



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0452; Project Identifier MCAI-2021-01356-A; Amendment 39-22176; AD 2022-19-07]

RIN 2120-AA64

Airworthiness Directives; Piaggio Aviation S.p.A. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Piaggio Aviation S.p.A. (Piaggio) Model P-180 airplanes. This AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI identifies the unsafe condition as accumulation of water and subsequent freezing in the pitot-tube, which results in pitot-tube blockage. This AD requires modifying the total air temperature (TAT) probe heater electrical circuit and revising your existing airplane flight manual (AFM). The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Piaggio Aero Industries S.p.A, P180 Customer Support, Via Pionieri e Aviatori d'Italia, snc - 16154 Genoa, Italy; phone: (+39) 331 679 74 93; email: technicalsupport@piaggioaerospace.it. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the

availability of this material at the FAA, call (817) 222-5110. It is also available at [regulations.gov](https://www.regulations.gov) by searching for and locating Docket No. FAA-2022-0452.

Examining the AD Docket

You may examine the AD docket at [regulations.gov](https://www.regulations.gov) by searching for and locating Docket No. FAA-2022-0452; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the MCAI, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Mike Kiesov, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 901 Locust, Room 301, Kansas City, MO 64106; phone: (816) 329-4144; email: mike.kiesov@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Piaggio Model P-180 airplanes. The NPRM published in the *Federal Register* on April 11, 2022 (87 FR 21034). The NPRM was prompted by MCAI originated by the European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union. EASA issued EASA AD 2019-0144, dated June 19, 2019 (referred to after this as “the MCAI”), to address an unsafe condition on all Piaggio Model P.180 Avanti and Avanti II airplanes. The MCAI states:

Occurrences of pitot-tube blockage were reported, leading to in-flight air data loss. Investigation results indicated that accumulation of water and subsequent freezing was the failure cause.

This condition, if not corrected, could lead to unreliable indication or loss of in-flight air data provided by systems deriving their data from measuring air pressure, possibly resulting in loss of control of the aeroplane.

To address this potentially unsafe condition, Piaggio issued the applicable AFM TC [Piaggio Aviation P.180 AVANTI II/EVO Temporary Change 79, dated September 17, 2018; and Piaggio Aviation P.180 AVANTI Temporary Change No. 36, dated April 11, 2019], providing instructions to switch on pitot-tube heater before taxi if operation in heavy rain, snow or icing condition is expected. To prevent concurrent activation of TAT probe heater on ground, which could lead to temporary air data indications failure, Piaggio issued the applicable SBs [Piaggio Aviation Service Bulletin No. 80-0430, Revision 1; and Piaggio Aero Industries Service Bulletin No. 80-0457, Original Issue], providing modification instructions to inhibit on-ground power supply to TAT probe heater, when the pitot-tube heater is activated.

For the reasons described above, this [EASA] AD requires amendment of the applicable AFM and, for certain aeroplanes, modification of the TAT probe heater electrical circuit.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) by searching for and locating Docket No. FAA-2022-0452.

In the NPRM, the FAA proposed to require modifying the TAT probe heater electrical circuit and revising your existing AFM. The FAA is issuing this AD to prevent blockage of the pitot-tube. The unsafe condition, if not addressed, could result in temporary air data indications failure, which could result in loss of control of the airplane.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from Piaggio. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to Update Contact Information for Piaggio

Piaggio requested that the FAA revise the NPRM to update the contact information provided for Piaggio service information.

The FAA agrees and has updated the contact information for Piaggio throughout this final rule accordingly.

Request Regarding the Background Information

Piaggio requested the FAA remove the extra reference “and No. 79” from the quoted MCAI statement in the Background section that reads “To address this potentially unsafe condition, Piaggio issued the applicable AFM TC [Piaggio Aviation P.180 AVANTI II/EVO Temporary Change 79, dated September 17, 2018; and Piaggio Aviation P.180 AVANTI Temporary Change No. 36 and No. 79]....”

The FAA agrees and has deleted “and No. 79” from the quoted MCAI statement in the Background section of this AD. Instead, that text has been replaced with the date of Piaggio Aviation P.180 AVANTI Temporary Change No. 36, which was originally intended to be provided. This change does not alter the intent of that language.

Request to Remove Specific Service Bulletin Revision Level

Piaggio requested that paragraphs (g)(2)(ii) and (g)(3)(iii) of the proposed AD be revised to remove the revision number and date from the service bulletin reference specified in those paragraphs. Piaggio explained that this change is necessary because the service bulletin, independently from the revision, introduces the new Magnaghi landing gear in lieu of the Safran landing gear.

The FAA partially agrees. The FAA concurs that the referenced service bulletin up to Revision 2 independent of the revision level introduces the new Magnaghi landing gear in lieu of the Safran landing gear. However, the FAA cannot remove the revision level because the FAA has no way of knowing the language and content of future revisions. The FAA has referenced the service bulletin as “up to Revision 2” in paragraphs (g)(2)(ii) and (g)(3)(iii) of this AD accordingly.

Request to Reference Latest Service Information and Provide Credit for Previous Revision

Piaggio requested that paragraph (g)(3) of the proposed AD be updated to reference Piaggio Aero Industries S.p.A. Service Bulletin No. 80-0430, Revision 2, dated July 20, 2021, which is the latest service information. In addition, Piaggio requested that the Credit for Previous Actions specified in paragraph (h) of the proposed AD be revised to include Piaggio Aviation S.p.A. Service Bulletin No. 80-0430, Revision 1, dated April 30, 2019.

The FAA agrees with referencing Piaggio Aero Industries S.p.A. Service Bulletin No. 80-0430, Revision 2, dated July 20, 2021, in the actions required by paragraph (g)(3) of this AD. This is in addition to Piaggio Aviation S.p.A. Service Bulletin No. 80-0430, Revision 1, dated April 30, 2019. Because the FAA is referencing both in paragraph (g)(3) of this AD, no change to the Credit for Previous Actions specified in paragraph (h) of this AD is necessary. The final rule has been changed to reference Piaggio Aero Industries S.p.A. Service Bulletin No. 80-0430, Revision 2, dated July 20, 2021, in paragraph (g)(3) of this AD.

Conclusion

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI and service information referenced above. The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on this product. Except for the changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information under 1 CFR Part 51

The FAA reviewed Piaggio Aviation S.p.A. Service Bulletin No. 80-0430, Revision 1, dated April 30, 2019; Piaggio Aero Industries S.p.A. in A.S. Service Bulletin No. 80-0430, Revision 2, dated July 20, 2021; and Piaggio Aero Industries Service Bulletin S.p.A. A.S. No. 80-0457, Revision 1, dated February 12, 2020. This service information specifies procedures for modifying the TAT heater circuit in order to inhibit its engagement on the ground when the pitot heater is turned on. These documents are distinct because they apply to airplanes in different configurations.

The FAA reviewed Piaggio Aviation P.180 AVANTI II/EVO Temporary Change No. 79, dated September 17, 2018, which revises the Limitations and Normal Procedures sections of the existing AFM to include updated procedures for airplane operation when the modification for inhibition of the TAT heater (on ground) has been installed.

The FAA also reviewed Piaggio Aviation P.180 AVANTI Temporary Change No. 36, dated April 11, 2019, which revises the Emergency and Normal Procedures sections of the existing AFM to include additional procedures to avoid air data computer failure due to water trapped and frozen in pitot lines.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

The FAA reviewed Piaggio Aero Industries Service Bulletin No. 80-0454, Revision 0, dated March 6, 2017; Piaggio Aero Industries S.p.A. Service Bulletin No. 80-0425, Revision 0, dated May 30, 2017; Piaggio Aero Industries S.p.A. Service Bulletin No. 80-0425, Revision 1, dated December 15, 2017; and Piaggio Aero Industries S.p.A. Service Bulletin No. 80-0425, Revision 2, dated June 4, 2018. This service information specifies procedures for replacing the Messier-Dowty nose and main landing gear and steering system with a Magnaghi nose and main landing gear and Eaton steering system.

The FAA also reviewed Piaggio Aero Industries S.p.A. Service Bulletin No. 80-0430, Revision 0, dated August 10, 2017. This service information specifies procedures for modifying the TAT heater circuit in order to inhibit its engagement on the ground when the pitot heater is turned on.

Differences Between this AD and the MCAI

The MCAI requires informing all flight crews of the AFM revisions and operating accordingly thereafter, and this AD does not because these actions are already required by FAA operating regulations.

Costs of Compliance

The FAA estimates that this AD affects 101 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated costs

Action	Labor Cost	Parts Cost	Cost per airplane	Cost on U.S. operators
Modify TAT probe heater electrical circuit	42 work-hours x \$85 per hour = \$3,570	Up to \$3,632	Up to \$7,202	Up to \$496,938 (69 airplanes)
Revise AFM	1 work-hour x \$85 per hour = \$85	Not Applicable	\$85	\$8,585 (101 airplanes)

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022-19-07 Piaggio Aviation S.p.A.: Amendment 39-22176; Docket No. FAA-2022-0452; Project Identifier MCAI-2021-01356-A.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Piaggio Aviation S.p.A. Model P-180 airplanes, all serial numbers (S/Ns), certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC) Code 3411, Pitot/Static System.

(e) Unsafe Condition

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI identifies the unsafe condition as accumulation of water and subsequent freezing in the pitot-tube. The FAA is issuing this AD to prevent blockage of the pitot-tube. The unsafe condition, if not addressed, could result in temporary air data indications failure, which could result in loss of control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) For all airplanes: Within 30 days after the effective date of this AD, revise the existing airplane flight manual (AFM) for your airplane by adding into the Emergency Procedures and Normal Procedures sections the information in Piaggio Aviation P.180 AVANTI Temporary Change No. 36, dated April 11, 2019; or by incorporating into the Limitations and Normal Procedures sections the information in Piaggio Aviation P.180 Avanti II/EVO Temporary Change No. 79, dated September 17, 2018; as applicable to your airplane S/N. Using a different document with language identical to that in Piaggio Aviation P.180 AVANTI Temporary Change No. 36, dated April 11, 2019; or Piaggio Aviation P.180 Avanti II/EVO Temporary Change No. 79, dated September 17, 2018; is acceptable for compliance with this requirement.

(2) For airplanes identified in paragraph (g)(2)(i) and (ii) of this AD: Within 660 hours time-in-service (TIS) after the effective date of this AD or 24 months after the effective date of this AD, whichever occurs first, modify the total air temperature (TAT) probe heater electrical circuit by following the Accomplishment Instructions, paragraphs (6) through (27), in Piaggio Aero Industries S.p.A. A.S. Service Bulletin No. 80-0457, Revision 1, dated February 12, 2020.

(i) S/N 1105, if Piaggio Aero Industries Service Bulletin No. 80-0454, Revision 0, dated March 6, 2017, is not incorporated.

(ii) S/Ns 1106 through 1234 inclusive, if Piaggio Aero Industries S.p.A. Service Bulletin No. 80-0425 up to Revision 2 is not incorporated.

(3) For airplanes identified in paragraphs (g)(3)(i) through (iii) of this AD: Within 660 hours TIS after the effective date of this AD or 24 months after the effective date of this AD, whichever occurs first, modify the TAT probe heater electrical circuit by following the Accomplishment Instructions, Paragraphs (6) through (21), in Piaggio Aviation S.p.A. Service Bulletin No. 80-0430, Revision 1, dated April 30, 2019, or Accomplishment Instructions, paragraphs (6) through (21) and (25), in Piaggio Aero

Industries S.p.A. in A.S. Service Bulletin No. 80-0430, Revision 2, dated July 20, 2021.

(i) S/Ns 1002, 3001, 3003, 3004, 3006, and 3007.

(ii) S/N 1105, if Piaggio Aero Industries Service Bulletin No. 80-0454, Revision 0, dated March 6, 2017, is incorporated.

(iii) S/Ns 1106 through 1234 inclusive, if Piaggio Aero Industries S.p.A. Service Bulletin No. 80-0425 up to Revision 2 is incorporated.

(h) Credit for Previous Actions

This paragraph provides credit for the modification required by paragraph (g)(3) of this AD, if the modification was done before the effective date of this AD using Piaggio Aero Industries S.p.A. Service Bulletin No. 80-0430, Revision 0, dated August 10, 2017.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (j)(1) of this AD and email to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Mike Kiesov, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 901 Locust, Room 301, Kansas City, MO 64106; phone: (816) 329-4144; email: mike.kiesov@faa.gov.

(2) Refer to European Union Aviation Safety Agency (EASA) AD 2019-0144, dated June 19, 2019, for more information. You may examine the EASA AD in the AD docket at regulations.gov by searching for and locating Docket No. FAA-2022-0452.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Piaggio Aviation S.p.A. Service Bulletin No. 80-0430, Revision 1, dated April 30, 2019.

(ii) Piaggio Aero Industries S.p.A. in A.S. Service Bulletin No. 80-0430, Revision 2, dated July 20, 2021.

(iii) Piaggio Aero Industries Service Bulletin S.p.A. A.S. No. 80-0457, Revision 1, dated February 12, 2020.

(iv) Piaggio Aviation P.180 AVANTI II/EVO Temporary Change No. 79, dated September 17, 2018.

(v) Piaggio Aviation P.180 AVANTI Temporary Change No. 36, dated April 11, 2019.

(3) For service information identified in this AD, contact Piaggio Aero Industries S.p.A, P180 Customer Support, Via Pionieri e Aviatori d'Italia, snc - 16154 Genoa, Italy; phone: (+39) 331 679 74 93; email: technicalsupport@piaggioaerospace.it.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to:

www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on September 6, 2022.

Christina Underwood, Acting Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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