



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 22-163

Issued: 12 December 2022

Note: This Proposed Airworthiness Directive (PAD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 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 Approval Holder's Name:

PIAGGIO AVIATION S.p.A.

Type/Model designation(s):

P.180 aeroplanes

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

TCDS Number(s): EASA.A.059

Foreign AD: Not applicable

Supersedure: None

ATA 55 – Stabilizers – Horizontal Stabilizer Central Box – Inspection / Repair / Replacement

Manufacturer(s):

Piaggio Aero Industries S.p.A. (PAI)

Applicability:

P.180 Avanti aeroplanes, manufacturer serial numbers (MSN) 1004 to 1052 inclusive, and MSN 1054 to 1104 inclusive; and

P.180 Avanti II aeroplanes, MSN 1002, MSN 1053, MSN 1105 to 1234 inclusive, MSN 3001 to 3012 inclusive, and MSN 3016.

Definitions:

For the purpose of this AD, the following definitions apply:

The SB: Piaggio P.180 Mandatory Service Bulletin (SB) 80-0489 Revision 2.

Reason:

An occurrence was reported where, during scheduled maintenance on a Piaggio P.180 aeroplane, corrosion was found inside the horizontal stabilizer (HS) central box. Subsequent investigation and



inspection of 16 other aeroplanes (of different age and in different configuration, representative for the complete P.180 fleet) revealed that corrosion at different levels of severity was found on the various aluminium alloy reinforcements in the HS central box of all inspected aeroplanes. This corrosion was caused by formation of a humid environment inside the box, due to water ingress and/or condensation, which promoted galvanic phenomena. Further investigation revealed that aeroplanes subjected to prolonged inactivity and parked outside are probably more prone to suffer from corrosion damage.

This condition, if not detected and corrected, could lead to reduced structural integrity of the HS, possibly resulting in loss of control of the aeroplane.

To address this potential unsafe condition, PAI issued the SB, as defined in this AD, providing instructions for inspection, repair and replacement.

For the reason described above, this AD requires a one-time detailed inspection (DET) of the HS central box, reporting of the results to PAI for determination of the severity level of the corrosion and, depending on the outcome, repetitive DET of the HS central box and, depending on findings, accomplishment of applicable corrective action(s). This AD also requires, for aeroplanes where level 3 corrosion is found, repair or replacement of the HS, which terminates the repetitive inspections.

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

Required as indicated, unless accomplished previously:

One-Time Inspection:

- (1) Within the compliance time defined in Table 1 of this AD, as applicable, accomplish a DET of the HS central box in accordance with the instructions of Part A of the SB.

Table 1 – HS Central Box One-Time Inspection

MSN	Compliance Time (flight hours (FH) or calendar time, whichever occurs first after the effective date of this AD)
1002; and 1034 to 3016 inclusive	Within 220 FH or 13 months
1004 to 1033 inclusive	Within 320 FH or 13 months

Reporting / Repetitive Inspections:

- (2) If, during the inspection as required by paragraph (1) of this AD, any corrosion is detected, before next flight, contact PAI for assessment of the corrosion level. The instructions of the SB can be used for the reporting purpose.
- (3) If, following the assessment of any DET results, level 2 or 3 corrosion is determined to exist, within the threshold and at the intervals as determined by PAI, depending on the findings of the previous DET, accomplish a DET of the HS central box in accordance with the instructions of Part B of the SB.



- (4) Before next flight after each DET as required by paragraph (3) of this AD, contact PAI to determine the interval for subsequent DET. The instructions of the SB can be used for the reporting purpose.

Corrective Action(s):

- (5) If, following evaluation of any DET results, level 3 corrosion is determined to exist, within 660 FH or 13 months, whichever occurs first after that DET, repair or replace the HS in accordance with the instructions of Part B of the SB (see Note 2 of this AD).

Note 2: Pending repair or replacement of the HS, repetitive DET must be accomplished as required by paragraph (3) of this AD.

Credit:

- (6) Accomplishment of inspections and corrective action(s) on an aeroplane, accomplished before the effective date of this AD in accordance with the instructions of Piaggio P.180 Mandatory SB 80-0489 at original issue or Revision 1, is an acceptable method to comply with the initial requirements of this AD, as applicable for that aeroplane.

Terminating Action:

- (7) Repair or replacement of the HS on an aeroplane in accordance with the instructions of Part B of the SB, as required by paragraph (5) of this AD, constitutes terminating action for the repetitive DET as required by paragraph (3) of this AD for that aeroplane.

Ref. Publications:

Piaggio P.180 Mandatory SB 80-0489 original issue dated 29 April 2022, or Revision 1 dated 13 May 2022, or Revision 2 dated 30 November 2022.

The use of later approved revisions of the above-mentioned document is acceptable for compliance with the requirements of this AD.

Remarks:

1. This Proposed AD will be closed for consultation on 09 January 2023.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this PAD, and which may occur, or have occurred on a product, part or appliance not affected by this PAD, can be reported to the [EU aviation safety reporting system](#). This may include reporting on the same or similar components, other than those covered by the design to which this PAD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.



4. For any question concerning the technical content of the requirements in this PAD, please contact: Piaggio Aero Industries, P180 Customer Support, Via Pionieri e Aviatori d'Italia 2, snc 16154 Genoa, Italy, Telephone: + 39 331 679 7493, or
E-mail: technicalsupport@piaggioaerospace.it.

