

EASA	COMMENT RESPONSE DOCUMENT
	EASA PAD No. 12-145 [Published on 19 November 2012 and officially closed for comments on 17 December 2012]

Commenter 1: Air France – Olivier Demède – 28.11.2012

Comment # 1

SB 32-8018 is classified as Aircraft only but apply to Equipment MPN 299000-1 only and refer to VSB 299000-29A01.

-- >Could you please confirm that AD applicability will be: A380 all model fitted with MPN 299000-1 MSN listed in Appendix 1 fitted on A380-841?

VSB 299000-29A01 states that

Accumulators with Pink dot only are limited at 3225 Fc and 29350 Fh. (this limitation is not reflected in the AD)

Accumulators with Yellow dot are limited at 4275 Fc and 35600 Fh.

--> Could you please advise why the 3225Fc and 29350Fh limitation is not reflected in the AD as stated in the VSB?

A new standard of accumulator has been designed and covered by Airbus Mod 71175T81268 for introduction on A/C in manufacturing line.

This MOD will introduce MPN 1015300-00 which should NOT be life limited.

--> Could you please incorporate the MOD number into the Applicability?

EASA response:

- 1) EASA disagreed. The final AD is applicable to all A380 aircraft model (-841, -842 and -861). As per the replacement requirement of §1 of this AD, it is required to identify if the affected P/N is installed.**
- 2) EASA agreed. The final AD has been amended to clarify the compliance time which now considers 3 HP accumulator configurations. This is in line with Airbus SB A380-29-8018 and EATON SB 299000-29A01 Revision 01 instructions.**
- 3) EASA agreed. The final AD has been amended to state that aeroplanes on which MOD71175 or Airbus SB 29-8016 has been embodied in production are not affected by the requirement of §1 of this AD, provided that the affected P/N is not re-installed.**

Commenter 2: Qantas Airways Ltd – Stuart Roach – 17.12.2012**Comment # 2**

This PAD concerns potential fatigue related failure of the HP hydraulic accumulators on the A380 aircraft. The PAD refers to Airbus SB A380-29-8018 for instructions for replacement of the affected accumulators. Airbus SB A380-29-8018 requires a physical inspection of the HP accumulators on the aircraft and follow-up activity depending on the inspection findings. Qantas considers that this physical inspection is not required if the flight hours and flight cycles of the accumulators are tracked within an operators system of maintenance and these aircraft/component records could be used to determine when a HP accumulator needs to be replaced and tested in accordance with the requirements of Eaton SB 299000-29A01. Furthermore, an operator's system of maintenance can also be used to ensure removal within the required life limits specified in the PAD and Eaton SB 299000-29A01. Qantas considers that using our system of maintenance to ensure the requirements of Eaton SB 299000-29A01 would actually be simpler and provide a more effective method to demonstrate compliance than following the requirements of Airbus SB A380-29-8019.

Based on the above comments, Qantas would like to propose that the requirements of the AD be rewritten as follows (note that Appendix 1 of the AD should be revised to remove the reference to S/N's 02122990 inclusive and above):

- (1) Within 750 FC or 6200 FH, whichever occurs first since first installation on an aircraft or within 20 days after the effective date of this AD for HP accumulators already exceeding 750 FC or 6200 FH, ensure the HP accumulators listed in Appendix 1 of this AD have been HASS tested with Acoustic Emission in accordance with Eaton SB 299000-29A01.
- (2) A life limitation of 4275 FC or 35600 FH, whichever occurs first since first installation on an aircraft must be applied to all HP accumulators listed in Appendix 1 of this AD and all HP accumulators with S/N 02122990 or later.
- (3) From the effective date of this AD, do not install a HP accumulator listed in Appendix 1 of this AD unless it has been HASS tested with Acoustic Emission in accordance with Eaton SB 299000-29-A01.

NOTE:

HP accumulators that have been HASS tested with Acoustic Emission in accordance with Eaton SB 299000-29A01 will be identified with a yellow dot (for units that have tested after entering into service) or a pink dot (for units that have been inspected before entering into service).

NOTE

HP accumulators listed in Appendix B of Eaton SB 299000-29-A01 have been manufactured using a different process and do not require testing or application of any life limits.

EASA response:

Comment understood. The final AD has been amended and is in line with Airbus SB A380-29-8018 and EATON SB 299000-29A01 Revision 01 instructions. A

specific paragraph has been added to specify that a review of aeroplane maintenance records is acceptable to identify if the affected P/N is installed, provided those records can be relied upon for that purpose.

Commenter 3: Lufthansa Technik AG – Stefan Haberkorn – 14.12.2012

Comment # 3

1. Required Action(s) and Compliance Time(s) Table 1:

The EATON SB 299000- 29A01 mentions a further limit:

- 3525 FC or 29350 FH since installation of SB 299000-29A01 (for affected accumulators which were in service before successful implementation of this SB / pink dot)

This limit has been selected since Eaton is not able to provide the accumulated FH/FC for those units. Consequently the operator which receives and installs an accumulator listed in appendix 1 of the AD with a pink dot of paint will not know the FH /FC since first installation of the part on an aeroplane. Thus it is up to the operator to find a procedure to select a fictive FH /FC to ensure that a limit overdue will not happen.

Airbus has provided the following answer to my first question in this matter:

“ As indicated before, the accumulator FH/FC information is not supposed to be tracked by the vendor. As a consequence, when returned to the Eaton repair shop, the accumulated FH/FC could be not provided to Eaton. This is why we request Eaton to define another value of the limitation.” (SR Ref : SEEL4-2012-731043)

For this reason, I would suggest to transfer the additional limit in the AD.

Affected HP accumulator Configuration	Compliance time
HP accumulator having S/N listed in appendix 1 of this AD and without a yellow and pink dot of paint on the identification label	750 flight cycles (FC) or 6 200 flight hours (FH), since first installation of the part on an <u>aeroplane</u> , whichever occurs first
HP accumulator having S/N listed in appendix 1 of this AD and with a pink dot of paint on the identification label	3525 FC or 29350 FH since implementation of SBC 299000-29A01, whichever occurs first
HP accumulator having S/N listed in appendix 1 of this AD and with a yellow dot of paint on the identification label	4 275 FC or 35 600 FH, since first installation of the part on an <u>aeroplane</u> , whichever occurs first
HP accumulator having S/N starting from 02122990 inclusive	

2. Appendix 1 of the AD

According to AD the required actions and compliance times are only applicable for HP accumulator having S/N listed in appendix 1. However there are several S/N which have been produced after changing the manufacturing process, after May 2009, which are not included in this Appendix.

HP Accumulators installed in DLH A/C

P/N 299000-1 S/N 01872990	Limit: 4275 FC or 35696 FH, since first flight, whichever occurs first	Concession Reference No.: F0562-2011049
P/N 299000-1 S/N 01912990	Limit: 4275 FC or 35600 FH, since first flight, whichever occurs first	Concession Reference No.: F0562-2011100-A
P/N 299000-1 S/N 02052990	Limit: 4275 FC or 35600 FH, since first flight, whichever occurs first	Concession Reference No.: F0562-2011101-A

The HASS test with Acoustic Emission has been performed on these units before installation on A/C.

Maybe further S/N between 01512990 and 02122990 exist. Have these S/N excluded from the list since the requirement is covered by a concession?
From my point of view the Appendix 1 should list should be revised to avoid any confusion.

EASA response:

- 1) **EASA agreed. The final AD has been amended to clarify the compliance time which now considers 3 HP accumulator configurations. This is in line with Airbus SB A380-29-8018 and EATON SB 299000-29A01 Revision 01 instructions.**
- 2) **EASA agreed. The appendix has been amended.**

Commenter 4: UAE – Jorge VIEIRA REIS – December 2012

Comment # 3

Airbus SB A380-29-8018 affectivity up-to MSN 0103.

As per attached mail, I was informed that A380-29-8016 will include MSN 0105 for installation of new accumulator. As per AIR, S/N 02702990 & 02692990 are installed on A6EDX, but, these s/n are not reflected in the list of appendix as per VSB and issued SB A380-29-8018, but s/n is impacted as per the attached list in the EASA PAD.

As per IPC, FSN 119/MSN 0123 will be delivered with 1015300-0.

My concern is that since MSN 0105 delivered with old part number, shouldn't SB A380-29-8018 be revised to include MSN 0105 since installed accumulator can be life limited and should be controlled, especially now that p/n is reflected in the EASA PAD Appendix 1.

Emirates is concerned with this possible AD topic and want to ensure full compliance and there is no discrepancies in the documents issued and no aircraft have been missed out

Airbus SB A380-29-8018 affectivity up-to MSN 0103.

EASA response:

- 1) **S/N are part of the appendix A of the EATON VSB 299000-29A01 Revision 01 and are consequently listed in appendix 1 of the Final AD**
- 2) **Airbus SB 29-8018 is under revision to update the effectivity (MSN 002; 087-089; 091; 093-096; 100; 102; 105-114; 120; 122 added)**

Commenter 5: Air France – Jean-Francois Degoulange (Field Rep) – 19/11/2012**Comment # 3**

Do you know if PAD take into account the question raised on these SB and VSB some week ago?

The PAD only refer to SB 8018 without Rev number and No mention at all to the VSB.

Also the MSN list is in open Mode ... "ALL MSN LISTED AND ABOVE"

EASA response:

1) The final AD refers to Airbus SB A380-29-8018 original issue and EATON SB 299000-29A01 Rev 01 or any later revision

2) The requirements to check that the aeroplane is still in compliance with the requirements of this AD when installing a HP accumulator, as listed in Appendix 1 of this AD is applicable to all aeroplanes. Consequently, the AD applicability is "Airbus A380-841, A380-842 and A380-861 aeroplanes, all manufacturer serial numbers"