphone for initial evaluation and for fault isolation:

(a)   Set the SERVICE INTERPHONE switch, S50, on the P5 Overhead Panel to the OFF position.

(b)   Connect a microphone to the first officer's microphone jack.

(c)   Set all audio control panels (ACPs) to these conditions:

1)   Push all audio monitor switches to off.

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      2)   Push the flight microphone selector switch to on. The flight microphone selector switch is labelled FLT, FLT INT, or INT.

          a)   Make sure its light comes on.

      3)   Push the volume control for the flight microphone selector switch. The flight microphone selector switch is labelled FLT, FLT INT, or INT.

          a)   Make sure its light comes on.

      4)   Turn the volume control for the flight microphone selector switch to the middle position. The flight microphone selector switch is labelled FLT, FLT INT, or INT.

    (d)   Set the captain's ACP to these conditions:

      1)   Push the SPKR volume control switch to on.

          a)   Make sure its light comes on.

      2)   Turn the SPKR volume control switch to the middle position or to the volume level you are comfortable with.

(2)   Do this check of the captain's flight interphone speaker:

    (a)   Push and hold the PTT switch on the first officer's control wheel to the MIC position.

    (b)   Speak into the first officer's microphone.

    (c)   Make sure you can hear the voice clearly from the captain's flight interphone speaker.

    (d)   If the voice is not heard on the captain's flight interphone speaker, then do the Fault Isolation Procedure below.

    (e)   If the voice is heard on the captain's flight interphone speaker, then there was an intermittent fault.

F.   Fault Isolation Procedure

(1)   Replace the captain's flight interphone speaker:

    • Flight Interphone Speaker Removal, AMM TASK 23-51-03-000-802

    • Flight Interphone Speaker Installation, AMM TASK 23-51-03-000-804.

    (a)   Do the Repair Confirmation at the end of this task.

    (b)   Do the Repair Confirmation at the end of this task.

      1)   If the Repair Confirmation is not OK, then continue.

(2)   Replace the captain's Audio Control Panel (ACP):

    • Audio Control Panel Removal, AMM TASK 23-51-02-000-801

    • Audio Control Panel Installation, AMM TASK 23-51-02-400-801.

    (a)   Do the Repair Confirmation at the end of this task.

      1)   If the Repair Confirmation is not OK, then continue.

(3)   Replace the Remote Electronic Unit (REU):

    • Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801

    • Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

    (a)   Do the Repair Confirmation at the end of this task.

      1)   If the Repair Confirmation is not OK, then continue.

(4)   Do this check of the wiring:

    (a)   Remove the REU, M1353 from the E4-1 shelf (AMM TASK 23-51-01-000-801).

    (b)   Remove the captain's flight interphone speaker (AMM TASK 23-51-03-000-802).

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(c)   Do a check for an open circuit between connector D2501B, pin D8 of the REU, M1353, and connector D127, pin 1 of the captain's flight interphone speaker, M77:

(d)   If there is an open circuit, then do these steps:

    1)   Repair the wiring.

    2)   Re-install the captain's flight interphone speaker (AMM TASK 23-51-03-000-804).

    3)   Re-install the REU (AMM TASK 23-51-01-000-802).

    4)   Do the Repair Confirmation at the end of this task.

G.   Repair Confirmation

(1)   Do this check of the captain's flight interphone speaker:

NOTE: You must do the steps to prepare for fault isolation that are in the Initial Evaluation before you can do this check.

(a)   Push and hold the PTT switch on the first officer's control wheel to the MIC position.

(b)   Speak into the first officer's microphone.

(c)   Make sure you can hear the voice clearly from the captain's flight interphone speaker.

(d)   If the voice is heard on the captain's flight interphone speaker, then you corrected the fault.

———— **END OF TASK** ————

806. First Officer's Flight Interphone Speaker Problem - Fault Isolation

A.   Description

(1)   Sound is not heard from the first officer's flight interphone speaker.

B.   Possible Causes

(1)   Remote Electronic Unit (REU), M1353

(2)   First Officer's Audio Control Panel, P8-6

(3)   First Officer's Flight Interphone Speaker, M78

(4)   Wiring

C.   Circuit Breakers

(1)   These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	21	C00560	INTERPHONE POWER F/O DC 2
C	22	C00561	INTERPHONE POWER F/O BAT
C	23	C00239	INTERPHONE POWER CAPT DC 2
C	24	C00240	INTERPHONE POWER CAPT BAT
D	21	C00084	INTPH AND WARN
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

D.   Related Data

(1)   SSM 23-51-11

(2)   WDM 23-51-11

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   (3)   WDM 23-51-21

   (4)   WDM 23-51-31

E.   Initial Evaluation

  (1)   Do these steps to prepare the flight interphone for initial evaluation and for fault isolation:

     (a)   Set the SERVICE INTERPHONE switch, S50, on the P5 Overhead Panel to the OFF position.

     (b)   Connect a microphone to the captain's microphone jack.

     (c)   Set all audio control panels (ACPs) to these conditions:

        1)   Push all audio monitor switches to off.

        2)   Push the flight microphone selector switch to on. The flight microphone selector switch is labelled FLT, FLT INT, or INT.

           a)   Make sure its light comes on.

        3)   Push the volume control for the flight microphone selector switch. The flight microphone selector switch is labelled FLT, FLT INT, or INT.

           a)   Make sure its light comes on.

     (d)   Set the first officer's ACP to these conditions:

        1)   Push the SPKR volume control switch to on.

           a)   Make sure its light comes on.

        2)   Turn the SPKR volume control switch to the middle position or to the volume level you are comfortable with.

  (2)   Do this check of the first officer's flight interphone speaker:

     (a)   Push and hold the PTT switch on the captain's control wheel to the MIC position.

     (b)   Speak into the captain's microphone.

     (c)   Make sure you can hear the voice clearly from the first officer's flight interphone speaker.

     (d)   If the voice is not heard on the first officer's flight interphone speaker, then do the Fault Isolation Procedure below.

     (e)   If the voice is heard on the first officer's flight interphone speaker, then there was an intermittent fault.

F.   Fault Isolation Procedure

  (1)   Replace the first officer's Audio Control Panel (ACP):

     •   Audio Control Panel Removal, AMM TASK 23-51-02-000-801

     •   Audio Control Panel Installation, AMM TASK 23-51-02-400-801.

     (a)   Do the Repair Confirmation at the end of this task.

        1)   If the Repair Confirmation is not OK, then continue.

  (2)   Replace the Remote Electronic Unit (REU):

     •   Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801

     •   Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

     (a)   Do the Repair Confirmation at the end of this task.

        1)   If the Repair Confirmation is not OK, then continue.

  (3)   Replace the first officer's flight interphone speaker:

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- Flight Interphone Speaker Removal, AMM TASK 23-51-03-000-802
- Flight Interphone Speaker Installation, AMM TASK 23-51-03-000-804.

    (a)   Do the Repair Confirmation at the end of this task.

        1)   If the Repair Confirmation is not OK, then continue.

(4)   Do this check of the wiring:

    (a)   Remove the REU, M1353 from the E4-1 shelf (AMM TASK 23-51-01-000-801).

    (b)   Remove the first officer's flight interphone speaker (AMM TASK 23-51-03-000-802).

    (c)   Do a check for an open circuit between connector D2501B, pin C11 of the REU, M1353, and connector D129, pin 1 of the first officer's flight interphone speaker, M78:

    (d)   If there is an open circuit, then do these steps:

        1)   Repair the wiring.

        2)   Re-install the first officer's flight interphone speaker (AMM TASK 23-51-03-000-804).

        3)   Re-install the REU (AMM TASK 23-51-01-000-802).

        4)   Do the Repair Confirmation at the end of this task.

G.   Repair Confirmation

(1)   Do this check of the first officer's flight interphone speaker:

NOTE: You must do the steps to prepare for fault isolation that are in the Initial Evaluation before you can do this check.

    (a)   Push and hold the PTT switch on the captain's control wheel to the MIC position.

    (b)   Speak into the captain's microphone.

    (c)   Make sure you can hear the voice clearly from the first officer's flight interphone speaker.

    (d)   If the voice is heard on the first officer's flight interphone speaker, then you corrected the fault.

——— **END OF TASK** ———

807. Audio Control Panel Problems - Fault Isolation

A.   Description

(1)   The audio control panel does not operate correctly at one station. The other stations operate correctly.

B.   Possible Causes

(1)   Audio Control Panel (ACP), P8-6 (captain's), P8-7 (first officer's), or P5-15 (observer's)

C.   Circuit Breakers

(1)   These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	21	C00560	INTERPHONE POWER F/O DC 2
C	22	C00561	INTERPHONE POWER F/O BAT
C	23	C00239	INTERPHONE POWER CAPT DC 2
C	24	C00240	INTERPHONE POWER CAPT BAT
D	21	C00084	INTPH AND WARN

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F/O Electrical System Panel, P6-2

Row	Col	Number	Name
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

D. Related Data

(1)   SSM 23-51-11

(2)   WDM 23-51-11

(3)   WDM 23-51-21

(4)   WDM 23-51-31

E. Initial Evaluation

(1)   Do these steps to prepare the audio control panel for initial evaluation and for fault isolation:

(a)   Visually examine the audio control panel.

1)   Identify the light or switch that does not operate correctly.

F. Fault Isolation Procedure

(1)   Replace the affected Audio Control Panel (ACP):

• Audio Control Panel Removal, AMM TASK 23-51-02-000-801

• Audio Control Panel Installation, AMM TASK 23-51-02-400-801.

(a)   Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1)   Do this check of the audio control panel:

(a)   Operate the light or switch that did not operate correctly.

(b)   If the light or switch now operates correctly, then you corrected the fault.

─────── **END OF TASK** ───────

808. Captain`s (First Officer`s, Observer`s) Oxygen Mask Communication Problems - Fault Isolation

A. Description

(1)   The Captain`s (First Officer`s, Observer`s) oxygen mask communication does not operate correctly.

B. Possible Causes

(1)   Oxygen Mask, M524 (M525, M526)

(2)   Captain`s (First Officer`s, Observer`s) Oxygen Mask Stowage Panel, P21-7 (P23-7, P61-7)

(3)   Captain`s (First Officer`s, Observer`s) ACP, P8-6 (P8-7, P5-15)

(4)   REU, M1353

(5)   Wiring

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C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	2	C00412	INSTR XFR

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	21	C00560	INTERPHONE POWER F/O DC 2
C	22	C00561	INTERPHONE POWER F/O BAT
C	23	C00239	INTERPHONE POWER CAPT DC 2
C	24	C00240	INTERPHONE POWER CAPT BAT
D	21	C00084	INTPH AND WARN
D	22	C00086	AUDIO F/O
D	23	C00083	AUDIO CAPT
D	24	C00085	AUDIO OBS

D. Related Data

(1) SSM 23-51-11

(2) WDM 23-51-11

(3) WDM 23-51-21

(4) WDM 23-51-31

E. Initial Evaluation

(1) Do a test for the applicable oxygen mask microphone: Oxygen Mask Microphone - Operational Test, AMM TASK 23-51-00-710-803.

   (a) If the oxygen mask microphone operate correctly, then there was an intermittent fault.

   (b) If the oxygen mask microphone does not operate correctly, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Replace the Oxygen Mask, M524 (M525, M526). These are the tasks:

- Oxygen Mask/Regulator Removal, AMM TASK 35-12-85-000-802
- Oxygen Mask/Regulator Installation, AMM TASK 35-12-85-400-802.

   (a) Do the Repair Confirmation at the end of this task.

(2) Do this wiring check (WDM 21-51-11, WDM 21-51-21, WDM 23-51-31):

   (a) Use Wiring Diagram Manual (WDM) to identify the pins of connector D6049 (D6051, D6053) and pins of connector D2501B for the interface between Captain`s (First Officer`s, Observer`s) Oxygen Mask Stowage Panel, P21-7 (P23-7, P61-7) and REU, M1353.

   (b) Remove the Captain`s (First Officer`s, Observer`s) Oxygen Mask Stowage Panel, P21-7 (P23-7, P61-7). This is the task: Oxygen Mask Stowage Box Removal, AMM TASK 35-12-85-000-801.

   (c) Remove the REU, M1353. This is the task: Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801.

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(d)   Do a wiring check between pins of connector D6049 (D6051, D6053) at the Captain`s (First Officer`s, Observer`s) Oxygen Mask Stowage Panel and pins of connector D2501B at the E4-1 Shelf.

(e)   If you find a problem with the wiring, then do these steps:

1)   Repair the wiring.

2)   Re-install the Captain`s (First Officer`s, Observer`s) Oxygen Mask Stowage Panel, P21-7 (P23-7, P61-7). This is the task: Oxygen Mask Stowage Box Installation, AMM TASK 35-12-85-400-801.

3)   Re-install the REU, M1353. This is the task: Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

4)   Do the Repair Confirmation at the end of this task.

SHZ 706, 807-825, 827-847, 850-852, 855-863, 881-899

(f)   If you do not find a problem with the wiring, then do this step and continue:

1)   Re-install the REU, M1353. This is the task: Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

SHZ 002, 009-699, 706, 721-799, 801-806, 865, 866, 871-874, 876-880, 901-999

(g)   If you do not find a problem with the wiring, then do this step and continue:

1)   Re-install the Captain`s (First Officer`s, Observer`s) Oxygen Mask Stowage Panel, P21-7 (P23-7, P61-7). This is the task: Oxygen Mask Stowage Box Installation, AMM TASK 35-12-85-400-801.

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(3)   Do this wiring check (WDM 21-51-11, WDM 21-51-21, WDM 23-51-31):

(a)   Remove the Captain`s (First Officer`s, Observer`s) Oxygen Mask Stowage Panel, P21-7 (P23-7, P61-7). This is the task: Oxygen Mask Stowage Box Removal, AMM TASK 35-12-85-000-801.

(b)   Remove the Captain`s (First Officer`s, Observer`s) ACP, P8-6 (P8-7, P5-15). This is the task: Audio Control Panel Removal, AMM TASK 23-51-02-000-801.

(c)   Do a wiring check as follows:

CAPTAIN

CAPTAINS OXYGEN MASK STOWAGE PNL, P21-7	**CAPT AUDIO CONTROL PANEL, P8-6**
D6049	**D133**
pin E	pin E

FIRST OFFICER

F/O OXYGEN MASK STOWAGE PNL, P23-7	**F/O AUDIO CONTROL PANEL, P8-7**
D6051	**D137**
pin E	pin E

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OBSERVER

OXYGEN MASK STOWAGE PNL, P61-7	OBS AUDIO CONTROL PANEL, P5-15
D6053	D139
pin E	pin E

(d)   Do a continuity check to make sure that this pin of connector D6049 (D6051, D6053) has continuity to the Structure Ground as follows:

CAPTAIN

**CAPTAINS
OXYGEN MASK
STOWAGE PNL,
P21-7**
D6049
pin F   . . . .   GND

FIRST OFFICER

**F/O OXYGEN
MASK
STOWAGE PNL,
P23-7**
D6051
pin F   . . . .   GND

OBSERVER

**OXYGEN MASK
STOWAGE PNL,
P61-7**
D6053
pin F   . . . .   GND

(e)   If you find a problem with the wiring, then do these steps:

1)   Repair the wiring.

2)   Re-install the Captain`s (First Officer`s, Observer`s) Oxygen Mask Stowage Panel, P21-7 (P23-7, P61-7). This is the task: Oxygen Mask Stowage Box Installation, AMM TASK 35-12-85-400-801.

3)   Re-install the Captain`s (First Officer`s, Observer`s) ACP, P8-6 (P8-7, P5-15). This is the task: Audio Control Panel Installation, AMM TASK 23-51-02-400-801.

4)   Do the Repair Confirmation at the end of this task.

(f)   If you do not find a problem with the wiring, then do this step and continue:

1)   Re-install the Captain`s (First Officer`s, Observer`s) Oxygen Mask Stowage Panel, P21-7 (P23-7, P61-7). This is the task: Oxygen Mask Stowage Box Installation, AMM TASK 35-12-85-400-801.

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(4)   Do this wiring check (WDM 21-51-11, WDM 21-51-21, WDM 23-51-31):

(a)   Remove the REU, M1353. This is the task: Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801.

(b)   Remove the Captain`s (First Officer`s, Observer`s) ACP, P8-6 (P8-7, P5-15). This is the task: Audio Control Panel Removal, AMM TASK 23-51-02-000-801.

(c)   Do a wiring check as follows:

CAPTAIN

CAPT AUDIO CONTROL PANEL, P8-6 D133	REMOTE ELECTRONIC UNIT, M1353 D2501B
pin A	pin K1
pin B	pin K2

FIRST OFFICER

F/O AUDIO CONTROL PANEL, P8-6 D137	REMOTE ELECTRONIC UNIT, M1353 D2501B
pin A	pin K6
pin B	pin K7

OBSERVER

OBS AUDIO CONTROL PANEL, P5-15 D139	REMOTE ELECTRONIC UNIT, M1353 D2501B
pin A	pin K11
pin B	pin K12

1)   If you find a problem with the wiring, then do these steps:

a)   Repair the wiring.

b)   Re-install the REU, M1353. This is the task: Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

c)   Re-install the Captain`s (First Officer`s, Observer`s) ACP, P8-6 (P8-7, P5-15). This is the task: Audio Control Panel Installation, AMM TASK 23-51-02-400-801.

d)   Do the Repair Confirmation at the end of this task.

2)   If you do not find a problem with the wiring, then do these steps and continue:

a)   Re-install the REU, M1353. This is the task: Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

b)   Re-install the Captain`s (First Officer`s, Observer`s) ACP, P8-6 (P8-7, P5-15). This is the task: Audio Control Panel Installation, AMM TASK 23-51-02-400-801.

(5)   Replace the Captain`s (First Officer`s, Observer`s) Oxygen Mask Stowage Panel, P21-7 (P23-7, P61-7). These are the tasks:

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- Oxygen Mask Stowage Box Removal, AMM TASK 35-12-85-000-801

- Oxygen Mask Stowage Box Installation, AMM TASK 35-12-85-400-801.

    (a)   Do the Repair Confirmation at the end of this task.

(6)   Replace the Captain`s (First Officer`s, Observer`s) ACP, P8-6 (P8-7, P5-15). These are the tasks:

- Audio Control Panel Removal, AMM TASK 23-51-02-000-801

- Audio Control Panel Installation, AMM TASK 23-51-02-400-801.

    (a)   Do the Repair Confirmation at the end of this task.

(7)   Replace the REU, M1353. These are the tasks:

- Remote Electronics Unit (REU) Removal, AMM TASK 23-51-01-000-801

- Remote Electronics Unit (REU) Installation, AMM TASK 23-51-01-000-802.

    (a)   Do the Repair Confirmation at the end of this task.

G.   Repair Confirmation

(1)   Do a test for the applicable oxygen mask microphone: Oxygen Mask Microphone - Operational Test, AMM TASK 23-51-00-710-803.

    (a)   If the observed fault symptom is gone, then you corrected a problem.

    (b)   If the observed fault symptom stays, then continue the Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

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801. **Voice Recorder Monitor Jack Signal Problem - Fault Isolation**

    A. **Description**

        (1) No sound is heard through the headset/headphone.

    B. **Possible Causes**

        (1) Headset/headphone

        (2) Voice recorder unit, M383

        (3) Voice recorder control panel, P5-7

        (4) Wiring or connector.

    C. **Circuit Breakers**

        (1) These are the primary circuit breakers related to the fault:

        CAPT Electrical System Panel, P18-2
        <u>Row</u>   <u>Col</u>   <u>Number</u>   <u>Name</u>

        SHZ 821-825, 827-847, 850-852, 855-859, 881-899
          D   6   C01948   VOICE RCDR/RIPS

        SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999
          D   7   C00107   VOICE RCDR

        SHZ ALL

        These circuit breakers are inoperative and should remain open:

        CAPT Electrical System Panel, P18-2
        <u>Row</u>   <u>Col</u>   <u>Number</u>   <u>Name</u>

        SHZ 811-820
          D   6   C01948   VOICE RCDR/RIPS (INOP)

        SHZ 821-825, 827-847, 850-852, 855-859, 881-899
          D   7   C00107   VOICE RCDR (INOP)

        SHZ ALL

    D. **Related Data**

        (1) (SSM 23-71-11)

        (2) (WDM 23-71-01)

    E. **Initial Evaluation**

        (1) Connect the headphone, STD-1390 to the voice recorder control panel at the pilot's overhead panel, P5.

        (2) Set the volume control switches on the audio control panels (ACP) to the off position.

        SHZ 860-863, 865, 866, 871-874

        (3) Set the CVR AUTO/ON switch to the ON position.

          <u>NOTE</u>: Both engines must be off for at least five minutes.

          (a) Make sure that the CVR AUTO/ON switch stays in the ON position.

        SHZ ALL

        (4) Make sure that you can hear the flight deck conversation in the headphone.

        (5) Push and hold the TEST switch on the voice recorder control panel.

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(a) Make sure that you can hear a tone in the headphone.

    1) If you hear a tone in the headphone, then continue.

    2) If you do not hear a tone in the headphone, then do the Fault Isolation procedure below.

(6) Release the TEST switch.

(7) Speak into the microphones for the captain, the first officer, and the first observer, and the area microphone on the P5 overhead panel.

(a) If you hear your voice on all four channels through the headphone at the voice recorder control panel, then there was an intermittent fault.

(b) If you can not hear your voice on all four channels through the headphone at the voice recorder control panel, then do the Fault Isolation Procedure below.

SHZ 860-863, 865, 866, 871-874

(8) Set the CVR AUTO/ON switch back to the AUTO position.

SHZ ALL

F. Fault Isolation Procedure

(1) Replace the voice recorder, M383.

These are the tasks:

Voice Recorder Removal, AMM TASK 23-71-11-000-801,

Voice Recorder Installation, AMM TASK 23-71-11-400-801.

(a) Push and hold the TEST switch on the voice recorder control panel.

(b) If you hear a modulated sound through the headphone at the voice recorder control panel, then you corrected the fault.

(c) If you do not hear a modulated sound through the headphone at the voice recorder control panel, then continue.

(d) Release the TEST switch.

(2) Replace the voice recorder control panel, P5-7.

These are the tasks:

Voice Recorder Control Panel Removal, AMM TASK 23-71-12-000-801,

Voice Recorder Control Panel Installation, AMM TASK 23-71-12-400-801.

(a) Push and hold the TEST switch on the voice recorder control panel.

(b) If you hear a modulated sound through the headphone at the voice recorder control panel, then you corrected the fault.

(c) If you do not hear a modulated sound through the headphone at the voice recorder control panel, then continue.

(d) Release the TEST switch.

(3) Do this check of the wiring:

(a) Remove the voice recorder control panel, P5-7. To remove it, do this task: Voice Recorder Control Panel Removal, AMM TASK 23-71-12-000-801.

(b) Do a wiring check between these pins of connector D179, at the P5 overhead panel, and connector D177, at the voice recorder rack.

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D179		D177
pin B	. . . .	pin 13
pin C	. . . .	pin 14
pin L	. . . .	pin 47
pin K	. . . .	pin 45
pin V	. . . .	pin 5
pin W	. . . .	pin 6

(c)   If you find a problem with the wiring, then do these steps:

1)   Repair the wiring.

2)   Re-install the voice recorder unit, M383. To install it, do this task:Voice Recorder Installation, AMM TASK 23-71-11-400-801.

3)   Re-install the voice recorder control panel, P5-7. To install it, do this task:Voice Recorder Control Panel Installation, AMM TASK 23-71-12-400-801.

4)   Push the TEST switch on the voice recorder control panel for 3 to 5 seconds.

5)   If you hear a modulated sound through the headphone at the voice recorder control panel, then you corrected the fault.

———— **END OF TASK** ————

804. Voice Recorder STATUS Light or TEST Light Problem - Fault Isolation

A.   **Description**

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(1)   When you push the TEST Button on the Cockpit Voice Recorder (CVR) Control Panel for approximately one half second, the STATUS or TEST Light blinks, flickers, dims or does not come ON momentarily.

SHZ 706

(2)   When you push the TEST Button on the CVR Control Panel for approximately 5 seconds, the STATUS or TEST Light does not come ON.

SHZ ALL

B.   **Possible Causes**

(1)   Voice Recorder Unit, M383

(2)   Voice Recorder Control Panel, P5-7

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(3)   Recorder Independent Power Supply (RIPS) Battery Pack

(4)   RIPS, M2862

SHZ 827-847, 850-852, 855-859, 881-899

(5)   CVR Dispatch Relay, R1069

(6)   Circuit Breaker, C1537

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(7)   Wiring

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C.   **Circuit Breakers**

(1)   These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

SHZ 827-847, 850-852, 855-863, 865, 866, 871-874, 881-899

C	7	C01537	VOICE RCDR RELAY

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

D	6	C01948	VOICE RCDR/RIPS

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

D	7	C00107	VOICE RCDR

SHZ ALL

These circuit breakers are inoperative and should remain open:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

SHZ 811-825

C	7	C01537	VOICE RCDR RELAY (INOP)

SHZ 811-820

D	6	C01948	VOICE RCDR/RIPS (INOP)

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

D	7	C00107	VOICE RCDR (INOP)

SHZ ALL

D.   **Related Data**

(1)   SSM 23-71-11

SHZ 827-847, 850-852, 855-859, 881-899

(2)   SSM 23-27-35

SHZ ALL

(3)   WDM 23-71-01

SHZ 827-847, 850-852, 855-859, 881-899

(4)   WDM 23-27-35

SHZ ALL

E.   **Initial Evaluation**

SHZ 827-847, 850-852, 855-859, 881-899

(1)   Do this task: ACARS - Operational Test, AMM TASK 23-27-00-740-814-009 to make sure that Aircraft Communications Addressing And Reporting System (ACARS) is serviceable.

NOTE: The ACARS must be serviceable with the correct software installed in the ACARS Communications Management Unit (CMU) in order to get the operational test of the Voice Recorder System to pass.

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SHZ 860-863, 865, 866, 871-874

(2)   Set the CVR AUTO/ON Switch to the ON position.

NOTE: Both engines must be off for at least 5 minutes.

(a)   Make sure that the CVR AUTO/ON Switch stays in the ON position.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(3)   Push the TEST Switch, on the P5-7 Voice Recorder Control Panel, for approximately one half second.

(a)   If the STATUS or TEST Light comes ON momentarily, then there was an intermittent problem.

(b)   If the STATUS or TEST Light blinks, flickers, dims or does not come ON, then do the Fault Isolation Procedure below.

SHZ 706

(4)   Push the TEST Switch, on the P5-7 Voice Recorder Control Panel, for approximately 5 seconds.

(a)   If the STATUS or TEST Light comes ON, then there was an intermittent problem.

(b)   If the STATUS or TEST Light does not come ON, then do the Fault Isolation Procedure below.

SHZ ALL

F.   **Fault Isolation Procedure**

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(1)   Do this check of the wiring (WDM 23-71-01):

(a)   At the maintenance port connector D10101, use a digital/analog multimeter, COM-1793, to do a continuity check at pin 1.

1)   If pin 1 does not read continuity to ground (resistance is open or infinity), then repair the wiring.

a)   Do the Repair Confirmation at the end of this task.

2)   If pin 1 shows continuity to ground (resistance is approximately zero (0) Ω, then continue.

3)   Attach the Black (Negative) lead of the multimeter to Pin 1 of connector D10101 as a ground reference when taking measurements in the subsequent steps.

(b)   At the maintenance port connector D10101, use a digital/analog multimeter, COM-1793, set to the DIODE position and do a continuity check between pin 1 and pin 6.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899; AIRPLANES WITH RIPS PART NUMBER 100-3020-400

1)   If a continuity check between pin 1 and pin 6 does not read a value between 400 to 700 millivolts (ground condition), then replace the Battery Pack of the RIPS, M2862. This is the task: Recorder Independent Power Supply (RIPS) Battery - Replacement, AMM TASK 23-71-22-960-801.

a)   Supply electrical power. This is the task: Supply Electrical Power, AMM TASK 24-22-00-860-811.

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899; AIRPLANES WITH RIPS PART NUMBER 100-3020-400 (Continued)

            <1>   Wait for 15 (fifteen) minutes after you supply electrical power to the airplane.

                    NOTE: If you do not wait fifteen minutes, it is possible the value you see will not be satisfactory because the battery is at a low state of charge.

       b)   Do the Repair Confirmation at the end of this task.

    2)   If continuity check between pin 1 and pin 6 reads a value between 400 to 700 millivolts (ground state), then continue.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899; AIRPLANES WITH RIPS PART NUMBER 100-3010-401

    3)   If a continuity check between pin 1 and pin 6 does not read a value less than 700 millivolts (ground condition), then replace the Battery Pack of the RIPS, M2862. This is the task: Recorder Independent Power Supply (RIPS) Battery - Replacement, AMM TASK 23-71-22-960-801.

       a)   Supply electrical power. This is the task: Supply Electrical Power, AMM TASK 24-22-00-860-811.

            <1>   Wait for 15 (fifteen) minutes after you supply electrical power to the airplane.

                    NOTE: If you do not wait fifteen minutes, it is possible the value you see will not be satisfactory because the battery is at a low state of charge.

       b)   Do the Repair Confirmation at the end of this task.

    4)   If continuity check between pin 1 and pin 6 reads a value less than 700 millivolts (ground state), then continue.

SHZ 827-847, 850-852, 855-859, 881-899

    (c)   At the maintenance port connector D10101, use a digital/analog multimeter, COM-1793, to do a continuity check between pin 1 and pin 8.

    1)   If a continuity check between pin 1 and pin 8 does not read a value < 100 Ω, then do the steps that follow:

       a)   Do a wiring check between these pins of connector D177 at the Voice Recorder Rack and connector D10727B at the CMU-1 (WDM 23-27-35):

VOICE RECORDER, M383 D177	CMU-1, M2127 D10727B
pin 33	pin D15
pin 34	pin C15

       b)   If you find a problem with the wiring, then do these steps:

            <1>   Repair the wiring.

            <2>   At the maintenance port connector D10101, use a digital/analog multimeter, COM-1793, to do a continuity check between pin 1 and pin 8.

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SHZ 827-847, 850-852, 855-859, 881-899 (Continued)

        <a>   If a continuity check between pin 1 and pin 8 does not read a value < 100 Ω, then go to the step below that looks at the front panel of the Voice Recorder Unit, M383.

        <b>   If continuity check between pin 1 and pin 8 reads a value < 100 Ω, then continue.

    2)   If continuity check between pin 1 and pin 8 reads a value < 100 Ω, then continue.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(d)   At the maintenance port connector D10101, use a digital/analog multimeter, COM-1793, to do a continuity check between pin 1 and pin 12.

    1)   If a continuity check between pin 1 and pin 12 reads a value < 100 Ω, then replace the Voice Recorder Control Panel, P5-7. These are the tasks:

        • Voice Recorder Control Panel Removal, AMM TASK 23-71-12-000-801

        • Voice Recorder Control Panel Installation, AMM TASK 23-71-12-400-801

    2)   If continuity check between pin 1 and pin 12 does not read a value < 100 Ω, then continue.

SHZ 706

(2)   Replace the Voice Recorder Unit, M383. These are the tasks:

    • Voice Recorder Removal, AMM TASK 23-71-11-000-801

    • Voice Recorder Installation, AMM TASK 23-71-11-400-801

(a)   Do the Repair Confirmation at the end of this task.

SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

(3)   Look at the Front Panel of the Voice Recorder Unit, M383.

(a)   If the BITE Indicator comes ON and stays ON, then replace the Voice Recorder Unit, M383. These are the tasks:

    • Voice Recorder Removal, AMM TASK 23-71-11-000-801

    • Voice Recorder Installation, AMM TASK 23-71-11-400-801

    1)   Do the Repair Confirmation at the end of this task.

(b)   If the BITE Indicator does not come ON, then continue.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(4)   Replace the Battery Pack of the RIPS, M2862. This is the task: Recorder Independent Power Supply (RIPS) Battery - Replacement, AMM TASK 23-71-22-960-801.

(a)   Supply electrical power. This is the task: Supply Electrical Power, AMM TASK 24-22-00-860-811.

    1)   Wait for 15 (fifteen) minutes after you supply electrical power to the airplane.

        NOTE: If you do not wait fifteen minutes, it is possible the value you see will not be satisfactory because the battery is at a low state of charge.

(b)   Do the Repair Confirmation at the end of this task.

(5)   Replace the RIPS, M2862. These are the tasks:

    • Recorder Independent Power Supply - Removal, AMM TASK 23-71-22-000-801

    • Recorder Independent Power Supply - Installation, AMM TASK 23-71-22-400-801

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

      (a)   Do the Repair Confirmation at the end of this task.

SHZ ALL

(6)   Replace the P5-7 Voice Recorder Control Panel. These are the tasks:

    • Voice Recorder Control Panel Removal, AMM TASK 23-71-12-000-801

    • Voice Recorder Control Panel Installation, AMM TASK 23-71-12-400-801

      (a)   Do the Repair Confirmation at the end of this task.

SHZ 827-847, 850-852, 855-859, 881-899

(7)   Replace the CVR Dispatch Relay, R1069 on the J11 Panel as follows (WDM 23-71-01):

      (a)   Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
C	7	C01537	VOICE RCDR RELAY

      (b)   Replace the CVR Dispatch Relay, R1069.

      (c)   Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
C	7	C01537	VOICE RCDR RELAY

      (d)   Do the Repair Confirmation at the end of this task.

SHZ ALL

(8)   Do this check of the wiring (WDM 23-71-01):

      (a)   Remove the Voice Recorder Unit, M383. This is the task: Voice Recorder Removal, AMM TASK 23-71-11-000-801.

      (b)   Remove the P5-7 Voice Recorder Control Panel. This is the task: Voice Recorder Control Panel Removal, AMM TASK 23-71-12-000-801.

      (c)   Do a wiring check as follows:

VOICE RECORDER CONT PNL, P5-7 D179	**VOICE RECORDER, M383 D177**
pin E	pin 16

        1)   If you find the problem with the wiring, then do these steps:

          a)   Repair the wiring.

          b)   Re-install the P5-7 Voice Recorder Control Panel. This is the task: Voice Recorder Control Panel Installation, AMM TASK 23-71-12-400-801.

          c)   Re-install the Voice Recorder Unit, M383. This is the task: Voice Recorder Installation, AMM TASK 23-71-11-400-801.

          d)   Do the Repair Confirmation at the end of this task.

        2)   If you do not find the problem with the wiring, then do these steps and continue:

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 a) Re-install the P5-7 Voice Recorder Control Panel. This is the task: Voice Recorder Control Panel Installation, AMM TASK 23-71-12-400-801.

 b) Re-install the Voice Recorder Unit, M383. This is the task: Voice Recorder Installation, AMM TASK 23-71-11-400-801.

SHZ 827-847, 850-852, 855-859, 881-899

(9) Do this voltage check (WDM 23-71-01):

 (a) Open this circuit breaker and install safety tag:

 CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
C	7	C01537	VOICE RCDR RELAY

 (b) Remove the CVR Dispatch Relay, R1069 from the J11 Panel.

 (c) Remove the safety tag and close this circuit breaker:

 CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
C	7	C01537	VOICE RCDR RELAY

 (d) Do a voltage check as follows:

RELAY-CVR DISPATCH, R1069 D13187		**VOLTAGE**
pin 7	. . . . GND	28 VDC

 1) If the correct voltage is not present, then do this check of the wiring:

 a) Open this circuit breaker and install safety tag:

 CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
C	7	C01537	VOICE RCDR RELAY

 b) Do a wiring check as follows:

RELAY-CVR DISPATCH, R1069 D13187	**VOICE RCDR RELAY, C1537**
pin 7	term =L

 <1> If you find a problem with the wiring, then do these steps:

 <a> Repair the wiring.

 <b> Re-install the CVR Dispatch Relay, R1069.

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SHZ 827-847, 850-852, 855-859, 881-899 (Continued)

     <c> Remove the safety tag and close this circuit breaker:

     CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
C	7	C01537	VOICE RCDR RELAY

     <d> Do the Repair Confirmation at the end of this task.

   <2> If you do not find a problem with the wiring, then do these steps:

     <a> Replace this circuit breaker:

     CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
C	7	C01537	VOICE RCDR RELAY

     <b> Do the Repair Confirmation at the end of this task.

  2) If the correct voltage is present, then continue.

 (10) Do this check of the wiring (WDM 23-71-01):

 (a) Remove the Voice Recorder Unit, M383. This is the task: Voice Recorder Removal, AMM TASK 23-71-11-000-801.

 (b) Open this circuit breaker and install safety tag:

 CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
C	7	C01537	VOICE RCDR RELAY

 (c) Do a wiring check as follows:

RELAY-CVR DISPATCH, R1069 D13187	VOICE RECORDER, M383 D177
pin 2	pin 15
pin 3	pin 31

  1) If you find the problem with the wiring, then do these steps:

   a) Repair the wiring.

   b) Re-install the CVR Dispatch Relay, R1069.

   c) Re-install the Voice Recorder Unit, M383. This is the task: Voice Recorder Installation, AMM TASK 23-71-11-400-801.

   d) Remove the safety tag and close this circuit breaker:

   CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
C	7	C01537	VOICE RCDR RELAY

   e) Do the Repair Confirmation at the end of this task.

  2) If you do not find the problem with the wiring, then do this step and continue:

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SHZ 827-847, 850-852, 855-859, 881-899 (Continued)

        a)   Re-install the Voice Recorder Unit, M383. This is the task: Voice Recorder Installation, AMM TASK 23-71-11-400-801.

  (11)   Do this check of the wiring (WDM 23-71-01):

    (a)   Remove the RIPS, M2862. This is the task: Recorder Independent Power Supply - Removal, AMM TASK 23-71-22-000-801.

    (b)   Do a wiring check as follows:

RELAY-CVR DISPATCH, R1069	RIPS, M2862
D13187	D13185
pin 5	pin 10

        1)   If you find the problem with the wiring, then do these steps:

            a)   Repair the wiring.

            b)   Re-install the CVR Dispatch Relay, R1069.

            c)   Re-install the RIPS, M2862. This is the task: Recorder Independent Power Supply - Installation, AMM TASK 23-71-22-400-801.

            d)   Do the Repair Confirmation at the end of this task.

        2)   If you do not find the problem with the wiring, then do this step and continue:

            a)   Re-install the CVR Dispatch Relay, R1069.

  (12)   Do this check of the wiring (WDM 23-71-01):

    (a)   Remove the P5-7 Voice Recorder Control Panel. This is the task: Voice Recorder Control Panel Removal, AMM TASK 23-71-12-000-801.

    (b)   Do a wiring check as follows:

VOICE RECORDER CONT PNL, P5-7	RIPS, M2862
D179	D13185
pin D	pin 11

        1)   If you find the problem with the wiring, then do these steps:

            a)   Repair the wiring.

            b)   Re-install the P5-7 Voice Recorder Control Panel. This is the task: Voice Recorder Control Panel Installation, AMM TASK 23-71-12-400-801.

            c)   Re-install the RIPS, M2862. This is the task: Recorder Independent Power Supply - Installation, AMM TASK 23-71-22-400-801.

            d)   Do the Repair Confirmation at the end of this task.

    SHZ 821-825

  (13)   Do this check of the wiring (WDM 23-71-01):

    (a)   Remove the P5-7 Voice Recorder Control Panel. This is the task: Voice Recorder Control Panel Removal, AMM TASK 23-71-12-000-801.

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SHZ 821-825 (Continued)

    (b)   Remove the RIPS, M2862. This is the task: Recorder Independent Power Supply - Removal, AMM TASK 23-71-22-000-801.

    (c)   Do a wiring check as follows:

VOICE RECORDER CONT PNL, P5-7	**RIPS, M2862**
D179	**D13185**
pin D	pin 11

        1)   If you find the problem with the wiring, then do these steps:

            a)   Repair the wiring.

            b)   Re-install the P5-7 Voice Recorder Control Panel. This is the task: Voice Recorder Control Panel Installation, AMM TASK 23-71-12-400-801.

            c)   Re-install the RIPS, M2862. This is the task: Recorder Independent Power Supply - Installation, AMM TASK 23-71-22-400-801.

            d)   Do the Repair Confirmation at the end of this task.

        2)   If you do not find the problem with the wiring, then do this step and continue:

            a)   Re-install the P5-7 Voice Recorder Control Panel. This is the task: Voice Recorder Control Panel Installation, AMM TASK 23-71-12-400-801.

  (14)   Do this check of the wiring (WDM 23-71-01):

    (a)   Remove the Voice Recorder Unit, M383. This is the task: Voice Recorder Removal, AMM TASK 23-71-11-000-801.

    (b)   Do a wiring check as follows:

VOICE RECORDER, M383	**RIPS, M2862**
D177	**D13185**
pin 15	pin 10

        1)   If you find the problem with the wiring, then do these steps:

            a)   Repair the wiring.

            b)   Re-install the Voice Recorder Unit, M383. This is the task: Voice Recorder Installation, AMM TASK 23-71-11-400-801.

            c)   Re-install the RIPS, M2862. This is the task: Recorder Independent Power Supply - Installation, AMM TASK 23-71-22-400-801.

            d)   Do the Repair Confirmation at the end of this task.

SHZ 002, 009-699, 706, 721-799, 801-820, 860-863, 865, 866, 871-874, 876-880, 901-999

  (15)   Do this check of the wiring (WDM 23-71-01):

    (a)   Remove the Voice Recorder Unit, M383. This is the task: Voice Recorder Removal, AMM TASK 23-71-11-000-801.

    (b)   Remove the P5-7 Voice Recorder Control Panel. This is the task: Voice Recorder Control Panel Removal, AMM TASK 23-71-12-000-801.

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    (c)   Do a wiring check as follows:

VOICE RECORDER CONT PNL, P5-7 D179	VOICE RECORDER, M383 D177
pin D	pin 15
pin E	pin 16

        1)   If you find the problem with the wiring, then do these steps:

            a)   Repair the wiring.

            b)   Re-install the P5-7 Voice Recorder Control Panel. This is the task: Voice Recorder Control Panel Installation, AMM TASK 23-71-12-400-801.

            c)   Re-install the Voice Recorder Unit, M383. This is the task: Voice Recorder Installation, AMM TASK 23-71-11-400-801.

            d)   Do the Repair Confirmation at the end of this task.

    SHZ ALL

G.   **Repair Confirmation**

    SHZ 002, 009-699, 721-799, 801-825, 827-847, 850-852, 855-863, 865, 866, 871-874, 876-899, 901-999

  (1)   Push the TEST switch, on the P5-7 Voice Recorder Control Panel, for approximately one half second.

    (a)   If the STATUS or TEST Light comes ON momentarily, then you corrected the fault.

    (b)   If the STATUS or TEST Light does not come ON momentarily, then continue the Fault Isolation Procedure at the subsequent step.

    SHZ 706

  (2)   Push the TEST Switch, on the P5-7 Voice Recorder Control Panel, for approximately 5 seconds.

    (a)   If the STATUS or TEST Light comes ON, then you corrected the problem.

    (b)   If the STATUS or TEST Light does not come ON, then continue the Fault Isolation Procedure at the subsequent step.

——— **END OF TASK** ———

SHZ 860-863, 865, 866, 871-874

805. **CVR System Operation Problem (Airplanes With AUTO/ON Switch) - Fault Isolation**

    A.   **Description**

    (1)   Cockpit voice recorder (CVR) system does not operate correctly.

    B.   **Possible Causes**

    (1)   Voice recorder unit, M383

    (2)   Voice recorder control panel, P5-7

    (3)   CVR AUTO/ON switch, P5-88

    (4)   CVR sense engine run relay, R779

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SHZ 860-863, 865, 866, 871-874 (Continued)

    (5)   CVR switch latching relay, R780

    (6)   Engine 1 running relay, R737

    (7)   Engine 2 running relay, R738

    (8)   Wiring problem

C. Circuit Breakers

    (1)   These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
C	7	C01537	VOICE RCDR RELAY
D	7	C00107	VOICE RCDR

D. Related Data

    (1)   (SSM 23-71-11)

    (2)   (WDM 23-71-01)

E. Initial Evaluation

    (1)   Do these steps to do the Initial Evaluation:

        (a)   Connect the headphone, STD-1390 to the HEADPHONE/HEADSET jack on the voice recorder control panel.

        (b)   Set the CVR AUTO/ON switch (P5 overhead panel) to the ON position.

           NOTE: Both engines must be off for at least 5 minutes.

           1)   Make sure that the CVR AUTO/ON switch stays in the ON position.

        (c)   Set the left engine start lever to the IDLE position.

           1)   Make sure that the right engine start lever is in the OFF position.

           2)   Wait approximately 5 minutes.

              NOTE: The CDS will energize the engine running relay 5 minutes after you put the start lever in the IDLE position.

           3)   Make sure that the CVR AUTO/ON switch moves from the ON position to the AUTO position.

        (d)   Push the TEST switch on the CVR control panel (P5 panel) for one half second and release it.

           1)   Make sure that you hear a test tone in the headphone.

           2)   Make sure that the light comes on once on the CVR control panel.

        (e)   If the test is not satisfactory, then make a note that there is a problem with the left engine/CVR operation and continue.

        (f)   Set the left engine start lever to the OFF position.

           1)   Wait approximately 5 minutes.

              NOTE: The voice recorder will continue to operate for 5 minutes after both engines have stopped running, or engine running simulation has been discontinued.

        (g)   Set the CVR AUTO/ON switch (P5 overhead panel) to the ON position.

           NOTE: Both engines must be off for at least 5 minutes.

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SHZ 860-863, 865, 866, 871-874 (Continued)

        1)   Make sure that the CVR AUTO/ON switch stays in the ON position.

    (h)   Set the right engine start lever to the IDLE position.

        1)   Wait approximately 5 minutes.

            NOTE: The CDS will energize the engine running relay 5 minutes after you put the start lever in the IDLE position.

        2)   Make sure that the CVR AUTO/ON switch moves from the ON position to the AUTO position.

    (i)   Push the TEST switch on the CVR control panel (P5 panel) for one half second and release it.

        1)   Make sure that you hear a test tone in the headphone.

        2)   Make sure that the light comes on once on the CVR control panel.

    (j)   If the test was not satisfactory, then make a note that there is a problem with the right engine/CVR operation and continue.

    (k)   Set the right engine start lever to the OFF position.

    (l)   Make sure that the left and right engine start levers are each set to the off position.

        1)   Wait approximately 5 minutes.

    (m)   Set the CVR AUTO/ON switch (P5 overhead panel) to the ON position.

        NOTE: Both engines must be off for at least 5 minutes.

        1)   Make sure that the CVR AUTO/ON switch stays in the ON position.

        2)   If the CVR AUTO/ON switch does not stay in the ON position, then go to the Fault Isolation Procedure - CVR AUTO/ON Switch Operation Problem, Switch Does Not Stay ON.

    (n)   Push the TEST switch on the CVR control panel (P5 panel) for one half second and release it.

        1)   Make sure that you hear a test tone in the headphone.

        2)   Make sure that the light comes on once on the CVR control panel.

    (o)   If the test was not satisfactory, then make a note that there is a problem with the CVR AUTO/ON switch operation and continue.

  (2)   If the CVR did not operate correctly, then do these steps:

    (a)   If the CVR did not operate correctly for all of the conditions above, then do the Fault Isolation Procedure - CVR System Operation Problem.

    (b)   If there was a problem with the left and right engine/CVR operation, then do the Fault Isolation Procedure - Left and Right Engine/CVR Operation Problem.

    (c)   If there was a problem with the left engine/CVR operation, then do the Fault Isolation Procedure - Left Engine/CVR Operation Problem.

    (d)   If there was a problem with the right engine/CVR operation, then do the Fault Isolation Procedure - Right Engine/CVR Operation Problem.

    (e)   If there was a problem with the CVR AUTO/ON switch operation, then do the Fault Isolation Procedure - CVR AUTO/ON Switch Operation Problem.

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     (f)   If there was a problem with the CVR AUTO/ON switch operation where the switch did not stay ON, then do the Fault Isolation Procedure - CVR AUTO/ON Switch Operation Problem, Switch Does Not Stay ON.

   (3)   If the CVR did operate correctly, then there was an intermittent fault.

  F.   **Fault Isolation Procedure - CVR System Operation Problem**

   (1)   Replace the voice recorder, M383.

       These are the tasks:

       Voice Recorder Removal, AMM TASK 23-71-11-000-801,

       Voice Recorder Installation, AMM TASK 23-71-11-400-801.

     (a)   Do the Repair Confirmation at the end of this task.

     (b)   If the Repair Confirmation is not satisfactory, then continue.

   (2)   Replace the voice recorder control panel, P5-7.

       These are the tasks:

       Voice Recorder Control Panel Removal, AMM TASK 23-71-12-000-801,

       Voice Recorder Control Panel Installation, AMM TASK 23-71-12-400-801.

     (a)   Do the Repair Confirmation at the end of this task.

     (b)   If the Repair Confirmation is not satisfactory, then continue.

   (3)   Do this check of the wiring to the voice recorder:

     (a)   Remove the voice recorder, M383. To remove it, do this task: Voice Recorder Removal, AMM TASK 23-71-11-000-801.

     (b)   Set one of the two engine start levers to the IDLE position.

     (c)   Remove the safety tag and close this circuit breaker:

       CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	7	C00107	VOICE RCDR

     (d)   Do a check for 115 VAC between pin 2 and pin 3 (ground) of connector D177 for the voice recorder.

     (e)   If there is not 115 VAC between pin 2 and pin 3 of connector D177, then do these steps:

       1)   Do a check for 115 VAC between the load terminal of VOICE RCDR circuit breaker, C107 and structure ground.

       2)   If there is not 115 VAC at the load terminal, then do these steps:

         a)   Replace the following circuit breaker:

           CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	7	C00107	VOICE RCDR

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    b) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	7	C00107	VOICE RCDR

    c) Re-install the voice recorder, M383. To install it, do this task: Voice Recorder Installation, AMM TASK 23-71-11-400-801.

    d) Do the Repair Confirmation at the end of this task.

  3) If there is 115 VAC at the load terminal, then do these steps:

    a) Repair the wiring between pin 2 of D177 and the circuit breaker, C107.

    b) Do the Repair Confirmation at the end of this task.

 (f) If there is 115 VAC between pin 2 and pin 3 of connector D177, then continue.

(4) Do this check of the wiring to the CVR AUTO/ON switch:

 (a) Disconnect connector D11125 from the CVR AUTO/ON switch.

 (b) Make sure that this circuit breaker is closed:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
C	7	C01537	VOICE RCDR RELAY

 (c) Do a check for 28 VDC between pin 4 of connector D11125 and structure ground.

 (d) If there is not 28 VDC at pin 4 of connector D11125, then do these steps:

  1) Do a check for 28 VDC between the load terminal of VOICE RCDR RELAY circuit breaker, C1537 and structure ground.

  2) If there is not 28 VDC at the load terminal of VOICE RCDR RELAY circuit breaker C1537, then do these steps:

    a) Replace the circuit breaker C1537.

    b) Re-connect connector D11125 to the CVR AUTO/ON switch.

    c) Re-install the voice recorder, M383. To install it, do this task: Voice Recorder Installation, AMM TASK 23-71-11-400-801.

    d) Do the Repair Confirmation at the end of this task.

  3) If there is 28 VDC at the load terminal of VOICE RCDR RELAY circuit breaker C1537, then do these steps:

    a) Repair the wiring between pin 4 of connector D11125 and the circuit breaker, C1537.

    b) Re-connect connector D11125 to the CVR AUTO/ON switch.

    c) Re-install the voice recorder, M383. To install it, do this task: Voice Recorder Installation, AMM TASK 23-71-11-400-801.

    d) Do the Repair Confirmation at the end of this task.

 (e) If there is 28 VDC at pin 4 of the CVR AUTO/ON switch, then re-connect connector D11125 to the CVR AUTO/ON switch and continue.

(5) Do this check of the wiring between the voice recorder control panel and the voice recorder:

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    (a)   Remove the voice recorder control panel, P5-7. To remove it, do this task: Voice Recorder Control Panel Removal, AMM TASK 23-71-12-000-801.

    (b)   Do a wiring check between these pins of connector D179, at the P5 overhead panel, and connector D177, for the voice recorder.

D179		D177
pin A	. . . .	pin 12
pin E	. . . .	pin 16
pin D	. . . .	pin 15
pin W	. . . .	pin 6
pin V	. . . .	pin 5
pin C	. . . .	pin 14
pin L	. . . .	pin 47
pin K	. . . .	pin 45
pin B	. . . .	pin 13
pin F	. . . .	pin 17

    (c)   If you find a problem with the wiring, then do these steps:

        1)   Repair the wiring.

        2)   Re-install the voice recorder, M383. To install it, do this task: Voice Recorder Installation, AMM TASK 23-71-11-400-801.

        3)   Re-install the voice recorder control panel, P5-7. To install it, do this task: Voice Recorder Control Panel Installation, AMM TASK 23-71-12-400-801.

        4)   Do the Repair Confirmation at the end of this task.

G.   Fault Isolation Procedure - Left and Right Engine/CVR Operation Problem

(1)   Set one of the two engine start levers to the IDLE position.

(2)   Do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

    (a)   If the PSEU BITE test shows an ENGINE RUN fault, then go to the fault isolation task for the applicable maintenance message to correct the fault.

        1)   Do the Repair Confirmation at the end of this task.

        2)   If the Repair Confirmation is not satisfactory, then continue.

    (b)   If the PSEU BITE test does not show an ENGINE RUN fault, then continue.

(3)   Replace the CVR sense engine run relay, R779.

    NOTE: R779 is in the J22 junction box.

    (a)   Do the Repair Confirmation at the end of this task.

    (b)   If the Repair Confirmation is not satisfactory, then continue.

(4)   Do this check of the wiring:

    (a)   Remove the CVR sense engine run relay, R779.

    (b)   Do a check for 115 VAC at pin A2 of connector D11073 for the relay.

    (c)   If there is not 115 VAC at pin A2 of R779, then do these steps:

        1)   Do a check for 115 VAC between the load terminal of VOICE RECORDER circuit breaker, C107 and structure ground.

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    2)   If there is not 115 VAC at the load terminal of VOICE RECORDER circuit breaker C107, then do these steps:

        a)   Replace the circuit breaker C107.

        b)   Re-install the CVR sense engine run relay, R779.

        c)   Do the Repair Confirmation at the end of this task.

    3)   If there is 115 VAC at the load terminal of VOICE RECORDER circuit breaker C107, then do these steps:

        a)   Repair the wiring between pin A2 of connector D11073 and the circuit breaker.

        b)   Re-install the CVR sense engine run relay, R779.

        c)   Do the Repair Confirmation at the end of this task.

  (d)   If there is 115 VAC at pin A2 of connector D11073, then continue.

(5)   Do this check of the wiring:

  (a)   Do a check for 28 VDC between pin X1 and pin X2 (ground) of connector D11073.

  (b)   If there is not 28 VDC between pin X1 and pin X2 of connector D11073, then do these steps:

    1)   Do a check for 28 VDC at the load terminal of the VOICE RCDR RELAY circuit breaker, C1537.

    2)   If there is not 28 VDC at C1537, then do these steps:

        a)   Replace the circuit breaker C1537.

        b)   Re-install the CVR sense engine run relay, R779.

        c)   Do the Repair Confirmation at the end of this task.

    3)   If there is 28 VDC at the load terminal of the VOICE RCDR RELAY circuit breaker, C1537, then do these steps:

        a)   Repair the wiring between pin X1 of connector D11073 and the circuit breaker.

        b)   Re-install the CVR sense engine run relay, R779.

        c)   Do the Repair Confirmation at the end of this task.

  (c)   If there is 28 VDC from X1 to X2 of connector D11073, then continue.

(6)   Do this check of the ground circuit for the CVR sense engine run relay, R779:

  (a)   Make sure pin C1 of connector D11073 goes to ground.

  (b)   If pin C1 goes does not go to ground, then do these steps:

    1)   Repair the wiring between pin C1 of connector D11073 and structure ground.

        a)   Re-install the CVR sense engine run relay, R779.

        b)   Do the Repair Confirmation at the end of this task.

H.   Fault Isolation Procedure - Left Engine/CVR Operation Problem

(1)   Replace the engine 1 running relay, R737.

    NOTE: R737 is in the J22 junction box.

  (a)   Do the Repair Confirmation at the end of this task.

  (b)   If the Repair Confirmation is not satisfactory, then continue.

(2)   Do this check of the wiring:

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        (a)   Remove the engine 1 running relay, R737.

        (b)   Make sure that pin C2 of connector D12538 for the relay R737, goes to ground.

        (c)   If pin C2 of connector D12538 does not go to ground, then do these steps:

            1)   Repair the wiring between pin C2 of connector D12538 and structure ground.

            2)   Re-install the engine 1 running relay, R737.

            3)   Do the Repair Confirmation at the end of this task.

        (d)   If pin C2 of connector D12538 goes to ground, then continue.

    (3)   Do this check of the wiring between the CVR sense engine run relay, R779 and the engine 1 running relay, R737:

        (a)   Remove the CVR sense engine run relay, R779.

            NOTE: R779 is in the J22 junction box.

        (b)   Do a check for an open circuit between these pins of connector D11073 for relay R779 and connector D12538 for relay R737:

            D11073   **D12538**
            pin C1 . . . . pin C1

            1)   Repair the wiring.

            2)   Re-install the engine 1 running relay, R737.

            3)   Re-install the CVR sense engine run relay, R779.

            4)   Do the Repair Confirmation at the end of this task.

I.   **Fault Isolation Procedure - Right Engine/CVR Operation Problem**

    (1)   Replace the engine 2 running relay, R738.

        NOTE: R738 is in the J24 junction box.

        (a)   Do the Repair Confirmation at the end of this task.

        (b)   If the Repair Confirmation is not satisfactory, then continue.

    (2)   Do this check of the wiring:

        (a)   Remove the engine 2 running relay, R738.

        (b)   Make sure that pin C2 of connector D12540 for the relay R738, goes to ground.

        (c)   If pin C2 of connector D12540 does not go to ground, then do these steps:

            1)   Repair the wiring between pin C2 of connector D12540 and structure ground.

            2)   Re-install the engine 2 running relay, R738.

            3)   Do the Repair Confirmation at the end of this task.

        (d)   If pin C2 of connector D12540 goes to ground, then continue.

    (3)   Do this check of the wiring between the CVR sense engine run relay, R779 and the engine 2 running relay, R738:

        (a)   Remove the CVR sense engine run relay, R779.

            NOTE: R779 is in the J22 junction box.

        (b)   Do a check for an open circuit between these pins of connector D11073 for relay R779 and connector D12540 for relay R738:

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D11073	**D12540**
pin C1	pin C1

    1)   Repair the wiring.

    2)   Re-install the engine 2 running relay, R738.

    3)   Re-install the CVR sense engine run relay, R779.

    4)   Do the Repair Confirmation at the end of this task.

J.   Fault Isolation Procedure - CVR AUTO/ON Switch Operation Problem

  (1)   Do this check for 115 VAC to the CVR AUTO/ON switch:

    (a)   Disconnect connector D11125 from the CVR AUTO/ON switch, P5-88.

    (b)   Do a check for 115 VAC at pin 1, of connector D11125.

    (c)   If there is not 115 VAC at pin 1 of connector D11125, then do these steps:

       1)   Do a check for 115 VAC at the load terminal of circuit breaker, C107.

       2)   If there is 115 VAC at the load terminal of circuit breaker C107, then do these steps:

         a)   Repair the wiring between pin 1 of connector D11125 and the circuit breaker.

         b)   Re-connect connector D11125 to the CVR AUTO/ON switch, P5-88.

         c)   Do the Repair Confirmation at the end of this task.

       3)   If there is not 115 VAC at the load terminal of circuit breaker C107, then do these steps:

         a)   Replace the circuit breaker, C107.

         b)   Re-connect connector D11125 to the CVR AUTO/ON switch, P5-88.

         c)   Do the Repair Confirmation at the end of this task.

    (d)   If there is 115 VAC at pin 1 of connector D11125, then continue.

  (2)   Replace the CVR AUTO/ON switch, P5-88.

    (a)   Do the Repair Confirmation at the end of this task.

    (b)   If the Repair Confirmation is not satisfactory, then continue.

  (3)   Do this check of the wiring between the CVR AUTO/ON switch and the voice recorder:

    (a)   Disconnect connector D11125 from the CVR AUTO/ON switch, P5-88.

    (b)   Remove the voice recorder, M383. To remove it, do this task: Voice Recorder Removal, AMM TASK 23-71-11-000-801.

    (c)   Do a check of the wiring between these pins of connector D11125 for the CVR AUTO/ON switch and connector D177 for the voice recorder:

D11125	**D177**
pin 3	pin 2

    (d)   Repair the wiring.

    (e)   Re-install the voice recorder, M383. To install it, do this task: Voice Recorder Installation, AMM TASK 23-71-11-400-801.

    (f)   Re-connect connector D11125 to the CVR AUTO/ON switch, P5-88.

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      (g)   Do the Repair Confirmation at the end of this task.

K. Fault Isolation Procedure - CVR AUTO/ON Switch Operation Problem, Switch Does Not Stay ON

    (1)   Do this check for 28 VDC at the CVR AUTO/ON switch:

        (a)   Make sure that the engines have been off for at least 5 minutes.

        (b)   Disconnect connector D11125 from the CVR AUTO/ON switch, P5-88.

        (c)   Do a check for 28 VDC at pin 4 of connector D11125.

        (d)   If there is not 28 VDC at pin 4 of connector D11125, then do these steps:

            1)   Do a check for 28 VDC from the load terminal of VOICE RCDR RELAY circuit breaker C1537 to structure ground.

            2)   If there is not 28 VDC at the load terminal of VOICE RCDR RELAY circuit breaker C1537, then do these steps:

                a)   Replace the circuit breaker, C1537.

                b)   Re-connect connector D11125 to the CVR AUTO/ON switch, P5-88.

                c)   Do the Repair Confirmation at the end of this task.

            3)   If there is 28 VDC at the load terminal of circuit breaker C1537, then do these steps:

                a)   Repair the wiring between pin 4 of connector D11125 and the circuit breaker.

                b)   Re-connect connector D11125 to the CVR AUTO/ON switch, P5-88.

                c)   Do the Repair Confirmation at the end of this task.

        (e)   If there is 28 VDC at pin 4 of connector D11125, then continue.

    (2)   Do this check of the CVR AUTO/ON switch:

        (a)   Make sure that pin 5 of connector D11125 for the CVR AUTO/ON switch goes to ground.

        (b)   If pin 5 of connector D11125 goes to ground, then do these steps:

            1)   Replace the CVR AUTO/ON switch, P5-88.

            2)   Do the Repair Confirmation at the end of this task.

        (c)   If pin 5 of connector D11125 does not go to ground, then re-connect connector D11125 to the CVR AUTO/ON switch and continue.

    (3)   Do this check for 28 VDC at the CVR switch latching relay, R780:

        (a)   Remove the CVR switch latching relay, R780.

            NOTE: R780 is in the J22 junction box.

        (b)   Do a check for 28 VDC between pin X1 of connector D11131 for the relay, R780 and structure ground.

        (c)   If there is not 28 VDC at pin X1 of connector D11131, then do these steps:

            1)   Repair the wiring between these pins of connector D11131 for the relay, R780 and load terminal of the VOICE RCDR RELAY circuit breaker, C1537:

Relay, R780	CB, C1537
D11131	C1537
pin X1	pin Load Terminal

            2)   Re-connect connector D11125 to the CVR AUTO/ON switch, P5-88.

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   3) Do the Repair Confirmation at the end of this task.

  (d) If there is 28 VDC at pin X1 of D11131, then continue.

 (4) Do this check of the wiring between the CVR switch latching relay, R780 and the engine 2 running relay, R738:

  (a) Make sure that pin X2 of D11131 goes to ground.

  (b) If pin X2 of D11131 does not go to ground, then do these steps:

   1) Replace the engine 2 running relay, R738.

   2) Re-install the CVR latching relay, R780.

   3) Do the Repair Confirmation at the end of this task.

   4) If the Repair Confirmation is not satisfactory, then do these steps:

    a) Remove the engine 2 running relay, R738.

    b) Remove the CVR switch latching relay, R780.

    c) Do a wiring check between these pins of connector D12540 for relay R738 and connector D11131 for relay R780:

     D12540   **D11131**
     pin C3 . . . . pin X2

    d) Repair the problem in the wiring.

    e) Re-install the engine 2 running relay, R738.

    f) Re-install the CVR switch latching relay, R780.

    g) Do the Repair Confirmation at the end of this task.

  (c) If pin X2 of D11131 goes to ground, then continue.

 (5) Do this check of the wiring between the CVR switch latching relay, R780 and the engine 1 running relay, R737:

  (a) Make sure that pin A2 of D11131 goes to ground.

  (b) If pin A2 of D11131 does not go to ground, then do these steps:

   1) Replace the engine 1 running relay, R737.

   2) Re-install the CVR latching relay, R780.

   3) Do the Repair Confirmation at the end of this task.

   4) If the Repair Confirmation is not satisfactory, then do these steps:

    a) Remove the engine 1 running relay, R737

    b) Remove the CVR switch latching relay, R780.

    c) Do a wiring check between these pins of connector D12538 for relay R737 and connector D11131 for relay R780:

     D12538   **D11131**
     pin C3 . . . . pin A2

    d) Repair the problem in the wiring.

    e) Re-install the engine 1 running relay, R737.

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    f) Re-install the CVR switch latching relay, R780.

    g) Do the Repair Confirmation at the end of this task.

   5) If pin A2 of D11131 goes to ground, then continue.

  (6) Do this check of the CVR switch latching relay, R780:

   (a) Do a check for 28 VDC between pin A1 of D11131 and structure ground.

   (b) If there is not 28 VDC at pin A1 of D11131, then do these steps:

    1) Disconnect connector D11125 from the CVR AUTO/ON switch, P5-88.

    2) Do a check of the wiring between these pins of connector D11125 and connector D11131:

     D11125   **D11131**
     pin 5 . . . . pin A1

    3) Repair the wiring.

    4) Re-install the CVR switch latching relay, R780.

    5) Re-connect connector D11125 to the CVR AUTO/ON switch, P5-88.

    6) Do the Repair Confirmation at the end of this task.

   (c) If there is 28 VDC at pin A1 of D11131 then do these steps:

    1) Install a new CVR switch latching relay, R780.

    2) Do the Repair Confirmation at the end of this task.

L. Repair Confirmation

 (1) Do this check of the CVR operation:

  (a) Connect the headphone, STD-1390 to the HEADPHONE/HEADSET jack on the voice recorder control panel.

  (b) Set the CVR AUTO/ON switch (P5 overhead panel) to the ON position.

   NOTE: Both engines must be off for at least 5 minutes.

   1) Make sure that the CVR AUTO/ON switch stays in the ON position.

  (c) Set the left engine start lever to the IDLE position.

   1) Make sure that the right engine start lever is in the OFF position.

   2) Wait approximately 5 minutes.

    NOTE: The CDS will energize the engine running relay 5 minutes after you put the start lever in the IDLE position.

   3) Make sure that the CVR AUTO/ON switch moves from the ON position to the AUTO position.

  (d) Push the TEST switch on the CVR control panel (P5 panel) for one half second and release it.

   1) Make sure that you hear a test tone in the headphone.

   2) Make sure that the light on the CVR control panel comes on once.

  (e) Set the left engine start lever to the OFF position.

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    1)   Wait approximately 5 minutes.

        <u>NOTE</u>: The voice recorder will continue to operate for 5 minutes after both engines have stopped running, or engine running simulation has been discontinued.

  (f)   Set the CVR AUTO/ON switch (P5 overhead panel) to the ON position.

    <u>NOTE</u>: Both engines must be off for at least 5 minutes.

    1)   Make sure that the CVR AUTO/ON switch stays in the ON position.

  (g)   Set the right engine start lever to the IDLE position.

    1)   Wait approximately 5 minutes.

        <u>NOTE</u>: The CDS will energize the engine running relay 5 minutes after you put the start lever in the IDLE position.

    2)   Make sure that the CVR AUTO/ON switch moves from the ON position to the AUTO position.

  (h)   Push the TEST switch on the CVR control panel (P5 panel) for one half second and release it.

    1)   Make sure that you hear a test tone in the headphone.

    2)   Make sure that the light on the CVR control panel comes on once.

  (i)   Set the right engine start lever to the OFF position.

  (j)   Make sure that the left and right engine start levers are each set to the off position.

    1)   Wait approximately 5 minutes.

  (k)   Set the CVR AUTO/ON switch (P5 overhead panel) to the ON position.

    <u>NOTE</u>: Both engines must be off for at least 5 minutes.

    1)   Make sure that the CVR AUTO/ON switch stays in the ON position.

  (l)   Push the TEST switch on the CVR control panel (P5 panel) for one half second and release it.

    1)   Make sure that you hear a test tone in the headphone.

    2)   Make sure that the light on the CVR control panel comes on once.

  (m)   Set the CVR AUTO/ON switch back to the AUTO position.

  (n)   If the CVR operates correctly, then you corrected the fault.

——————— **END OF TASK** ———————

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

806. RIPS Maintenance Status Check Failed - Fault Isolation

  A. Description

  (1)   Use this task when the results of the RIPS Maintenance Status Check at the RIPS Maintenance Port are not satisfactory.

    <u>NOTE</u>: The RIPS Maintenance Status Check in the Aircraft Maintenance Manual (AMM) is a part of the RIPS System Test task. It is also a part of the RIPS Maintenance Discrete Check task.

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B. Possible Causes

(1)   RIPS Battery

(2)   RIPS Unit, M2862

C. Related Data

(1)   SSM 23-71-11

(2)   WDM 23-71-01

D. Initial Evaluation

(1)   Use a digital/analog multimeter, COM-1793 and make sure it is set to the DIODE position.

(2)   Do a check for continuity at the RIPS Maintenance Port connector D10101 between pin 1 and pin 6 (WDM 23-71-01).

SHZ 821-825, 827-847, 850-852, 855-859, 881-899; AIRPLANES WITH RIPS PART NUMBER 100-3020-400

(a)   If you see a value between 400 to 700 millivolts (ground state), do the No Fault Status Check Within Limits Fault Isolation Procedure.

(b)   If you see a value that is not between 400 to 700 millivolts (ground state), do the No Fault Status Check Not Within Limits Fault Isolation Procedure.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899; AIRPLANES WITH RIPS PART NUMBER 100-3010-401

(c)   If a continuity check between pin 1 and pin 6 does not read a value less than 700 millivolts (ground condition), then do the Fault Isolation Procedure below for No Fault Status Check Within Limits.

(d)   If continuity check between pin 1 and pin 6 reads a value less than 700 millivolts (ground state), then do the Fault Isolation Procedure below for No Fault Status Check Not Within Limits.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

E. No Fault Status Check Within Limits - Fault Isolation Procedure

(1)   Replace the RIPS Battery. This is the task: Recorder Independent Power Supply (RIPS) Battery - Replacement, AMM TASK 23-71-22-960-801.

(a)   Supply electrical power. This is the task: Supply Electrical Power, AMM TASK 24-22-00-860-811.

　　1)   Wait for 15 (fifteen) minutes after you supply electrical power to the airplane before you do the tests that follow.

　　　　NOTE: If you do not wait fifteen minutes, it is possible the value you see will not be satisfactory because the battery is at a low state of charge.

(b)   Use a digital/analog multimeter, COM-1793 and set it to the DIODE position.

(c)   Do a check for continuity at connector D10101 between pin 1 and pin 10 (WDM 23-71-01).

　　1)   If you see a value of "OL" (out-of-limit), then you corrected the problem.

　　2)   Install the protective dust-cap cover on the Maintenance Port (Connector D10101).

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    F. **No Fault Status Check Not Within Limits - Fault Isolation Procedure**

        (1)   Replace the RIPS Unit, M2862. These are the tasks:

            • Recorder Independent Power Supply - Removal, AMM TASK 23-71-22-000-801

            • Recorder Independent Power Supply - Installation, AMM TASK 23-71-22-400-801

          (a)   Supply electrical power. This is the task: Supply Electrical Power, AMM TASK 24-22-00-860-811.

              1)   Wait for 15 (fifteen) minutes after you supply electrical power to the airplane before you do the tests that follow.

                    NOTE: If you do not wait fifteen minutes, it is possible the value you see will not be satisfactory because the battery is at a low state of charge.

          (b)   Use a digital/analog multimeter, COM-1793 and set it to the DIODE position.

          (c)   Do a check for continuity at connector D10101 between pin 1 and pin 10 (WDM 23-71-01).

              1)   If you see a value of "OL" (out-of-limit), then you corrected the problem.

              2)   Install the protective dust-cap cover on the Maintenance Port (Connector D10101).

—————— **END OF TASK** ——————

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807. **No Surveillance Video For One Camera - Fault Isolation**

A. Description

(1) This task is for these Observed Faults:

    (a) There is no Surveillance Video for Camera 1.

    (b) There is no Surveillance Video for Camera 2.

    (c) There is no Surveillance Video for Camera 3.

B. Possible Causes

(1) Video Camera:

    • Camera 1, M3002, or

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    • Camera 2, M3003, or

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

    • Camera 2, M3026, or

SHZ 807-825, 827-847, 850-852, 855-859, 881-899

    • Camera 3, M3004

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(2) Camera Control Unit (CCU):

    • CCU 1, M3005

    • CCU 2, M3007

    • CCU 3, M3009

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

(3) Camera Control Unit (CCU):

    • CCU 1, M3005

    • CCU 2, M3030

    • CCU 3, M3009

SHZ 807-825, 827-847, 850-852, 855-859, 881-899

(4) Video Switch:

    • Video Switch (VS), M3001 or

    • Video Switch (VS), M3029

(5) Wiring

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-12

Row	Col	Number	Name
B	1	C01641	SURVEILLANCE CAMERA

D. Related Data

(1) WDM 23-70-11

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E. Initial Evaluation

(1)   Do this task: Flight Deck Entry Video Surveillance System - System Test, AMM TASK 23-75-00-730-804.

(a)   If the MFD shows Surveillance Video for all three cameras, then there was an intermittent fault.

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(b)   If the MFD does not show Surveillance Video for one camera only, and the airplane has VS P/N M3001 installed, then do the "Fault Isolation Procedure - Airplanes with VS, M3001" below.

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(c)   If the MFD does not show Surveillance Video for one camera only, and the airplane has VS P/N M3029 installed, then do the "Fault Isolation Procedure - Airplanes with VS, M3029" below.

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F. Fault Isolation Procedure - Airplanes with VS, M3001

(1)   Examine the Camera Lens.

(a)   Make sure that the lens is not covered, or blocked by debris.

(2)   Replace the applicable CAM 1 (2, 3), M3002 (M3003, M3004). These are the tasks:

• Video Camera - Removal, AMM TASK 23-75-02-000-804

• Video Camera - Installation, AMM TASK 23-75-02-400-804

(a)   Do the Repair Confirmation at the end of this task.

(3)   Make sure that there is Input Power from the Video Switch to the applicable Camera Control Unit (CCU) 1 (2, 3), M3005 (M3007, M3009) as follows:

(a)   Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-12

Row	Col	Number	Name
B	1	C01641	SURVEILLANCE CAMERA

(b)   Disconnect the applicable CCU 1 (2, 3) connector D12491 (D12493, D12495) (WDM 23-70-11).

(c)   Close this circuit breaker:

F/O Electrical System Panel, P6-12

Row	Col	Number	Name
B	1	C01641	SURVEILLANCE CAMERA

(d)   Do a voltage check at the applicable CCU 1 (2, 3) connector as follows (WDM 23-70-11):

CAMERA 1

CCU 1 CONNECTOR D12491	CCU 1 CONNECTOR D12491	VOLTAGE
pin 1	pin 3	24V DC

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CAMERA 2

CCU 2 CONNECTOR D12493		CCU 2 CONNECTOR D12493	VOLTAGE
pin 1	. . . .	pin 3	24V DC

CAMERA 3

CCU 3 CONNECTOR D12495		CCU 3 CONNECTOR D12495	VOLTAGE
pin 1	. . . .	pin 3	24V DC

1) If the voltage check is as specified above, then replace the applicable CCU 1 (2, 3), M3005 (M3007, M3009). These are the tasks:

   • Camera Control Unit - Removal, AMM TASK 23-75-11-000-801

   • Camera Control Unit - Installation, AMM TASK 23-75-11-400-801

   a) Do the Repair Confirmation at the end of this task.

2) If the voltage check is not as specified above, then replace the VS, M3001. These are the tasks:

   • Video Switch - Removal, AMM TASK 23-75-07-000-801

   • Video Switch - Installation, AMM TASK 23-75-07-400-801

   a) Do the Repair Confirmation at the end of this task.

(4) Do this wiring check (WDM 23-70-11):

(a) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-12

Row	Col	Number	Name
B	1	C01641	SURVEILLANCE CAMERA

(b) Disconnect the applicable CCU 1 (2, 3) connector D12491 (D12493, D12495) .

(c) Disconnect connector DA12489 from the VS, M3001.

(d) Examine the wiring between the applicable CCU 1 (2, 3) and the VS, M3001 as follows:

CAMERA 1

CCU 1 D12491		VS DA12489
pin 1	. . . .	pin D3
pin 2	. . . .	pin D4
pin 4	. . . .	pin A1
pin 5	. . . .	pin C1

CCU 1 D12491		
pin 3	. . . .	GD11100-ST

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CAMERA 2

CCU 2	**VS**
D12493	**DA12489**
pin 1	pin D5
pin 2	pin D6
pin 4	pin A2
pin 5	pin C2

CCU 2
D12493

pin 3 . . . . GD3734-ST

CAMERA 3

CCU 3	**VS**
D12495	**DA12489**
pin 1	pin D1
pin 2	pin D2
pin 4	pin A3
pin 5	pin C3

CCU 3
D12495

pin 3 . . . . GD3924-ST

1) If you find a problem with the wiring do these steps:

    a) Repair the wiring.

    b) Reconnect the applicable CCU 1 (2, 3) connector D12491 (D12493, D12495).

    c) Reconnect connector D12489 to the VS.

    d) Do the Repair Confirmation at the end of this task.

SHZ 821-825, 827-847, 850-852, 855-859, 881-899

G. Fault Isolation Procedure - Airplanes with VS, M3029

(1) Examine the Camera Lens.

    (a) Make sure that the lens is not covered, or blocked by debris.

(2) Replace the CAM 1 (2, 3), M3002 (M3026, M3004). These are the tasks:

    • Video Camera - Removal, AMM TASK 23-75-02-000-804

    • Video Camera - Installation, AMM TASK 23-75-02-400-804

    (a) Do the Repair Confirmation at the end of this task.

(3) Make sure that there is Input Power from the Video Switch to the applicable Camera Control Unit (CCU) 1 (2, 3), M3005 (M3030, M3009) as follows:

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

      (a)   Open this circuit breaker and install safety tag:

          F/O Electrical System Panel, P6-12

Row	Col	Number	Name
B	1	C01641	SURVEILLANCE CAMERA

      (b)   Disconnect the applicable CCU 1 (2, 3) connector D12491 (D12947, D12495) (WDM 23-70-11).

      (c)   Close this circuit breaker:

          F/O Electrical System Panel, P6-12

Row	Col	Number	Name
B	1	C01641	SURVEILLANCE CAMERA

      (d)   Do a voltage check at the applicable CCU 1 (2, 3) connector as follows (WDM 23-70-11):

                    CAMERA 1

CCU 1 CONNECTOR D12491	CCU 1 CONNECTOR D12491	VOLTAGE
pin 1	pin 3	24V DC

                    CAMERA 2

CCU 2 CONNECTOR D12947	CCU 2 CONNECTOR D12947	VOLTAGE
pin 1	pin 3	24V DC

                    CAMERA 3

CCU 3 CONNECTOR D12495	CCU 3 CONNECTOR D12495	VOLTAGE
pin 1	pin 3	24V DC

        1)   If the voltage check is as specified above, then replace the applicable CCU 1 (2, 3), M3005 (M3030, M3009). These are the tasks:

          • Camera Control Unit - Removal, AMM TASK 23-75-11-000-801

          • Camera Control Unit - Installation, AMM TASK 23-75-11-400-801

          a)   Do the Repair Confirmation at the end of this task.

        2)   If the voltage check is not as specified above, then replace the VS, M3029. These are the tasks:

          • Video Switch - Removal, AMM TASK 23-75-07-000-801

          • Video Switch - Installation, AMM TASK 23-75-07-400-801

          a)   Do the Repair Confirmation at the end of this task.

    (4)   Do this wiring check (WDM 23-70-11):

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SHZ 821-825, 827-847, 850-852, 855-859, 881-899 (Continued)

(a)   Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-12

Row	Col	Number	Name
B	1	C01641	SURVEILLANCE CAMERA

(b)   Disconnect the applicable CCU 1 (2, 3) connector D12491 (D12947, D12495) .

(c)   Disconnect connector DA12949 from the Video Interface Unit (VIU), M3029.

(d)   Examine the wiring between the applicable CCU 1 (2, 3) and the VS, M3029 as follows:

CAMERA 1

CCU 1	VS
D12491	**DA12949**
pin 1	pin D3
pin 2	pin D4
pin 4	pin A1
pin 5	pin C1

CCU 1
D12491
pin 3 . . . .   GD11100-ST

CAMERA 2

CCU 2	VS
D12947	**DA12949**
pin 1	pin D5
pin 2	pin D6
pin 4	pin A2
pin 5	pin C2

CCU 2
D12947
pin 3 . . . .   GD3734-ST

CAMERA 3

CCU 3	VS
D12495	**DA12949**
pin 1	pin D1
pin 2	pin D2
pin 4	pin A3
pin 5	pin C3

CCU 3
D12495
pin 3 . . . .   GD3924-ST

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    1)   If you find a problem with the wiring do these steps:

        a)   Repair the wiring.

        b)   Reconnect the applicable CCU 1 (2, 3) connector D12491 (D12947, D12495).

        c)   Reconnect connector D12949 to the VS.

        d)   Do the Repair Confirmation at the end of this task.

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H.   Repair Confirmation

(1)   Do this task: Flight Deck Entry Video Surveillance System - System Test, AMM TASK 23-75-00-730-804.

    (a)   If the video shows correctly on the Common Display System (CDS) from all three cameras, then you corrected the problem.

    (b)   If the video does not show correctly on the CDS from all three cameras, then continue the Fault Isolation Procedure at the subsequent step.

——— **END OF TASK** ———

808. Distorted Surveillance Video for One Camera - Fault Isolation

A.   Description

(1)   This task is for these Observed Faults:

    (a)   The Surveillance Video shows, but the display is dark for one camera.

    (b)   Lines show on the Video Display for one camera.

    (c)   Surveillance Video is jittery or jumpy or the picture appears to roll.

    (d)   Other Surveillance Video Display problems for one camera.

B.   Possible Causes

(1)   Video Camera:

    • Camera 1, M3002, or

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    • Camera 2, M3003, or

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    • Camera 2, M3026, or

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    • Camera 3, M3004

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(2)   Camera Control Unit (CCU):

    • CCU 1, M3005, or

    • CCU 2, M3007, or

    • CCU 3, M3009

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    (3)   Camera Control Unit

- CCU 1, M3005, or
- CCU 2, M3030, or
- CCU 3, M3009

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    (4)   Video Switch:

- Video Switch (VS), M3001 or
- Video Switch (VS), M3029

    (5)   Wiring

C.   Circuit Breakers

    (1)   These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	12	C01373	DISPLAY CTR LWR

F/O Electrical System Panel, P6-12

Row	Col	Number	Name
B	1	C01641	SURVEILLANCE CAMERA

D.   Related Data

    (1)   WDM 23-70-11

    (2)   WDM 31-62-42

E.   Initial Evaluation

    (1)   Do this task: Flight Deck Entry Video Surveillance System - System Test, AMM TASK 23-75-00-730-804.

        (a)   If the MFD shows Surveillance Video correctly for all three cameras, then there was an intermittent fault.

            NOTE: Only the Lower-Center MFD can show Flight Deck Entry Video.

                  The Inboard Left, and Inboard Right MFD Units are connected to FDEVSS.

                  However to successfully show video, the optional video-capable MFDs are required.

        (b)   If Surveillance Video shows for all three cameras, but on one camera the video is dark, the display is jumpy, lines show or there are other display problems then do these steps:

          1)   Make a record of the Camera Control Panel (CP) position (R-C-L) with the problem.

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            NOTE: Position C on the Control Panel, M3000, is Camera 1, M3002 on the Wiring Diagram Manual (WDM).

                  Position L on the Control Panel is Camera 2, M3003.

                  Position R is Camera 3, M3004.

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> NOTE: Position C on the Control Panel, M3000, is Camera 1, M3002 on the WDM.
>
> Position L on the Control Panel is Camera 2, M3026.
>
> Position R is Camera 3, M3004.

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> NOTE: Only the Lower-Center MFD can show Flight Deck Entry Video.
>
> The Inboard Left, and Inboard Right MFD Units are connected to FDEVSS.
>
> However to successfully show video, the optional video-capable MFDs are required.

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(c)   If the Surveillance Video on one camera is dark, the display is jumpy, lines show or there are other display problems, and the airplane has VS P/N M3001 installed, then do the "Fault Isolation Procedure - Airplanes with VS, M3001" below.

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(d)   If the Surveillance Video on one camera is dark, the display is jumpy, lines show or there are other display problems, and the airplane has VS P/N M3029 installed, then do the "Fault Isolation Procedure - Airplanes with VS, M3029" below.

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F.   **Fault Isolation Procedure - Airplanes with VS, M3001**

(1)   Examine the Camera Lens.

(a)   Make sure that the lens is not covered, or blocked by debris.

(2)   Replace the applicable CAM 1 (2, 3), M3002 (M3003, M3004). These are the tasks:

• Video Camera - Removal, AMM TASK 23-75-02-000-804

• Video Camera - Installation, AMM TASK 23-75-02-400-804

(a)   Do the Repair Confirmation at the end of this task.

(3)   Do this wiring check (WDM 23-70-11):

(a)   Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-12

Row	Col	Number	Name
B	1	C01641	SURVEILLANCE CAMERA

(b)   Disconnect the applicable CCU 1 (2, 3) connector D12491 (D12493, D12495).

(c)   Disconnect connector DA12489 from the VS, M3001.

(d)   Examine the wiring between the applicable CCU 1 (2, 3) and the VS, M3001 as follows:

CAMERA 1

CCU 1	VS
D12491	**DA12489**
pin 1	pin D3
pin 2	pin D4

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CCU 1
D12491
pin 3 . . . . GD11100-ST

CAMERA 2

CCU 2	**VS**
D12493	**DA12489**
pin 1	pin D5
pin 2	pin D6

CCU 2
D12493
pin 3 . . . . GD3734-ST

CAMERA 3

CCU 3	**VS**
D12495	**DA12489**
pin 1	pin D1
pin 2	pin D2

CCU 3
D12495
pin 3 . . . . GD3924-ST

    1)   If you find a problem with the wiring do these steps:

        a)   Repair the wiring.

        b)   Reconnect the applicable CCU 1 (2, 3) connector D12491 (D12493, D12495).

        c)   Reconnect connector D12489 to the VS.

        d)   Do the Repair Confirmation at the end of this task.

  (4)   Replace the Video Switch, M3001. These are the tasks:

      • Video Switch - Removal, AMM TASK 23-75-07-000-801

      • Video Switch - Installation, AMM TASK 23-75-07-400-801

  (a)   Do the Repair Confirmation at the end of this task.

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G.   **Fault Isolation Procedure - Airplanes with VS, M3029**

  (1)   Examine the Camera Lens.

    (a)   Make sure that the lens is not covered, or blocked by debris.

  (2)   Replace the CAM 1 (2, 3), M3002 (M3026, M3004). These are the tasks:

      • Video Camera - Removal, AMM TASK 23-75-02-000-804

      • Video Camera - Installation, AMM TASK 23-75-02-400-804

    (a)   Do the Repair Confirmation at the end of this task.

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(3)   Do this wiring check (WDM 23-70-11):

    (a)   Open this circuit breaker and install safety tag:

        F/O Electrical System Panel, P6-12

Row	Col	Number	Name
B	1	C01641	SURVEILLANCE CAMERA

    (b)   Disconnect the applicable CCU 1 (2, 3) connector D12491 (D12947, D12495) .

    (c)   Disconnect connector DA12949 from the VIU, M3029.

    (d)   Examine the wiring between the applicable CCU 1 (2, 3) and the VS, M3029 as follows:

CAMERA 1

CCU 1	**VS**
D12491	**DA12949**
pin 1	pin D3
pin 2	pin D4

CCU 1
D12491
pin 3 . . . . GD11100-ST

CAMERA 2

CCU 2	**VS**
D12947	**DA12949**
pin 1	pin D5
pin 2	pin D6

CCU 2
D12947
pin 3 . . . . GD3734-ST

CAMERA 3

CCU 3	**VS**
D12495	**DA12949**
pin 1	pin D1
pin 2	pin D2

CCU 3
D12495
pin 3 . . . . GD3924-ST

    1)   If you find a problem with the wiring do these steps:

        a)   Repair the wiring.

        b)   Reconnect the applicable CCU 1 (2, 3) connector D12491 (D12947, D12495).

        c)   Reconnect connector D12949 to the VS.

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      d)   Do the Repair Confirmation at the end of this task.

   (4)   Replace the Video Switch, M3029. These are the tasks:

      • Video Switch - Removal, AMM TASK 23-75-07-000-801

      • Video Switch - Installation, AMM TASK 23-75-07-400-801

     (a)   Do the Repair Confirmation at the end of this task.

SHZ 807-825, 827-847, 850-852, 855-859, 881-899

H.   **Repair Confirmation**

   (1)   Do this task: Flight Deck Entry Video Surveillance System - System Test, AMM TASK 23-75-00-730-804.

     (a)   If the video shows correctly on the CDS from all three cameras, then you corrected the problem.

     (b)   If the video does not show correctly on the CDS from all three cameras, then continue the Fault Isolation Procedure at the subsequent step.

——— **END OF TASK** ———

809.   **Surveillance Video Problems for All Cameras - Fault Isolation**

A.   **Description**

   (1)   This task is for this (these) Observed Fault(s):

     (a)   There is no video for all three Video Surveillance Cameras and/or the Lower Center Multi-function Display shows CAMERA FAIL.

B.   **Possible Causes**

   (1)   Video Switch:

      • Video Switch (VS), M3001 or

      • VS, M3029

   (2)   Camera CP, M3000

   (3)   Wiring

   (4)   Impedance Transformer:

      • Impedance Transformer, T3022 or

      • Impedance Transformer, T3029

     NOTE: The Transformer is located between the Lower Center Display Unit, N00190 and the Video Surveillance System (WDM 23-70-11, WDM 31-62-42).

C.   **Circuit Breakers**

   (1)   These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	12	C01373	DISPLAY CTR LWR

F/O Electrical System Panel, P6-11

Row	Col	Number	Name
A	8	C01627	CABIN UTIL RLY PWR

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F/O Electrical System Panel, P6-12

Row	Col	Number	Name
B	1	C01641	SURVEILLANCE CAMERA

D. Related Data

(1) WDM 23-70-11

(2) WDM 31-62-42

E. Initial Evaluation

(1) Do this task: Flight Deck Entry Video Surveillance System - System Test, AMM TASK 23-75-00-730-804.

    (a) If the Multi-Function Display (MFD) shows Surveillance Video for all three cameras correctly, then there was an intermittent fault.

    (b) If the MFD shows the message CAMERA FAIL, and the airplane has VS P/N M3001 installed, then do the "Fault Isolation Procedure - Airplanes with VS, M3001" below.

    (c) If the MFD shows the message CAMERA FAIL, and the airplane has VS P/N M3029 installed, then do the "Fault Isolation Procedure - Airplanes with VS, M3029" below.

SHZ 807-825, 827-847, 850-852, 855-859, 881-899; Airplanes with VS M3001

F. Fault Isolation Procedure - Airplanes with VS, M3001

(1) On the Electric Meters, Battery and Galley Power Module, P5-13, make sure that the In-Flight Entertainment (IFE)/PASS SEAT Switch is set to ON.

(2) Make sure that the VS has power as follows:

    (a) Open this circuit breaker and install safety tag:

        F/O Electrical System Panel, P6-12

Row	Col	Number	Name
B	1	C01641	SURVEILLANCE CAMERA

    (b) On the VS, M3001, disconnect connector DA12489 (WDM 23-70-11).

    (c) Close this circuit breaker:

        F/O Electrical System Panel, P6-12

Row	Col	Number	Name
B	1	C01641	SURVEILLANCE CAMERA

    (d) Do a check for 115V Alternating Current (AC) on connector DA12489 between pins A10 and B10 (WDM 23-70-11).

    (e) If you do not find 115V AC at the VS connector, then do the steps that follow:

        1) Examine and repair the wiring between the VS, M3001, and circuit breaker C01641 (WDM 23-70-11).

        2) Reconnect connector DA12489 to the VS.

        3) Do the Repair Confirmation at the end of this task.

    (f) If you find 115V AC at the VS connector, then continue.

(3) Replace the VS. These are the tasks:

    • Video Switch - Removal, AMM TASK 23-75-07-000-801

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• Video Switch - Installation, AMM TASK 23-75-07-400-801

(a) Do the Repair Confirmation at the end of this task.

(4) Replace the Impedance Transformer, T3022 (or T3029) for the Lower Center MFD (WDM 23-70-11, WDM 31-62-42).

(a) Do the Repair Confirmation at the end of this task.

(5) Do a continuity check of the Camera CP circuitry at the VS connector as follows (WDM 23-70-11):

(a) Disconnect connector DA12489 from the VS, M3001.

(b) Do a check to make sure that each position of the 3-position Rotary Switch, on the Camera CP, has continuity to the VS.

NOTE: You must set the Rotary Switch to the specified position to complete each of the three circuits.

CP CAM SEL-POS L

VS Connector DA12489	VS Connector DA12489	RESISTANCE
pin A7	pin B6 (RTN)	CONTINUITY

CP CAM SEL-POS C

VS Connector DA12489	VS Connector DA12489	RESISTANCE
pin A6	pin B6 (RTN)	CONTINUITY

CP CAM SEL-POS R

VS Connector DA12489	VS Connector DA12489	RESISTANCE
pin A8	pin B6 (RTN)	CONTINUITY

(c) Do a continuity check of the DSPL (Display) push-button on the Camera CP from the VS connector:

NOTE: To complete the circuit, you must push DSPL on the Camera CP. The position of the Rotary Switch does not affect this check.

CP DSPL SEL

VS Connector DA12489	VS Connector DA12489	RESISTANCE
pin A5	pin B5 (RTN)	CONTINUITY (with DSPL Pushed)

(d) If the continuity checks are not as specified above, then do these steps:

1) Replace the Camera CP. These are the tasks:

• Control Panel - Removal, AMM TASK 23-75-03-000-803

• Camera Control Panel - Installation, AMM TASK 23-75-03-400-803

a) Do the Repair Confirmation at the end of this task.

2) Do the continuity checks again.

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SHZ 807-825, 827-847, 850-852, 855-859, 881-899; Airplanes with VS M3001 (Continued)

    a)   If you still find a problem, then repair the wiring.

    b)   Reconnect connector D12489 to the VS.

    c)   Do the Repair Confirmation at the end of this task.

SHZ 807-825, 827-847, 850-852, 855-859, 881-899; Airplanes with VS M3029

G.   **Fault Isolation Procedure - Airplanes with VS, M3029**

(1)   On the Electric Meters, Battery and Galley Power Module, P5-13, make sure that the IFE/PASS SEAT Switch is set to ON.

(2)   Make sure that the VS has power as follows:

    (a)   Open this circuit breaker and install safety tag:

        F/O Electrical System Panel, P6-12

Row	Col	Number	Name
B	1	C01641	SURVEILLANCE CAMERA

    (b)   On the VS, M3029, disconnect connector DA12949 (WDM 23-70-11).

    (c)   Close this circuit breaker:

        F/O Electrical System Panel, P6-12

Row	Col	Number	Name
B	1	C01641	SURVEILLANCE CAMERA

    (d)   Do a check for 115V AC on connector DA12949 between pins A10 and B10 (WDM 23-70-11).

    (e)   If you do not find 115V AC at the VS connector, then do the steps that follow:

        1)   Examine and repair the wiring between the VS, M3029, and circuit breaker C01641 (WDM 23-70-11).

        2)   Reconnect connector DA12949 to the VS.

        3)   Do the Repair Confirmation at the end of this task.

    (f)   If you find 115V AC at the VS connector, then continue.

(3)   Replace the VS. These are the tasks:

    • Video Switch - Removal, AMM TASK 23-75-07-000-801

    • Video Switch - Installation, AMM TASK 23-75-07-400-801

    (a)   Do the Repair Confirmation at the end of this task.

(4)   Replace the Impedance Transformer, T3022 (or T3029 as applicable) for the Lower Center MFD (WDM 23-70-11, WDM 31-62-42).

    (a)   Do the Repair Confirmation at the end of this task.

(5)   Do a continuity check of the Camera CP circuitry at the VS connector as follows (WDM 23-70-11):

    (a)   Disconnect connector DA12949 from the VS, M3029.

    (b)   Do a check to make sure that each position of the 3-position Rotary Switch, on the Camera CP, has continuity to the VS.

        NOTE: You must set the Rotary Switch to the specified position to complete each of the three circuits.

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CP CAM SEL-POS L

VS Connector DA12949	VS Connector DA12949	RESISTANCE
A7	B6 (RTN)	CONTINUITY

CP CAM SEL-POS C

VS Connector DA12949	VS Connector DA12949	RESISTANCE
A6	B6 (RTN)	CONTINUITY

CP CAM SEL-POS R

VS Connector DA12949	VS Connector DA12949	RESISTANCE
A8	B6 (RTN)	CONTINUITY

(c) Do a continuity check of the DSPL (Display) push-button on the Camera CP from the VS connector:

NOTE: To complete the circuit, you must push DSPL on the Camera CP. The position of the Rotary Switch does not affect this check.

CP DSPL SEL

VS Connector DA12949	VS Connector DA12949	RESISTANCE
A5	B5 (RTN)	CONTINUITY (with DSPL Pushed)

(d) If the continuity checks are not as specified above, then do these steps:

    1) Replace the Camera CP. These are the tasks:

       • Control Panel - Removal, AMM TASK 23-75-03-000-803

       • Camera Control Panel - Installation, AMM TASK 23-75-03-400-803

      a) Do the Repair Confirmation at the end of this task.

    2) Do the continuity checks again.

      a) If you still find a problem, then repair the wiring.

      b) Reconnect connector D12949 to the VS.

      c) Do the Repair Confirmation at the end of this task.

SHZ 807-825, 827-847, 850-852, 855-859, 881-899

H. Repair Confirmation

(1) Do this task: Flight Deck Entry Video Surveillance System - System Test, AMM TASK 23-75-00-730-804.

(a) If the MFD shows Surveillance Video for all three cameras correctly, then you corrected the problem.

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(b) If the MFD shows the message CAMERA FAIL, then continue the Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

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801. Outlet Unit Status LED Problems - Fault Isolation

    A.   General

        (1)   Use this task when the PC Power System Outlet Unit (OU) STATUS LED is Red in color or does not come ON.

            (a)   If the OU STATUS LED is Green in color, this indicates normal OU operation. Power is available and the outlet is enabled.

            (b)   If the OU STATUS LED is Red in color, or does not come ON, this indicates that there is no power available or there is a problem in the OU or ISPS.

                1)   If power is not available because the system has reached the specified Maximum Power-use Limit, the new user must wait for another user to disconnect. At that time, the STATUS LED will change to Green in color. This is also normal operation.

    B.   Initial Evaluation

        (1)   Make sure that the Power Input Cable is securely connected to the OU.

            (a)   At the FWD Attendant Control Panel (ACP), access the LCD Touchscreen Passenger Services Menu and cycle the PC Power soft button Switch to test the system again.

            (b)   If the LED is Green in color, there was an intermittent fault.

            (c)   If the LED does not come ON or is Red in color, do the Fault Isolation Procedure below.

    C.   Fault Isolation Procedure

        (1)   If the OU Status LED does not come ON or is Red in color, do the steps that follow:

            (a)   Examine all OU Status LEDs in the same seat group.

            (b)   If only one OU Status LED in the seat group does not come ON or is Red in color, then do the steps that follow:

                1)   Replace the applicable OU. These are the tasks:

                    • Outlet Unit Removal, AMM TASK 23-81-04-000-801

                    • Outlet Unit Installation, AMM TASK 23-81-04-400-801

                2)   If the OU Status LED changes to Green in color, then you corrected the problem.

                3)   If the problem continues, examine the wiring harness between the ISPS and the OU.

                    a)   If you find a problem, repair or replace the applicable harness.

                4)   If the OU Status LED changes to green in color, then you corrected the fault.

            (c)   If all the OU Status LEDs in the same seat group do not come ON or are Red in color, then do the steps that follow:

                1)   Replace the ISPS for the seat group. These are the tasks:

                    • In-Seat Power Supply - Removal, AMM TASK 23-81-05-000-801

                    • In-Seat Power Supply - Installation, AMM TASK 23-81-05-400-801

                2)   If the OU Status LEDs change to Green in color, then you corrected the problem.

            (d)   Examine the OU LEDs in other seat groups.

            (e)   If the OU Status LEDs in other seat groups do not come ON or are Red in color, then do the steps that follow:

                1)   Replace the MCU. These are the tasks:

                    • Master Control Unit Removal, AMM TASK 23-81-01-000-801

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- Master Control Unit Installation, AMM TASK 23-81-01-400-801

2) If the OU Status LEDs change to Green in color, then you corrected the problem.

———— **END OF TASK** ————

803. MCU Status LED Problems - Fault Isolation

A. General

(1) Use this task when the PC power system does not operate correctly or when one or more of the status LEDs on the MCU are not green.

B. Initial Evaluation

SHZ 827-847, 850-852, 855-859, 881-887

(1) Apply electrical power to the PC Power system at the forward attendant control panel and look at the status LEDs on the MCU.

    (a) If all the status LEDs on the MCU are green, then there was an intermittent fault.

    (b) If the status LED(s) is amber, then do the fault isolation procedure below for the ISPS Fault Indication.

    (c) If the status LED(s) is red, then do the fault isolation procedure below for Circuit Breaker Trip Fault Indication.

SHZ 888-899

(2) Apply electrical power to the PC Power system at the forward attendant control panel and look at the status LEDs on the MCU.

    (a) If all the status LEDs on the MCU are green, then there was an intermittent fault.

    (b) If the INPUT POWER LED(s) is not green, then do the fault isolation procedure below for MCU Input Power Fault Indication.

    (c) If the BITE LED is not green, then do the fault isolation procedure below for MCU BITE Fault Indication.

    (d) If the GFI LED(s) is not green, then do the fault isolation procedure below for MCU GFI Fault Indication.

    (e) If the OUTPUT POWER LED(s) is not green, then do the fault isolation procedure below for MCU Output Power Fault Indication.

C. MCU Input Power Fault Indication - Fault Isolation Procedure

(1) For an MCU-1 problem, do these steps:

    (a) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	2	C01605	PC POWER CONTROL

F/O Electrical System Panel, P6-12

Row	Col	Number	Name
A	5	C01602	PC POWER 1
A	8	C01603	PC POWER 2

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    (b)   Disconnect the input power connector from the MCU-1, M02700.

          NOTE: Refer to the Wiring Diagram Manual (WDM) for the correct connector number (WDM 25-25-31).

    (c)   Close these circuit breakers:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	2	C01605	PC POWER CONTROL

F/O Electrical System Panel, P6-12

Row	Col	Number	Name
A	5	C01602	PC POWER 1
A	8	C01603	PC POWER 2

    (d)   Put the PC Power soft button on the LCD Touchscreen Passenger Services menu to ON.

    (e)   Examine the wiring that follows at the MCU input power connector for correct voltage and continuity to ground (WDM 25-25-31):

          NOTE: Refer to the WDM for the correct connector number.

CONNECTOR D14272	EXPECTED RESULTS
pin A	115VAC
pin B	115VAC
pin C	115VAC
pin D	CONTINUITY
pin E	CONTINUITY

    (f)   If you find 115VAC at pins A, B and C and pins D and E read continuity to ground, then replace the MCU. These are the tasks:

        • Master Control Unit Removal, AMM TASK 23-81-01-000-801

        • Master Control Unit Installation, AMM TASK 23-81-01-400-801

      1)   If all of the status LEDs on the MCU are green and power is available at all OUs, then you corrected the fault.

    (g)   If pin D or pin E do not read continuity to ground, repair the wiring.

    (h)   If the problem continues, examine and repair the wiring between circuit breaker 6A8, PC POWER, at the P6 power distribution panel and the MCU power input connector. (WDM 25-25-31)

    (i)   Reconnect the connector to J8 at MCU 1.

      1)   If the green status LED on the MCU is on, the red status LED on the MCU is not on, all ACOU status LEDS are green and power is available at all ACOUs, then you corrected the fault.

D.   MCU BITE Fault Indication - Fault Isolation Procedure

    (1)   Do the BITE Fault Isolation procedure as follows:

    (a)   If the BITE LED is amber, wait for 5 minutes.

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    1)   Then remove and supply power to the system by cycling the PC Power soft button on the LCD Touchscreen Passenger Services menu at the forward attendant control panel.

    2)   If all the status LEDs on the MCU are green and power is available at all the OUs, then you corrected the fault.

    3)   If the problem continues, replace the MCU. These are the tasks:

    Master Control Unit Removal, AMM TASK 23-81-01-000-801,

    Master Control Unit Installation, AMM TASK 23-81-01-400-801.

(b)   If the BITE LED is red, replace the MCU. These are the tasks:

    Master Control Unit Removal, AMM TASK 23-81-01-000-801,

    Master Control Unit Installation, AMM TASK 23-81-01-400-801.

    1)   If all the status LEDs on the MCU are green and power is available at all the OUs, then you corrected the fault.

  E.   **MCU GFI Fault Indication - Fault Isolation Procedure**

(1)   Do the GFI Fault Isolation procedure as follows:

(a)   If the GFI LED is amber, the GFI Trip limit has been exceeded on the corresponding column.

    1)   Remove and apply power to the system by cycling the PC Power soft button on the LCD Touchscreen Passenger Services menu at the forward attendant control panel.

    2)   If the status LEDs on the MCU are green and power is available at all the OUs, then it was an intermittent fault.

    3)   If the GFI LED is still amber, then do the steps that follow:

    a)   Disconnect the corresponding column in half by disconnecting the ISPS in the middle of the column, (WDM 25-25-31).

    b)   Remove and apply power to the system by cycling the PC Power soft button on the LCD Touchscreen Passenger Services menu at the forward attendant control panel..

    c)   If the GFI LED on the MCU is green, then the fault is located in the disconnected half of the column.

    d)   If the GFI LED on the MCU is amber, then the fault is located in the connected half of the column.

    e)   Reconnect the column and disconnect the ISPS in the middle of the part of the column with the fault.

    f)   Do the steps above again until you identify the unit with the fault.

    g)   Examine and repair the wiring that connects to the unit with the fault, (WDM 25-25-31).

    h)   Remove and apply power to the system by cycling the PC Power soft button on the LCD Touchscreen Passenger Services menu at the forward attendant control panel..

    i)   If the problem continues, replace the ISPS with the fault. These are the tasks:

    In-Seat Power Supply - Removal, AMM TASK 23-81-05-000-801,

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In-Seat Power Supply - Installation, AMM TASK 23-81-05-400-801.

j)   Remove and apply power to the system by cycling the PC Power soft button on the LCD Touchscreen Passenger Services menu at the forward attendant control panel..

k)   If the corresponding GFI LED on the MCU is green, then you corrected the fault.

(b)   If the GFI LED on the MCU is red, do a check of the status LEDs on the outlet units (OUs).

1)   If all the LEDs on the OUs are green, then replace the MCU. These are the tasks:

Master Control Unit Removal, AMM TASK 23-81-01-000-801,

Master Control Unit Installation, AMM TASK 23-81-01-400-801.

2)   If not all the status LEDs on the OUs are green, do this task: Outlet Unit Status LED Problems - Fault Isolation, 23-81 TASK 801.

3)   Remove and apply power to the system by cycling the PC Power soft button on the LCD Touchscreen Passenger Services menu at the forward attendant control panel.

4)   If the LEDs on the OUs and the MCU are green, then you corrected the fault.

F.   **Output Power Fault Indication - Fault Isolation Procedure**

(1)   Do the Output Power Fault Isolation procedure as follows:

(a)   Remove and apply power to the system by cycling the PC Power soft button on the LCD Touchscreen Passenger Services menu at the forward attendant control panel.

(b)   If all the Output Power status LEDs on the MCU are green, then it was an intermittent fault.

(c)   If the Output Power LED(s) is red, then replace the MCU. These are the tasks:

Master Control Unit Removal, AMM TASK 23-81-01-000-801,

Master Control Unit Installation, AMM TASK 23-81-01-400-801.

(d)   Remove and apply power to the system by cycling the PC Power soft button on the LCD Touchscreen Passenger Services menu at the forward attendant control panel.

(e)   If all the Output Power LEDs on the MCU are green, then you corrected the fault.

SHZ 827-847, 850-852, 855-859, 881-887

G.   **ISPS Fault Indication - Fault Isolation Procedure**

(1)   The status LED on the MCU is amber when there is a fault on the ISPS(s) in the corresponding column. Do the steps as follows:

(a)   Make sure that all the status LEDs on the outlet units (OUs) in the column are green, (WDM 25-25-31).

1)   If not all the status LEDs on the OUs of the corresponding are green, do this task: Outlet Unit Status LED Problems - Fault Isolation, 23-81 TASK 801.

2)   Remove and apply power to the system by cycling the PC Power soft button on the LCD Touchscreen Passenger Services menu at the forward attendant control panel.

3)   If all the status LEDs on the MCU are green, then you corrected the fault.

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H.   **Circuit Breaker Trip Fault Indication - Fault Isolation Procedure**

(1)   The LED(s) on the MCU is red when the circuit breaker trip limit has been exceeded on the corresponding column. Do the steps that follow:

(a)   Disconnect the corresponding column in half by disconnecting the ISPS in the middle of the column, (WDM 25-25-31).

1)   Remove and apply power to the system by cycling the PC Power soft button on the LCD Touchscreen Passenger Services menu at the forward attendant control panel.

2)   If the status LED on the MCU is green, then the fault is located in the disconnected half of the column.

3)   If the status LED on the MCU is red, then the fault is located in the connected half of the column.

4)   Reconnect the column.

(b)   Disconnect the ISPS in the middle of the part of the column with the fault and do the steps above again until you identify the unit with the fault.

(c)   Examine and repair the wiring that connects to the unit with the fault (WDM 25-25-31).

(d)   Remove and apply power to the system by cycling the PC Power soft button on the LCD Touchscreen Passenger Services menu at the forward attendant control panel.

(e)   If the status LED on the MCU is green, then you corrected the fault.

(f)   If the LED is still red, replace the ISPS with the fault. These are the tasks:

In-Seat Power Supply - Removal, AMM TASK 23-81-05-000-801,

In-Seat Power Supply - Installation, AMM TASK 23-81-05-400-801.

(g)   Remove and apply power to the system by cycling the PC Power soft button on the LCD Touchscreen Passenger Services menu at the forward attendant control panel.

(h)   If the corresponding status LED on the MCU is green, then you corrected the fault.

(i)   If the LED is red, then replace the MCU. These are the tasks:

Master Control Unit Removal, AMM TASK 23-81-01-000-801,

Master Control Unit Installation, AMM TASK 23-81-01-400-801.

(j)   Remove and apply power to the system by cycling the PC Power soft button on the LCD Touchscreen Passenger Services menu at the forward attendant control panel.

(k)   If the corresponding status LED on the MCU is green, then you corrected the fault.

——— END OF TASK ———

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801. **Flight Compartment Outlet Unit LED Problems - Fault Isolation**

    A. **Description**

        (1) The Outlet Unit (OU) status LED is red in color or does not come on.

           NOTE: Normal operation is when the OU status LED is green in color. This indicates power is available and the outlet is enabled. If the OU status LED is red in color, this indicates a fault with the OU or ISPS. If the OU status LED does not come on, this indicates that power is not available.

    B. **Possible Causes**

        (1) Outlet Unit

        (2) In-Seat Power Supply (ISPS)

        (3) Circuit Breaker

        (4) Wiring problem

    C. **Circuit Breakers**

        (1) This is the primary circuit breaker related to the fault:

           F/O Electrical System Panel, P6-12

Row	Col	Number	Name
A	3	C01643	FD - PC POWER

    D. **Related Data**

        (1) WDM 25-29-11

    E. **Initial Evaluation**

        (1) Make sure that power is applied to the Flight Compartment PC power system.

           (a) Test the system again by cycling the applicable circuit breaker.

           (b) Do this task on the applicable OU: Flight Compartment PC Power System - Operational Test, AMM TASK 23-82-00-710-801.

           (c) If the LED is green in color, there was an intermittent fault.

           (d) If the LED is red in color, do the fault isolation task below for "OU Status LED is Red in Color".

           (e) If the LED is not on, do the fault isolation task below for "OU Status LED is Not On".

    F. **OU Status LED is Red in Color - Fault Isolation Procedure**

        (1) If the OU status LED is red in color, do the steps that follow:

           (a) If only one OU status LED in the flight compartment is red in color, then do the steps that follow:

               1) Replace the applicable OU. These are the tasks:

                  • Outlet Unit Removal, AMM TASK 23-82-01-000-801

                  • Outlet Unit Installation, AMM TASK 23-82-01-400-801.

               2) If the OU status LED changes to green in color, then you corrected the fault.

               3) If the problem continues, examine the wiring between the ISPS and the OU.

                  a) If you find a problem, repair or replace the applicable wiring.

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    4) If the OU status LED changes to green in color, then you corrected the fault.

  (b) If all the OU status LEDs in the flight compartment are red in color, then do the steps that follow:

    1) Replace the ISPS. These are the tasks:
- In-Seat Power Supply Removal, AMM TASK 23-82-02-000-801
- In-Seat Power Supply Installation, AMM TASK 23-82-02-400-801.

    2) If the OU status LEDs change to green in color, then you corrected the fault.

G. OU Status LED is Not On - Fault Isolation Procedure

  (1) If the OU status LED is not on, do the steps that follow:

  (a) If only one OU status LED in the flight compartment is not on, then do the steps that follow:

    1) Replace the applicable OU. These are the tasks:
- Outlet Unit Removal, AMM TASK 23-82-01-000-801
- Outlet Unit Installation, AMM TASK 23-82-01-400-801.

    2) If the OU status LED changes to green in color, then you corrected the fault.

    3) If the problem continues, examine the wiring between the ISPS and the OU.

     a) If you find a problem, repair or replace the applicable wiring.

    4) If the OU status LED changes to green in color, then you corrected the fault.

  (b) If all the OU status LEDs in the flight compartment are not on, then do the steps that follow:

    1) Disconnect connector D14212 from connector J2 of the ISPS, M2566.

    2) Check for 115 VAC at pin 1 of connector D14212.

    3) If pin 1 of connector D14212 reads 115 VAC, replace the ISPS. These are the tasks:
- In-Seat Power Supply Removal, AMM TASK 23-82-02-000-801
- In-Seat Power Supply Installation, AMM TASK 23-82-02-400-801.

    4) If the OU status LEDs change to green in color, then you corrected the fault.

    5) If pin 1 of connector D14212 does not read 115 VAC, replace the circuit breaker.

    6) If the OU status LEDs change to green in color, then you corrected the fault.

    7) If the problem continues, check and repair the wiring as necessary.

    8) If the OU status LED changes to green in color, then you corrected the fault.

——— **END OF TASK** ———

SHZ 888-899

803. Flight Compartment Outlet Unit Has No Power Or USB Problem

  A. Description

  (1) The Outlet Unit (OU) in the flight compartment does not provide power to a Portable Electronic Device (PED) or all PC power outlets do not have power.

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B. Possible Causes

(1) CAPT (F/O) PC power outlet , M3249 (M3250)

(2) In-Seat Power Supply, M3248

(3) Circuit Breaker, C1643

(4) Wiring problem

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-12

Row	Col	Number	Name
A	3	C01643	FD - PC POWER

D. Related Data

(1) WDM 25-29-11

E. Initial Evaluation

(1) Do this task: Flight Compartment PC Power System - Operational Test, AMM TASK 23-82-00-710-801.

(a) If both OUs are operational, there was an intermittent fault.

(b) If one OU is operational, do the fault isolation task below for "One OU is Operational".

(c) If both OUs are not operational, do the fault isolation task below for "Both OUs are Not Operational".

F. One OU is Operational - Fault Isolation Procedure

(1) If the LED indication on the power outlet module does not operate in any condition, do this check of the voltage at the in-seat power supply:

NOTE: You must measure the outlet voltage to know if the power outlet module operates correctly.

(a) Disconnect connector D16740 from the in-seat power supply, M3248.

(b) Do a check for voltage between pin 1 of connector D16740 and ground (WDM 25-29-11). The correct voltage is 115 VAC.

(c) If the correct voltage is not present, then do this check of the voltage at the FD - PC POWER circuit breaker:

1) Get access to the FD - PC POWER circuit breaker, C1643.

2) Do a check for voltage between terminal =L of the circuit breaker and ground (WDM 25-29-11). The correct voltage is 115 VAC.

3) If the correct voltage is not present, then do these steps:

a) Re-connect connector D16740 to the in-seat power supply, M3248.

b) Replace the FD - PC POWER circuit breaker, C1643.

c) Do the Repair Confirmation at the end of this task.

4) If the correct voltage is present, then do this check of the wiring:

a) Do a wiring check as follows (WDM 25-29-11):

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ISPS	Circuit Breaker
D16740	**C1643**
pin 1	term = L

       b)   If you find a problem with the wiring, then do these steps:

         <1>   Repair the wiring.

         <2>   Re-connect connector D16740 to the in-seat power supply, M3248.

         <3>   Do the Repair Confirmation at the end of this task.

    (d)   If the correct voltage is present, then continue.

    (e)   Re-connect connector D16740 to the in-seat power supply, M3248.

  (2)   Do a check of the wiring between the in-seat power supply, M3248 and the applicable CAPT (F/O) PC power outlet , M3249 (M3250) (WDM 25-29-11).

    (a)   If you find a problem with the wiring, then do these steps:

      1)   Repair the wiring.

      2)   Do the Repair Confirmation at the end of this task.

  (3)   Replace the ISPS, M3248. These are the tasks:

    • In-Seat Power Supply Removal, AMM TASK 23-82-02-000-801

    • In-Seat Power Supply Installation, AMM TASK 23-82-02-400-801.

    (a)   Do the Repair Confirmation at the end of this task.

  (4)   Replace the applicable CAPT (F/O) PC power outlet , M3249 (M3250). These are the tasks:

    • Outlet Unit Removal, AMM TASK 23-82-01-000-801

    • Outlet Unit Installation, AMM TASK 23-82-01-400-801.

    (a)   Do the Repair Confirmation at the end of this task.

G.   Both OUs are Not Operational - Fault Isolation Procedure

  (1)   Do this check of the voltage at the in-seat power supply:

    (a)   Disconnect connector D16740 from the in-seat power supply, M3248.

    (b)   Do a check for voltage between pin 1 of connector D16740 and ground (WDM 25-29-11). The correct voltage is 115 VAC.

    (c)   If the correct voltage is not present, then do this check of the wiring:

      1)   Open this circuit breaker:

        F/O Electrical System Panel, P6-12

Row	Col	Number	Name
A	3	C01643	FD - PC POWER

      2)   Do a wiring check as follows (WDM 25-29-11):

ISPS	Circuit Breaker
D16740	**C1643**
pin 1	term = L

      3)   If you find a problem with the wiring, then do these steps:

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        a)   Repair the wiring.

        b)   Re-connect connector D16740 to the in-seat power supply, M3248.

        c)   Close this circuit breaker:

F/O Electrical System Panel, P6-12

Row	Col	Number	Name
A	3	C01643	FD - PC POWER

        d)   Do the Repair Confirmation at the end of this task.

     4)   If you do not find a problem with the wiring, then do these steps:

        a)   Re-connect connector D16740 to the in-seat power supply, M3248.

        b)   Replace the FD - PC POWER circuit breaker, C1643.

        c)   Do the Repair Confirmation at the end of this task.

    (d)   If the correct voltage is present, then continue.

  (2)   Replace the ISPS, M3248. These are the tasks:

    • In-Seat Power Supply Removal, AMM TASK 23-82-02-000-801

    • In-Seat Power Supply Installation, AMM TASK 23-82-02-400-801.

    (a)   Do the Repair Confirmation at the end of this task.

H.   Repair Confirmation

  (1)   Do this task: Flight Compartment PC Power System - Operational Test, AMM TASK 23-82-00-710-801.

    (a)   If both OUs are operational, then you corrected the fault.

    (b)   If one OU is not operational, continue the Fault Isolation Procedure at the subsequent step.

    (c)   If both OUs are not operational, continue the Fault Isolation Procedure at the subsequent step.

——— **END OF TASK** ———

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