SERVICE BULLETIN SUMMARY

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

Tel: (33) 5 61 93 33 33 Telex: AIRBU 530526F Fax: (33) 5 61 93 42 51

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

ATA SYSTEM: 21

TITLE: AIR CONDITIONING - COCKPIT AND CABIN TEMPERATURE CONTROL

- INTRODUCE MODIFIED TRIM AIR VALVE

**CONF ALL

MODIFICATIONS

	MODIFICATION CLASSIFICATION						
MAJOR	None						
MINOR	154549K16372						

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

Operational experience has shown that high temperature of the Trim Air Valve (TAV) actuator could affect the TAV operation. As a consequence, the reduction of TAV actuator temperature has been achieved by increasing the electrical motor resistance.

This Service Bulletin is published to advise all operators of the issue of the LIEBHERR Service Bulletin No. 1320A-21-01 which modifies three TAVs accordingly.

The accomplishment of this Service Bulletin will increase the reliability of the TAV actuator.

GENERAL EVALUATION

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

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

MATERIAL PRICE INFORMATION

No Material

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EFFECTIVITY

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

03X	U80	09S	11S	14S	15S	15T	16T	17S	17W	19R	26S	27V
29S	31V	31X	35T	35U	36V	38W	43S	46U	47Y	52T	53Z	54S
56W	59Z	62X	64S	66X	69X	73W	74T	79W	80X	83V	83W	85T
86W	86Z	89T	91X	93V	95V	95W	96S	97U	98W	98X	99W	AAF
AAL	AAR	AAW	AAY	ABL	ABQ	ABY	ACA	ACI	ADH	ADR	AEE	AFL
AFR	AGC	AHY	AIB	AIJ	AJM	ALK	AMC	AMU	ANA	ANZ	APJ	ARR
ART	ARU	AUA	AUH	AVA	AWC	AWM	AWW	AXM	AZA	AZI	AZW	B2V
BAL	BAW	BEC	BEL	BER	BGF	BGH	BGY	BHP	BIE	BJN	BKP	BRS
C2C	C8J	C9G	CBJ	CCA	CCM	CEB	CEF	CES	CHB	CHH	CIB	CQH
CQN	CRK	CSA	CSC	CSN	CSZ	CTN	CTV	CUA	CYP	D2F	DAL	DCS
DKH	DLH	DNV	DQA	DRK	EAA	EDW	EIN	ETD	ETJ	EVA	EZD	EZY
F2I	FFT	FGE	FHY	FIN	FLI	FPY	FRN	G2X	G4I	G8E	GAF	GAP
GFA	GIA	GLG	GMI	GMR	GOW	GWI	GZQ	HAY	HCC	HDA	HKE	
												HKJ
HRM	HVN	I2L	I2T	IAC	IAW	IBE	IBS	IGO	IRA	IRM	ISR	ISS
IYE	JAG	JAS	JAV	JBU	JJP	JKT	JSA	JST	JZR	KAC	KCA	KFR
KGL	KHO	KHV	KKK	KMF	KNE	KOM	KZR	LAA	LAN	LAO	LBT	LBY
LFO	LJB	LLC	LLM	LLP	LMJ	LMU	LZB	M2I	MAC	MAU	MDL	MEA
MJF	MJN	MLD	MLM	MLR	MMA	MML	MON	MSC	MSR	MXA	MYX	NIA
NKS	NLV	NLY	NMA	NMB	NVD	NVR	NWS	OAL	OAW	OBS	OHY	ONE
ORF	OZW	PAL	PIC	PTR	PVJ	QAF	QTR	R1T	RAM	RBA	RBG	RFJ
RJA	RJD	RKM	RNV	ROT	RYW	RZO	SAA	SAI	SAS	SBI	SDM	SFJ
SFW	SGG	SGX	SHJ	SIA	SKU	SLK	SMX	SND	SNX	SOL	SRQ	SUD
SVA	SVR	SVW	SWM	SWR	SYA	SYR	TAE	TAI	TAK	TAM	TAP	TAR
TBA	TBJ	TBZ	TCW	TCX	TGW	THA	THY	TJS	TNA	TWJ	TXP	UAE
UAL	UEA	UKN	ULG	UNA	USA	UTA	UZB	VIM	VJC	VKG	VLE	VLG
VLK	VOI	VRD	VRE	VVC	WAU	WGT	WHT	WRC	WTJ	WZZ	XLF	

CONCURRENT REQUIREMENTS

None

REFERENCES / REPERCUSSIONS

TFU	21.60.00.007
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

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SERVICE BULLETIN SUMMARY

MANPOWER

Task 211213-831-848-001: Modification					
TOTAL MANHOURS	6.00				
ELAPSED TIME (HOURS)	6.00				
Additional manhours related to Vendor SB; refer to:					
Modify the Trim Air Valves	LIEBHERR Service Bulletin No.				
	1320A-21-01				

APPENDICES

None

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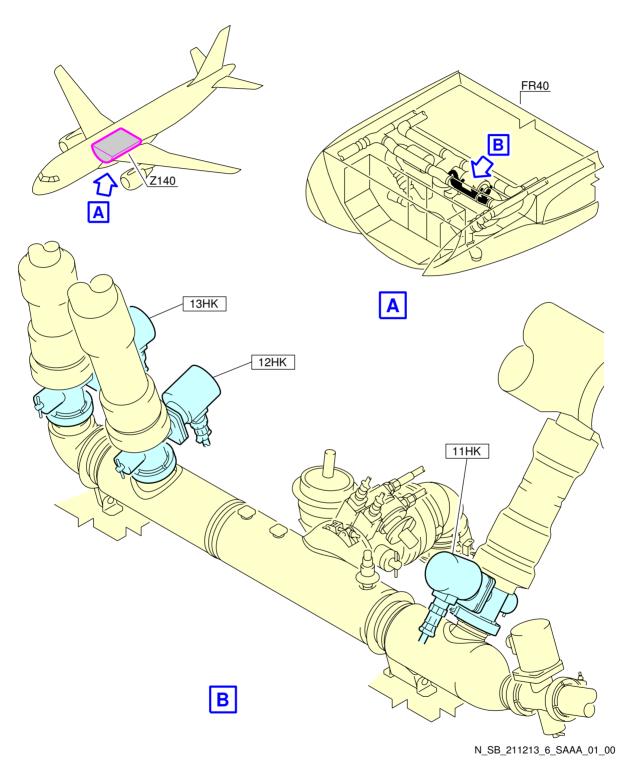


Figure A-GSAAA - Sheet 01

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ATA SYSTEM: 21

TITLE: AIR CONDITIONING - COCKPIT AND CABIN TEMPERATURE CONTROL - INTRODUCE MODIFIED TRIM AIR VALVE

MODIFICATION No.: 154549K16372

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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	321-111	321-112	321-131	321-211	321-212
321-213	321-231	321-232					

(2) Effectivity by MSN

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0029 0045-0059 0061 0063-0078 0080-0090 0093-0097 0099 0103-0104 0109-0127 0135-0138 0140-0142 0145 0147-0150 0152-0155 0157-0162 0164-0176 0178-0179 0181-0183 0185 0189-0190 0192 0194-0195 0197-0224 0229-0237 0239-0246 0248-0256 0258-0270 0272-0279 0281-0285 0287 0289-0303 0306-0312 0314 0316-0326 0328-0335 0339-0343 0345-0351 0353-0362 0364 0366-0373 0375-0376 0378 0380-0396 0398-0424 0426-0432 0434-0436 0438-0452 0454-0466 0468-0480 0482-0535 0537-0546 0548-0601 0603-0614 0616-0627 0629-0631 0633-0707 0709-0752 0754-0788 0790-0955 0957-1043 1045-1112 1114-1185 1187-1217 1219-1277 1279-1373 1375-1728 1730-1767 1769-1812 1814-1821 1823-1829 1831-1918 1920-1929 1931-1984 1986-1991 1993-2024 2026-2050 2052-2110 2112-2217 2219-2275 2277-2423 2425-2499 2501-2721 2723-3091 3093-3109 3111-3162 3164-5730 5732-5733
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(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
08U	4151
09S	1300 1353
11S	4211
14S	0283
15S	1589
15T	0764 1494 2910 3164
16T	4679
17S	3333
17W	3046
19R	0421
26S	0368 0424 0438
27V	3826
29S	0291 0292
31V	0164 0332 0420 0436 1048
31X	2192 4319
35T	5040
35U	0088
36V	0136
38W	1194
43S	4650
46U	2906 2952 2982 3275 3296 3332 3674 3734 3986 4053 5218
47Y	0394
52T	1599
53Z	1468
54S	5261
56W	0250 0335
59Z	1556
62X	3402
64S	0557 0597
66X	0230 1283 1305
69X	0219 0449 0588 0733 0747 2214 2249
73W	0087
74T	2165 4228 4768
79W	3751
80X	2748
83V	0369
83W	4024
85T	0234
86W	0384

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OPERATOR	MSN
86Z	0168 0460 0461 0466 0497 1429
89T	3356
91X	2837
93V	3932
95V	3379
95W	2949
96S	1068 1145 2176
97U	4842
98W	0103 0109 0120 0222 0348 0441
98X	0590 0601
99W	1333 3038
AAF	0639 0808 0823 1006 1846 2870 3136 3242 3289 3852 4268 4589
AAF	4675
AAL	5327 5678 5698 5704
AAR	0802 1174 1356 1511 1636 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
AAW	3224 3236 3615 3657 4004 4203 4330 4489 4521 5414 5448
AAY	1255 2224 2319 2387
ABL	1227 1970 2045 2943
ABQ	1467 3364 3385 3388 3403 3974
ABY	3218 3246 3444 3476 3626 3802 3840 3925 4061 4243 4310 4468
	4524 4806 4848 4890 4958 5017 5143 5206 5276 5307 5423 5452
	5502 5576 5718
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
	0785 0800 0813 0817 0829 0831 0840 0845 1562 1577 1602 1611
	1623 1632 1638 1673 1719 1726 1742 1748 1772 1783 1811 1853
	1864 1874 1940 2018 2145
ACI	2152
ADH	3138 3161 3328 3502 3515 3532 3643 3666 3695
ADR	0444 4282 4301
AEE	2468 3033 3066 3074 3162 3316 3365 3392 3423 3439 3462 3478
	3526 3527 3709 3714 3745 3748 3753 3773 3785 3812 3820 3829
	3850 3878 3990 4065 4094 4165
AFL	2052 2069 2072 2091 2093 2106 2116 2133 2144 2151 2163 2179
	2222 2233 2243 2330 2337 2342 2875 2903 2912 2920 2947 2957
	2965 3052 3063 3157 3191 3267 3281 3298 3334 3336 3373 3410 3511 3545 3574 3627 3631 3640 3644 3699 3711 3778 3786 3789
	3794 3823 3835 3838 3923 3942 3954 3998 4058 4074 4099 4103
	4116 4133 4148 4160 4453 4461 4498 4500 4579 4625 4649 4656
	4684 4692 4712 4835 5044 5059 5271 5421 5536 5565 5572 5578
	5580 5585 5614 5720

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OPERATOR	MSN
AFR	0061 0063 0115 0145 0155 0214 0236 0237 0239 0270 0278 0285
ALIT	0287 0491 0498 0509 0521 0529 0544 0598 0600 0608 0618 0625
	0637 0777 0796 0938 0985 0998 1000 1020 1025 1036 1133 1151
	1169 1176 1190 1201 1216 1267 1271 1299 1344 1404 1415 1444
	1449 1471 1476 1502 1505 1524 1616 1622 1640 1645 1658 1677
	1691 1699 1733 1859 1873 1879 1885 1894 1900 1924 1938 1949
	2035 2059 2071 2081 2100 2109 2140 2317 2344 2350 2456 2582
	2601 2686 2705 2716 2721 2750 2918 2938 2951 2961 2967 2972
	3008 3009 3051 3098 3372 3399 3401 3419 3420 3441 3470 3777
	3795 3814 3825 3859 3884 3930 4063 4084 4105 4137 4139 4241
	4251 4267 4295 4298 4335 4402 4601 4604 4664 4714 4747 4800
	4820 4901 4908 5084 5129 5719
AGC	0190
AHY	0331 2487 2516 2588 2685 2788 2846 2853 2865 2991 3006
AIB	0138 5295
AIJ	0169 0707 1132 1162 1179 1244 1259 1308 1322 1747 1780 2048
	2189 2227 2539 3021 3123 3149 3160 3286 3304 3312 3374 3508
	3514 3667 3690 4235 4304 4411 4730 4733 4924 4933 5163 5221
	5358 5372 5653 5665
AJM	0624 0626
ALK	2345 2564 2584 2908 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 5459 5523
ANA	0167 0170 0212 0245 0300 0328 0383 0413 0482 0501 0507 0531
	0534 0549 0554 0658 0669 0685
ANZ	2085 2090 2112 2130 2148 2153 2173 2257 2297 2445 2533 2594
	2663 4553 4584 4884 4926 5629 5682
APJ	4887 4936 5015 5166 5304 5384 5440 5540 5640 5724
ARR	0913
ART	0142 0279 0310 0311 0333 0359 0426 0533 0936
ARU	0573 0582
AUA	0552 0570 0581 0768 0776 0797 0920 0935 1137 1150 1189 1385
	1387 1458 1478 1504 1553 1678 1735 1931 1937 2009 2131 2174
	2262 2416 2494 2547 2652
AUH	2403
AVA	1612 1618 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
AWC	5195 5360 5398 5454 5477 5622 5632 2791
AWM	0765
AWW	0446

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OPERATOR	MSN
AXM	2425 2612 2633 2656 2683 2699 2760 2816 2826 2842 2881 2885
7000	2926 2944 2956 2989 3000 3018 3064 3117 3140 3154 3173 3182
	3194 3201 3223 3232 3261 3277 3291 3299 3327 3338 3353 3370
	3394 3404 3427 3448 3477 3486 3489 3505 3521 3536 3549 3568
	3576 3582 3610 3628 3648 3679 3701 3715 3729 3765 3776 3813
	3875 3963 3997 4019 4035 4070 4079 4088 4098 4126 4147 4263
	4278 4293 4302 4333 4346 4361 4367 4386 4390 4404 4426 4458
	4462 4477 4486 4557 4571 4582 4793 4797 4807 4882 4889 4917
	4964 4969 4979 4980 4989 5098 5137 5149 5153 5165 5200 5215
	5272 5283 5325 5344 5347 5353 5359 5397 5420 5428 5430 5431
	5468 5505 5547 5593 5619 5627 5657 5703 5706
AZA	0434 0477 0488 0494 0495 0513 0514 0515 0516 0524 0526 0532
	0576 0583 0586 0593 0599 0819 0848 0940 0951 0959 0999 1138
	1168 1217 1220 1448 1457 1473 1480 1489 1722 1740 1745 1770
	1779 2033 2057 2074 2083 2086 2101 2127 2869 2932 3076 3079
	3080 3115 3178 3213 3295 3343 3362 3412 3464 3482 3563 3598 3609 3732 3815 3831 3846 3885 3906 3921 3956 3976 3978 4075
	4108 4119 4143 4152 4195 4249 4520 4523 4536 4759 4764 4859
	4875 4910 5018 5130 5294 5383 5424
AZI	0527
AZW	0630 1973
B2V	0185
BAL	2335 3492
BAW	1014 1082 1115 1118 1142 1177 1193 1197 1222 1225 1232 1236
	1239 1258 1261 1279 1295 1329 1338 1380 1384 1418 1423 1424
	1606 1661 1665 1687 1689 1690 1696 1708 1711 1754 1760 1782
	1814 1829 1871 1883 1899 1907 1910 1958 1987 2038 2040 2098
	2188 2190 2194 2305 2320 2323 2324 2351 2363 2389 2429 2441
	2466 2536 2653 2694 2697 2720 2799 2981 3049 3081 3235 3254
	3290 3301 3314 3351 3468 3499 3512 3550 3607 3649 3697 3703
	3721 3726 3912 3926 4007 4039 4185 4238 4265 4306 4464 4551
	4725 4791 4975 5634
BEC	3199
BEL	0644 1086 1102 1160 1336 1388 1441 1493 1797 1838 1963 2196
	2230 2392 2400 2810 3255 3790 4275
BER	1629 1966 1988 1994 2005 2619 3055 3093 3121 3415 3447 3516
	3708 3728 3749 3865 3945 4013 4101 4161 4269 4291 4329 4334
	4433 4510 4565 4606 4674 4728 4743 4988 5038 5126 5133 5191
	5246 5252
BGF	3188
BGH	0349 1087 2844 2863 3139
BGY	1450 1723 2118 2645
BHP	2968 3245 3422 3604 4033 4187 4294 4631
BIE	0519 0827 0891
BJN	3617 4956
BKP	2254 2310 2417 2509 2531 2634 2648 2660 2664 3421 3424 3454
	3694 3759 3911
BRS	2263
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OPERATOR	MSN
C2C	5088
C8J	5545
C9G	0246 0710 0772 1676
CBJ	4388 4428 5630 5722
CCA	0876 0921 1296 2000 2007 2015 2172 2202 2205 2237 2269 2285
CCA	2293 2298 2454 2499 2508 2525 2532 2545 2551 2559 2614 2643
	2805 2819 2839 2847 2890 3195 3200 3215 3221 3226 3250 3307
	3329 3337 3461 3506 3523 3601 3623 3653 3655 3665 3678 3722
	3725 3766 3806 3940 3973 4022 4031 4062 4091 4131 4180 4221
	4283 4317 4318 4348 4377 4472 4473 4494 4538 4566 4593 4617
	4719 4771 4775 4803 4829 4834 4873 4895 4900 4949 4963 4985
	4997 5014 5032 5054 5091 5124 5174 5199 5265 5346 5352 5386
	5419 5432 5435 5568 5573 5600 5664 5690
CCM	3882 3952 4463 4478
CEB	2556 2586 2625 2638 2786 2790 2821 2831 2852 2876 2994 3048
	3272 3433 3472 3487 3646 3762 3767 4447 4508 4537 4574 4852
	4861 4870 4927 4993 5045 5067 5250 5320 5381 5442 5498 5669
	5687
CEF	2801 3085
CES	0665 0754 0828 0838 0854 0883 0897 0909 0914 0925 0939 0967
	0984 0986 1005 1028 1030 1041 1070 1072 1093 1108 1285 1303
	1312 1316 1330 1345 1357 1361 1377 1386 1532 1541 1542 1551
	1601 1603 1639 1906 1911 1964 1981 2022 2034 2036 2049 2056
	2068 2155 2171 2182 2199 2212 2219 2221 2235 2239 2244 2274
	2309 2315 2437 2451 2478 2493 2498 2543 2549 2562 2591 2606
	2627 2693 2757 2825 2882 2895 3168 3170 3186 3197 3233 3247
	3249 3262 3471 3481 3559 3593 3611 3612 3613 3639 3650 3677 3682 3692 3716 3775 3793 3797 3870 3904 3929 3937 3965 3969
	4027 4037 4043 4045 4111 4144 4186 4198 4209 4220 4239 4240
	4252 4297 4309 4340 4342 4355 4374 4423 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
CHB	5626 5679
CHH	2475 2557 2561 2581 2611 2617 2644 2733 2746 2849 2891 2985
	3285 3520 3548 3561 3578 3580 3638 3768 3842 3849 3851 3914
	3958 3982 4042 4262 4410 4412 4440 4452 4471 4482 4483 4505
	4513 4522 4529 4540 4569 4580 4600 4602 4644 4677 4686 4687
	4739 4825 4995 5006 5008 5072 5100 5105 5114 5117 5172 5185
	5216 5220 5331 5471 5656
CIB	0774 0809 0884 0894 0905 0957 0971 1381 1402 1416 1437 1607
	1968 5603
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
2011	5562
CQN	0696 0698 0704 0705 3836 3876 3901 3903 3941

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OPERATOR	MSN
CRK	5147 5189 5260 5416 5514 5544
CSA	2719 2758 2789 3031 3043 3060 3094 3097 3406 3436 3452 3660
OSA	3892 4258 4713
CSC	0540 0550 0551 0556 0591 0878 0902 0912 0915 0919 1007 1013
030	1500 2313 2348 2396 2431 2510 2534 2597 2639 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
CSN	0709 0712 0718 0720 0722 0849 0859 0881 0895 0900 0950 0966
	1035 1039 1057 1596 1614 1776 1788 1971 1974 1986 1995 2004
	2008 2067 2080 2200 2203 2232 2273 2354 2361 2371 2408 2426
	2435 2484 2505 2506 2511 2519 2521 2530 2541 2546 2554 2555
	2558 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 5645 5655 5671 5693
	5713 5730
CSZ	2672 2684 2841 2905 2909 2935 2973 2980 3131 3132 3153 3206
	3366 3383 3435 3440 3456 3528 3599 3696 3698 3756 3848 3855
	3887 3898 3935 3971 4010 4028 4159 4176 4208 4214 4226 4300
	4866 4876 4897 4920 4929 4977 4986 5002 5082 5110 5176 5369
	5521 5550 5589 5639
CTN	0258 0767 0833 1009 1029 1237 1252
CTV	5511 5541 5551 5556 5560 5574 5597
CUA	5023
CYP	0256 2108 2275 2334 2343 2359 2383 2718 4197
D2F	0243 0251 0326 0411 0478
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
	1833 1839 1875 1897 1923 1959 1976 1982 1990 2002 2013 2026
	2039 2047 2082 2087 2092 2095
	2000 2071 2002 2001 2002 2000

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SERVICE BULLETIN

OPERATOR	MSN
DCS	1053 3243 3632
DKH	2975 3027 3234 3268 3368 3485 3596 3605 3967 3984 4064 4102
ואח	4154 4276 4401 4429 4573 4587 4652 4833 4840 4981 5013 5070
	5071 5131 5226 5329 5339 5455 5491 5674
DLU	0069 0070 0071 0072 0078 0083 0086 0093 0094 0104 0110 0111
DLH	0116 0117 0135 0137 0147 0161 0162 0172 0200 0201 0202 0209
	0216 0217 0218 0267 0268 0269 0346 0382 0401 0412 0458 0468
	0473 0474 0484 0493 0502 0505 0518 0560 0563 0564 0567 0595
	0609 0610 0616 0623 0627 0636 0641 0651 0652 0679 0689 0692
	0694 0699 0700 0717 0723 0729 0738 0744 0794 0853 0860 0875
	0887 0901 1016 1080 1161 1172 1188 1214 1260 1273 1337 1365
	1367 3265 3339 3360 3387 3434 3592 3625 3864 3936 3987 4005
	4016 4047 4054 4073 4085 4097 4120 4141 4153 4182 4191 4261
	4289 4324 4332 4360 4363 4398 4449 4455 4511 4545 4560 4585
	4607 4626 4672 4710 4753 4792 4796 4819 4841 4881 4916 4976
	4994 5028 5049 5087 5122 5181 5186 5203 5239 5284 5293 5413
	5425 5441 5487 5497 5525 5557 5601 5635 5658 5694
DNV	1630 1805 1808 1841 2241 2751 3065
DQA	2347
DRK	2306 2346 3950
EAA	0386 0445
EDW	0942 0947 1026 2024
EIN	0926 1023 1094 1229 1242 1394 1443 1983 2001 2191 2206 2217
	2250 2256 2272 2294 2364 2374 2399 2409 2411 2432 2486 2542
	2583 2635 3054 3102 3129 3169 3318 3345 3377 3501 3755 3781
	3857 4572 4634 4678 4715
ETD	0350 1944 1945 1947 1955 2167 3004 3050 3676 3693 3713 3902
	4066 4077 4124 4934 5095 5348 5407 5714
ETJ	0325 0428
EVA	5328 5354 5377 5485
EZD	0667 0743 0872 0874 1074 1286 2137 2141 2147 2576 3621 4533
EZY	2037 2043 2050 2053 2062 2120 2170 2181 2184 2245 2265 2271
	2289 2300 2353 2360 2370 2385 2398 2402 2412 2420 2427 2450
	2463 2471 2477 2481 2492 2495 2503 2512 2514 2527 2528 2538
	2565 2578 2605 2636 2646 2677 2681 2691 2702 2709 2715 2727
	2729 2735 2742 2744 2754 2765 2769 2777 2779 2782 2795 2803
	2812 2818 2827 2829 2854 2860 2866 2873 2884 2923 2946 2959
	3003 3036 3041 3053 3059 3061 3082 3084 3088 3090 3118 3122
	3134 3137 3176 3184 3411 3413 3426 3432 3442 3466 3537 3544
	3555 3569 3571 3608 3634 3675 3683 3702 3720 3735 3742 3746
	3754 3763 3774 3788 3799 3805 3808 3810 3824 3843 3844 3845
	3854 3871 3888 3909 3913 3922 3946 3953 3975 3979 3991 4006
	4012 4014 4034 4040 4048 4056 4069 4076 4080 4087 4125 4129
	4132 4157 4179 4196 4219 4233 4234 4250 4286 4313 4327 4380
	4385 4418 4425 4427 4437 4444 4451 4554 4556 4588 4591 4624
	4635 4636 4640 4646 4667 4676 4680 4693 4705 4708 4717 4721
	4740 4744 4749 4778 4781 4785 4787 4837 5019 5020 5046 5052
	5056 5064 5104 5111 5113 5116 5138 5146 5150 5187 5201 5224
FOL	5236 5249 5289 5318 5319 5542 5592 5638 5688 5702
F2I	0085 0148 0204 0215 0249 0301 0357 0373 0391 0724 0758

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SERVICE BULLETIN

OPERATOR	MSN
FFT	1515 1579 1583 1615 1660 1684 1759 1781 1786 1803 1806 1860
	1939 1943 1980 1991 1997 2010 2012 2017 2019 2030 2103 2198
	2209 2236 2240 2253 2258 2260 2287 2318 2325 2406 2448 2483
	2518 2806 2836 2857 3389 3431 4127 4204 4253 4254 4272 4307
	4562 4641 4668 4688 4704 4727 4745 5661
FGE	1439 3834
FHY	0580 0771 0855 2524 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
FLI	2186 5079
FPY	0112 0189 0342 0395
FRN	0647 0660
G2X	0347 0674
G4I	1157 1795 2507
G8E	0221 0294 0594 0605 1464 2700 2763
GAF	3897 4060
GAP	4415 4504 4777 4907 4984 5007 5012 5103 5310
GFA	4030 4059 4083 4146 4158 4188 4218 4255 4502 4541 4780 4827
	4860 4865 5025 5074 5171 5175 5180 5257 5321 5336
GIA	0839 0892 1635 2598 2692 3147 3148 3861 4961 5351 5379 5394
	5399 5415 5571
GLG	1866 1872 1882 1925 2078 2126 4379 4547
GMI	3019 3202 3407 3589 3818 4663 4691 5085
GMR	1407
GOW	3256 3306 3597 3616 3798 3827 3900 3915 4399 4438 5016 5112
	5232 5463 5552 5675
GWI	0646 0654 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
070	5535 5569
GZQ	1878
HAY	0716 0888 2745 3533 3560
HCC	2180 4699
HDA	0633 0756 0784 0812 0930 0993 1024 1253 1695 1721 1984 2021
LIVE	2229 2238 2428 4023 4247 5024 5030 5362 5429 4970 5264 5266 5341
HKE HKJ	2706 3073 4878
	0293 0517 0535 0642
HRM HVN	0619 0648 0650 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
I2L	0371 0443 0816 0973 1018
I2T	1631 1682
L	

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SERVICE BULLETIN

OPERATOR	MSN
IAC	0045 0046 0047 0048 0049 0050 0051 0056 0057 0058 0074 0075
	0080 0089 0090 0095 0096 0097 0396 0398 0416 0423 0431 0432
	0451 0469 0486 0490 0492 0499 1668 1718 2593 2624 2629 2907
	3130 3146 3212 3271 3288 3300 3305 3326 3340 3344 3367 3498
	3551 3557 3573 3619 3620 3687 3752 3792 3822 3874 3918 3955
	3970 4002 4009 4020 4029 4052 4078 4089 4096 4121 4138 4155
	4164 4201 4212 4236 4237 4280
IAW	4044 4067 5115 5290 5464
IBE	0173 0223 0274 0356 1021 1027 1047 1119 1154 1180 1247 1262
	1288 1292 1318 1347 1362 1554 1572 1655 1674 1681 1716 1793
	1809 1836 2115 2220 2225 2242 2248 2264 2270 2311 2357 2365
	2381 2391 2472 2488 2563 2599 2736 2756 2889 2996 3078 3179
	3209 3320 3380 3443 3651 3744 5486 5570 5692
IBS	0158 0176 0207 0224 0266 0323 1059 1067 1099 1101 1516 1530
10.0	2104 2143 2807 5501 5590 5729
IGO	3159 3192 3227 3335 3357 3414 3453 3457 3497 3541 3618 3782
	3863 3943 4008 4113 4156 4216 4312 4328 4384 4481 4488 4506
	4518 4535 4552 4603 4609 4614 4630 4637 4752 4757 4762 4813
	4818 4868 4888 4947 4954 4965 5027 5036 5076 5080 5090 5092
	5094 5155 5190 5230 5231 5259 5262 5291 5298 5313 5365 5411
IDA	5437 5460 5473 5476 5507 5537 5577 5641 5676 5683 5712 5727
IRA	0303 0312 0345 0530 0575 0857 2054
IRM	1202
ISR	4354 4413
ISS	0737 0749 1125 1198 1823 1896 2102
IYE	4653 4690
JAG	4503 5478
JAS	0029 2061
JAV	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
JJP	5093 5145 5161 5245 5274 5281 5355 5492 5499 5520 5598 5618
	5649 5695 5701 5717 5732
JKT	5532 5685 5725
JSA	2316 2356 2423 2453 2604 4443 4515 4772 4786 4872 4914 5305
	5323 5390 5433 5472 5482 5708

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SERVICE BULLETIN

OPERATOR	MSN
JST	1195 1408 2169 2185 2197 2292 2299 2322 2329 2338 2455 2515
001	2526 2537 2573 2587 2600 2608 2642 2651 2703 2717 2766 2787
	3474 3495 3547 3668 3717 3743 3783 3899 3916 3917 3948 4177
	4178 4229 4245 4257 4303 4343 4356 4434 4460 4466 4495 4497
	4527 4899 4922 5039 5211 5270 5311 5334 5489 5566 5631
JZR	2569 2792 2822 3919 3939 4162 5033 5625
KAC	0181 0182 0195 2046 3957
KCA	0407 0662
KFR	2366 2376 2443 2621 2650 2817 2856 2874 2916 2919 2922 2933
	3012 3105 3302 3322
KGL	0663 0668 0787 0852 0954 1060 1293 2029 2077
KHO	0354 0361 0376 0393 0414
KHV	2480 5343 5427
KKK	0604 0614 0675 0761 0968 0974 1124 1438 1451 1503 1730 1950
	1953 2747 2753
KMF	0480
KNE	2123 2776 3238 3361 3396 3425 3475 3530 3787 3817 3868 3889
	3894 3933 4055 4735 5716
KOM	0409
KZR	1042 1204 2128 2828 3141 3484 3519 3614 5357 5401 5404 5613
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
1.40	5583 5586 5686 5707
LAO	4596 4639 5356 5396
LBT	0400 0793 0937 0970 0995 1121 1175 1597 1744 3480 4623
LBY	0558 0561 1098 1727 2277
LFO	0659
LJB	3985
LLC	0415 1715 2987
LLM	1054 1918 1969 1993 2413 2419 2439
LLP	0739 1411 2016
LMJ	1868
LMU	0666 0932 0943 0977 1366
LZB	2540 2596 3028 3309 3564 3780
M2I	1017
MAC	3809 3833 4539 4568
MAU	1592 1936
MDL	4918 4973 5073 5335 5375 5426 5449 5605
MEA	1956 1967 1977 2055 3736 3804 3837 4296 4339 4632 5000 5152 5162 5253
MJF	4353
IVIOI	+050

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SERVICE BULLETIN

OPERATOR	MSN
MJN	3723 4117 4795
MLD	0622 0741
MLM	2592 3363 4199 4470 4622 5538
MLR	1946 2731 3106
MMA	0113 0114 0295 0316 1791
	1706 1750
MML	
IVION	0389 0392 0864 0983 1015 1045 1081 1153 1207 1320 1370 1413
	2793 3546 3575 5526 5581 5582 5606
MSC	2937 2966 3282 3323
MSR	0165 0166 0178 0194 0198 0322 0351 0366 0680 0687 0715 0725
IVIOIT	2070 2073 2079 2088 2094
MXA	0252 0259 0260 0261 0275 0276 0296 0320 0321 0353
MYX	0566
NIA	3183 3219
NKS	2433 2470 2473 2476 2485 2490 2560 2567 2590 2603 2622 2673
INICO	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
NLV	1998 2157 2210 2496 2502
NLY	2529 2668 2749 2867 2902 3504 3661 3689 3830 4231 4316 4368
	4581 4594 4611 4648 5522 5648
NMA	1697 1732 2676
NMB	3346 3586 5366 5400
NVD	0211 0299 0375 0419 0528 1263 1778
NVR	2211 2216 2410
NWS	1219 1233 1276 1843 2649 2927 3034 3120
OAL	3895 3905
OAW	1886
OBS	3758 5642
OHY	0364 0385 0455 0471 0496 0543 0640 0661 0676 0792 0806 0810
	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
ORF	2566 4992
OZW	0429 1922
PAL	0706 0745 2162 2183 2878 2925 2954 3087 3108 3187 3205 3273
	3310 3455 3553 3579 3652 3731 5081 5140 5315 5371 5715
PIC	0990 2331 2340 2670 4459
PTR	0459 0537
PVJ	3542
QAF	0927 1335 3994 4114 4170

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SERVICE BULLETIN

OPERATOR	MSN
	1487 1566 1648 1656 1773 1895 1928 1957 2097 2107 2121 2138
QTR	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
R1T	1908
RAM	2064 2076 2726 3070
RBA	2023 2032 2135 2139 2195 3071
RBG	2764 3152
RFJ	0814
RJA	2953 3428 3522 3685 3803 3832 4670 4817 4853 5099 5128 5177
NJA	15367
RJD	5277
RKM	2158 3907
RNV	0229
	2931 2955 3220 3225
ROT	
RYW	0569 3458
RZO	0795 2011 2390 3891
SAA	2268 2281 2308 2326 2355 2375 2379 2418 2438 2469 2501 4990
0.41	5011 5637 5680
SAI	0542 0877 1497 2027 3089 3270
SAS	1183 1383 1587 1619 1642 1675 1798 1807 1817 1848 2850 2883
0.01	2888 2911 2958 2990 3086 3231 3292
SBI	1071 1078 1090 1091 1126 1129 1131 1149 1164 1167 1819 1870
	2028 2279 2369 2373 2464 2474 2618 2623 2641 3446 3473 3490 3494 3866 3880 4032 4150 5001 5026 5031 5106 5134 5167 5559
	5607
SDM	0427 0525 0649 1130 1488 1560 1578 1654 1657 1679 1743 1753
ODIVI	1761 1767 1851 1863 1876 1890 2465 2497 2879 2913 2930 2964
	3044
SFJ	2620 2658 2695 3025 4555 4720 5102 5393 5512 5652
SFW	0671 0994
SGG	0799 0879 1390
SGX	1605
SHJ	0910
SIA	0244
SKU	0179 0406 0447 1400 1523 2119 2129 2251 2283 2378 2380 2436
SKU	2460 2548
SLK	0899 0969 1228 1422 1561 1698 2058 2252 2517 2568 2775 3104
SLIK	3570 3821 4118 4215 4259 4457 4701 5050 5089 5296 5531
SMX	2995
SND	1880 1999
SNX	0289
SOL	0302
SRQ	3757 3801 5188 5194 5228
SUD	3040

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SERVICE BULLETIN

OPERATOR	MSN
SVA	4015 4057 4081 4090 4092 4104 4115 4122 4135 4273 4314 4337
OVA	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	0140 0157 0203 0220 0735 0775 0815 0841 0991 1012 1063 1152
	1199 1484 1720 1751 1777 1884 1901 1905 2117 2166 2175 2187
	2278 2327 2349 2707 2998 3099 3107 3189
SVW	2921 3100 3133 3856 5445
SWM	0430 0476
SWR	0520 0522 0541 0545 0553 0559 0562 0574 0577 0578 0585 0596
	0603 0612 0621 0635 0643 0664 0673 0681 0701 0703 0713 0727
	0734 0782 0987 1144 1762 1951 2134 4534 4618 4673 5037 5069
	5518 5567
SYA	3853 3872
SYR	0886 0918 1032 1076 1085 1117
TAE	0657 0934 0946 0949 1339 1368 1934 2084 2659
TAI	1066 1334 1598 1625 1952 2282 2301 2339 2434 2444 2553 2610
	2687 2862 2917 3042 3057 3103 3113 3248 3276 3378 3418 3510
	3538 3577 3581 3869 4906 4944 5068 5219 5238 5243 5280 5333 5406
TAK	2442 2446 3171 3331
TAM	0334 0440 0976 1010 1092 1096 1103 1139 1143 1158 1215 1246
173IVI	1251 1376 1459 1486 1518 1575 1580 1591 1593 1595 1608 1613
	1628 1652 1663 1672 1692 1703 1717 1757 1771 1775 1801 1802
	1804 1818 1825 1826 1827 1831 1832 1835 1837 1855 1857 1888
	1891 2014 2044 2372 2393 2467 2513 2661 2734 2737 2783 2784
	2838 2859 2896 2904 2924 3002 3032 3035 3047 3058 3111 3156
	3180 3211 3222 3229 3240 3266 3278 3284 3294 3313 3325 3391
	3540 3565 3588 3594 3595 3630 3658 3662 3710 3727 3733 3750
	3761 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
TAD	5643 5654 5666
TAP	0629 0750 0755 0763 0790 0821 0837 0870 0906 0917 0933 0945 0960 0979 0982 1034 1100 1106 1120 1127 1165 1181 1206 1231
	1307 1399 1667 1713 1756 1765 1799 1816 2178 3769 3883 4021
	4095 4106 4145
TAR	0119 0123 0124 0205 0370 0390 0402 0511 0869 0880 0958 0975
1741	1187 1479 1700 3096 4344 4689 5204 5474 5610
TBA	4766 4801 4846 5157 5256 5451 5529 5563
TBJ	1485
TBZ	0362 0405
TCW	0653 1787 1929 1975 2362
TCX	0677 1238 1250 1942 1961 1965 2003 2060 2114
TGW	2724 2728 4181 4210 4421 4445 4469 4491 4493 4532 4561 4608
	4645 4804 4812 4874 4879 4931 5120 5496 5596 5662 5697 5721
THA	5198 5248 5258 5301 5436 5553

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SERVICE BULLETIN

OPERATOR	MSN	
THY	1002 1624 1856 1909 1996 2156 2164 2395 2401 2404 2414 2452	٦
	2522 2602 2609 2626 2631 2655 2738 2739 2823 2868 2928 2934	
	2941 2984 2999 3010 3015 3126 3142 3185 3207 3208 3239 3257	
	3259 3283 3303 3308 3341 3350 3382 3405 3429 3525 3539 3558	
	3567 3603 3637 3654 3673 3688 3718 3719 3738 3896 3931 3949	
	4629 4643 4654 4665 4682 4695 4698 4706 4755 4761 4774 4779	
	4788 4790 5077 5083 5118 5154 5205 5254 5388 5450 5465 5490	
	5546 5584 5633 5663 5667 5689	
TJS	3513 4169	
TNA	0538 0555 0606 0731 0746 0791 0822 2914 5055	
TWJ	2550	╝
TXP	0607 0611 0617	
UAE	4822	
UAL	0435 0439 0442 0450 0452 0454 0456 0457 0462 0463 0464 0465	٦
	0470 0472 0475 0479 0483 0485 0487 0489 0500 0503 0504 0506	
	0508 0510 0512 0523 0539 0568 0571 0587 0589 0592 0613 0638	
	0655 0678 0683 0686 0690 0702 0748 0751 0759 0780 0783 0788	
	0798 0804 0820 0824 0825 0826 0834 0836 0842 0843 0847 0850	
	0851 0858 0862 0865 0867 0871 0873 0882 0893 0898 0944 0948	
	0952 0955 0965 0980 0989 1001 1022 1031 1104 1105 1128 1146	
	1163 1192 1211 1243 1248 1266 1272 1282 1290 1291 1321 1341	
	1343 1359 1363 1401 1409 1420 1426 1427 1432 1435 1460 1469	
	1474 1475 1477 1495 1507 1508 1514 1522 1533 1538 1545 1555	
	1559 1569 1573 1581 1584 1585 1586 1600 1609 1617 1620 1627	
	1647 1649 1653 1664 1669 1671 1680 1688 1702 1728 1731 1737	
	1741 1755 1821 1840 1842 1845 1847 1865	
UEA	2654 2696 2762 2774 2820 2835 3024 3706 4347 5003	╝
UKN	3260	╝
ULG	0308 0314	
UNA	3886 4583 4732	╝

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SERVICE BULLETIN

OPERATOR	MSN
USA	0052 0053 0054 0055 0064 0065 0066 0067 0076 0077 0081 0082
OOA	0099 0317 0448 0565 0584 0762 0770 0803 0844 0856 0861 0863
	0866 0868 0885 0889 0890 0896 0904 0922 0924 0929 0931 0953
	0972 0997 1003 1019 1033 1038 1040 1043 1046 1049 1050 1051
	1052 1055 1056 1061 1064 1065 1069 1075 1079 1083 1088 1095
	1097 1109 1110 1111 1112 1114 1116 1122 1134 1135 1141 1148
	1166 1178 1182 1196 1203 1205 1223 1224 1234 1245 1254 1264
	1265 1268 1269 1274 1275 1281 1284 1287 1289 1294 1297 1298
	1301 1310 1311 1313 1314 1315 1317 1319 1323 1326 1328 1331
	1340 1342 1348 1350 1354 1358 1360 1369 1371 1373 1375 1378
	1382 1389 1391 1393 1395 1397 1403 1406 1410 1412 1417 1419
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VIM	2457 2732 3125 4270 4305 5158
VJC	2712 3739 3791 4049 4190 4193 4475 4512
VKG	1881 1887 1889 1921 1932 1954 1960 1972
VLE	1226
VLG	0199 0240 0241 0264 0992 1171 1208 1210 1221 1349 1372 1396
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	4855 4937 5479 5530 5533 5587 5599 5612 5616 5620 5673
VLK	0422 0714 0730 1200 1213 1379
VOI	1140 1159 2204 2296 2657 2666 2771 2780 2979 2997 3045 3069
VOI	3077 3175 3252 3253 3279 3317 3450 3463 3491 3524 3543 3590
	3624 3672 3705 4403 4422 4741 4798 4828 4832 4950 5062 5207
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VRD	2616 2674 2740 2773 2778 2800 2811 2830 2851 2993 3016 3037
VIII	3101 3135 3155 3181 3204 3230 3324 3347 3349 3359 3398 3417
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VRE	2213 2228
VVC	1306 1454 1564 1725 1867
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WGT	1212
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OPERATOR	MSN		
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	5196 5539 5604 5608 5615 5617 5660		
XLF	0343		

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(4) Configuration by MSN

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MSN	CONFIGURATION
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MSN	CONFIGURATION
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MSN
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3757 3758 3759 3760 3761 3762 3763 3764 3765 3766 3767	
3768 3769 3770 3771 3772 3773 3774 3775 3776 3777 3778	
3779 3780 3781 3782 3783 3784 3785 3786 3787 3788 3789	
3790 3791 3792 3793 3794 3795 3796 3797 3798 3799 3800	
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4065 4066 4067 4068 4069 4070 4071 4072 4073 4074 4075	
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4087 4088 4089 4090 4091 4092 4093 4094 4095 4096 4097	
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5385	5386	5387	5388	5389	5390	5391	5392	5393	5394	5395	
5396	5397	5398	5399	5400	5401	5402	5403	5404	5405	5406	
5407	5408	5409	5410	5411	5412	5413	5414	5415	5416	5417	
5418	5419	5420	5421	5422	5423	5424	5425	5426	5427	5428	
5429	5430	5431	5432	5433	5434	5435	5436	5437	5438	5439	
5440	5441	5442	5443	5444	5445	5446	5447	5448	5449	5450	
5451	5452	5453	5454	5455	5456	5457	5458	5459	5460	5461	
5462	5463	5464	5465	5466	5467	5468	5469	5470	5471	5472	
5473	5474	5475	5476	5477	5478	5479	5480	5481	5482	5483	
5484	5485	5486	5487	5488	5489	5490	5491	5492	5493	5494	
5495	5496	5497	5498	5499	5500	5501	5502	5503	5504	5505	
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5/20	5727	3128	5729	5/30	5/32	5/33					

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(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
Reidentified part set REIDD01	1	

B. CONCURRENT REQUIREMENTS

None

C. REASON

(1) History

Operational experience has shown that high temperature of the Trim Air Valve (TAV) actuator could affect the TAV operation. As a consequence, the reduction of TAV actuator temperature has been achieved by increasing the electrical motor resistance.

(2) Objective/Action

This Service Bulletin is published to advise all operators of the issue of the LIEBHERR Service Bulletin No. 1320A-21-01 which modifies three TAVs accordingly.

(3) Advantages

The accomplishment of this Service Bulletin will increase the reliability of the TAV actuator.

(4) Operational/Maintenance Consequences

None

D. <u>DESCRIPTION</u>

To accomplish this Service Bulletin it is necessary to :

Task 211213-831-848-001: Modification

- (1) Remove the Trim Air Valves
- (2) Modify the Trim Air Valves
- (3) Install the Trim Air Valves

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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

Accomplishment of this Service Bulletin is recommended at the earliest opportunity where manpower and facilities are available.

F. APPROVAL

The technical content of this document is approved under the authority of Design Organisation 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 211213-831-848-001: Modification							
Get Access	1.50						
On Aircraft							
Remove the Trim Air Valves	1.00						
Install the Trim Air Valves	1.50						
Tests	0.50						
Close-Up	1.50						
TOTAL MANHOURS	6.00						
ELAPSED TIME (HOURS)	6.00						
Additional manhours related to Vendor SB; refer to:							
Modify the Trim Air Valves	LIEBHERR Service Bulletin No.						
	1320A-21-01						

H. WEIGHT AND BALANCE

Not Changed

I. ELECTRICAL LOAD DATA

Not Changed

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J. REFERENCES

Aircraft Maintenance Manual (AMM)	06-20-00 06-41-53 12-34-24 20-16-00 21-63-51
ATA Common Support Data Dictionary (CSDD), Chapter 2	
Elec. Std. Practices Manual (ESPM)	20-55-00
Vendor Service Bulletin (VSB)	LIEBHERR Service Bulletin No. 1320A-21-01

K. PUBLICATION AFFECTED

Illustrated Parts Catalog (IPC)	21-63-03

L. INTERCHANGEABILITY/MIXABILITY

DESCRIPTION	OLD PART N°	NEW PART N°	INT	MIXABILITY	SEE NOTES
Trim Air Valve	1320A0000-01	1320A0000-02	02	YES	

NOTE: For definitions of interchangeability codes in column INT., refer to ATA

Common Support Data Dictionary (CSDD), Chapter 2.

NOTE: Only the mixability configuration(s) and condition(s) stated in this Service

Bulletin are approved.

M. SPARES

Trim Air Valve 1320A0000-01

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SERVICE BULLETIN

2. MATERIAL INFORMATION

**CONF ALL

A. MATERIAL - PRICE AND AVAILABILITY

(1) Procurement Addresses

Modification of removed equipment should be negotiated directly with LIEBHERR as per instructions given in LIEBHERR Service Bulletin No. 1320A-21-01.

(2) Price and Availability

No AIRBUS kit will be provided.

Refer to the LIEBHERR Service Bulletin No. 1320A-21-01 for the equipment modification sales terms.

B. INDUSTRY SUPPORT INFORMATION

Refer to the LIEBHERR Service Bulletin No. 1320A-21-01 for the industry support terms of the Vendor Service Bulletin parts and labor.

C. LIST OF COMPONENTS

No Kit

D. LIST OF MATERIALS - OPERATOR SUPPLIED

None

E. PARTS TO BE RE-IDENTIFIED BY OPERATOR

Reidentified part set REIDD01

REVISION No.: 00 - Jul 11/13

ITEM	NEW PART N°	KEYWORD	ITEM		SEE NOTES
	1320A0000-02	VALVE		1320A0000-01	

F. TOOLING

None

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3. ACCOMPLISHMENT INSTRUCTIONS

Task 211213-831-848-001 - 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.

IN CASE OF CONTAMINATION REFER TO ESPM 20-55-00.

Task Associated Data

	Zone	
140		
	Modified FIN	
11HK 12HK 13HK		
Access		
Door	825	
Manpower		
TOTAL MANHOURS		6.00
ELAPSED TIME (HOURS) 6.00		6.00
Additional manhours related to Vendor SB; refer to:		
LIEBHERR Service Bulletin No. 1320A-21-01		

A. **GENERAL**

(1) Subtask 211213-910-201-001 - Standard Practices

Manpower Resources	
Skills	NON SPECIFIC

	References
Aircraft Maintenance Manual (AMM)	06-20-00, Page Block 001 06-41-53, Page Block 001 Task 20-16-00-912-001

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- (a) For the identification of zones, refer to AMM 06-20-00, Page Block 001.
- (b) For the identification of access panels, refer to AMM 06-41-53, Page Block 001.
- (c) For circuit breaker safety practices, refer to AMM Task 20-16-00-912-001.
- (d) Tag the parts that you must remove and retain to make the subsequent installation easier.
- (e) Put all the retained hardware in identified plastic bags and attach the bags to the related unit.

(2) Subtask 211213-839-201-001 - Administrative

Manpower Resources	
Skills	NON SPECIFIC

Write in the applicable aircraft records that you have done all the work given in this Service Bulletin.

B. PREPARATION

(1) Subtask 211213-941-201-001 - Job Set-up

Manpower Resources	
Skills	NON SPECIFIC

References	
Aircraft Maintenance Manual (AMM)	Task 12-34-24-869-002
	Task 21-63-51-000-001

- (a) Make sure that the aircraft is electrically grounded, refer to AMM Task 12-34-24-869-002.
- (b) Do the Job Set-up procedure as given for the Removal of the Trim Air Valve (TAV), refer to AMM Task 21-63-51-000-001.

C. PROCEDURE

(1) Subtask 211213-020-201-001 - Remove the Trim Air Valves

Work Zones and Access Panels			
	Zone	ne Access/Work location	
	140	Access	Door 825

Manpower Resources		
Manhours	1.00	
Minimum number of person	1	
Subtask elapsed time	1.00	
Skills	AIRFRAME	

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	References
Aircraft Maintenance Manual (AMM)	Task 21-63-51-000-001

(a) Remove the Trim Air Valves (TAV) 11HK, 12HK and 13HK, refer to AMM Task 21-63-51-000-001.

(2) Subtask 211213-831-201-001 - Modify the Trim Air Valves

VALVE

Reidentified part set REIDD01						
ITEM NEW PART N°	KEYWORD	ITEM	OLD PART N°	SEE NOTES		

Material necessary to do the job

Re	ferences
Vendor Service Bulletin (VSB)	LIEBHERR 1320A-21-01

(a) Modify the Trim Air Valves (TAV) 11HK, 12HK and 13HK, refer to LIEBHERR Service Bulletin No. 1320A-21-01.

1320A0000-01

(b) After the modification the Part Number (PN) of the TAV will change as given below:

1 TAV Cockpit

1320A0000-02

FIN 11HK

1 Trim Air Valve 1320A0000-01

will become

FIN 11HK

1 Trim Air Valve 1320A0000-02

2 TAV FWD Cabin

FIN 12HK

1 Trim Air Valve 1320A0000-01

will become

FIN 12HK

1 Trim Air Valve 1320A0000-02

3 TAV AFT Cabin

FIN 13HK

1 Trim Air Valve 1320A0000-01

will become

FIN 13HK

1 Trim Air Valve 1320A0000-02

6 DATE: Jul 11/13 SERVICE BULLETIN No.: A320-21-1213

SERVICE BULLETIN

(3) Subtask 211213-420-201-001 - Install the Trim Air Valves

Work Zones and Access Panels					
		Zone	Access/Work location		
	1	140	Access	Door 825	

Manpower Resources				
Manhours	1.50			
Minimum number of person	1			
Subtask elapsed time	1.50			
Skills	AIRFRAME			

	References
Aircraft Maintenance Manual (AMM)	Task 21-63-51-400-001

(a) Install the Trim Air Valves (TAV) 11HK, 12HK and 13HK, refer to AMM Task 21-63-51-400-001.

D. TEST

(1) Subtask 211213-700-201-001 - Test

Manpower Resources	
Skills	AIRFRAME

Ref	erences
Aircraft Maintenance Manual (AMM)	Task 21-63-51-400-001

(a) Do the Test procedure as given for the Installation of the Trim Air Valve (TAV), refer to AMM Task 21-63-51-400-001.

E. CLOSE-UP

(1) Subtask 211213-942-201-001 - Close-up

Manpower Resou	urces
Skills	NON SPECIFIC

	References
Aircraft Maintenance Manual (AMM)	Task 21-63-51-400-001

- (a) Make sure that the work areas are clean and clear of tools and other items of equipment.
- (b) Do the Close-up procedure as given for the Installation of the Trim Air Valve (TAV), refer to AMM Task 21-63-51-400-001.

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SERVICE BULLETIN REPORTING SHEET

TITLE: AIR CONDITIONING - COCKPIT AND CABIN TEMPERATURE CONTROL - INTRODUCE MODIFIED TRIM AIR VALVE

MODIFICATION No.: 154549K16372

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 <u>HAS BEEN</u> 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:

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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: Jul 11/13 SERVICE BULLETIN No.: A320-21-1213

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		
Х	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	Operator: Date:						
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