



## Airworthiness Directive

**AD No.:** 2021-0234R1

**Issued:** 11 May 2023

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I, Part M.A.301, or Annex Vb Part ML.A.301, as applicable, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I, Part M.A.303, or Annex Vb Part ML.A.303, as applicable] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

### Design Change Approval Holder's Name:

FOKKER SERVICES B.V.

### Modification(s):

USB Receptacle in Cockpit

**Effective Date:** Revision 1: 18 May 2023  
Original issue: 11 November 2021

**TCDS Number(s):** EASA.A.036, EASA.A.037

**STC Number(s):** EASA STC 10061825 (Boeing 737) and STC 10046185 (Bombardier DHC-8)

**Minor mod(s):** Fokker Services ECR016073 (Airbus A18, A319, A320 and A321); CRR-0185 (Airbus A330); CRR-0186 (Airbus A340); CRR-0190 (Boeing 767); CRR-0210 (Boeing 757); CRR-0241 (Boeing 777); CRR-0265 (Bombardier CL-600-2B16); CRR-0300 (ATR42/72); CRR-0146 (Boeing 737 NG); CRR-0206 (Boeing 737 classic); CRR-0290 (DHC-8 Series 100/200/300/400); and CRR-0309 (DHC-8 Series 100/200/300 with glass cockpit post-EASA STC 10039339).

**Foreign AD:** Not applicable

**Revision:** This AD revises EASA AD 2021-0234 dated 28 October 2021, which superseded EASA AD 2018-0259R1 dated 07 February 2019.

## ATA 46 – Information Systems – Electronic Flight Bag Universal Serial Bus Receptacle – Modification

### Manufacturer(s):

Lone Star Aviation, Corp. for the affected universal serial bus (USB) receptacles; and Fokker Aircraft B.V., Airbus (formerly Airbus Industrie), Avions de Transport Régional (ATR, formerly EADS ATR - Alenia, Aerospatiale Matra ATR - ALENIA, Aerospatiale - Alenia, Aerospatiale - Aeritalia), Boeing, and Bombardier (formerly Canadair, De Havilland Canada) for the affected aeroplanes.

### Applicability:

Fokker F27 Mark 050, F28 Mark 3000, F28 Mark 0070 and F28 Mark 0100 aeroplanes; Airbus A318, A319, A320, A321, A330 and A340 aeroplanes; ATR42 and ATR72 aeroplanes; Boeing 737, 757, 767 and 777 aeroplanes; Bombardier (formerly Canadair) and MHI RJ Aviation ULC (formerly



Bombardier) CL-600 aeroplanes; and De Havilland Aircraft of Canada (formerly Bombardier) DHC-8 aeroplanes; models and manufacturer serial numbers (MSN) as identified in Appendix 1 of this AD.

### Definitions:

For the purpose of this AD, the following definitions apply:

#### The applicable SB/EB:

Fokker Services (FS) Service Bulletin (SB) SBF50-46-006 (Fokker F27 Mark 050), SBF28-46-002 (Fokker F28 Mark 3000), SBF100-46-008 (Fokker F28 Mark 0070 and Mark 0100), Engineering Bulletin (EB) EBA320-0167 Revision 4 (Airbus A320), EBA330-0011 (Airbus A330), EBA340-0005 (Airbus A340), EBATR72-0013 (ATR42 and ATR72), EBB737-0156 Revision 3 (Boeing 737), EBB757-0020 (Boeing 757), EBB767-0023 (Boeing 767), EBB777-0009 (Boeing 777), EBCL60-0010 (CL-600), and EBDHC8-0035 (DHC-8), as applicable.

**Affected part:** Lone Star Aviation, Corp. USB receptacles, having Part Number (P/N) LS03-05050-A.

**Groups:** Group 1 aeroplanes are all MSN identified in Appendix 1 of this AD, except those identified as Group 2. Group 2 aeroplanes are Airbus A318-112 MSN 4878, A320-214 MSN 3410, A321-211 MSN 8104 and 8232, A321-253N MSN 8085; and Boeing 737-800 MSN 35984 and 40874.

### Reason:

Several occurrences on various aeroplanes have been reported of smoke and fumes in the cockpit, due to overheating of an Electronic Flight Bag (EFB) USB receptacle, which had been installed by FS modification SB or EB, introducing an STC or minor modification (Engineering Change Request (ECR) or Compliance Record Report (CRR), as applicable). Investigation results revealed that each of these events was caused by a short circuit in the EFB charging cable.

This condition, if not corrected, could lead to further events of smoke/fumes in the cabin, possibly resulting in excessive flight crew workload and/or injury to flight deck occupants.

To address this unsafe condition, the USB manufacturer developed a modification (change to USB receptacle P/N LS03-05050-B), and FS published the applicable SB/EB to provide those modification instructions, installing current limiting and overheat protection. Consequently, EASA issued AD 2018-0259 (later revised) to require modification of each affected part. That AD also prohibited (re)installation of affected parts.

After EASA AD 2018-0259R1 was issued, certain SBs referred to in that AD in “The applicable SB/EB” list were revised to introduce additional MSN, also to be modified.

For the reason described above, EASA issued AD 2021-0234, retaining the requirements of EASA AD 2018-0259R1, which was superseded, and clarified and expanded the Applicability by listing all affected MSN in Appendix 1.

Since that AD was issued, certain minor modifications were found to be inadvertently omitted in the list of affected design changes. This AD is revised to correct that oversight. This revised AD does not change the requirements, nor the Applicability.



**Required Action(s) and Compliance Time(s):**

Required as indicated, unless accomplished previously:

**Modification:**

- (1) Within the compliance time specified in Table 1 of this AD, as applicable, modify each affected part in accordance with the instructions of the applicable SB/EB.

Table 1 – Modification

Group	Compliance Time
1	Within 12 months after 14 December 2018 [the effective date of the original issue of EASA AD 2018-0259]
2	Within 12 months after 11 November 2021 [the effective date of the original issue of this AD]

**Part(s) Installation:**

- (2) After modification of an aeroplane as required by paragraph (1) of this AD, do not install an affected part on that aeroplane.

**Ref. Publications:**

Fokker Services SBF50-46-006 dated 27 July 2018.

Fokker Services SBF28-46-002 dated 27 July 2018.

Fokker Services SBF100-46-008 dated 27 July 2018.

Fokker Services EBA320-0167 Revision 4 dated 30 July 2021.

Fokker Services EBA330-0011 dated 27 July 2018.

Fokker Services EBA340-0005 dated 27 July 2018.

Fokker Services EBAT72-0013 dated 27 July 2018.

Fokker Services EBB737-0156 Revision 3 dated 25 February 2019.

Fokker Services EBB757-0020 dated 27 July 2018.

Fokker Services EBB767-0023 dated 27 July 2018.

Fokker Services EBB777-0009 dated 27 July 2018.

Fokker Services EBCL60-0010 Revision 1 dated 30 August 2018.

Fokker Services EBDHC8-0035 dated 27 July 2018.



The use of later approved revisions of the above-mentioned documents is acceptable for compliance with the requirements of this AD.

#### Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. The original issue of this AD was posted on 22 September 2021 as PAD 21-137 for consultation until 20 October 2021. No comments were received during the consultation period.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu).
4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, can be reported to the [EU aviation safety reporting system](#). This may include reporting on the same or similar components, other than those covered by the design to which this AD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.
5. For any question concerning the technical content of the requirements in this AD, please contact: Fokker Services B.V., Technical Services Dept., P.O. Box 1357, 2130 EL, Hoofddorp, The Netherlands, Telephone +31 88 6280 350, Fax +31 88 6280 111, E-mail: [technicalservices@fokkerservices.com](mailto:technicalservices@fokkerservices.com).

The referenced publication(s) can also be downloaded from [www.myfokkerfleet.com](http://www.myfokkerfleet.com) for operators of Fokker aeroplane types or [www.myaircraftfleet.com](http://www.myaircraftfleet.com) for operators of all other affected aeroplane types.



## Appendix 1 – Detailed Applicability

All listed aeroplane types and models, all listed MSN, having an affected part installed in accordance with the related FS modification SB or EB, as listed below, as applicable to MSN or configuration.

Affected aeroplanes	Affected MSNs	Modification SB/EB
Fokker F27 Mark 050	20211, 20218, 20219, 20278, 20288, 20297 and 20299	SBF50-46-004
Fokker F28 Mark 3000	11137	SBF28-46-001
Fokker F28 Mark 0070 and F28 Mark 0100	11308, 11324, 11325, 11417, 11427, 11452, 11459, 11466, 11478, 11501, 11528, 11536 to 11541 inclusive, 11543, 11551, 11553, 11556, 11558, 11561, 11562, 11563, 11566, 11567, 11570, 11574, 11576 to 11579 inclusive, and 11581 to 11583 inclusive	SBF100-46-003
Airbus A318-111 and A318-112; A319-111, A319-112, A319-114, A319-115 and A319-132; A320-211, A320-212, A320-214, A320-231, A320-232 and A320-251N; A321-211, A321-231, A321-232, A321-251N and A321-253N	0142, 0244, 0311, 0333, 0359, 0415, 0426, 0427, 0525, 0533, 0566, 0649, 0662, 0888, 0936, 0984, 1004, 1087, 1130, 1183, 1200, 1213, 1219, 1233, 1276, 1366, 1379, 1488, 1560, 1571, 1578, 1579, 1630, 1654, 1657, 1679, 1725, 1743, 1753, 1761, 1762, 1767, 1805, 1808, 1841, 1843, 1851, 1863, 1873, 1876, 1890, 1893, 1941, 1946, 2093, 2105, 2115, 2151, 2163, 2179, 2211, 2216, 2233, 2234, 2241, 2376, 2410, 2465, 2476, 2497, 2590, 2649, 2731, 2751, 2862, 2874, 2879, 2913, 2927, 2930, 2931, 2933, 2947, 2955, 2964, 3034, 3044, 3046, 3065, 3106, 3120, 3179, 3183, 3219, 3220, 3225, 3267, 3334, 3410, 3640, 3794, 3835, 3919, 3925, 3939, 3942, 3998, 4092, 4162, 4270, 4305, 4310, 4470, 4728, 4878, 5033, 5055, 5625, 5681, 5733, 5833, 5963, 6124, 6210, 6232, 7127, 7237, 7433, 7486, 7535, 7560, 7650, 7663, 7674, 7680, 7686, 7694, 7697, 7715, 7891, 8085, 8104, 8106 and 8232	EBA319-0025, EBA319-0032, EBA320-0044, EBA320-0049, EBA320-0059, EBA320-0064, EBA320-0095, EBA320-0097, EBA320-0105, EBA320-0108, EBA320-0111, EBA320-0124, EBA320-0126, EBA320-0139, EBA320-0140, EBA320-0141, EBA320-0145, EBA320-0150, EBA320-0156, EBA320-0158, EBA320-0160, or EBA320-0164
Airbus A330-202, A330-223, A330-243, A330-322 and A330-343	0096, 0127, 0211, 0262, 0303, 0306, 0311, 0313, 0456, 0627, 1008, 1098, 1564, 1583, 1604, 1607, 1650, 1669, 1687, 1689	EBA330-0004, EBA330-0005, or EBA330-0007
Airbus A340-312, A340-313 and A340-542	0117, 0185, 0190, 0202, 0236, 0367, 0483 and 0912	EBA340-0001, or EBA340-0004
ATR42-500, ATR72-212 and ATR72-212A	414, 548, 566, 569, 588, 589, 591, 596, 599, 605, 705, 706, 707, 861, 867, 942, 945, 950, 951, 952, 953, 958, 960, 963, 965, 975, 976, 980, 981, 983, 984, 990, 1034, 1035 and 1143	EBAT72-0006, EBAT72-0007, EBAT72-0008, EBAT72-0010, or EBAT72-0011



Affected aeroplanes	Affected MSNs	Modification SB/EB
Boeing 737-300, 737-400, 737-500, 737-700, 737-800 and 737-900ER	23237, 23522, 23523, 23525, 23526, 23529, 23530, 23654, 23657 to 23664 inclusive, 23831, 23832, 23870, 23970, 24020, 24028, 24029, 24131, 24255, 24302, 24303, 24332, 24365, 24453, 24474, 24492, 24644, 24691, 24773, 24778, 24813, 24904, 24909, 24940, 24941, 24942, 24943, 25271, 25371, 25596, 25614, 25615, 25743, 25795, 26066, 26306, 26308, 27002, 27005, 27007, 27179, 27180, 27182, 27314, 27315, 27316, 27318, 27319, 27320, 27321, 27325, 27328, 27331, 27395, 27532, 27540, 27980, 27982, 27986, 27987, 27989, 27992, 28038, 28054, 28100, 28102, 28103, 28104, 28107, 28108, 28109, 28110, 28177, 28213, 28220, 28228, 28229, 28231, 28239, 28243, 28244, 28245, 28247, 28254, 28375, 28378, 28381, 28384, 28385, 28387, 28388, 28438, 28439, 28440, 28442, 28473, 28474, 28476, 28477, 28478, 28489, 28536, 28549, 28568, 28572, 28586, 28610, 28617, 28623, 28644, 28645, 28658, 28702, 28723, 28740, 28821, 28822, 28825, 28826, 28873, 28899, 28900, 28901, 28902, 28903, 28905, 28906, 28907, 28908, 28909, 28910, 28911, 28912, 28913, 28914, 28917, 28918, 28920, 28925, 28926, 28980 to 28988 inclusive, 29036, 29037, 29141, 29250, 29332, 29346, 29351, 29636, 29643, 29669, 29884, 29889, 29919, 29924, 29932, 29936, 29937, 30040, 30231, 30276, 30278, 30294, 30295, 30390, 30413, 30414, 30415, 30416, 30417, 30421, 30593, 30640, 30646, 30651, 30666, 30667, 30669, 30672, 30702, 30719, 30724, 30785, 30881, 31716, 31765, 32243, 32360, 32362, 32624, 32625, 32691, 32735, 32740, 32778, 32779, 32780, 32797, 32841, 32907, 32917, 33016, 33018, 33027, 33057 to 33075 inclusive, 33602, 33622, 33833, 33972, 33978, 33979, 34251, 34702, 34703, 34706, 34897, 34900, 34952, 34954, 35093, 35275, 35278, 35283, 35702, 35793, 35959, 35984, 36114, 36115, 36386, 36387, 36822, 36826, 36828, 36829, 36831, 37076, 37077, 37084, 37085, 37159, 37360, 37363, 37546, 37552, 37553, 37718, 37741, 38018, 38025, 38027, 39394, 39404, 39437, 40076, 40090, 40233 to 40278 inclusive, 40281, 40282, 40424, 40696, 40697, 40728, 40871, 40872, 40874, 40875, 40876, 41201, 41202, 41212, 41224, 41227, 41228, 41232, 41236, 41238, 41244, 41399, 41400, 41401, 41707 to 41710 inclusive, 41795, 41805, 41808, 41836, 41841, 41991, 41992, 42059, 44435, 62445, 63144 to 63170 inclusive, 63568 63569, 63570, 63701 and 63702	EBB737-0008, EBB737-0021, EBB737-0022, EBB737-0023, EBB737-0025, EBB737-0031, EBB737-0032, EBB737-0041, EBB737-0044, EBB737-0046, EBB737-0052, EBB737-0068, EBB737-0070, EBB737-0071, EBB737-0088, EBB737-0094, EBB737-0096, EBB737-0098, EBB737-0099, EBB737-0108, EBB737-0113, EBB737-0123, EBB737-0124, EBB737-0133, EBB737-0140, EBB737-0143, EBB737-0147, EBB737-0148, EBB737-0149, or EBB737-0154



Affected aeroplanes	Affected MSNs	Modification SB/EB
Boeing 757-200	24014, 24015, 24016, 24122, 24135, 24136, 24397, 24793, 25488, 26332, 26635, 27203, 27351, 27973, 29380, 29442, 29443, 30046 and 30338	EBB757-0002, EBB757-0004, EBB757-0005, or EBB757-0010
Boeing 767-200 and 767-300	22219, 22220, 23072, 23326, 23327, 23328, 24086, 24318, 24457, 24865, 25280, 25411, 25530, 25532, 25533, 25535, 25536, 26208, 26328, 27192, 27193, 27194, 27195, 27310, 27427, 27616, 27617, 27686, 27957, 27959, 27960, 28042, 28098, 28111, 28207, 29390, 29435, 29618, 30008, 30107, 30115, 30301, 30342, 30435, 30437, 30439, 30841, 30843, 30853, 30854, 35816 and 35818	EBB767-0003, EBB767-0004, EBB767-0006, EBB767-0008, EBB767-0009, EBB767-0010, EBB767-0011, EBB767-0014, EBB767-0015, or EBB767-0018
Boeing 777-200LR	27606, 27608 and 32703	EBB777-0005 or EBB777-0007
Bombardier (formerly Canadair) CL-600-2B16	5651	EBCL60-0005
MHI RJ Aviation ULC, (formerly Bombardier) CL-600-2C10	10247	EBCL60-0008
De Havilland Aircraft of Canada Ltd (formerly Bombardier, Boeing Canada, De Havilland Canada) DHC-8-202, DHC-8-311, DHC-8-314, DHC-8-315, and DHC-8-402	252, 385, 401, 434, 445, 446, 450, 451, 453, 457, 459, 460, 461, 463, 482, 488, 496, 498, 504, 523, 533, 556, 581, 4022, 4033, 4038, 4106, 4294, 4305, 4351, 4354, 4481 and 4482.	EBDHC8-0019, EBDHC8-0020, EBDHC8-0021, EBDHC8-0022, EBDHC8-0031, or EBDHC8-0034

