SERVICE BULLETIN SUMMARY

AIRBUS
CUSTOMER SERVICES DIRECTORATE
1 Rond Point Maurice Bellonte
31707 BLAGNAC CEDEX
FRANCE

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This summary is for information only and is not approved for modification of the aircraft.

ATA SYSTEM: 21

TITLE: AIR CONDITIONING - AIR COOLING - INTRODUCE INSULATION COVER ON ALL OPTIONAL OZONE CONVERTERS

**CONF ALL

MODIFICATIONS

MODIFICATION CLASSIFICATION					
MAJOR	None				
MINOR	155206K17084				

NOTE:

As per EASA IR 21, a minor change is one that has no appreciable effect on the mass, balance, structural strength, reliability, operational characteristics affecting the airworthiness of the product. All other changes are major changes.

REASON/DESCRIPTION/OPERATIONAL CONSEQUENCES

Some operators have reported air leaks in the LH and RH wing areas during ground temperature conditions of over 45 degrees Celsius. High temperatures have been detected at the top of the air conditioning packs in the pack bay areas (Zone 191 and Zone 192). The cause of the air leaks is high temperatures in the air conditioning pack bay areas.

This Service Bulletin is issued to detail instructions for the addition of an insulation cover around the ozone converters, 100HM and 101HM, located in the LH and RH air conditioning pack bay areas.

Accomplishment of this Service Bulletin will ensure that the ozone converters are insulated from high external ground temperatures. Thus the risk of air leaks in the air conditioning pack bay areas due to high temperatures will decrease.

GENERAL EVALUATION

EVALUATION TABLE						
COMPLIANCE	RECOMMENDED (1)	CANCELS INSPECTION SB	NO			
POTENTIAL AD	NO	A/C OPERATION AFFECTED	NO			
RELIABILITY AFFECTED	NO	PAX COMFORT AFFECTED	NO			
COST SAVING	NO	ETOPS AFFECTED	NO			
STRUCTURAL LIFE EXTN	NO	VENDOR SB INVOLVED	NO			

NOTE (1): Service Bulletin recommended to be accomplished to prevent significant operational disruptions.

6 DATE: Nov 26/13 SERVICE BULLETIN No.: A320-21-1214

SERVICE BULLETIN SUMMARY

MATERIAL PRICE INFORMATION

MATERIAL PRICE INFORMATION TABLE						
MATERIAL SET	QTY PER A/C	PRICE PER A/C (USD)	MAIN PARTS			
Kit 211214D01R01	1	1,350.00	Insulation cover, Tie-wrap, Nut			

EFFECTIVITY

This Service Bulletin is applicable to this (these) operator(s):

03X 35T	09S 38W	11S 43S	15T 52T	17R 53X	17W 53Z	19R 56W	20Q 64S	26S 66X	27V 69X	29S 74T	31V 79W	31X 80X
85T	86W	86Z	89T	90R	91X	93V	95W	96V	98W	AAF	AAL	AAR
AAY	ABL	ABQ	ABY	ACA	ACI	ADH	ADR	AEE	AFL	AFR	AGC	AHY
AIJ	ALK	AMC	AMU	ANA	ANR	ANZ	AOJ	APJ	ARR	ART	ARU	AUA
AVA BGY	AWC BHP	AWW BJN	AXM BKP	AZI BRS	AZW C2C	BAL C8J	BAW C9G	BEC CBJ	BEL CCA	BER CCM	BGF CEB	BGH CEF
CES	CFG	CHB	CHH	CIB	CQH	CQN	CRK	CSA	CSC	CSN	CSZ	CTV
CUA	CYP	D2F	DAL	DCS	DKH	DLH	DNV	EAA	EDW	EIN	ETD	ETJ
EVA	EVE	EZD	EZY	F2I	FFT	FHY	FIN	FLI	FPY	FRN	G2X	GAF
GAP	GCR	GFA	GLG	GMI	GMR	GWI	GZQ	HAY	HDA	HKE	HKJ	HRM
HVN	I2L	IAC	IAW	IBS	IRA	IRM	ISR	ISS	IYE	JAS	JAT	JAV
JBU	JJP	JSA	JST	KAC	KCA	KFR	KGL	KHO	KHV	KKK	KMF	KNE
KZR	LAA	LAN	LAO	LBT	LBY	LFO	LJB	LLC	LLM	LLP	LMJ	LMU
LZB	MAC	MEA	MJF	MLD	MLM	MLR	MMA	MML	MON	MSR	NKS	NLV
NLY	NMA	NMB	NVD	NVR	NWS	OAW	OBS	OHY	ONE	ORF	OZW	PAL
PIC	QAF	QDA	QTR	RAM	RBA	RBG	RFJ	RJA	RJD	RKM	RNV	RYW
RZO	S2A	SAA	SAI	SBI	SDM	SFJ	SFW	SGG	SGL	SGX	SHU	SKU
SND	SNX	SOL	SRQ	SUD	SVA	SVR	SVW	SWM	SWR	TAE	TAI	TAK
TAM	TAP	TBZ	TCW	TCX	THY	TJS	TNA	TVS	UAE	UAL	UEA	UKN
ULG	UNA	USA	UTA	VAR	VIM	VIP	VJC	VKG	VLG	VLK	VNL	VOI
VRD	VRE	VVC	WGT	WHT	WOW	WRC	WTJ	WZZ	XLF			

CONCURRENT REQUIREMENTS

Accomplishment of this Service Bulletin requires the prior or simultaneous accomplishment of the following Service Bulletins as per effectivity specified in these Service Bulletins:

Service Bulletin No. A320-21-1031

DATE: Nov 26/13

6

A320-21-1119 A320-21-1183 A320-21-1205 A320-21-1212

NOTE: Service Bulletin No. A320-21-1031 (AIR CONDITIONING - AIR COOLING - INSTALL

OZONE CONVERTERS) which applies Modification No. 21215K1234

NOTE: Service Bulletin No. A320-21-1119 (AIR CONDITIONING - AIR COOLING - INSTALL

OZONE CONVERTER ENGELHARD PN 20499003 OR PN 20499004) which applies

SERVICE BULLETIN No.: A320-21-1214

Modification No. 21215K1234

NOTE: Service Bulletin No. A320-21-1183 (AIR CONDITIONING - AIR COOLING - INSTALL

SERVICE BULLETIN SUMMARY

OZONE CONVERTER ENGELHARD PN 20499005 OR PN 20499006) which applies Modification No. 21215K1234

NOTE: Service Bulletin No. A320-21-1205 (AIR CONDITIONING - AIR COOLING - INSTALL

VOC/OZONE CATALYTIC CONVERTER FOR A/C WITH A318-TYPE ECS) which

applies Modification No. 21215K1234

NOTE: Service Bulletin No. A320-21-1212 (AIR CONDITIONING - AIR COOLING - INSTALL

VOC/OZONE CATALYTIC CONVERTER FOR A/C WITHOUT A318-TYPE ECS) which

applies Modification No. 21215K1234

REFERENCES / REPERCUSSIONS

TFU	None
OEB	None
AOT	None
SIL	None
LINE MAINTENANCE AFFECTED	No
LIFE LIMIT	None
OTHER	None

NATURE OF THE WORK

AIRCRAFT	YES
EQUIPMENT	YES
HARD	NO
SOFT	NO
OBRM	NO

MANPOWER

Task 211214-831-848-001: Modification				
TOTAL MANHOURS 3.50				
ELAPSED TIME (HOURS) 3.50				

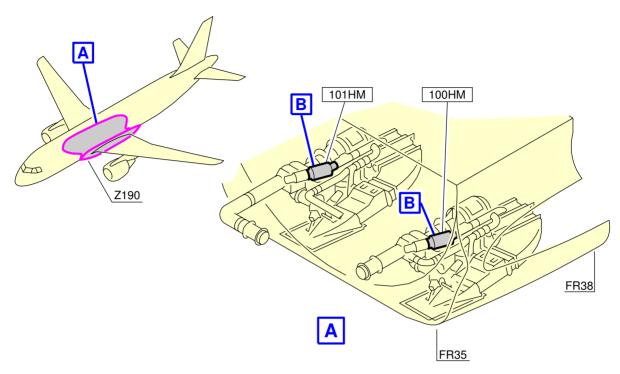
APPENDICES

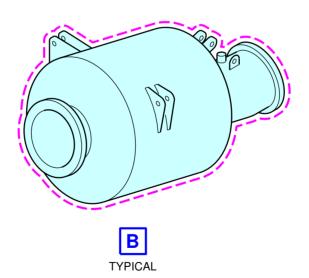
None

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SERVICE BULLETIN SUMMARY

**CONF ALL





NOTE:
AREA OF MODIFICATION.

N_SB_211214_6_SAAA_01_00

Figure A-GSAAA - Sheet 01

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ATA SYSTEM: 21

TITLE: AIR CONDITIONING - AIR COOLING - INTRODUCE INSULATION COVER ON ALL OPTIONAL OZONE CONVERTERS

MODIFICATION No.: 155206K17084

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1. PLANNING INFORMATION

**CONF ALL

A. <u>EFFECTIVITY</u>

(1) Models

318-111	318-112	318-121	318-122	319-111	319-112	319-113	319-114
319-115	319-131	319-132	319-133	320-211	320-212	320-214	320-216
320-231	320-232	320-233	321-131	321-211	321-212	321-231	321-232

(2) Effectivity by MSN

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0029 0052-0055 0059 0064-0068 0073 0076-0077 0081-0082 0084-0085 0099 0118 0121-0122 0125-0127 0141 0149-0150 0152-0154 0159-0160 0164 0168 0171 0174-0175 0179 0183 0189-0190 0192 0197 0203 0206 0208 0210 0213 0220 0229-0235 0242-0243 0248-0251 0253-0255 0262-0263 0265 0272-0273 0277 0279 0281-0282 0284 0289-0292 0294 0297-0299 0301-0302 0306-0309 0311 0314 0317-0319 0324 0329-0335 0339-0343 0347 0349-0350 0354-0355 0357-0362 0367 0371-0373 0376 0378 0380-0381 0384 0386-0389 0391-0393 0395 0399-0400 0403-0410 0414-0415 0417-0418 0420 0422 0424 0426-0430 0435-0436 0439-0442 0444 0447-0450 0452 0454-0457 0460-0466 0470-0472 0475-0476 0479-0480 0483 0485 0487 0489 0491 0496-0497 0500 0503-0504 0506 0508 0510 0512 0523 0525 0527-0528 0530 0539-0540 0542-0543 0546 0548 0550-0551 0556-0558 0561 0565 0568 0571-0573 0575 0579-0580 0582 0584 0587-0589 0591-0592 0597 0604 0613-0614 0620 0630-0631 0633-0634 0638-0640 0644-0645 0647 0649 0653 0655-0657 0659-0661 0663 0666-0668 0670-0672 0674-0676 0678 0680 0682-0684 0686-0688 0690-0691 0693 0695 0697 0702 0707 0711 0714-0716 0719 0721
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0724-0726 0728 0730 0732-0733 0735-0737 0739-0743 0747-0749 0751-0752
0756-0762 0764 0766 0769-0770 0772-0773 0775 0778-0781 0783-0788 0792 0795
0798-0805 0807-0808 0811 0813-0818 0820 0823-0826 0828-0832 0834-0836
0839-0847 0850-0851 0856-0858 0861-0863 0865-0868 0871 0873-0874 0877-0879
0882-0883 0885 0888-0890 0892-0893 0896 0898 0902-0904 0907-0908 0911-0916
0919 0922-0925 0927-0932 0934 0936 0941 0943-0944 0946 0948-0949 0952-0955
0961-0965 0972-0973 0976-0978 0980-0981 0983 0988-0991 0993 0996-0997 1001
1003-1008 1010-1011 1013 1015 1017 1019 1022 1024 1031 1033 1037-1038 1040
1042-1043 1046 1049-1053 1055-1056 1058 1060-1062 1064-1066 1069 1071-1073
1075 1077-1079 1083-1084 1088-1093 1095-1097 1103-1105 1107-1112 1114 1116
1121-1123 1126 1128-1131 1134-1136 1139-1141 1143 1146-1149 1152 1155-1156
1158-1159 1163-1164 1166-1167 1170-1171 1173-1175 1178 1182 1184-1185
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1229-1230 1233-1235 1238 1240-1241 1243 1245-1246 1248-1251 1254-1255 1257
1262-1266 1268-1270 1272 1274-1275 1277 1280-1282 1284-1294 1297-1298
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1441-1442 1446-1447 1451-1453 1455-1456 1459-1460 1462-1463 1465 1468-1470
1472 1474-1475 1477 1481-1483 1486-1488 1490-1496 1498-1501 1503-1504
1506-1509 1512 1514-1515 1517-1523 1525-1528 1530-1531 1533-1536 1538-1541
1543-1549 1551-1553 1555 1557 1559-1560 1562-1571 1573 1575-1586 1588 1591
1593 1595-1603 1605 1607-1615 1617-1618 1620-1621 1623-1630 1632-1638 1641
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1815 1818-1821 1823-1828 1831-1835 1837-1842 1844-1847 1849-1858 1860-1868
1870 1872 1874-1878 1880-1882 1884 1886-1893 1895-1898 1901-1905 1909
1912-1913 1915-1917 1920-1929 1931-1932 1934-1935 1937 1940-1945 1947-1957
1959-1963 1965-1968 1970-1978 1980 1982-1983 1986 1988-1990 1994-1997
2000-2020 2023-2024 2026 2028-2032 2039 2041-2042 2044-2048 2052 2054-2055
2060-2061 2063-2067 2069 2072 2075-2078 2080 2082 2084 2087 2089 2091-2093
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2132-2136 2138-2139 2141-2142 2144-2147 2149-2152 2154 2156 2158-2169
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2314 2316 2318-2319 2321 2325 2327-2328 2330-2337 2339-2343 2345 2349 2352
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SERVICE BULLETIN

4788-4790 4794 4798-4799 4802 4805 4808-4811 4814-4817 4821-4828 4830-4833 4836 4838-4840 4842-4844 4847 4849-4851 4853-4858 4860-4865 4867 4869-4871 4877-4878 4880 4883-4887 4891-4894 4896 4898 4902-4907 4909 4911-4913 4915 4917 4919 4921 4923-4926 4928 4930 4932-4946 4948 4950-4951 4953 4955 4957 4959-4962 4964 4966-4968 4970-4972 4974 4978 4981-4984 4987-4988 4990-4992 4996 4998-5001 5003-5013 5015 5022-5026 5029-5031 5034-5035 5037-5038 5040-5043 5047-5048 5051 5053 5055 5057-5058 5060-5063 5065-5066 5068-5072 5074 5077-5078 5081 5083 5086 5088 5093 5095-5097 5099-5103 5106-5109 5114-5115 5117-5119 5121 5125-5128 5131-5136 5140-5142 5144-5145 5147-5148 5151-5154 5156 5158-5164 5166-5173 5175 5177-5180 5182-5185 5189 5191-5193 5195 5197 5200 5202 5205 5207-5210 5212-5214 5216-5217 5219-5223 5225-5227 5229 5233-5235 5237-5238 5240-5247 5251-5255 5257 5260 5263-5264 5266-5269 5273-5275 5277-5282 5285-5288 5290 5292 5297 5299-5300 5302-5304 5306 5308-5310 5312 5314 5316-5317 5321-5322 5324-5333 5336-5343 5345 5348-5351 5354-5358 5360-5364 5367-5368 5370 5372-5374 5376-5380 5382 5384-5385 5387-5389 5391-5396 5398-5399 5401-5410 5412 5415-5418 5422 5427 5429 5431 5434 5438-5440 5443-5447 5450 5453-5459 5461-5462 5464-5467 5469-5471 5475 5477-5481 5483-5485 5488 5490-5495 5499-5500 5503-5506 5508-5520 5522-5524 5527-5528 5530 5533-5535 5538 5540-5541 5543-5549 5551 5554-5556 5558-5562 5564 5567 5569 5571 5574-5575 5579 5582-5584 5586-5588 5591 5594-5595 5597-5599 5602 5606-5607 5609 5611-5613 5616 5618 5620-5624 5626 5628 5630 5632-5633 5636-5637 5640 5642-5657 5659 5661 5663 5665-5668 5670-5674 5677-5681 5684 5686 5689 5691 5693 5695-5696 5698-5701 5704-5705 5707 5709-5711 5713-5714 5716-5717 5720 5722-5724 5726 5728 5730 5732-5737 5740-5741 5745-5746 5748-5756 5758-5761 5763-5765 5767-5770 5773-5774 5776-5779 5781-5783 5786 5788-5791 5793 5795-5801 5803-5804 5808 5810 5816-5819 5821 5823 5826-5827 5830-5832 5834 5836-5837 5840-5845 5848-5849 5852 5854 5859-5862 5864-5865 5867-5868 5870 5873-5887 5890 5895-5896 5899 5901-5902 5904 5907 5909-5913 5916 5919-5922 5924-5926 5929-5933 5935-5942 5944-5947 5949-5950 5953-5958 5960-5961 5963-5970 5972-5978 5980 5982-5983 5987-5989 5991 5994-5999 6002-6009 6012 6014 6016-6018 6020 6022 6024 6026-6027 6029-6031 6033 6035 6037 6039-6046 6049-6050 6052-6053 6055 6057 6059-6063 6065-6071 6073 6078-6079 6081-6083 6085 6087 6089-6090 6092 6094 6097 6099-6100

(3) Effectivity by Operator

The Operator/MSN relationship is provided for information only and is correct at the time of issue in accordance with the information available to AIRBUS. Any future changes resulting from transfer of an aircraft from one operator to another will not be reflected in this list unless the Service Bulletin is revised for another reason.

OPERATOR	MSN
03X	2421
09S	1300 1353
11S	4211
15T	0764 1494 2910 3164
17R	5768
17W	3046
19R	1017
20Q	4842
26S	0424

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OPERATOR	MSN
27V	3826
298	0291 0292
31V	0164 0332 0420 0436
31X	4319
35T	5040
38W	1194
43S	4650
52T	1599
53X	6069
	1468
53Z	
56W	0250 0335
64S	0557 0597
66X	0230
69X	0449 0588 0733 0747
74T	2165 4228 4768
79W	3751
80X	2748
85T	0234
86W	0384
86Z	0168 0460 0461 0497 2874
89T	3356
90R	5963
91X	2837
93V	3932
95W	2949
96V	4470
98W	0441
AAF	0639 0808 0823 1006 1846 3136 3242 3289 3852 4589 4675 6012
AAL	5327 5678 5698 5704 5745 5753 5761 5781 5786 5788 5789 5798
	5810 5827 5834 5842 5860 5884 5895 5904 5932 5938 5946 5955
	5975 5983 5991 6020 6040 6046 6063 6070 6085 6094
AAR	0802 1174 1356 1670 1734 2041 2110 2226 2247 2290 2397 2459
	2808 2840 3244 3297 3437 3483 3496 3641 3873 4112 4142 5035
	5169 5173 5287 5350 5382 5462 5500 5636 5767 5774
AAY	1229 1255 1262 1288 1292 1318 1347 2224 2319 2387
ABL	1227 1636 1970 2045 2943
ABQ	3385 3388
ABY	2764 3246 3444 3476 3626 3802 3840 3925 4061 4243 4310
ACA	0059 0068 0073 0084 0122 0126 0127 0141 0149 0150 0154 0159
	0174 0175 0183 0210 0231 0232 0233 0242 0248 0253 0254 0255
	0265 0277 0284 0290 0309 0324 0330 0341 0378 0403 0404 0546
	0572 0634 0656 0670 0672 0682 0688 0691 0693 0695 0697 0711 0719 0721 0728 0732 0736 0740 0742 0752 0757 0769 0773 0779
	0719 0721 0728 0732 0736 0740 0742 0752 0757 0769 0773 0779
	1623 1632 1638 1673 1719 1726 1742 1748 1772 1783 1811 1853
	1864 1874 1940 2018 2145
ACI	2152
	1

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OPERATOR	MSN
ADH	3138 3161
ADR	0444 4282 4301
AEE	2468 3033 3066 3074 3365 3392 3423 3439 3462 3478 3526 3527
,	3709 3714 3745 3753 3773 3785 3820 3829 3850 3878 3990 4065
	4094 4165
AFL	2052 2069 2072 2091 2093 2106 2116 2133 2144 2151 2163 2179
	2233 2243 2330 2337 2342 5720 5755 5790 5873 5881 5913 5921
	5967 5970 5974 5982 5989 6017 6022 6043 6044 6060 6071 6090
AFR	0491 1924 1949
AGC	0190
AHY	0331 2487 2516 2588 2685 2788 2846 2853 2865 2991 3006
AlJ	0707 1747 1780 2048 2189 2227 2539 3021 3123 3304 3374 3508
	3514 3667 3690 4235 4304 4411 4730 4733 4924 4933 5163 5221
	5358 5372 5653 5665 5867 5878 5933
ALK	2345 4694 4869 4915 5086
AMC	2113 2122 2142 2291 2332 2382 2665 2768 3056 3068
AMU	0620 0631 0805 0908 0928 1758 1790 1850 1893 1912 1926 1962
	4197 5459 5523
ANA	5901 5926
ANR	0726
ANZ	2445 4884 4926
AOJ	4503
APJ	4887 4936 5015 5166 5304 5384 5440 5540 5640 5724 5874 6004
ARR	0913
ART	0279 0311 0333 0359 0426 0936
ARU	0573 0582
AUA	1385 1504 1553 1678 1735 1931 1937 2009
AVA	1612 1634 2066 2328 2333 2358 2367 2377 2394 2523 2544 2552
	2575 2662 3408 3467 3518 3647 3664 3691 3961 3980 3988 3992
	4001 4011 4026 4046 4051 4100 4167 4175 4200 4281 4284 4345
	4381 4487 4567 4599 4763 4789 4821 4862 4939 5057 5119 5195
	5243 5360 5398 5454 5477 5622 5632
AWC	2791
AWW	2443
AXM	2425 4917 4964 5153 5200 5325 5431 5505 5547 5657
AZI	0527
AZW	0630 1973
BAL	2335 3492
BAW	2190 2441 2653 2694 2697 2720 2799 2981 3049 3512 3926
BEC	3199
BEL	0644 1441 1493 1797 1838 1963 2392 2400 2810 3790 4275
BER	1629 1966 1988 1994 2003 2005 2619 3055 3093 3121 3415 3447
	3516 3661 3689 3708 3728 3749 3865 3945 4013 4101 4161 4269
	4291 4329 4334 4433 4510 4565 4606 4674 4728 4743 4988 5038
DOE	5126 5133 5191 5246
BGF	3188
BGH	0349 3139

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OPERATOR	MSN
BGY	2118 2645
BHP	2968 3245 3422 3604 4033 4187 4294 4631
BJN	3617
BKP	2254 2310 2417 2509 2648 2660 2783 3421 3424 3454 3694 3759 3911
BRS	2263
C2C	5088 5907
C8J	5545
C9G	0772 1624 1676
CBJ	4388 4428 5630 5722 5848 5997 6041
CCA	2000 2007 2015 2172 2202 2205 2237 2269 2285 2293 2298 2454
	2499 2508 2525 2532 2545 2551 2559 2614 2643 2805 2819 2839
	2847 2890 3195 3200 3215 3221 3226 3250 3337 3461 3506 3601
CCM	4463 4478 5887
CEB	2786 2790 2821 2831 2852 2876 2994 3048 3272 3433 3472 3487
023	3646 3762 3767 4861 4870
CEF	2801 3085
CES	0828 0883 0914 0925 1005 1072 1093 1108 1285 1303 1377 1386
020	1541 1551 1601 1603 2171 2182 2199 3969 4045 4198 4209 4252
	4374 4627 4638 4659 4685 4702 4709 4711 4718 4722 4723 4729
	4746 4748 4765 4769 4776 4799 4831 4844 4857 4877 4886 4903
	4938 4946 4967 4987 5047 5048 5053 5063 5135 5136 5144 5156
	5192 5210 5227 5242 5267 5273 5309 5326 5330 5338 5363 5376
	5380 5402 5412 5439 5461 5481 5508 5516 5519 5524 5527 5558
	5575 5623 5628 5668 5691 5700 5705 5710 5711 5726 5735 5759
	5770 5823 5826 5852 5864 5886 5920 5942 5973 5998 6052 6062
	6089
CFG	5969 6053
CHB	5626 5679 5740 5760 5912
CHH	2849 2891 2985 3285 4042 4412 4440 4471 4482 4483 4505 4513
	4540 4569 4580 4600 4602 4644 4677 4686 4687 4739 4825 5006
	5008 5072 5100 5114 5117 5172 5185 5216 5220 5331 5471 5656
CIB	1607 1968
CQH	0978 1686 1769 1852 1920 2939 3014 3023 3747 3819 4072 4093
	4168 4244 4331 4366 4373 4375 4499 4586 4738 4750 4760 4809
	4816 4909 4978 4983 5022 5051 5108 5378 5403 5434 5446 5466
	5562 5778 5816 5911 6073
CQN	3836 3876 3901 3903 3941 5645 5713
CRK	5147 5189 5416 5514 5544 6003
CSA	2719 2758 2789 3031 3043 3060 3094 3097 3406 3436 3452 3660
000	3892 4258 4713
CSC	0540 0550 0551 0556 0591 0878 0902 0912 0915 0919 1007 1013
	1500 2396 2431 3114 3116 3124 3158 3167 3196 3210 3386 3449
	3583 3591 3680 3730 3893 3962 3996 4018 4068 4288 4326 4378
	4420 4424 4525 4575 4619 4642 4660 4707 4731 4824 4830 4856 4905 4911 4923 5041 5121 5141 5160 5197 5208 5233 5286 5303
	5389 5470 5543 5609 5646 5647 5650 5670 5765 5868 5896 5910
	5937 5953 5964 5977 6008 6030
	0001 0000 0007 0011 0000 0000

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OPERATOR	MSN
CSN	1596 1614 1776 1788 1971 1974 1986 1995 2004 2008 2067 2080
0011	2200 2203 2232 2273 2354 2361 2371 2408 2426 2435 2484 2505
	2506 2511 2521 2530 2574 2579 2637 2667 2680 2689 2701 2708
	2713 2714 2741 2743 2759 2767 2770 2772 2796 2809 2815 2824
	2834 2855 2861 2877 2899 2901 2915 2936 2940 2948 2950 2960
	2969 2971 2986 3020 3067 3075 3112 3144 3217 3241 3251 3258
	3269 3311 3342 3459 3493 3507 3552 3566 3587 3645 3681 3764
	3784 3828 3847 3860 3867 3890 3910 3920 3934 3938 3951 3959
	3981 3983 3999 4003 4017 4036 4038 4071 4140 4172 4184 4189
	4194 4205 4217 4224 4225 4230 4232 4248 4260 4266 4271 4274
	4279 4290 4292 4299 4322 4325 4338 4341 4350 4362 4365 4369
	4370 4387 4396 4416 4430 4456 4507 4550 4613 4671 4696 4751
	4782 4794 4808 4836 4854 4864 4880 4883 4912 4919 4928 4982
	5061 5151 5168 5170 5183 5202 5214 5225 5237 5268 5279 5288
	5410 5480 5484 5503 5506 5534 5561 5564 5579 5602 5611 5655
	5671 5693 5730 5736 5750 5756 5797 5817 5832 5837 5875 5890
	5930 5945 5949 5976 6018 6049 6078
CSZ	2905 2935 3131 3153 3366 3440 3456 3599
CTV	0839 0892 1635 2598 2692 3861 4961 5351 5379 5394 5399 5415
2111	5511 5541 5551 5556 5560 5571 5574 5597 5777 5830
CUA	5023
CYP	2108 2275 2334 2343 2359
D2F	0243 0251
DAL	0118 0121 0125 0152 0153 0160 0171 0192 0197 0206 0208 0213
	0262 0263 0272 0273 0281 0282 0297 0298 0306 0307 0318 0319
	0329 0339 0340 0355 0358 0360 0367 0372 0380 0381 0387 0388
	0399 0408 0410 0417 0418 0766 0778 0786 0801 0807 0818 0830
	0832 0846 0903 0907 0911 0923 0962 0964 0981 0988 0996 1011
	1037 1058 1062 1191 1230 1249 1324 1325 1346 1392 1414 1434
	1453 1456 1483 1498 1501 1520 1535 1543 1549 1567 1570 1582
	1633 1641 1646 1659 1662 1683 1685 1693 1709 1714 1738 1746
	1752 1766 1774 1789 1796 1800 1810 1812 1815 1820 1824 1828
	1833 1839 1875 1897 1923 1959 1976 1982 1990 2002 2013 2026 2039 2047 2082 2087 2092 2095
DOC	1053 3243
DCS	
DKH	2975 3027 3234 3268 3368 3485 3596 3605 3967 3984 4064 4102
	4154 4276 4401 4429 4573 4587 4652 4833 4840 4981 5013 5070
DIII	5071 5131 5226 5329 5339 5455 5491 5674 5737 5876
DLH	5741 5769 5831 5935 5972 6006 6033 6092
DNV	1630 1805 1808 1841 2241 2751
EAA	0386
EDW	2024
EIN	1983 2001 2191 2206 2217 2374 2399 2409 2432 2542 2583 2635
	3129 3318 3345 3501 3857 4572 4634 4678 4715
ETD	0350 1140 1159 1944 1945 1947 1955 2167 3693 3713 3902 4066
	4077 4124 4934 5095 5348 5407 5714 5791 5821 5836 5882 5924
ETJ	0428
EVA	3363 5328 5354 5377 5485 5808 5849 6024 6042 6087
EVE	5642

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SERVICE BULLETIN

OPERATOR	MSN
EZD	0667 0743 0874 1286 2141 2147
EZY	2265 2271 2398 2420 2427 2450 3084
F2I	0085 0220 0249 0294 0301 0373 0391 0393 0724 0758
FFT	1515 1579 1583 1615 1684 1759 1781 1786 1803 1806 1860 1943
	1980 1997 2010 2012 2017 2019 2030 2103 2198 2209 2236 2240
	2253 2258 2260 2287 2318 2325 2406 2448 2483 2518 2806 2836
	2857 3205 3389 3431 4127 4204 4253 4254 4272 4307 4562 4641
	4668 4688 4704 4727 4745 5661
FHY	0580 2804 4207 4658 5096
FIN	0941 0961 1073 1107 1184 1185 1241 1309 1352 1364 1405 1470
	1544 1588 1712 1913 1916 1978 1989 2065 2124 2146 2154 2208
	2266 5758 5803 5922 5961 6083
FLI	2186 3905
FPY	0189 0342 0395
FRN	0647 0660
G2X	0347 0674
GAF	3897 4060
GAP	2162 2183 4777 4907 4984 5007 5012 5103 5310
GCR	5799
GFA	4030 4059 4083 4146 4158 4188 4218 4255 4502 4541 4780 4827
	4860 4865 5025 5074 5171 5175 5180 5257 5321 5336
GLG	1866 1872 1882 1925 2078 2126 4379 4547
GMI	3019 3202 3407 5843 6005
GMR	2128
GWI	1077 1084 1089 1136 1147 1155 1170 1209 1277 2607 2628 2632
	2813 2833 2976 3011 3128 3172 3193 3352 3358 3375 3500 3534
	3839 3841 4166 4227 4256 4285 4998 5043 5457 5467 5535 5569
	5941 5978
GZQ	1878
HAY	0716 0888 2745
HDA	0633 0756 0784 0930 0993 1024 5024 5030 5362 5429
HKE	4970 5260 5264 5266 5341
HKJ	4878
HRM	0666
HVN	2255 2261 2267 2303 2974 3005 3013 3022 3198 3315 3355 3600
	3737 3862 3964 3966 4136 4213 4277 4311 4315 4669 4703 4737
	4783 4826 4863 4945 4971 5164 5241 5247 5251 5275 5297 5306
	5340 5385 5392 5418 5438 5456 5469 5495 5555 5699 5709 5916
	5958 5994
I2L	0371 0816 2718 2922 3012 3834
IAC	1668 1718 2593 2624 2629
IAW	4044 4067 5115 5290 5464
IBS	1530
IRA	0530 0575 0857 2054
IRM	1202
ISR	4354 4413
ISS	0737 0749 1198 1823 1896 2102

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SERVICE BULLETIN

OPERATOR	MSN
IYE	4653 4690
JAS	5478
JAT	3252
JAV	0029 2061
JBU	1123 1156 1173 1235 1240 1257 1270 1280 1302 1327 1398 1446
JBU	1452 1506 1528 1546 1557 1610 1650 1705 1739 1784 1785 1849
	1861 1898 1904 1915 1917 1927 1948 2006 2020 2031 2042 2063
	2075 2099 2125 2132 2136 2149 2150 2159 2160 2177 2201 2215
	2231 2246 2259 2280 2284 2286 2307 2314 2336 2352 2368 2384
	2386 2415 2447 2449 2461 2489 2491 2504 2520 2535 2577 2580
	2640 2647 2671 2710 2725 2755 2781 2802 2814 2832 2848 2871
	2880 2900 2945 2970 2977 2992 3029 3039 3072 3091 3119 3150
	3190 3228 3263 3287 3348 3381 3416 3451 3479 3488 3517 3554
	3572 3622 3659 3707 3724 3760 3800 3811 4578 4612 4647 4904
	5060 5142 5148 5302 5312 5349 5417 5677 5723 5782 5783 5854
	5865 5909 5960 6031
JJP	5093 5145 5161 5245 5274 5281 5355 5492 5499 5520 5598 5618
	5649 5695 5701 5717 5732 5796 5877 5885 5940
JSA	2316 2356 2423 2453 2604
JST	1195 1408 2169 2185 2197 3474 3495 3547 3668 3743 3783 3899
	3916 3917 3948
KAC	2046 3957
KCA	0407
KFR	2650
KGL	0663 0668 0787 0954 1060 1293 2029 2077
KHO	0354 0376 0414
KHV	2480 5343 5427
KKK	0604 0614 0675 0761 1438 1451 1503 1730 1950 1953 2747 2753
KMF	0480
KNE	2123 2776 3218 3238 3256 3361 3396 3425 3475 3787 3817 3868
	3889 3894 3933 4055 4735 5716
KZR	1042 1204 2828 3141 3484 3519 3614 5357 5401 5404 5613 5734
	5870 5968 6029 6037
LAA	4405 4450 4490 4526 5373 5405 5494
LAN	1304 1332 1351 1355 1491 1512 1526 1548 1568 1626 1854 1858
	1877 1903 2089 2096 2295 2304 2321 2572 2585 2845 2858 2864
	2872 2886 2887 2892 2894 3264 3280 3319 3330 3535 3556 3663
	3671 3770 3772 3779 4383 4400 4439 4476 4509 4516 4543 4546
	4549 4563 4576 4597 4598 4605 4657 4697 4758 4767 4815 4839 4871 4892 4896 4921 4943 4972 5005 5097 5125 5178 5213 5229
	5234 5263 5316 5324 5364 5408 5443 5453 5483 5493 5548 5554
	5583 5586 5686 5707 5764 5801 5818 5859 5879 5902 5929 5950
	5965 5995 6026 6055 6065
LAO	5356 5396
LBT	0400 1121 1175 1597 1744 3480 4623
LBY	0558 0561 1727 2277
LFO	0659
LJB	3985

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SERVICE BULLETIN

OPERATOR	MSN
LLC	0415 2987
LLM	2413 2419 2439
LLP	0739 1411 2016
LMJ	1868
LMU	0932 0943 0977
LZB	2540 2596 3028 3309 3564 3780
MAC	3809 3833
MEA	1956 1967 1977 2055 3736 3804 3837 4296 4339 4632 5000 5152
	5162 5253 5746
MJF	4353
MLD	0741
MLM	2592 4199 4622 5538
MLR	2731
MMA	0973 1791
MML	1706 1750
MON	0389 0392 0983 1015 1421 1571 1637 1707 1763 1794 1941 2105
	2234 2730 2793 5582 5606 6059
MSR	0680 0687 0715 0725
NKS	2433 2470 2473 2476 2485 2490 2560 2567 2590 2603 2622 2673
	2679 2698 2704 2711 2723 2797 2893 2898 2929 2942 2963 2978
	2983 3007 3017 3026 3165 3393 3395 4206 4264 4321 4431 4548
	4592 4595 4902 4951 4996 5029 5042 5132 5159 5370 5387 5458 5517 5624 5672 5804 5861 5880 5954 5999 6082
NLV	2496 2502
NLY	2529 2668 2749 2867 2902 3504 3830 4231 4316 4368 4581 4594
INCI	4611 4648 5522 5648 5957
NMA	2676
NMB	3346 3586
NVD	0299 0409 0466 0528 1263 1778
NVR	2211 2216 2410
NWS	1219 1233 2649 2927 3120
OAW	1886
OBS	3758
OHY	0455 0471 0496 0543 0640 0661 0676 0792 0811 0835 0916 0963
	1004 1008 1482 1509 2571 2688
ONE	3001 3030 3062 3214 3216 3371 3390 3438 3469 3509 3585 3602
	3606 3635 3642 4222 4287 4336 4891 4913 4941 4942 5193 5278
	5299 5754 5841 6050 6057
ORF	2566 4992
OZW	0429 1922
PAL	2878 2925 2954 3108 5081 5140
PIC	0990 2331 2340
QAF	0927 4114 4170
QDA	6061

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SERVICE BULLETIN

OPERATOR	MSN
QTR	1487 1566 1648 1656 1773 1895 1928 1957 2097 2107 2121 2138
QIII	2161 2288 2341 3274 3369 3397 3636 3669 4110 4130 4173 4183
	4382 4406 4436 4479 4496 4530 4615 4700 4754 4784 4802 4810
	4858 4930 4968 5010 5078 5127 5182 5217 5255 5361 5395
RAM	2076
RBA	2023 2032 2135 2139 2195 3071
RBG	3152
RFJ	0814
RJA	2953 3428 3522 3685 3803 3832 4670 4817 4853 5099 5128 5177
11071	5367
RJD	1618 5277
RKM	2158 3907
RNV	0229
RYW	3458
RZO	0795 2011 2390 3891
S2A	2366 2376
SAA	4990 5011 5637 5680 5956 6007
SAI	0542 0877 3089 3105 3270
	1071 1078 1090 1091 1126 1129 1131 1149 1164 1167 1819 1870
SBI	2028 2064 2369 2373 2464 2474 2618 2623 2641 2726 3070 3446
	3473 3490 3494 3866 3880 4032 4150 5001 5026 5031 5106 5134
	5167 5559 5607 6066
SDM	0427 0525 0649 1130 1488 1560 1578 1654 1657 1679 1743 1761
05	1767 1851 1863 1876 1890 2465 2497 2879 2913 2930 2964 3044
SFJ	2620 2658 2695 3025 4555 4720 5102 5393 5512 5652 5773 5862
	5931
SFW	0671
SGG	0799 0879 1390
SGL	0357
SGX	1605
SHU	2222
SKU	0179 0406 0447 1400 1523
SND	1880
SNX	0289
SOL	0302
SRQ	3757 3801
SUD	3040
SVA	4015 4057 4081 4090 4092 4104 4115 4122 4135 4273 4314 4337
	4349 4357 4364 4376 4391 4392 4393 4394 4397 4408 4414 4419
	4432 4442 4454 4467 4484 4501 4517 4519 4542 4564 4577 4590
	4811 4823 4838 4925 4955 4962 5009 5065 5223 5285 5314 5447
	5509 5549
SVR	0203 0735 0775 0815 0841 0991 1152 1199 1720 1751 1884 1901
	1905 2117 2166 2175 2187 2278 2327 2349 2707 3107
SVW	2921 3133 3542 3856 5445
SWM	0430 0476
SWR	1762 1951 2134 4534 4618 4673 5037 5069 5518 5567

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SERVICE BULLETIN

OPERATOR	MSN
TAE	0657 0934 0946 0949 1339 1368 1934 2084 2659
TAI	1066 1334 1598 1625 1952 2282 2301 2339 2434 2444 2553 2610
1731	2687 2862 2917 3042 3057 3103 3113 3248 3276 3378 3418 3510
	3538 3577 3581 3869 4906 4944 5068 5219 5238 5280 5333 5406
	5840 5936 5944 6002 6068 6099
TAK	2700 2763 3171 3331
TAM	0334 0440 0976 1010 1092 1096 1103 1139 1143 1158 1215 1246
	1251 1376 1459 1486 1518 1575 1580 1591 1593 1595 1608 1613
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	1891 2014 2044 2372 2393 2467 2513 2661 2734 2737 2784 2838
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	3816 3908 3972 4000 4163 4171 4192 4320 4352 4358 4389 4441
	4446 4465 4544 4570 4662 4734 4756 4773 4953 4974 5066 5101
	5107 5109 5184 5209 5222 5240 5342 5345 5528 5591 5621 5643
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TCW	0653 1787 1929 1975 2362
TCX	1238 1250 1942 1961 1965 2060 2114
THY	1856 1909 1996 2156 2164 2395 2401 2404 2414 2452 2522 2602 2609 2626 2631 2655 2738 2739 2823 2868 2928 2934 2941 2984
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TJS	4169
TNA	5055 6009
TVS	4699
UAE	4822
UAL	0435 0439 0442 0450 0452 0454 0456 0457 0462 0463 0464 0465
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LIFA	1741 1755 1821 1840 1842 1845 1847 1865
UEA	2654 2696 2762 2774 2820 2835 3024 3706 4347 5003 5252
UKN	3260
ULG	0308 0314

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SERVICE BULLETIN

OPERATOR	MSN
UNA	3886 4732
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	1340 1342 1348 1350 1354 1358 1360 1369 1371 1373 1375 1378
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	1547 1552 1563 1565 1576 1621 1643 1644 1651 1666 1701 1704
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	2458 2482 2570 2595 2613 2615 2630 2669 2690 3584 3629 3633 3712 3740 3796 3858 3879 3881 3924 3928 3944 3960 3977 3989
	3993 4025 4041 4050 4082 4086 4107 4123 4134 4149 4202 4242
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	5235 5244 5269 5282 5292 5300 5317 5332 5368 5374 5409 5422
	5444 5475 5504 5513 5588 5594 5644 5659 5684 5696 5728 5751
	5763 5795 5800 5899 5939 5980 6027 6035 6100
UTA	5681 5733 5779 5919 5966 6016 6067
VAR	2383
VIM	2732 3125 4270 4305 5158
VIP	4151
VJC	2712 3739 3791 4049 4475 4512
VKG	1881 1887 1889 1921 1932 1954 1960 1972
VLG	1171 1210 1372 1540 1749 1862 2168 2207 2388 2407 2678 2761
	2785 2794 2798 2962 2988 3083 3095 3293 3321 3529 3700 3704
	3995 4128 4661 4681 4742 4849 4855 4937 5479 5530 5533 5587
	5599 5612 5616 5620 5673 5925 6039 6045 6079 6081
VLK	0422 0714 0730 1213
VNL	5844
VOI	2204 2296 2657 2666 2771 2780 2979 2997 3045 3069 3077 3175
	3253 3279 3317 3450 3463 3491 3590 3624 3672 3705 4403 4422
	4741 4798 4828 4832 4950 5062 5207 5212 5308 5322 5337 5391
	5488 5510 5595 5651 5776 5793 5819 5988 5996 6014
VRD	2616 2674 2740 2773 2778 2800 2811 2830 2851 2993 3016 3037
	3101 3135 3155 3181 3204 3230 3324 3347 3349 3359 3398 3417
	3445 3460 3465 3503 3656 3670 3684 3686 4448 4480 4558 4559
	4610 4616 4655 4805 4814 4851 4867 4894 4948 4959 4991 4999 5004 5034 5058 5179 5515
VRE	1429
VVC	1564 1725 1867
WGT	1212
WHT	2440
WOW	2457

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OPERATOR	MSN
WRC	0235 0579 0645 0684 0760 0781
WTJ	0548
WZZ	1834 1892 1902 2752
XLF	0343

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SERVICE BULLETIN

(4) Configuration by MSN

					MS	N					CONFIGURATION
0029 00	052	0053	0054	0055	0059	0064	0065	0066	0067	0068	001
0073 00	076	0077	0081	0082	0084	0085	0099	0118	0121	0122	
0125 0	126	0127	0141	0149	0150	0152	0153	0154	0159	0160	
0164 0	168	0171	0174	0175	0179	0183	0189	0190	0192	0197	
0203 02	206	0208	0210	0213	0220	0229	0230	0231	0232	0233	
0234 02	235	0242	0243	0248	0249	0250	0251	0253	0254	0255	
0262 02	263	0265	0272	0273	0277	0279	0281	0282	0284	0289	
0290 02	291	0292	0294	0297	0298	0299	0301	0302	0306	0307	
0308 03	309	0311	0314	0317	0318	0319	0324	0329	0330	0331	
0332 03	333	0334	0335	0339	0340	0341	0342	0343	0347	0349	
0350 03	354	0355	0357	0358	0359	0360	0361	0362	0367	0371	
0372 03	373	0376	0378	0380	0381	0384	0386	0387	0388	0389	
0391 03	392	0393	0395	0399	0400	0403	0404	0405	0406	0407	
0408 04	409	0410	0414	0415	0417	0418	0420	0422	0424	0426	
0427 04	428	0429	0430	0435	0436	0439	0440	0441	0442	0444	
0447 04	448	0449	0450	0452	0454	0455	0456	0457	0460	0461	
0462 04	463	0464	0465	0466	0470	0471	0472	0475	0476	0479	
0480 04	483	0485	0487	0489	0491	0496	0497	0500	0503	0504	
0506 0	508	0510	0512	0523	0525	0527	0528	0530	0539	0540	
0542 0	543	0546	0548	0550	0551	0556	0557	0558	0561	0565	
0568 0	571	0572	0573	0575	0579	0580	0582	0584	0587	0588	
0589 0	591	0592	0597	0604	0613	0614	0620	0630	0631	0633	
0634 06											
0657 06											
0674 06	675	0676	0678	0680	0682	0683	0684	0686	0687	0688	
0690 06											
0719 07											
0737 07											
0756 07											
0772 07											
0787 07											
0805 08											
0823 08											
0836 08											
0851 08											
0871 08											
0890 08											
0912 09											
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0991 09											
1010 10											
1038 10											
1056 10											
1073 10											
1092 10											
1110 1											
1130 1	131	1134	1135	1136	1139	1140	1141	1143	1146	114/	

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SERVICE BULLETIN

MSN	CONFIGURATION
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1170 1171 1173 1174 1175 1178 1182 1184 1185 1191 1192	001
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1893 1895 1896 1897 1898 1901 1902 1903 1904 1905 1909	
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1926 1927 1928 1929 1931 1932 1934 1935 1937 1940 1941	
1942 1943 1944 1945 1947 1948 1949 1950 1951 1952 1953	
1954 1955 1956 1957 1959 1960 1961 1962 1963 1965 1966	
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1967 1968 1970 1971 1972 1973 1974 1975 1976 1977 1978 1980 1982 1983 1986 1988 1989 1990 1994 1995 1996 1997 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2023 2024 2026 2028 2029 2030 2031 2032 2039 2041 2042 2044 2045 2046 2047 2048 2052 2054 2055 2060 2061 2063 2064 2065 2066 2067 2069 2072 2075 2076 2077 2078 2080 2082 2084 2087 2089 2091 2092 2093 2095 2096 2097 2099 2102 2103 2105 2106 2107 2108 2110 2113 2114 2116 2117 2118 2121 2122 2123 2124 2125 2126 2128 2132 2133 2134 2135 2136 2138 2139 2141 2142 2144 2145 2146 2147 2149 2150 2151 2152 2154 2156 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2171 2172 2175 2177 2178 2179 2182 2183 2185 2186 2187 2189 2190 2191 2193 2195 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2211 2215 2216 2217 2222 2224 2226 2227 2231 2232 2233 2234 2236 2237 2240 2241 2243 2246 2247 2253 2254 2255 2258 2259 2260 2261 2263 2265 2266 2267 2269 2271 2273 2275 2277 2278 2280 2282 2284 2285 2286 2287 2288 2290 2291 2293 2295 2296 2298 2301 2302 2303 2304 2307 2310 2312 2314 2316 2318 2319 2321 2325 2327 2328 2330 2331 2332 2333 2334 2335 2336 2337 2339 2340 2341 2342 2343 2345 2349 2352 2354 2356 2358 2359 2361 2362 2366 2367 2368 2369 2371 2372 2373 2374 2376 2377 2382 2383 2384 2386 2387 2388 2390 2392 2393 2394 2395 2396 2397
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SERVICE BULLETIN

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l l	4347										
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	4776										
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4862	4863	4864	4865	4867	4869	4870	4871	4877	4878	4880	
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4902	4903	4904	4905	4906	4907	4909	4911	4912	4913	4915	

6 DATE: Nov 26/13 SERVICE BULLETIN No.: A320-21-1214

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5763 5764 5765 5767 5768 5769 5770 5773 5774 5776 5777	5750 5751 5752 5753 5754 5755 5756 5758 5759 5760 5761	
0100 0104 0100 0101 0100 0110 0110 0114 0110 0111	5763 5764 5765 5767 5768 5769 5770 5773 5774 5776 5777	

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MSN	CONFIGURATION
5778 5779 5781 5782 5783 5786 5788 5789 5790 5791 5793	001
5795 5796 5797 5798 5799 5800 5801 5803 5804 5808 5810	
5816 5817 5818 5819 5821 5823 5826 5827 5830 5831 5832	
5834 5836 5837 5840 5841 5842 5843 5844 5845 5848 5849	
5852 5854 5859 5860 5861 5862 5864 5865 5867 5868 5870	
5873 5874 5875 5876 5877 5878 5879 5880 5881 5882 5883	
5884 5885 5886 5887 5890 5895 5896 5899 5901 5902 5904	
5907 5909 5910 5911 5912 5913 5916 5919 5920 5921 5922	
5924 5925 5926 5929 5930 5931 5932 5933 5935 5936 5937	
5938 5939 5940 5941 5942 5944 5945 5946 5947 5949 5950	
5953 5954 5955 5956 5957 5958 5960 5961 5963 5964 5965	
5966 5967 5968 5969 5970 5972 5973 5974 5975 5976 5977	
5978 5980 5982 5983 5987 5988 5989 5991 5994 5995 5996	
5997 5998 5999 6002 6003 6004 6005 6006 6007 6008 6009	
6012 6014 6016 6017 6018 6020 6022 6024 6026 6027 6029	
6030 6031 6033 6035 6037 6039 6040 6041 6042 6043 6044	
6045 6046 6049 6050 6052 6053 6055 6057 6059 6060 6061	
6062 6063 6065 6066 6067 6068 6069 6070 6071 6073 6078	
6079 6081 6082 6083 6085 6087 6089 6090 6092 6094 6097	
6099 6100	

(5) Configuration definition

**CONF 001

Config. 001 is valid for all the aircraft given in the effectivity of this Service Bulletin as a standard configuration.

(6) Material Effectivity

MATERIAL	QTY PER A/C	SEE NOTES
Kit 211214D01R01	1	

B. CONCURRENT REQUIREMENTS

Accomplishment of this Service Bulletin requires the prior or simultaneous accomplishment of the following Service Bulletins as per effectivity specified in these Service Bulletins:

Service Bulletin No. A320-21-1031

A320-21-1119 A320-21-1183 A320-21-1205 A320-21-1212

NOTE: Service Bulletin No. A320-21-1031 (AIR CONDITIONING - AIR COOLING

- INSTALL OZONE CONVERTERS) which applies Modification No.

21215K1234

NOTE: Service Bulletin No. A320-21-1119 (AIR CONDITIONING - AIR COOLING

- INSTALL OZONE CONVERTER ENGELHARD PN 20499003 OR PN

20499004) which applies Modification No. 21215K1234

NOTE: Service Bulletin No. A320-21-1183 (AIR CONDITIONING - AIR COOLING

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- INSTALL OZONE CONVERTER ENGELHARD PN 20499005 OR PN 20499006) which applies Modification No. 21215K1234

NOTE: Service Bulletin No. A320-21-1205 (AIR CONDITIONING - AIR COOLING

- INSTALL VOC/OZONE CATALYTIC CONVERTER FOR A/C WITH A318-

TYPE ECS) which applies Modification No. 21215K1234

NOTE: Service Bulletin No. A320-21-1212 (AIR CONDITIONING - AIR COOLING

- INSTALL VOC/OZONE CATALYTIC CONVERTER FOR A/C WITHOUT

A318-TYPE ECS) which applies Modification No. 21215K1234

C. REASON

(1) History

Some operators have reported air leaks in the LH and RH wing areas during ground temperature conditions of over 45 degrees Celsius. High temperatures have been detected at the top of the air conditioning packs in the pack bay areas (Zone 191 and Zone 192). The cause of the air leaks is high temperatures in the air conditioning pack bay areas.

(2) Objective/Action

This Service Bulletin is issued to detail instructions for the addition of an insulation cover around the ozone converters, 100HM and 101HM, located in the LH and RH air conditioning pack bay areas.

(3) Advantages

Accomplishment of this Service Bulletin will ensure that the ozone converters are insulated from high external ground temperatures. Thus the risk of air leaks in the air conditioning pack bay areas due to high temperatures will decrease.

(4) Operational/Maintenance Consequences

None

D. DESCRIPTION

To accomplish this Service Bulletin it is necessary to :

Task 211214-831-848-001: Modification

- (1) Disconnect the Tie-Rod from the Ozone Converter 100HM
- (2) Disconnect the Tie-Rod from the Ozone Converter 101HM
- (3) Install the Insulation Cover on the Ozone Converter 100HM and 101HM

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SERVICE BUILLETIN

E. COMPLIANCE

(1) Classification

RECOMMENDED: Service Bulletin recommended to be accomplished to prevent significant operational disruptions.

(2) Accomplishment Timescale

If the occurrence described above has been experienced, it should be considered to accomplish this Service Bulletin at your convenience.

F. APPROVAL

The technical content of this document is approved under the authority of Design Organization Approval No. EASA.21J.031.

If an aircraft listed in the effectivity has a modification or repair embodied that is not of AIRBUS origin, and which affects the content of this Service Bulletin, the operator is responsible for obtaining approval by its airworthiness authority for any adaptation necessary before incorporation of the Service Bulletin.

G. MANPOWER

The manpower estimates given in this Service Bulletin are based on the direct labor cost to do the work. These estimates assume that the work will be done by experienced personnel, and may need to be revised upwards to suit operator's circumstances. The estimates do not include the time to prepare, plan or inspect the work. Manufacture and procurement of parts and tools, drying times for paints, sealants, etc., and general administration work are also not included.

Task 211214-831-848-001: Modification					
Get Access	1.00				
On Aircraft					
Disconnect the Tie-Rod from the Ozone Converter 100HM	0.50				
Disconnect the Tie-Rod from the Ozone Converter 101HM	0.50				
Install the Insulation Cover on the Ozone Converter 100HM and 101HM	0.50				
Close-Up	1.00				
TOTAL MANHOURS	3.50				
ELAPSED TIME (HOURS)	3.50				

H. WEIGHT AND BALANCE

The weight and balance estimates given in this Service Bulletin are based on the Manufacturer's Empty Weight (MEW) and do not include operator's items. For the definition of MEW and operator's items, refer to the Weight and Balance Manual (WBM) Chapter 1-00-07.

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Aircraft Type	A318	A319	A320	A321
Manufacturers Empty Weight	+0.725 KG (+1.599 LB)	•		+0.725 KG (+1.599 LB)
Effect on Balance				+14.81 KGM (+107.12 LB.FT)

I. <u>ELECTRICAL LOAD DATA</u>

Not Changed

J. REFERENCES

Aircraft Maintenance Manual (AMM)	06-20-00 06-31-53 06-41-53
	12-34-24 20-21-11 51-42-00
	53-35-13
Elec. Std. Practices Manual (ESPM)	20-55-00
Service Bulletin (SB)	A320-21-1031
	A320-21-1119
	A320-21-1183
	A320-21-1205
	A320-21-1212
Standards Manual (SM)	
Weight and Balance Manual (WBM)	Chapter 1-00-07

K. PUBLICATION AFFECTED

Aircraft Maintenance Manual (AMM)	21-51-00 21-51-41
Illustrated Parts Catalog (IPC)	21-51-03

L. <u>INTERCHANGEABILITY/MIXABILITY</u>

Not Applicable

M. SPARES

None

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2. MATERIAL INFORMATION

**CONF ALL

A. MATERIAL - PRICE AND AVAILABILITY

(1) Procurement Addresses

Customers with aircraft shown in the effectivity of this Service Bulletin should send a purchase order to AIRBUS. Quote the number of this Service Bulletin. The address is:

Kit 211214D01R01	AIRBUS Material, Logistics and Suppliers Weg beim Jaeger 150 D-22335 HAMBURG GERMANY
	For ordering by internet http://spares.airbus.com For ordering by fax: +49 40 50 76 2590 For ordering by E-mail: airbus.kit@airbus.com

(2) Price and Availability

Kit 211214D01R01	
Cost	1,350.00 USD
Availability	90 calendar days from receipt of order

The availability given above is the standard lead time from the date of your purchase order. If items are required before this time, please include a retrofit planning schedule with your order so that we can try to comply with your requirements.

The sales terms (costs and availability) are estimated in relation to economic conditions. The latest valid price and lead time for ordering purposes shall be obtained through the AirbusSpares portal or through a request for quotation to airbus.kit@airbus.com.

B. INDUSTRY SUPPORT INFORMATION

For aircraft under warranty at Jan 01/17, AIRBUS will share the costs of accomplishment of this Service Bulletin by providing the kits at no charge for orders placed before Jan 01/17.

For aircraft under warranty at Jan 01/17 and the accomplishment of this Service Bulletin before Jan 01/17, AIRBUS will credit the manhours indicated in this Service Bulletin at the agreed in-house warranty labor rate for claims received not later than 90 days after completion of the last affected aircraft of your fleet.

C. LIST OF COMPONENTS

Kit 211214D01R01

ITEM	NEW PART N°	QTY (UM)	KEYWORD	ITEM	OLD PART N°	INT	SEE NOTES
1	D2157230002200	2	INSULATN				
2	NSA935401-12	6	TIE				
3	MS21043-3	2	NUT				

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NOTE:

If you find part numbers of hardware components in the related kit(s) which you cannot identify in the LIST OF COMPONENTS of this Service Bulletin, refer to Standards Manual (SM). The SM will give you the correct part number to part number relationship.

D. LIST OF MATERIALS - OPERATOR SUPPLIED

None

E. PARTS TO BE RE-IDENTIFIED BY OPERATOR

None

F. TOOLING

None

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3. ACCOMPLISHMENT INSTRUCTIONS

Task 211214-831-848-001 - Modification

WARNING: MAKE SURE THAT YOU OBEY ALL THE WARNINGS AND ALL THE CAUTIONS

INCLUDED IN THE REFERENCED PROCEDURES.

CAUTION: ALWAYS OBEY THE PRECAUTIONS THAT FOLLOW TO KEEP

ELECTRICAL WIRING IN A SATISFACTORY CONDITION (ELECTRICALLY AND MECHANICALLY SERVICEABLE). WHEN YOU DO MAINTENANCE WORK, REPAIRS OR MODIFICATIONS, ALWAYS KEEP ELECTRICAL WIRING, COMPONENTS AND THE WORK AREA AS CLEAN AS POSSIBLE. TO DO

THIS:

 PUT PROTECTION, SUCH AS PLASTIC SHEETING, CLOTHS, ETC; AS NECESSARY ON WIRING AND COMPONENTS.

 REGULARLY REMOVE ALL SHAVINGS, UNWANTED MATERIAL AND OTHER CONTAMINATION.

THESE PRECAUTIONS WILL DECREASE THE RISK OF CONTAMINATION AND DAMAGE TO THE ELECTRICAL WIRING INSTALLATION.

IF THERE IS CONTAMINATION, REFER TO ESPM 20-55-00.

NOTE: The accomplishment instructions of this Service Bulletin refer to procedures

included in other AIRBUS documents. When the words 'refer to' are used and the operator has an accepted alternative procedure, the accepted alternative procedure can be used. When the words 'in accordance with' are included in the instruction,

the procedure in the AIRBUS document must be used.

NOTE: The access and close-up instructions, not comprising return to service tests, in this

Service Bulletin do not constitute or affect the technical intent of the Service Bulletin. Operators can therefore, as deemed necessary, omit or add access and/or close-up steps to add flexibility to their maintenance operations as long as the

technical intent of the Service Bulletin is met within the set parameters.

<u>NOTE</u>: Manual titles given in the accomplishment instructions are referred to by acronyms.

Refer to paragraph 1.J., References, for the definition of acronyms.

Task Associated Data

	Zone			
191 192	20110			
191 192				
	Modified FIN			
100HM 101HM	100HM 101HM			
	Access			
Panel	191BB 191KB 192FB 192KB			
Manpower				
TOTAL MANHOURS		3.50		
ELAPSED TIME (HO	URS)	3.50		

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A. **GENERAL**

(1) Subtask 211214-910-201-001 - Standard Practices

Manpower Resources	
Skills	NON SPECIFIC

References		
Aircraft Maintenance Manual (AMM)	06-20-00, Page Block 001	
	06-31-53, Page Block 001	
	06-41-53, Page Block 001	
	Task 20-21-11-911-001	
	51-42-00	

- (a) For the Frame (FR) identification, refer to AMM 06-31-53, Page Block 001.
- (b) For the identification of zones, refer to AMM 06-20-00, Page Block 001.
- (c) For the identification of access panels, refer to AMM 06-41-53, Page Block 001.
- (d) Remove and install fasteners in accordance with AMM 51-42-00.
- (e) To torque tighten the standard threaded fasteners, refer to AMM Task 20-21-11-911-001.

B. PREPARATION

(1) Subtask 211214-941-201-001 - Job Set-up

Work Zones and Access Panels			
Zone Access/Work location			Access/Work location
	191	Access	Panel 191BB, Panel 191KB
	192	Access	Panel 192FB, Panel 192KB

Manpower Resource	es
Skills	NON SPECIFIC

Re	ferences
Aircraft Maintenance Manual (AMM)	Task 12-34-24-869-002
	Task 53-35-13-000-002

- (a) The following items shall be considered as the basic Aircraft configuration before you start a maintenance task:
 - Aircraft on the ground resting on landing gear (the ground safety locks and the wheel chocks are in position on the landing gear).
 - Engine shut down, thrust reversers closed and locked.
 - Aircraft in clean configuration.
 - Parking brake applied.

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- Aircraft electrical network de-energized.
- Hydraulic systems depressurized.
- Access to the cockpit and cabin is available.
- All circuit breakers are in closed position.
- All controls in NORM, AUTO or OFF position.
- (b) Make sure that the aircraft is electrically grounded, refer to AMM Task 12-34-24-869-002.
- (c) Put a warning notice in position in the cockpit to tell persons not to operate the APU BLEED and the ENG 1 BLEED and the ENG 2 BLEED pushbutton switches.
- (d) On the HP ground connector put a warning notice in position to tell persons not to supply the ground air.
- (e) Remove the access panels 191BB, 191KB, 192FB and 192KB, refer to AMM Task 53-35-13-000-002.

C. PROCEDURE

(1) Subtask 211214-831-201-001 - Disconnect the Tie-Rod from the Ozone Converter 100HM

Work Zones and Access Panels				
	Zone	Access/Work location		
	191	Access	Panel 191BB, Panel 191KB	
		Work location	from Frame 35 to Frame 38	

Manpower Resources			
Manhours	0.50		
Minimum number of person	1		
Subtask elapsed time	0.50		
Skills	AIRFRAME		

References			
Fig. A-GBAAA	Sheet 01		
Installation of Insulation Cover on the			
Ozone Converters 100HM and 101HM			

(a) On the ozone converter 100HM, disconnect the tie-rod.

Refer to Fig. A-GBAAA Sheet 01

1 Remove:

Nut
 MS21043-3
 Item (3)
 Discard
 Washer
 ASNA0113-48CA
 Item (4)
 Retain

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1 Bolt NAS6704U10 Item (5) Retain

(b) Move the disconnected end of the tie-rod away from the ozone converter 100HM.

(2) Subtask 211214-831-203-001 - Disconnect the Tie-Rod from the Ozone Converter 101HM

Work Zones and Access Panels					
	Zone Access/Work location			Access/Work location	
		192	Access Panel 192FB, Panel 192KB		
			Work location	from Frame 35 to Frame 38	

Manpower Resources			
Manhours	0.50		
Minimum number of person	1		
Subtask elapsed time	0.50		
Skills	AIRFRAME		

Ref	erences
Fig. A-GBAAA	Sheet 01
Installation of Insulation Cover on the	
Ozone Converters 100HM and 101HM	

(a) On the ozone converter 101HM, disconnect the tie-rod.

Refer to Fig. A-GBAAA Sheet 01

1 Remove:

1	Nut	MS21043-3	Item (3)	Discard
1	Washer	ASNA0113-48CA	Item (4)	Retain
1	Bolt	NAS6704U10	Item (5)	Retain

(b) Move the disconnected end of the tie-rod away from the ozone converter 101HM.

(3) Subtask 211214-831-202-001 - Install the Insulation Cover on the Ozone Converter 100HM and 101HM

Work Zones and Access Panels					
Zone Access/Work location			Access/Work location		
	191	Work location	from Frame 35 to Frame 38		
	192 Work location from Frame 35 to Frame 38				

Manpower Resources				
Manhours	0.50			
Minimum number of person	1			
Subtask elapsed time	0.50			
Skills	AIRFRAME			

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Material necessary to do the job

Kit 21				
ITEM NEW PART N°		QTY (UM) KEYWORD		SEE NOTES
1	D2157230002200	2	INSULATN	
2	NSA935401-12	6	TIE	
3	MS21043-3	2	NUT	

Ref	erences
Fig. A-GBAAA	Sheet 01
Installation of Insulation Cover on the	
Ozone Converters 100HM and 101HM	

(a) On the ozone converter 100HM, install the insulation cover, Item 1.

If necessary, cut the foil to enable the insulation blanket to be fitted around the pressure sensor connectors on the ozone converter.

Refer to Fig. A-GBAAA Sheet 01

1 Install:

1 Insulation Cover D2157230002200 Item 1

- Overlap the insulation cover at the ends of the ozone converter.
- <u>3</u> Attach the hook and loop tape around the ozone converter to secure the insulation cover, Item 1.

NOTE: Make sure that the hook and loop tape is correctly fastened.

4 Install the tie wrap, Item 2, around the ends of the insulation cover, Item 1:

3 Tie-Wrap NSA935401-12 Item 2

5 Re-connect the ozone converter to the tie-rod with:

1 Bolt NAS6704U10 Item (5) Retained at removal

1 Washer ASNA0113-48CA Item (4) Retained at

removal

1 Nut MS21043-3 Item 3

(b) On the ozone converter 101HM, install the insulation cover, Item 1.

If necessary, cut the foil to enable the insulation blanket to be fitted around the pressure sensor connectors on the ozone converter.

Refer to Fig. A-GBAAA Sheet 01

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1 Install:

1 Insulation Cover D2157230002200 Item 1

Overlap the insulation cover at the ends of the ozone converter.

<u>3</u> Attach the hook and loop tape around the ozone converter to secure the insulation cover, Item 1.

NOTE: Make sure that the hook and loop tape is correctly fastened.

4 Install the tie wrap, Item 2, around the ends of the insulation cover, Item 1:

3 Tie-Wrap NSA935401-12 Item 2

5 Re-connect the ozone converter to the tie-rod with:

1 Bolt NAS6704U10 Item (5) Retained at

removal

1 Washer ASNA0113-48CA Item (4) Retained at

removal

1 Nut MS21043-3 Item 3

D. TEST

None

E. CLOSE-UP

(1) Subtask 211214-942-201-001 - Close-up

Work Zones and Access Panels					
	Zone Access/Work location				
	191	Access	Panel 191BB, Panel 191KB		
	192	Access	Panel 192FB, Panel 192KB		

Manpower Resource	es
Skills	AIRFRAME

References			
Aircraft Maintenance Manual (AMM)	Task 53-35-13-400-002		

- (a) Make sure that the work areas are clean and clear of tools and other items of equipment.
- (b) Install the access panels 191BB, 191KB, 192FB and 192KB, refer to AMM Task 53-35-13-400-002.
- (c) Remove the warning notice(s).

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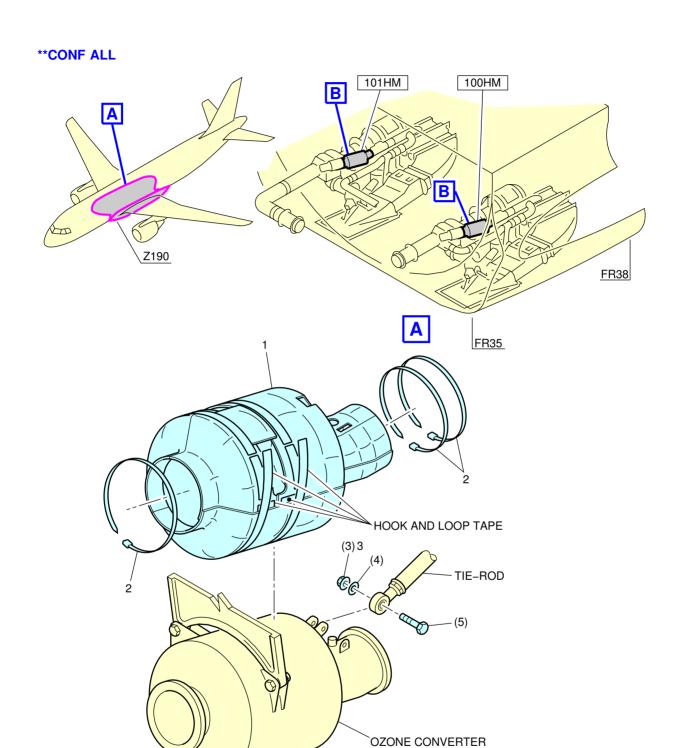


Figure A-GBAAA - Sheet 01
Installation of Insulation Cover on the Ozone Converters 100HM and 101HM

N_SB_211214_6_BAAA_01_01

B TYPICAL

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SERVICE BULLETIN REPORTING SHEET

TITLE: AIR CONDITIONING - AIR COOLING - INTRODUCE INSULATION COVER ON ALL OPTIONAL OZONE CONVERTERS

MODIFICATION No.: 155206K17084

Please complete the appropriate item (A or B):

A - SB WILL BE embodied YES/NO (if NO please comment)

If YES, aircraft concerned (as per SB effectivity by default) and planned dates (month/year) of embodiment:

B - SB HAS BEEN embodied on aircraft:

Operator comments:

From Airline: Name/Title: Signature:

Date:

If operational documentation is affected (see Paragraph 1.K of this SB): If information is needed prior to next normal revision or prior to SB embodiment, please indicate required service(s):

Either: Modification Operational Impact (MOI), if available

YES/NO

Or: Intermediate revision

YES/NO

<u>Important Information:</u> This SB will only be incorporated in your maintenance and operational documentation if this sheet is returned to Airbus and signed by a duly authorised representative. With the next feasible revision, this will result in

- Updating of maintenance documentation to show pre and post SB data.
- Updating of maintenance and operational documentation to show post SB data after embodiment.

If this SB requires previous or simultaneous accomplishment of other SBs, Airbus shall automatically include them in the manual revisions. Refer to SIL 00-037 for detailed information.

Please return this completed sheet to:

AIRBUS
CUSTOMER SERVICES DIRECTORATE
1 Rond Point Maurice Bellonte
31707 BLAGNAC CEDEX FRANCE

Attn: SDC32 Technical Data and Documentation Services

FAX: (+33) 5 61 93 28 06 e-mail: sb.reporting@airbus.com

or via your Resident Customer Support Office.

Alternatively, SB lists via letters or fax are also accepted.

6 DATE: Nov 26/13 SERVICE BULLETIN No.: A320-21-1214

SERVICE BULLETIN QUALITY PERCEPTION FORM

Use this form to tell us what is your perception of the quality of this Service Bulletin. The reported data that you provide us will be used to analyse areas of difficulties and to take corrective action to further improve the quality of our Service Bulletins.

We thank you for the time you have taken in completing this form.

(Please rate on a scale of 1 to 4, with 4 being the highest score)

- Quality rating of this SB	4	3	2	1
- Quality rating of the Accomplishment Instructions	4	3	2	1
- Quality rating of the Illustrations	4	3	2	1
- Is this SB easy to understand ?	Y / N			

If you have had difficulties in the accomplishment of this SB please quote below the area(s) and give a short description of the issue.

	Planning		Material		Instructions		
Χ	Effectivity	Χ	Kit content	Χ	Preparation		
Χ	Reason	Χ	List of Materials Operator Supplied	Χ	Mod/Inspection		
Χ	Manpower	Χ	Industry support	Χ	Test		
Χ	References	Χ	Re-identification	Χ	Close-Up		
Χ	Publication	Χ	Tooling	Χ	Illustrations		
<u>Co</u>	mments:						
Ор	erator:				Date:		
Na	Name/Title:						
Ple	Please return this form to:						
	AIRBUS CUSTOMER SERVICES DIRECTORATE						

CUSTOMER SERVICES DIRECTORATE
1 Rond Point Maurice Bellonte
31707 BLAGNAC CEDEX FRANCE

Attn: SEM4 Service Bulletins Management

FAX: (33) 5 61 93 42 51

Or via your Resident Customer Support Office.

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