

## COMMENT RESPONSE DOCUMENT

EASA PAD No. 19-102

[Published on 05 June 2019 and officially closed for comments on 03 July 2019]

### Commenter 1: Cathay Pacific Airways – Kevin Hsieh – 06/06/2019

#### Comment # 1

Cathay Pacific has two queries regarding EASA PAD 19-102 issued on the 05-Jun-2019:

- A. Referring to corrective actions (2) and (3): As per the PAD definitions, a “Serviceable part” is defined as “An affected part which has passed a flow test (no defects found) in accordance with the instructions of the applicable SB.”. Since the SB flow test is required to be performed on-wing, it is currently not possible to inspect an affected part without installing it first. To avoid a potential situation of a newly installed part failing the test and thereby requiring subsequent removal, can EASA also include an alternative off-wing test?
- B. If the above is not possible, can EASA clarify if there is a plan to introduce a permanent fix to mitigate the need to perform the flow test after each installation?

#### EASA response:

**Comment partially agreed. There is no possibility to develop an off-wing test for an affected part and no improved part is foreseen to be developed that would stop the need for SV flow test. However, the definition of ‘Affected Part’ and ‘Serviceable part’ has been amended in EASA PAD 19-102R1. In addition, installation of an affected part is now allowed provided that, before next flight after that installation, that affected part passes the flow test. EASA PAD 19-102R1 has been published in response to this comment.**

### Commenter 2: Air Italy – Elisa Oldani – 06/06/2019

#### Comment # 2

PAD N° 19-102 defines as “Serviceable Part”, any Affected Solenoid Valves P/N DVE90-06 or DVE90-07 which has passed a flow test (no defects found) in accordance with the instructions of the applicable SB (for our fleet Airbus SB A330-35-3056).



Airbus SB ask to do this “flow test” onboard, with the solenoid valve installed. In case of “three mask flow test” failure, SB ask to do “two mask flow test”. If the second test fail, SB ask to replace the shut-off valve.

The new solenoid valve to be installed has the same P/N. No improved oxygen supply solenoid valve is available for next installation. SB indeed ask to do again “three mask flow test” after replacement. Is quite like to restart the accomplishment of SB again, but in case of “three mask flow test” fail, after valve replacement, SB ask to do trouble shooting.

Air Italy point of view, is not clear how to satisfy the requirement of PAD in term of “SDI” (special detail inspection) because the flow test process for valve installed onboard is different from the process used for the replaced valve that I’m going to install onboard with the same P/N of the affected one.

After valve replacement, this valve can be considered “serviceable part” only if have passed “three mask flow test” and not all the test required in the first part of SB.

In addition, it could be that I need to replace more than one valve in the same ground time, due to the fact that do not exist an improved P/N or a test that can be done on shop and not onboard.

***EASA response:***

***Comment partially agreed. See EASA answer to Comment # 1 above.***

***EASA PAD 19-102R1 has been published in response to this comment.***

***Commenter 3: Qantas Airways – Tomo Sugano – 07/06/2019***

***Comment # 3***

**References**

Ref [1] EASA PAD 19-102 issued on 05-Jun-2019

Ref [2] Airbus Inspection SB A330-35-3056 R00 dated 01-Apr-2019

Ref [3] Task A330-A-35-XX-3056-04001-340A-A (of Ref [2] ISB Conf 001)

Ref [4] Task A330-A-35-XX-3056-05001-340A-A (of Ref [2] ISB Conf 002)

Ref [5] Airbus 330 AMM Task 35-13-51-400-802

With regard to Ref [1] PAD (hereafter referred to as the PAD), Qantas Airways would like to consult EASA on the following points:



- A. The PAD defines a 'Serviceable Part (Crew Oxygen Mask Solenoid Valve)' as "An affected part which has passed a flow test (no defects found) in accordance with the instructions of the applicable SB" (Ref [2] is the applicable SB in the case of the A330 fleet, which Qantas operates). We understand that this precise definition was essential in defining the Corrective Action as stipulated by PAD Para (2). However, the fact that the same PAD definition of a serviceable part also prevails in PAD Para (3): Parts Installation has now created the inspection requirement i.a.w. Ref [2] ISB for any Crew Oxygen Mask Solenoid Valve replacement events outside the scope of the ISB. This means that the ISB, which accomplishes a one-time inspection, will virtually remain in force as a recurring requirement when Valve replacement takes place.
- B. In relation to Point A above, we believe that the intent of Ref [3] and [4] ISB Subtasks (in the case of the A330) as required after Valve replacement should be incorporated into Ref [5] AMM Task for the valve installation. Otherwise, operators will have no choice but to append a customised AMM 'Green Page' to require their maintenance technicians to accomplish the recurring inspection requirement i.a.w. Ref [2] ISB.
- C. Further to the above, Qantas is in the opinion that there should also be appropriate stipulation in the AD on how the compliance with the AD is maintained when serviceable transfers (e.g. part cannibalisation) occur between aircraft upon the release of the new AD. This may depend on how EASA would address Points A and B.

**EASA response:**

- A** *Comment partially agreed. The definition of 'Affected part' and 'Serviceable part' were amended and if a serviceable SV is installed, which is not an affected part, there is no need, upon installation, to accomplish the SV flow test.*
- B** *For AMM task, this is not an EASA approved document. However, based on the flow test results, as required by the final AD, a repetitive maintenance task should be developed for each SV DVE90-06 or P/N DVE90-07.*
- C** *Comment agreed. Given the new approach, the transfer of SV from an aeroplane to another aeroplane becomes simpler. If the SV to be transferred is a serviceable part, there is no action required upon installation. If the SV to be transferred is an affected part, it is possible provided that, before next flight after installation, it passes the flow test (no defects found).*

**Commenter 4: Etihad Airways – Ahmed Eltom – 10/06/2019**

**Comment # 4**

As for the requirements of Table 1 of the subject PAD, we managed to obtain the MFD details from the vendor (Zodiac/AKKA).

Will it be acceptable to rely on the records for planning of the compliance time or is it required to physically inspect the SV to determine the year of manufacture?



**EASA response:**

**Comment acknowledged. EASA confirm that no physical inspection is required by EASA PAD 19-102R1 to find the year of manufacture of an affected part, to determine the due date for the SDI (flow test), provided records are complete and accurate and can therefore be relied upon for that purpose.**

**No changes have been made to EASA PAD 19-0102R1 in response to this comment.**

**Commenter 5: Virgin Australia Airlines – Ruchira Heendeniya – 11/06/2019**
**Comment # 5**

Can you please confirm whether the operators are allowed to perform a maintenance records check to determine the effectivity of this AD? If yes, please add a sentence similar to below:

E.g.: “A review of airplane maintenance records is acceptable in lieu of physical inspection if the part numbers can be conclusively determined from that review”.

**EASA response:**

**Comment acknowledged. See EASA answer to Comment # 4 above.**

**No changes have been made to EASA PAD 19-102R1 in response to this comment.**

**Commenter 6: Lufthansa Technik AG – Christian Veckenstedt – 13/06/2019**
**Comment # 6**

PAD No. 19-102 defines the following:



**Parts Installation:**

(3) From the effective date of this AD, installation on an aeroplane of an affected part is allowed, provided that the part is a serviceable part, as defined in this AD.

**Affected part:** Solenoid valves (SV), having Part Number (P/N) DVE90-06 or P/N DVE90-07.

**Serviceable part:** An affected part which has passed a flow test (no defects found) in accordance with the instructions of the applicable SB.

That would mean that all our spares are unserviceable and we have no possibility to replace a SV in case of an unscheduled removal. As there is no test on component level available/required, how can a spare SV be classified as serviceable?

The only possibility would be to add the SDI to the AMM installation procedure for the SV or to publish a check on component level for all spares. Even a new SV from the manufacturer must be checked after installation on the A/C according to the scheduled SBs.

Generally spoken, the malfunction of this component was detected in the LHT shop in November 2016. The problem is on component level, but there is no action on component level (e.g. Component SB) for the DVE90 valves. If the intention of this AD shall be only a snapshot of the finding rate of the flying SVs, the "Parts Installation" should be changed.

**EASA response:**

*Comment agreed. See EASA answer to Comment # 1 above.*

*EASA PAD 19-0102R1 has been published in response to this comment.*

**Commenter 7: Air France – Christelle Raphalen – 25/06/2019****Comment # 7**

The effectivity for this PAD is given for A330/A340 airplanes only, but the P/N DVE90-06 or DVE90-07 can be installed on A320 airplanes. Does this inspection concern also these aircraft?

In the case of the Solenoid Valve has been already tested iaw the SB A330-35-3056 or A340-35-4034:

- if mechanics, few months later, need to replace this equipment, the AMM Task 35-13-51-400-802-A doesn't request for the moment the same mask flow test that the SB test.



- However the new equipment installed can be overhauled (the better thing) or have only a bench test (workshop done by Zodiac Aerotechnics).

-> So, the aircraft may become non-compliant with the AD after an mechanic intervention if:

- \* the AD has been already applied,
- \* the tests are not included in AMM Task,
- \* and the equipment in shop have no overhaul (but only a bench test)

As a consequence, this situation brings questions about how to deal with equipment after AD. Must we request only overhaul for a removal Solenoid Valve?

**EASA response:**

**Comment agreed. See EASA answer to Comment # 1 above.**

**EASA PAD 19-102R1 has been published in response to this comment.**

**Commenter 8: Virgin Atlantic Airways – Martin Downey – 28/06/2019**

#### **Comment # 8**

The Airbus SBs related to PAD 19-102 (SB A330-35-3056, SB A340-35-4034, SB A340-35-5026) specify a requirement for a physical inspection of the oxygen solenoid valve to determine the date of manufacture, which is then used as the basis for determining the threshold for performing the test. This requirement is in Section 3.C.(1) which is part of a 'REQUIRED COMPLIANCE' section of the SB.

The oxygen solenoid valve is identified in the aircraft inspection report, and is a tracked serialised item at VIR. The valve supplier (Zodiac) and Airbus have both provided VIR with a list correlating valve serial number with its date of manufacture.

VIR believes that mandating a requirement to physically inspect the component on the aircraft (when its serial number is already known) to determine the inspection threshold, and then later perform the inspection is an undue burden – the engineering burden is almost doubled, as much of the effort goes into planning and administration maintenance tasks.

We believe that it should be permissible under the AD to determine the year of manufacture from the serial number/date of manufacture date a provided by Airbus and Zodiac. Without a specific statement in the AD permitting the year of manufacture of the solenoid valve to be determined from the serial number, the SB wording will compel the operator to do a physical inspection on each aircraft, and indeed may decide to do all inspections at



the earliest threshold (6 MO from AD effective date). Such an eventuality whereby operators perform the inspection much earlier than required or anticipated may generate significant logistical challenges; the supplier may not be able to support the demand for replacement valves.

**EASA response:**

*Comment acknowledged. See EASA answer to Comment # 4 above.*

*No changes have been made to the Final AD in response to this comment.*

**Commenter 9: American Airlines – Richard Castle – 28/06/2019**

**Comment # 9**

Subject PAD, issued 05 June 2019, proposes compliance with Airbus SB A330-35-3056 original issue dated 01 April 2019 for all A330 Series aircraft.

- A. American Airlines (AAL) notes that the affected Solenoid Valve part numbers, DVE90-06 and DVE90-07, are also installed on A320 Series aircraft and as such AAL uses those parts interchangeably across both fleet types. AAL further notes that Airbus has drafted SB A320-35-1096 which will, when released, perform a similar flow test on A320 Series aircraft and we assume that this SB will eventually become AD mandated as well. To maintain two-way interchangeability between A320 Series and A330 Series Oxygen Solenoid Valves the two flow tests (Paragraphs 3.C. of each SB) must match each other exactly. We would like Airbus and EASA to ensure that when releasing SB A320-35-1096, this is taken into consideration.
- B. Additionally, specific to SB A330-35-3056, CONF 001 work step 3.C.(2) – Three Mask Flow Test requires that reporting is accomplished in accordance with ISI 00.00.00179. The same requirement also applies to work step 3.C.(6). These are Required for Compliance (RC) work steps and must be accomplished as written. AAL believes that uploading an inspection report in a specific manner does not enhance safety or correct the potential unsafe condition and requests that the reporting requirement be eliminated from the AD requirements. If reporting is deemed necessary for safety reasons, please provide a simple alternate process e.g. an e-mail address, or more generic instructions of reporting findings to Airbus without mandating ISI 00.00.00179.

Finally, both CONF 001 and CONF 002 SB work steps 3.C.(5) – Replacement of the Shut off Valve (Depending on the Inspection Result) requires that any removed valve be sent to ZODIAC, the Shut off Valve OEM, for repairs. Again, this is a RC work step and must be accomplished as written. AAL believes that this is too restrictive and the final AD should allow any removed valves to be sent to any approved MRO for repairs.

**EASA response:**



**A** *Comment acknowledged. It is confirmed the issue is present on A320 family aeroplanes and EASA intend to publish an AD to address the unsafe condition. EASA is coordinating the issuance of the ADs and will try to align both ADs as much as possible. As for the respective Airbus SBs, the comments for SB alignment should be passed to Airbus directly.*

**B** *Comment not agreed. In Europe, SB actions become mandatory only if they are mentioned in an EASA AD. Hence, the mentioned reporting instructions present in Airbus SB, not being part of the Final AD, are not to be considered mandatory.*

*No changes have been made to EASA PAD 19-102R1 in response to this comment.*

