


EASA	COMMENT RESPONSE DOCUMENT
	EASA PAD No. 11-031 [Published 18 March 2011, revised on 12 April 2011 and officially closed for comments on 29 April 2011]

Commenter 1: Intertechnique – Christophe Besset –18/3/2011

Comment # 1

We would propose an extension of application to **24 months** for this EAD. This proposal is substantiated hereafter:

The safety assessment provided to EASA, shows that a rupture of mask harness in association with a major even such as smoke/ fire or depressurization is highly improbable or very highly improbable, and won't lead to the control loss of the A/C , nor be fatal for the concerned pilot.

Therefore, the application dead line should take into account manufacturing and logistics aspects. For internal manufacturing and logistics reasons 12 months seems to be achievable to provide all the spare harnesses. We already are constituting harness stock for that purpose.

Even if there are few types of harness (less than 10), that concerns hundreds of mask regulators equipping all type of platforms from small business jet to large airplane. Some small or medium airlines and individual aircraft owners have no crew mask in spare, to start a rotation for applying the AD. These customers (certainly large airline without enough spares) will order or ask new complete mask-regulators. The actual lead time to manufacture mask-regulator without forecast is 120 days. This lead time could increase if there is a peak of orders.

We think that an extension time, would be very much appreciated to avoid AOG for some Airlines. So, for the AD application 18 months seems to us reasonable, 24 months remains ideal.

EASA response:

Comments accepted. The Final AD has been revised to extend the compliance time to 24 months.

Commenter 2: European Air Transport Leipzig GmbH – Christian Köth –21/3/2011

Comment # 2

After reviewing the PAD together with the related SB MXH-35-240 European Air Transport (EAT) would like to comment the following:

The Intertechnique Service Bulletin MXH-35-240 states in Chapter 1. A. (1) Concerned equipment that

Inflatable harness PNR MXH Series manufactured before 33rd week of 2008 year (0833S) are not marked with any batch number and are not concerned.

EAT concludes that if the inflatable harness assembly is not marked with a batch number, it is not effected by the AD. This should be stated in the upcoming AD to avoid that not marked harness assemblies manufactured before 33rd week of 2008 become replaced because they are considered as not identifiable for AD applicability.

EASA response:

Comment accepted. The Reason section of the PAD already contains Note 2 that specifies that “Harness assemblies that do not have a date code were manufactured before week 33 of 2008 and are not affected by this unsafe condition”. No changes are made to the Final AD in response to this comment.

Commenter 3: Nouvelair [Sabenatechnics.com.tn] – Helmi Touel – 23/3/2011

Comment # 3

I have several remarks about the PAD:

- 1- It will be helpful to put the VSB on EASA web Site, because it's important to understand the PAD,
- 2- does P/N MF10 refer to all the series (MF10-05-11,...)?
- 3-phone number of Christophe Besset is wrong.

EASA response:

Comments partially agreed.

1. Please note that EASA cannot supply or distribute service publications, as these contain proprietary information, owned by the approval holder of the product to which it applies. In addition, the approval holder has the legal responsibility [EC 1702/2003, Part 21A.3B paragraph (c)] to “make available to all known operators or owners of the product, part or appliance and, on request, to any person required to comply with the airworthiness directive, appropriate descriptive data and accomplishment instructions”. Inter technique plans to publish the SB on a public-access part of their website. When that occurs, the Final AD could be revised to incorporate that information.

2. The PAD has been revised to make clear that all P/N MF-10 series are, or could be, affected, as the suspect harnesses have also been supplied as spares.

3. The PAD has been revised to provide the correct information and contact details.

No changes are made to the Final AD in response to this comment.

Commenter 4: BAE Systems (Operations) Ltd – David Houfe – 23/3/2011

Comment # 4

Whilst recognising the applicability of the referred PAD is not limited to the aeroplane manufacturers listed, I would like to make you aware that the subject Flight Crew

Oxygen Mask Regulators are installed on some BAE Systems aircraft types.

EASA response:

Comment accepted. The PAD has been revised to add BAE Systems to the list of manufacturers of aeroplanes that are known to have the affected oxygen masks installed.

No changes are made to the Final AD in response to this comment.

Commenter 5: NEXTJET – Sverre Rossmark – 24/3/2011

Comment # 5

Under "Required action and compliance time Item 1.1"; would a record check (maintenance follow-up system) be acceptable to verify Installed P/N of the mask assy (MA10-12, MC10, MC20, MF10, MF20, MLC20, MLD20, MRA005, MRA022 and MRA023). If any of these P/N are Installed then would an physical check be necessary to verify harness P/N and batchnr.

EASA response:

Comment understood. The PAD has been revised to make clear that all listed P/N series are, or could be, affected, as the suspect harnesses have also been supplied as spares. A record check of the oxygen mask might not be sufficient, as the P/N and batch number of the harness installed on the mask are not normally recorded.

No changes are made to the Final AD in response to this comment.

Commenter 6: Aer Lingus – Dan Fanning – 28/3/2011

Comment # 6

Further to PAD 11-031, can you please review the below query and confirm the applicability of flight crew oxygen masks requiring inspection per Inter technique Service Bulletin (SB) MXH-35-240.

In the applicability section of PAD 11-031 it is noted that it is those flight crew oxygen mask regulators as identified in Appendix II of Inter technique Service Bulletin (SB) which may contain the potentially defective harnesses. Having read this, one would believe it is just those flight crew oxygen mask regulators which would require inspection and action if necessary.

However, in the requirement actions section of the PAD, step 1.1 requests the operator to "Identify the P/N and batch number of the inflatable harnesses fitted to each Flight Crew Oxygen Mask Regulator that is installed in the aeroplane". Having read this, one would believe that all flight crew oxygen mask regulators on all aircraft would require inspection.

Aer Lingus believe that an ambiguity exists in requirement actions section as to whether it is all flight crew oxygen mask regulators installed on all aircraft which require

the inspection or whether it is just those aircraft which contain the flight crew oxygen mask regulators as identified in Appendix II of Intertechnique Service Bulletin (SB) MXH-35-240, as the applicability section of the PAD would seem to indicate. Clarification is required on this to determine the scope of work required by operators.

EASA response:

Comment understood. The PAD has been revised to make clear that all listed P/N series are, or could be, affected, as the suspect harnesses have also been supplied as spares. A record check of the oxygen mask might not be sufficient, as the P/N and batch number of the harness installed on the mask are not normally recorded.

No changes are made to the Final AD in response to this comment.

Commenter 7: British Airways – Andy Brooker – 31/3/2011

Comment # 7

Ref. EASA PAD 11-031 Issued 18 March 2011-03-31

The above PAD proposes that specific Flight Crew Oxygen Mask harnesses, detailed in Appendix II of Intertechnique SB MXH-35-240, be identified and replaced.

British Airways would like to ask if the methodology of identification using applicable aircraft records, would be an acceptable means of compliance with the proposed AD.

If so, British Airways request that reference to this methodology, be made in the final version of the AD.

EASA response:

Comment partially accepted. The PAD has been revised to specifically refer to Section 3 ‘Accomplishment Instructions’ of Intertechnique SB MXH-35-240 that contains the inspection instructions that must be used for identification of the harness P/N and batch number. A check of aircraft records might only be sufficient to determine whether a harness has been replaced on a mask (e.g. repair action), not which P/N and batch number harness is installed on an oxygen mask, as this is not normally recorded.

No changes are made to the Final AD in response to this comment.

Commenter 8: CRS Jet Spares – Mike Marino – 31/3/2011

Comment # 8

In SB MXH-35-240 the DMF is depicted in figure 1 as format “102010” (10th month of 2010).

I have checked several masks with p/n’s on the list in the SB and some have had the format of “11-00”. This format was on a mask p/n MC10-13-03 (though not on a listed serial number).

Can you explain this? Would the 11-00 stand for 11th month of 2000?

If the date format is not the same configuration listed in the SB, would that mean that it would not be suspect?

EASA response:

Comment/question understood. Intertechnique has issued revision 2 of the SB that provides more detail on the possible permutations of the date of manufacture (DMF) of the oxygen mask. However, the DMF of the mask does not determine whether an affected harness is installed. The PAD has been revised to make clear that all listed P/N series are, or could be, affected, as the suspect harnesses have also been supplied as spares.

No changes are made to the Final AD in response to this comment.

Commenter 9: Airbus – Eric Blancaneaux – 11/4/2011

Comment # 9

Please find herewith the comments from AIRBUS office of airworthiness on above mentioned PAD:

Applicability paragraph:

If the applicability is restricted to affected units as listed in INTERTECHNIQUE VSB appendix 2 then Required action paragraph (2) is also limited to this population whereas it shall be for all aeroplanes that could have these masks.

Applicability shall be limited to:

INTERTECHNIQUE Flight Crew Oxygen Masks Regulators, Part Number (P/N) MA10-12, MC10, MC20, MF10, MF20, MLC20, MLD20, MRA005, MRA022 and MRA023 Series.

The affected Flight Crew Oxygen Masks Regulators are known to be installed on, but not limited to, aeroplanes manufactured by Airbus, ATR, Boeing, Bombardier (Canadair), Cessna, Dassault, EADS CASA, EMBRAER, Gulfstream, Israel Aircraft Industries (IAI), McDonnell Douglas, Piaggio, Pilatus, Piper and SOCATA.

Required action paragraph:

First action would be to identify the affected Flight Crew Oxygen Masks Regulators, Part Number and serial numbers (SN) as listed in Intertechnique SB MXH-35-240 appendix II.

In case, an affected unit is found, proceed with current 1.1 and 1.2 AD requirements.

There is no definition of what is a “serviceable harness”; then the sentence shall be modified by “... replace it by a harness with a Manufacturing date not between 0850S and 1031S”.

Compliance time of 12 months is more restrictive than the 24 months as already published by Intertechnique in their SB, EASA must ensure with Intertechnique that there will be no spare part issues.

A 24 months compliance time for AIRBUS aeroplanes is more in line with regular maintenance intervals.

EASA response:

Comments partially agreed.

Applicability section: The PAD has been revised to make clear that all listed P/N series are, or could be, affected, as the suspect harnesses have also been supplied as spares.

Required Action(s) and Compliance Time(s) section, first action: The P/N and s/n of the mask does not determine whether an affected harness is installed; see Applicability above. The PAD has been revised to specifically refer to Section 3 'Accomplishment Instructions' of Intertechnique SB MXH-35-240 that contains the inspection instructions that must be used for identification of the harness P/N and batch number. These instructions determine what constitutes a 'serviceable harness'; this is also determined by paragraph (2) of the PAD.

Compliance time – Comment agreed; the Final AD has been amended to extend the compliance time to 24 months.

No other changes are made to the Final AD in response to this comment.

Commenter 10: Air France – Jean-Dominique Bouton – 12/4/2011

Comment # 10

After analyse of PAD 11-031 issued on oxygen mask regulator inflatable harness, I have the following comments:

AFR fleet is expected to be heavily impacted by this issue due to the fact that harnesses are not tracked by serial number. Installation of affected harness may have been performed in shop during the oxygen masks shop visit.

The action plan is to perform an inspection on aircraft in order to identify and track the affected harnesses, replace the affected harnesses on aircraft or remove the oxygen masks for harness replacement in shop as per VSB MXH-35-340.

Due to the high number of aircrafts to inspect, the uncertainty in the number of affected harnesses and availability of new harnesses, the compliance time of 12 months is deemed [too] short to manage all activities induced by this AD. A compliance time of 24 months as proposed by VSB MXH-35-240 is deemed more manageable.

EASA response:

Comments agreed.

The Final AD has been amended to extend the compliance time to 24 months.

Commenter 11: Lufthansa Technik AG – Christian Dimter – 12/4/2011

Comment # 11

PAD 11-031R1 suggests that "identification of an inflatable harness must be done in accordance with the instructions of the Intertechnique SB".

The SB MXH-35-240 R1 has a flow diagram on page 6 giving instructions on how to proceed when inspecting a mask.

Lufthansa Technik sees difficulties in the newly added decision box “Crew oxygen mask has been repaired and harness changed between 03rd week of 2009 and 8th week of 2011?”, as this point is a question nearly impossible to answer by the mechanic on the aircraft. There is no reference on the mask showing when the mask was last in the workshop for maintenance, and even less can he know if the harness has been replaced. Naturally, there are papers documenting the last shop visit, but they are not easily accessible to a mechanic performing the inspection anywhere in the world.

Lufthansa Technik therefore would like to suggest an alternative way of meeting compliance with the point EASA is aiming at (being to inspect also masks outside the S/N range given in the SB because of the possibility of installation of a defect harness during mask maintenance into a mask outside the range of the SB):

Lufthansa Technik uses a tracking system to track all P/N and S/N of crew oxygen masks. Thus, Lufthansa Technik could first of all determine which aircraft are affected by checking the list of affected P/N+S/N of the SB and determining in which aircraft affected masks are installed.

Furthermore, the workshop has provided a complete list of all affected harness P/Ns installed into any crew oxygen mask since beginning of 2008 until today. P/N + S/N of the masks are given where an affected harness has been installed since beginning of 2008. With this information, Lufthansa Technik can determine the momentary position of the affected mask (installed on aircraft or in storage) and can directly approach the affected aircraft for harness replacement.

Lufthansa Technik is sure this method would be more reliable than leaving the decision to the mechanic to decide whether the harness has or has not been replaced between week 3/2009 and week 8/2011. And this method would spare checking aircraft of which the installed mask P/Ns and S/Ns are known, do not appear in the SB and of which it is known that they have not had a harness replaced since beginning 2008.

Would EASA please be so kind as to look into this request and provide information on whether the AD can be amended by the possibility to check aircraft documentation in lieu of on-wing inspection to determine whether affected P/N / S/N are installed, keeping in mind that affected harnesses may have been installed on masks outside the S/N range given in the SB. If the AD cannot be amended, could EASA accept the Lufthansa Technik procedure as acceptable means of compliance with the AD requirements?

EASA response:

Comments partially agreed. Intertechnique has issued revision 2 of the SB to specify that “prior to using the flow chart to start the on-aircraft action(s), the operator, if he has the possibility, can determine (e.g. aircraft maintenance logs check) whether the inflatable harness has been replaced, during a maintenance operation on an oxygen mask regulator installed on the aircraft”. **The Final AD has been amended to specify the use of SB MXH-35-240R2 dated 10 May 2011.**

In case this still presents problems, LHT can apply for an AMOC (EASA Form 42) to obtain approval for an alternative procedure.

The Final AD has been amended to include a paragraph to specify that: “Oxygen mask regulators with a date of manufacturing (DMF) code of November 2008 (112008 or 11-08) or earlier, and those with a DMF of January 2011 (012011 or 01-11) or later, are excluded from the inspection and replacement requirements of paragraph (1) of this AD, provided it can be demonstrated that the inflatable harness has not been replaced on those masks. A review of aeroplane delivery- or maintenance records is acceptable to make the determination as specified in this paragraph, provided the DMF of the Oxygen Mask Regulator can be conclusively identified from that review.”

Commenter 12: Thomas Cook Aircraft Engineering – Iain Barber – 19/4/2011

Comment # 12

Thomas Cook Aircraft Engineering (TCX) have previously questioned and are awaiting reply from Intertechnique reference the scope of VSB MXH-35-240, due to the

flow chart on page 6 of VSB MXH-35-240 which shows the inspection path on aircraft to a point that states 'Crew Oxy Gen mask has been repaired between 03rd week of 2009 and 8th week of 2011' Yes/No (attached and highlighted in yellow), it was pointed out that how would the engineer know if the Crew Oxy Mask had been repaired and the harness replaced in the past, regardless of the P/N and S/N batch ranges listed in appendix II.

As it appears that the harness manufacturing date and batch number information can only be found on some harnesses by removing the harness from mask regulator, then this would then mean that it is necessary for the engineer to remove all the harnesses from Intertechnique crew oxygen mask regulators to positively identify possible affected harness batch ranges iaw appendix I, there is no AMM reference for removing the harness from the regulator which would cause further complications.

In addition, TCX have crew oxygen mask regulators in stock which have P/N's listed in appendix II but the S/N's is not applicable, however iaw related CMM's it is possible to fit affected harness P/N's to these regulators, there fore these units will have to have the harnesses removed also to check for possible affected units.

Question: Can you please confirm that to fully determine if an affected harness iaw appendix I is fitted to an Intertechnique crew oxygen mask regulator, it will be necessary to remove the harnesses from all Intertechnique crew oxygen masks, regardless of the P/N, S/N information listed in Appendix II?

EASA response:

Comment (question) understood. A partial answer is provided in the EASA response to comment # 11 above.

No additional changes are made to the Final AD is response to this comment.

Commenter 13: All Nippon Airways (ANA) – Mitsuru Ishikawa – 28/4/2011

Comment # 13

1/ PAD 11-031R1 requires that "identification of an inflatable harness must be done in accordance with the instructions of the Intertechnique SB MXH-35-240". The SB MXH-35-240 R1 has a flow chart on p. 6/22 providing instructions how to proceed when inspecting a mask. This flow chart requires to inspect the manufacturing date and the serial number of the crew oxygen mask visually. On the other hand, the SB has lists on p. 12/22 through 20/22 providing the part numbers and serial numbers of affected masks installing potential defective inflatable harnesses. ANA has the documentation showing the part numbers and serial numbers of the masks installed on the airplanes upon delivery from the aircraft manufacturers. ANA would like therefore to take advantage of the documentation to isolate affected masks in lieu of on-wing visual inspection as an alternate procedure. Please accept the way to take advantage of the delivery documentation as an alternative procedure of on-wing visual inspection to isolate affected masks.

2/ The flow chart on p. 6/22 of the SB MXH-35-240 R1 instructs to check whether the mask has been repaired between 03rd week of 2009 and 8th week of 2011. ANA has the shop maintenance records to show the part numbers and serial numbers of the masks as well as the date of repair. In addition, ANA can identify each part number and serial number of the mask on each airplane by our part control system whenever necessary. ANA would like therefore to take advantage of the shop maintenance record to isolate affected masks in lieu of on-wing visual inspection as an alternate procedure. Please accept the way to take advantage of the shop maintenance record as an alternative procedure to isolate affected masks.

3/ ANA has over 900 masks with the affected part numbers. ANA has contacted Zodiac and they said they were able to supply only twenty new inflatable harnesses a month per operator at a maximum. Furthermore, Zodiac reported approximately 300 potential defective harnesses were delivered to ANA. Based on the above facts, it must be impossible for ANA to complete the modification of the SB for the masks within 18 months according to the current PAD. Please accept the AD compliance to extend to 36 months.

4/ In case that the inspection and replacement in a shop, the SB MXH-35-240 R1 requires test for the mask per the relevant CMM after inspection and installation of the harness. The CMM allows to use gaseous oxygen (MIL-O-27210 type 1 or SAE AS 8010 standards or Technical Clause CT EQ 630-56), gaseous nitrogen (BB-N-411B type 1, class 1 grade A standard) and dry and oil-free air as the test gas, and our shop uses nitrogen. It is difficult to obtain nitrogen with the above specification in Japan because it is made with the specification of the Japanese Industrial Standards (JIS), which is slightly different from that. ANA would like to use nitrogen which meets JIS K1107 in lieu of BB-N-411B type 1, class 1 grade A standard, as an alternative gas.

JIS K 1107 Nitrogen; 99.999 percent or more pure - Oxygen content 5.0 vol. ppm or less - Moisture content 10 vol. ppm or less - Oil Free

BB-N-411; Type 1: Gaseous - Class 1: Oil Free - Grade A: 99.95 percent pure.

Please accept to take advantage of nitrogen specified by JIS K1107 as an alternative of a test gas specified in the Inter technique CMM 35-13-60 (MF20 series), 35-13-61 (MF10 series) and 35-13-63 (MC10 series) by providing AMOC.

5/ ANA concerns regarding spares upon purchasing after the effective date of the AD. To eliminate the risk of installation of the affected inflatable harness and easily find out whether the harness is serviceable, ANA would like Inter technique to change the part number of the harness and/or the mask assembly. Please make Inter technique change the part number change of the non-affected harness and/or the mask assembly with the non-affected harness if EASA can share the concern.

EASA response:

Comments nrs.1 and 2 partially agreed. See EASA response to comment # 11 above.

Comment nr.3 partially agreed. The Final AD has been amended to extend the compliance time to 24 months.

Comment nr.4 not agreed. An application for an AMOC would have to be made to the National aviation authority (NAA) of the State of Registry of the affected aeroplane(s), not to EASA. EASA can only accept an AMOC application if the affected aeroplane is registered in a European country, or if the application is made by the approval holder of the product(s), part(s) or appliance(s) to which the AD applies. Nevertheless, in case the NAA would request EASA advice or expert opinion to make a safety determination, this will be provided to that NAA.

Comment nr.5 not agreed. The cause of the unsafe condition, as specified in the AD, is certain “suspected silicon batches” that were used in the production of certain inflatable harnesses, identified by P/N and s/n in the SB. No design change is involved in the corrective action, therefore no new P/N is warranted.

No additional changes are made to the Final AD in response to these comments.

Commenter 14: Japan Air Lines (JAL) Engineering – Yasuo So – 28/4/2011

Comment # 14

JAL experienced rupture cases of crew O2 mask harness on 767, but not experienced on the other type of airplane. We believe that rupture would be related to mask type and depend on using frequency, because JAL has not experienced [rupture cases] on 767 domestic flights, which is few cases of using O2 mask.

We [are concerned] that this AD would affect maintenance schedule, because SB is applicable to all crew O2 masks on JAL airplane, and JAL has too many harnesses and man power to be required.

/1/ Compliance Date - Within 18 months after effective date of the AD is too short to complete the AD requirement. It is hard to prepare the rotatable unit (O2 mask) to check the batch number of total about 800 masks for JAL and also manpower would be short. Vendor SB MXH-35-240 indicates that the inspection should be completed within 24 month. However JAL concerns if all O2 mask can be inspected within even if 24 months. JAL would like EASA to request to extend the compliance

date to at least 24 months after effective date of the AD.

/2/ Required Action - In case that JAL has the shop maintenance record included batch number information, JAL would like to use the maintenance record to identify the P/N and batch number. Please add the following note to Item (1.1) of Required Action(s): Note1: Maintenance record or equivalent may be used to identify the P/N and batch number.

/3/ Required Action - There are no chance that the suspected harness assemblies manufactured between 50th week of 2008 year and 31st week of 2010 year are installed in the masks whose date of last shop out or manufacture are before Dec. 2008 because they are assembled only at shop facility in accordance with the applicable CMM. Please add the following note to Item (1.1): Note2: Except the inflatable harness fitted to each Flight Crew Oxygen Mask Regulator whose date of last shop out or manufacture indicated in maintenance record or equivalent are before Dec. 2008.

/4/ Other - There are some discrepancies in SB MXH-35-240 Rev.1, and we hear that it will be updated accordingly at the next revision of SB. JAL would like EASA to issue concerned AD for next revision of SB after revised.

EASA response:

Comment nr.1 agreed. The Final AD has been amended to extend the compliance time to 24 months.

Comment nr.2 partially agreed. See EASA response to comment # 11 above.

Comment nr.3 partially agreed. See EASA response to comment # 11 above.

Comment nr.4 agreed. The Final AD has been amended to specify the use of SB MXH-35-240R2 dated 10 May 2011.

Commenter 15: Avianca – Diogo B. Youssef – 29/4/2011

Comment # 15

Concerning the required actions written on PAD 11-031 R1, we should check the PN and Batch Number for all masks of Avianca Brasil fleet (56 masks). As the actions (removal of regulator) to check those information are part of SB MXH-35-240 and CMM only, as an 121 operator (without component capability), we were supposed to send all masks to a Zodiac facility to check the AD applicability, in a short period interval.

Asking the same issue for Zodiac Aerospace, they do not have any objection to check those information with masks installed on aircraft (see message attached). Now I would like to ask EASA if it is acceptable the check of Harness Batch Number with the mask installed. Regarding that the information check requires the regulator removal from the mask.

EASA response:

Comments partially agreed. See EASA response to comment # 11 above.