



Notification of a proposal to issue an Airworthiness Directive

PAD No.: 17-018

Issued: 07 February 2017

Note: This Proposed Airworthiness Directive (PAD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.

All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

Design Change Approval Holder's Name:

PIAGGIO AERO INDUSTRIES S.p.A.

Type/Model designation(s):

P.180 Avanti and Avanti II aeroplanes

Effective Date: [TBD – standard: 14 days after AD issue date]

TCDS Number(s): EASA.A.059

Foreign AD: Not applicable

Supersedure: None

ATA 27 – Flight Controls – Ailerons, Elevator, Main Wing Inboard Flaps, Forward Wing Flaps – Inspection

Manufacturer:

Piaggio Aero Industries S.p.A.

Applicability:

P.180 Avanti and Avanti II aeroplanes, all manufacturer serial numbers (MSN).

Reason:

During a post flight inspection of a right hand (RH) elevator assembly, disbonding was detected on the upper and lower metal skin from the honeycomb core. Subsequent investigation identified that a manufacturing deficiency caused the detected disbonding and that other flight control surfaces could potentially be affected by the same deficiency.

This condition, if not detected and corrected, could reduce the structural stiffness of the flight control surface and downgrade its aerodynamic characteristics, possibly resulting in reduced control of the aeroplane.

To address this potential unsafe condition, Piaggio Aero Industries (PAI) issued Service Bulletin (SB) 80-0455 to provide inspection instructions.



For the reasons described above, this AD requires repetitive inspections of the affected flight control assemblies and, depending on findings, repair or replacement. This AD also requires reporting of the inspection result to PAI.

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

Required as indicated, unless accomplished previously:

Note 1: The parts affected by this AD are all left hand (LH) forward flaps, RH forward flaps, LH inboard flaps, RH inboard flaps, LH ailerons, RH ailerons, LH elevators, and RH elevators, hereafter referred to as “affected control surface” in this AD, except those listed by Part Number (P/N) and serial number (s/n) in Table 1 of PAI SB 80-0455.

Inspections:

- (1) For aeroplanes with MSN 1002 and 1004 to 1220 inclusive: Within the threshold as defined in Table 1 of this AD, accomplish a coin tapping inspection of each affected control surface (see Note 1 of this AD) in accordance with the instructions of Part B of PAI SB 80-0455.

Table 1 – Compliance time

Compliance Time (A or B, whichever occurs later)	
A	Within 50 flight hours (FH) after the effective date of this AD
B	Within 200 FH after the last coin tapping inspection of the affected control surface in accordance with PAI Non-Destructive Test Manual (NDTM) 180-MAN-0300-01107, task 51-00-01

- (2) If, during the inspection as required by paragraph (1) of this AD, no damage is detected, as defined in Part B of PAI SB 80-0455, within 200 FH [the first follow-on inspection] and, thereafter, within 200 FH [the second follow-on inspection] accomplish a coin tapping inspection of each affected control surface in accordance with the instructions of Part B of PAI SB 80-0455.
- (3) If, during any inspection as required by paragraph (2) of this AD, no damage is detected, as defined in Part B of PAI SB 80-0455, within 600 FH after the second follow-on inspection as required by paragraph (2) of this AD and, thereafter, at intervals not to exceed 600 FH, accomplish a coin tapping inspection of each affected control surface. Accomplishment of the coin tapping inspection in accordance with the Piaggio Aircraft Maintenance Manual (AMM) 9066 (Avanti) or 180-MAN-0200-01105 (Avanti II), as applicable to aeroplane model, is an acceptable method to comply with the requirements of this paragraph.

Corrective Action(s):

- (4) If, during any inspection as required by paragraph (1), (2), or (3) of this AD, as applicable, any damage is detected, as defined in Part B of PAI SB 80-0455, before next flight, accomplish the applicable corrective action(s) as required by paragraph (4.1) or (4.2) of this AD, as applicable, in accordance with the instructions of PAI SB 80-0455.



- (4.1) Repair each damaged affected control surface in accordance with the instructions of PAI Structural Repair Manual (SRM) No. 180-MAN-0250-01106.
- (4.2) Contact PAI for approved repair or replacement instructions and accomplish those instructions accordingly, including any post-repair inspection(s), as applicable.

Post-Repair Inspections:

- (5) Within 50 FH after accomplishment of a repair of an affected control surface, as required by paragraph (4.1) of this AD [the first post-repair inspection] and, thereafter, within 200 FH [the second post-repair inspection] accomplish a coin tapping inspection of that repaired affected control surface in accordance with the instructions of PAI SB 80-0455.
- (6) If, during any inspection as required by paragraph (5) of this AD, no damage is detected, as defined in Part B of PAI SB 80-0455, within 600 FH after the second post-repair inspection, and, thereafter, at intervals not to exceed 600 FH, accomplish a coin tapping inspection of the repaired affected control surface. Accomplishment of the coin tapping test in accordance with Piaggio AMM 9066 (Avanti) or 180-MAN-0200-01105 (Avanti II), as applicable to aeroplane model, is an acceptable method to comply with the requirements of this paragraph.

Note 2: A non-cumulative tolerance of 10% may be applied to the compliance times specified in paragraphs (3) and (6) of this AD, to allow synchronization of the required inspections with other maintenance tasks specified in the applicable AMM.

- (7) If, during any inspection, as required by paragraph (5) or (6) of this AD, any damage is detected, as defined in Part B of PAI SB 80-0455, before next flight, accomplish an applicable corrective action as required by paragraph (4) of this AD.

Reporting Requirements:

- (8) If, during any inspection as required by this AD, any damage is detected, within 30 days after that inspection, report the inspection result to PAI in accordance with the instructions of PAI SB 80-0455.

Terminating Action:

- (9) Repair of an affected control surface, as required by paragraph (4.1) or (4.2) of this AD, does not constitute terminating action for repetitive inspections as required by this AD for that affected control surface, unless the approved PAI repair instructions, accomplished as required by paragraph (4.2) of this AD, specify otherwise.
- (10) Replacement of the affected part on an aeroplane with a part listed in Table 1 of PAI SB 80-0455 constitutes terminating action for the repetitive inspections required by this AD for that part.

Aircraft Maintenance Programme (AMP) Revision:

- (11) Revising the approved AMP, on the basis of which the operator or the owner ensures the continuing airworthiness of each operated aeroplane, by incorporating a coin tapping test (interval not to exceed 600 FH) of each affected control surface in accordance with the instructions PAI AMM 9066 (Avanti) or AMM 180-MAN-0200-01105 (Avanti II), as applicable, ensures the continued accomplishment of the tasks required by paragraph (3) or (6) of this AD



(see Note 3 of this AD). Consequently, after revising the approved AMP accordingly, it is not necessary that accomplishment of an individual coin tapping test has to be recorded for demonstration of AD compliance on a continued basis.

Note 3: For affected P.180 Avanti and Avanti II aeroplanes registered in Europe, complying with the approved AMP, as specified in paragraph (11) of this AD, is required by Commission Regulation (EU) No [1321/2014](#), Part M.A.301, paragraph 3.

Parts Installation:

(12) For all MSN: From the effective date of this AD, installation of affected control surfaces on an aeroplane is allowed, provided that, following installation, each affected control surface on that aeroplane is inspected and, depending on findings, corrected, as required by this AD.

Ref. Publications:

PAI SB 80-0455 original issue, dated 13 January 2017.

PAI AMM 9066 (Avanti) Revision G0, dated 08 June 2016.

PAI AMM 180-MAN-0200-01105 (Avanti II) Revision D0, dated 20 July 2016.

PAI SRM 180-MAN-0250-01106 Revision B0, dated 28 October 2011.

PAI NDTM 180-MAN-0300-01107 Revision B0, dated 28 October 2011.

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

Remarks:

1. This Proposed AD will be closed for consultation on 07 March 2017.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. For any question concerning the technical content of the requirements in this PAD, please contact: Piaggio Aero Industries S.p.A – Continued Airworthiness
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