



Airworthiness Directive

AD No.: 2013-0084R1

Issued: 30 August 2021

Note: This Airworthiness Directive (AD) 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.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:

PIAGGIO AVIATION S.p.A.

Type/Model designation(s):

P.180 aeroplanes

Effective Date: Revision 1: 06 September 2021
Original issue: 19 April 2013

TCDS Number(s): EASA.A.059

Foreign AD: None

Revision: This AD revises EASA AD 2013-0084 dated 05 April 2013.

ATA 32 – Landing Gear – Main Landing Gear Lever Hinge Fitting – Inspection

Manufacturer(s):

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

Applicability:

P.180 Avanti and Avanti II aeroplanes, all serial numbers, except those with Magnaghi main landing gear (MLG) installed.

Definitions:

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

Affected part: MLG lever hinge fittings (LHF).

Serviceable MLG: Any SAFRAN Landing Systems (SLS) MLG which is eligible for installation and that, before installation, has been verified for freedom of rotation and which passed (no defects found) a DVI and FPI of the LHF in accordance with the instructions of Parts 2 and 3 of the SB.

The SB: Piaggio Service Bulletin (SB) 80-0345.

The modification SB: SLS SB P180-32-33.



Reason:

During scheduled maintenance of a Piaggio P.180 aeroplane, cracks were detected at the joint between the hinge pin sub-assembly and the lock pin of the affected part. The results of the subsequent investigation revealed that the cracks were initiated by an unforeseen friction in the MLG wheel lever sub-assembly.

This condition, if not detected and corrected, could lead to structural failure of an MLG, possibly resulting in loss of control of the aeroplane during take-off or landing runs.

To address this potential unsafe condition, Piaggio issued the SB to provide inspection instructions for early identification of cracks in the MLG LHF. Consequently, EASA issued AD 2013-0084 to require repetitive inspections of the affected parts and, depending on findings, replacement of the MLG.

Since that AD was issued, Piaggio certified a design change, installing Magnaghi MLG which are not affected by the unsafe condition addressed by that AD. Additionally, SLS issued the modification SB, providing instructions to move the position of the lock pin along the axis of the LHF which improves the stress resistance of the SLS MLG.

Accordingly, this AD is revised to reduce the Applicability, excluding aeroplanes with Magnaghi MLG installed, and to introduce an optional modification for aeroplanes with SLS MLG installed. That modification constitutes terminating action for the repetitive inspections required by this AD. This revised AD also introduces some editorial changes to update the document to the latest AD writing standards, but without affecting the requirements.

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

Required as indicated, unless accomplished previously:

Inspection(s), Marking, Removal:

- (1) Within 200 flight cycles (FC) or 3 months, whichever occurs first after 19 April 2013 [the effective date of this AD at original issue], and before next flight after each MLG replacement, visually inspect each affected part for cracks and verify freedom of rotation of the MLG wheel lever sub-assemblies in accordance with the instructions of Part 1 of the SB.
- (2) If, during any inspection as required by paragraph (1) of this AD, freedom of rotation of the MLG wheel lever subassembly is not assured, before next flight, mark the affected part on the affected MLG as "inspect as per SB-80-0345" with an indelible pen, remove the MLG from the aeroplane for corrective action (see paragraph (9) of this AD) and replace the affected MLG with a serviceable MLG in accordance with the instructions of the SB.
- (3) Initially, within the threshold as specified in Table 1 of this AD, as applicable, unless already accomplished within the last 200 FC before 19 April 2013 [the effective date of this AD at original issue], and, thereafter, at intervals not to exceed 200 FC, accomplish a detailed visual inspection (DVI) of each affected part in accordance with the instructions of Part 2 of the SB.
- (4) Initially, within the threshold as specified in Table 1 of this AD, as applicable, unless already accomplished within the last 750 FC before 19 April 2013 [the effective date of this AD at original issue], and, thereafter, at intervals not to exceed 750 FC, accomplish a fluorescent



penetrant inspection (FPI) of each affected part in accordance with the Accomplishment Instructions, Part 3 of the SB.

Table 1 – Inspection Threshold (see Note 1 of this AD)

FC Accumulated	Compliance Time
2 300 FC or less	Before exceeding 2 500 FC
More than 2 300 FC, but less than 2 500 FC	Within 200 FC after 19 April 2013 [the effective date of the original issue of this AD]
2 500 FC or more	Within 200 FC or 3 months, whichever occurs first after 19 April 2013 [the effective date of the original issue of this AD]

Note 1: Unless indicated otherwise, the FC specified in Table 1 of this AD are those accumulated by an affected part since new (first installation on an aeroplane).

Corrective Action(s):

(5) If, during any inspection as required by paragraph (1), (3), (4), (8) or (9) of this AD, any cracked affected part is detected, before next flight, replace the affected MLG with a serviceable MLG, as defined in this AD, in accordance with the instructions of the SB.

(6) [Deleted]

Terminating Action:

(7) Replacement of an MLG on an aeroplane, as required by paragraph (2) or (5) of this AD, as applicable, does not constitute terminating action for the repetitive inspections required by this AD for that aeroplane.

Modification of an aeroplane in accordance with the instruction of the modification SB or replacement of a SLS MLG with a Magnaghi MLG in accordance with approved maintenance instructions constitutes terminating action for the repetitive inspections required by this AD for that aeroplane.

MLG Installation:

(8) If pertinent data (i.e. status of periodic DVI and FPI and/or FC since new) cannot be determined from the Authorized Release Certificate of an MLG to be installed, before next flight after installation, accomplish a DVI and FPI of the LHF in accordance with the instructions of Parts 2 and 3 of the SB, and, thereafter, accomplish repetitive DVI and FPI as required, respectively, by paragraphs (3) and (4) of this AD.

(9) From 19 April 2013 [the effective date of this AD at original issue], it is allowed to install on any aeroplane an MLG with an affected part marked as "inspect as per SB 80-0345", provided that, prior to installation, the freedom of rotation of the MLG has been restored in accordance with approved maintenance instruction. Before next flight after installation, accomplish a DVI and FPI of the LHF in accordance with the Instructions of Parts 2 and 3 of the SB, and, thereafter, accomplish repetitive DVI and FPI as required, respectively, by paragraphs (3) and (4) of this AD.



Ref. Publications:

Piaggio SB 80-0345 at original issue, dated 20 September 2012.

SLS SB P180-32-33 original issue, dated 12 September 2018.

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

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. The original issue of this AD was posted on 27 February 2013 as PAD 13-038 for consultation until 26 March 2013. No comments were received during the consultation period.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, 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 AD 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.
5. For any question concerning the technical content of the requirements in this AD, please contact: Piaggio Aero Industries, P180 Customer Support, Via Pionieri e Aviatori d'Italia snc, 16154 Genoa, Italy, Phone: (+39) 331 679 74 93, E-mail: technicalsupport@piaggioaerospace.it

