EASA AD No.: 2014-0142

EASA

AIRWORTHINESS DIRECTIVE

AD No.: 2014-0142

Date: 04 June 2014

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with EU 748/2012, Part 21.A.3B. In accordance with EC 2042/2003 Annex I, Part M.A.301, 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 [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].

Design Approval Holder's Name: Type/Model designation(s): Oxygen Mask Regulators ZODIAC AEROTECHNICS (formerly Intertechnique) ETSO (JTSO) Authorisations: EASA 210.10018226 and EASA 210.10033672; and DGAC France QAC 54538/SFACT/TC, F.O.001, F.O.007 and F.O.073. Foreign AD: Not applicable Supersedure: None Oxygen - Oxygen Mask Regulator Inflatable Harness / Inflation Hose **ATA 35** - Identification / Replacement Manufacturer(s): Zodiac Aerotechnics (formerly Intertechnique, EROS) Applicability: Flight Crew Oxygen Mask Regulators MC10 series, having a Part Number (P/N) as identified in Section 1.A.(1) of Zodiac Aerotechnics Service Bulletin (SB) MC10-35-274 Revision 1 issue dated 18 April 2014. The affected Flight Crew Oxygen Mask Regulators are known to be installed on, but not limited to, aeroplanes manufactured by Boeing, Bombardier, Cessna, Gulfstream and Leariet. Recent reported occurrences have shown that for harness hoses P/N 445952, Reason: installed on certain flight crew quick donning mask harnesses (also known as 'comfort' harness) having P/N MXH21-1, suspected silicon batches may have been used during manufacture, which have shown an unusually high premature rupture rate. The affected P/N MXH21-1 inflatable harness assembly consists of two main parts that can be disassembled; the harness itself and the harness inflation hose, P/N 445952. This is a similar non-conformity as identified for certain other inflatable harnesses, for which EASA AD 2011-0090 was issued. This condition, if not detected and corrected, could lead, in case of a sudden depressurization event, to a harness rupture, thereby providing inadequate protection against hypoxia of the affected flight crew member, possibly resulting in unconsciousness and consequent reduced control of the aeroplane.

EASA AD No.: 2014-0142

To address this potential unsafe condition, Zodiac Aerotechnics issued SB MC10-35-274 to provide instructions to identify and correct the affected P/N MXH21-1 inflatable harmesses. The affected Poses were installed on harmesses manufactured between week 50 of 2008 and week 51 of 2010, having dates codes 0850-S (week 50 of 2008) through 1051-S (week 51 of 2010). For the reasons described above, this AD requires identification of the affected P/N MXH21-1 inflatable (comfort) harmesses and to replace the harness inflation hose P/N 445952 with a serviceable unit, or to replace the inflatable harmess with a P/N MXH21-31 harmess. Effective Date: 18 June 2014 Required Action(s) and Compliance Time(s): (1) Within 24 months after the effective date of this AD, in accordance with the instructions of Section 3 of Zodiac Aerotechnics SB MC10-35-274, accomplish the actions as specified in paragraphs (1-1) and (1-2) of this AD. (1.1) Determine the date of manufacturing (DMF) code of each P/N MXH21-1 inflatable harmess fitted to a Flight Crew Oxygen Mask Regulator, having a P/N as identified in Section 1.A.(1) of Zodiac Aerotechnics SB MC10-35-274. A review of aeroplane delivery- or maintenance records is acceptable to make the determination as specified in this paragraph, provided those records can be relied upon for that purpose, and the DMF of the P/N MXH21-1 harmess can be conductively identified from that review. (1.2) If the DMF code of the P/N MXH21-1 harmess, identified as required by paragraph (1-1) of this AD, is between 0850-S and 1051-S (inclusive), replace the harmess inflation hose P/N 445952 with a serviceable part, or remove the inflatable harmess from the mask regulator and replace in with a serviceable harmess, nor the P/N 445952 harmess having a DMF code of November 2008 (0845-S or 08/45-S) or earlier, and those with a DMF of January 2011 (1101-5 or 5 or 11/31-S) or later, is excluded from the inspection and replacement requirements of paragraph (1) of this AD, provided it can be demonstrated that ne		
Required Action(s) and Compliance Time(s): (1) Within 24 months after the effective date of this AD, in accordance with the instructions of Section 3 of Zodiac Aerotechnics SB MC10-35-274, accomplish the actions as specified in paragraphs (1.1) and (1.2) of this AD. (1.1) Determine the date of manufacturing (DMF) code of each P/N MXH21-1 inflatable harness fitted to a Flight Crew Oxygen Mask Regulator, having a P/N as identified in Section 1.A.(1) of Zodiac Aerotechnics SB MC10-35-274. A review of aeroplane delivery- or maintenance records is acceptable to make the determination as specified in this paragraph, provided those records can be relied upon for that purpose, and the DMF of the P/N MXH21-1 harness can be conclusively identified from that review. (1.2) If the DMF code of the P/N MXH21-1 harness, identified as required by paragraph (1.1) of this AD, is between 0850-S and 1051-S (inclusive), replace the harness inflation hose P/N 4459S2 with a serviceable part, or remove the inflatable harness. (2) An oxygen mask regulator equipped with a P/N MXH21-1 inflatable harness having a DMF code of November 2008 (0845-S or 08/45-S) or earlier, and those with a DMF of January 2011 (1101-S or 11/01-S) or later, is excluded from the inspection and replacement requirements of paragraph (1) of this AD, provided it can be demonstrated that neither the inflatable harness, nor the P/N 4459S2 harness hose, has been replaced on that mask. A review of aeroplane delivery or maintenance records is acceptable to make the determination as specified in this paragraph, provided those records are relied upon for that purpose. (3) From the effective date of this AD, it is allowed to install on an aeroplane a Flight Crew Oxygen Mask Regulator, having a P/N as identified in Section 1.A.(1) of Zodiac Aerotechnics SB MC10-35-274, provided it has been determined that a P/N MXH21-3 inflatable harness is installed, or that the P/N MXH21-3 inflatable harness installed on that Flight Crew Oxygen Mask Regulator has been corrected, as r		MC10-35-274 to provide instructions to identify and correct the affected P/N MXH21-1 inflatable harnesses. The affected hoses were installed on harnesses manufactured between week 50 of 2008 and week 51 of 2010, having dates codes 0850-S (week 50 of 2008) through 1051-S (week 51 of 2010). For the reasons described above, this AD requires identification of the affected P/N MXH21-1 inflatable (comfort) harnesses and to replace the harness inflation hose P/N 445952 with a serviceable unit, or to replace the inflatable harness with
(1) Within 24 months after the effective date of this AD, in accordance with the instructions of Section 3 of Zodiac Aerotechnics SB MC10-35-274, accomplish the actions as specified in paragraphs (1.1) and (1.2) of this AD. (1.1) Determine the date of manufacturing (DMF) code of each P/N MXH21-1 inflatable harness fitted to a Flight Crew Oxygen Mask Regulator, having a P/N as identified in Section 1.A.(1) of Zodiac Aerotechnics SB MC10-35-274. A review of aeroplane delivery- or maintenance records is acceptable to make the determination as specified in this paragraph, provided those records can be relied upon for that purpose, and the DMF of the P/N MXH21-1 harness can be conclusively identified from that review. (1.2) If the DMF code of the P/N MXH21-1 harness, identified as required by paragraph (1.1) of this AD, is between 0850-S and 1051-S (inclusive), replace the harness inflation hose P/N 445952 with a serviceable part, or remove the inflatable harness from the mask regulator and replace it with a serviceable harness. (2) An oxygen mask regulator equipped with a P/N MXH21-1 inflatable harness having a DMF code of November 2008 (0845-S or 0845-S) or earlier, and those with a DMF of January 2011 (1101-S or 11/01-S) or later, is excluded from the inspection and replacement requirements of paragraph (1) of this AD, provided to can be demonstrated that neither the inflatable harness, nor the P/N 445952 harness hose, has been replaced on that mask. A review of aeroplane delivery or maintenance records is acceptable to make the determination as specified in this paragraph, provided those records can be relied upon for that purpose. (3) From the effective date of this AD, it is allowed to install on an aeroplane a Flight Crew Oxygen Mask Regulator, having a P/N as identified in Section 1.A (1) of Zodiac Aerotechnics SB MC10-35-274, provided it has been determined that a P/N MXH21-31 inflatable harness is installed, or that the P/N MXH21-1 inflatable harness installed on that Flight Crew Oxygen Mask Regulator	Effective Date:	18 June 2014
Time(s): (1) Writini 2 Archioths after the effective date of this AD, if accordance with the instructions of Section 3 of Zodiac Aerotechnics SB MC10-35-274, accomplish the actions as specified in paragraphs (1.1) and (1.2) of this AD. (1.1) Determine the date of manufacturing (DMF) code of each P/N MXH21-1 inflatable harness fitted to a Flight Crew Oxygen Mask Regulator, having a P/N as identified in Section 1.A.(1) of Zodiac Aerotechnics SB MC10-35-274. A review of aeroplane delivery- or maintenance records is acceptable to make the determination as specified in this paragraph, provided those records can be relied upon for that purpose, and the DMF of the P/N MXH21-1 harness can be conclusively identified from that review. (1.2) If the DMF code of the P/N MXH21-1 harness, identified as required by paragraph (1.1) of this AD, is between 0850-S and 1051-S (inclusive), replace the harness inflation hose P/N 445952 with a serviceable part, or remove the inflatable harness from the mask regulator and replace it with a serviceable harness. (2) An oxygen mask regulator equipped with a P/N MXH21-1 inflatable harness having a DMF code of November 2008 (0845-S) or 08/45-S) or earlier, and those with a DMF of January 2011 (1101-S or 11/01-S) or later, is excluded from the inspection and replacement requirements of paragraph (1) of this AD, provided it can be demonstrated that neither the inflatable harness, nor the P/N 445952 harness hose, has been replaced on that mask. A review of aeroplane delivery or maintenance records is acceptable to make the determination as specified in this paragraph, provided it has been determined that a P/N MXH21-1 inflatable harness installed, or that the P/N MXH21-1 inflatable harness installed on that Flight Crew Oxygen Mask Regulator, having a P/N as identified in Section 1.A.(1) of Zodiac Aerotechnics SB MC10-35-274, original issue dated 19 March 2014, or Revision 1 issue dated 18 April 2014. Ref. Publications: I Zodiac Aerospace SB MC10-35-274, original issue dated 19 March 201	and Compliance	Required as indicated, unless accomplished previously:
MXH21-1 inflatable harness fitted to a Flight Crew Oxygen Mask Regulator, having a P/N as identified in Section 1.A.(1) of Zodiac Aerotechnics SB MC10-35-274. A review of aeroplane delivery- or maintenance records is acceptable to make the determination as specified in this paragraph, provided those records can be relied upon for that purpose, and the DMF of the P/N MXH21-1 harness can be conclusively identified from that review. (1.2) If the DMF code of the P/N MXH21-1 harness, identified as required by paragraph (1.1) of this AD, is between 0850-S and 1051-S (inclusive), replace the harness inflation hose P/N 445952 with a serviceable part, or remove the inflatable harness from the mask regulator and replace it with a serviceable harness. (2) An oxygen mask regulator equipped with a P/N MXH21-1 inflatable harness having a DMF code of November 2008 (0845-S or 0845-S) or earlier, and those with a DMF of January 2011 (1101-S or 11/01-S) or later, is excluded from the inspection and replacement requirements of paragraph (1) of this AD, provided it can be demonstrated that neither the inflatable harness, nor the P/N 445952 harness hose, has been replaced on that mask. A review of aeroplane delivery or maintenance records is acceptable to make the determination as specified in this paragraph, provided those records can be relied upon for that purpose. (3) From the effective date of this AD, it is allowed to install on an aeroplane a Flight Crew Oxygen Mask Regulator, having a P/N as identified in Section 1.A.(1) of Zodiac Aerotechnics SB MC10-35-274, provided it has been determined that a P/N MXH21-31 inflatable harness installed, or that the P/N MXH21-1 inflatable harness installed on that Flight Crew Oxygen Mask Regulator has been corrected, as required by this AD. This determination can be made by following the flow chart contained in Section 3 of Zodiac Aerotechnics SB MC10-35-274, original issue dated 19 March 2014, or Revision 1 issue dated 18 April 2014. The use of later approved revisions of this docum		instructions of Section 3 of Zodiac Aerotechnics SB MC10-35-274,
to make the determination as specified in this paragraph, provided those records can be relied upon for that purpose, and the DMF of the P/N MXH21-1 harness can be conclusively identified from that review. (1.2) If the DMF code of the P/N MXH21-1 harness, identified as required by paragraph (1.1) of this AD, is between 0850-S and 1051-S (inclusive), replace the harness inflation hose P/N 445952 with a serviceable part, or remove the inflatable harness from the mask regulator and replace it with a serviceable harness. (2) An oxygen mask regulator equipped with a P/N MXH21-1 inflatable harness having a DMF code of November 2008 (0845-S or 08/45-S) or earlier, and those with a DMF of January 2011 (1101-S or 11/01-S) or later, is excluded from the inspection and replacement requirements of paragraph (1) of this AD, provided it can be demonstrated that neither the inflatable harness, nor the P/N 445952 harness hose, has been replaced on that mask. A review of aeroplane delivery or maintenance records is acceptable to make the determination as specified in this paragraph, provided those records can be relied upon for that purpose. (3) From the effective date of this AD, it is allowed to install on an aeroplane a Flight Crew Oxygen Mask Regulator, having a P/N as identified in Section 1.A.(1) of Zodiac Aerotechnics SB MC10-35-274, provided it has been determined that a P/N MXH21-31 inflatable harness is installed, or that the P/N MXH21-1 inflatable harness installed on that Flight Crew Oxygen Mask Regulator has been corrected, as required by this AD. This determination can be made by following the flow chart contained in Section 3 of Zodiac Aerotechnics SB MC10-35-274, original issue dated 19 March 2014, or Revision 1 issue dated 18 April 2014. The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.		MXH21-1 inflatable harness fitted to a Flight Crew Oxygen Mask Regulator, having a P/N as identified in Section 1.A.(1) of Zodiac
by paragraph (1.1) of this AD, is between 0850-S and 1051-S (inclusive), replace the harness inflation hose P/N 445952 with a serviceable part, or remove the inflatable harness from the mask regulator and replace it with a serviceable harness. (2) An oxygen mask regulator equipped with a P/N MXH21-1 inflatable harness having a DMF code of November 2008 (0845-S or 08/45-S) or earlier, and those with a DMF of January 2011 (1101-S or 11/01-S) or later, is excluded from the inspection and replacement requirements of paragraph (1) of this AD, provided it can be demonstrated that neither the inflatable harness, nor the P/N 445952 harness hose, has been replaced on that mask. A review of aeroplane delivery or maintenance records is acceptable to make the determination as specified in this paragraph, provided those records can be relied upon for that purpose. (3) From the effective date of this AD, it is allowed to install on an aeroplane a Flight Crew Oxygen Mask Regulator, having a P/N as identified in Section 1.A.(1) of Zodiac Aerotechnics SB MC10-35-274, provided it has been determined that a P/N MXH21-31 inflatable harness is installed, or that the P/N MXH21-1 inflatable harness installed on that Flight Crew Oxygen Mask Regulator has been corrected, as required by this AD. This determination can be made by following the flow chart contained in Section 3 of Zodiac Aerotechnics SB MC10-35-274, original issue dated 19 March 2014, or Revision 1 issue dated 18 April 2014. The use of later approved revisions of this document 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.		to make the determination as specified in this paragraph, provided those records can be relied upon for that purpose, and the DMF of the P/N MXH21-1 harness can be conclusively identified from that
having a DMF code of November 2008 (0845-S) or earlier, and those with a DMF of January 2011 (1101-S or 11/01-S) or later, is excluded from the inspection and replacement requirements of paragraph (1) of this AD, provided it can be demonstrated that neither the inflatable harness, nor the P/N 445952 harness hose, has been replaced on that mask. A review of aeroplane delivery or maintenance records is acceptable to make the determination as specified in this paragraph, provided those records can be relied upon for that purpose. (3) From the effective date of this AD, it is allowed to install on an aeroplane a Flight Crew Oxygen Mask Regulator, having a P/N as identified in Section 1.A.(1) of Zodiac Aerotechnics SB MC10-35-274, provided it has been determined that a P/N MXH21-31 inflatable harness is installed, or that the P/N MXH21-1 inflatable harness installed on that Flight Crew Oxygen Mask Regulator has been corrected, as required by this AD. This determination can be made by following the flow chart contained in Section 3 of Zodiac Aerotechnics SB MC10-35-274. Ref. Publications: Zodiac Aerospace SB MC10-35-274, original issue dated 19 March 2014, or Revision 1 issue dated 18 April 2014. The use of later approved revisions of this document 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.		by paragraph (1.1) of this AD, is between 0850-S and 1051-S (inclusive), replace the harness inflation hose P/N 445952 with a serviceable part, or remove the inflatable harness from the mask
Flight Crew Oxygen Mask Regulator, having a P/N as identified in Section 1.A.(1) of Zodiac Aerotechnics SB MC10-35-274, provided it has been determined that a P/N MXH21-31 inflatable harness is installed, or that the P/N MXH21-1 inflatable harness installed on that Flight Crew Oxygen Mask Regulator has been corrected, as required by this AD. This determination can be made by following the flow chart contained in Section 3 of Zodiac Aerotechnics SB MC10-35-274. Ref. Publications: Zodiac Aerospace SB MC10-35-274, original issue dated 19 March 2014, or Revision 1 issue dated 18 April 2014. The use of later approved revisions of this document 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.		having a DMF code of November 2008 (0845-S or 08/45-S) or earlier, and those with a DMF of January 2011 (1101-S or 11/01-S) or later, is excluded from the inspection and replacement requirements of paragraph (1) of this AD, provided it can be demonstrated that neither the inflatable harness, nor the P/N 445952 harness hose, has been replaced on that mask. A review of aeroplane delivery or maintenance records is acceptable to make the determination as specified in this paragraph, provided those records can be
Revision 1 issue dated 18 April 2014. The use of later approved revisions of this document 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.		Flight Crew Oxygen Mask Regulator, having a P/N as identified in Section 1.A.(1) of Zodiac Aerotechnics SB MC10-35-274, provided it has been determined that a P/N MXH21-31 inflatable harness is installed, or that the P/N MXH21-1 inflatable harness installed on that Flight Crew Oxygen Mask Regulator has been corrected, as required by this AD. This determination can be made by following the flow chart contained in Section 3 of Zodiac
compliance with the requirements of this AD. Remarks: 1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.	Ref. Publications:	
Methods of Compliance for this AD.		
2. This AD was posted on 04 April 2014 as PAD 14-067 for consultation until	Remarks:	
		2. This AD was posted on 04 April 2014 as PAD 14-067 for consultation until

EASA AD No.: 2014-0142

02 May 2014. The Comment Response Document can be found at http://ad.easa.europa.eu/.

- 3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: ADs@easa.europa.eu.
- 4. For any question concerning the technical content of the requirements in this AD, please contact:

Zodiac Aerotechnics, 61 rue Pierre Curie BP 1, 78373 Plaisir, CEDEX France, E-mail: Christophe.besset@zodiacaerospace.com, or

contact Mr. Yann Laine at Zodiac Services for documentation, Telephone +33 1 6486 6964, E-mail yann.laine@zodiacaerospace.com.

For all other issues (logistics, orders) refer to the applicable SB.