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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2003-CE-45-AD; Amendment 39-13481; AD 2004-04-01]

RIN 2120-AA64

Airworthiness Directives; Pilatus Aircraft Ltd. Models PC-7, PC-12, and PC-12/45 Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA adopts a new airworthiness directive (AD) that supersedes AD 2002-01-09, which applies to all Pilatus Aircraft Ltd. (Pilatus) Models PC-7, PC-12, and PC-12/45 airplanes that incorporate a certain engine-driven pump. AD 2002-01-09 currently requires you to inspect the joints between the engine-driven pump housing, the relief valve housing, and the relief valve cover for signs of fuel leakage and extruding gasket material; replace any engine-driven pump with any of the above problems; and ensure that the relief valve attachment screws are adequately torqued and re-torque as necessary. This AD is the result of mandatory continuing airworthiness information (MCAI) issued by the airworthiness authority for Switzerland. This AD retains the actions from AD 2002-01-09, adds certain engine-driven pumps to the applicability, and requires eventual replacement of the pump with an improved design pump to assure that the unsafe condition does not recur. We are issuing this AD to detect and correct gasket material extruding from the engine-driven pump housing and detect and correct relief valve attachment screws with inadequate torque. These conditions could lead to fuel leakage and result in a fire in the engine compartment.

DATES: This AD becomes effective on March 29, 2004.

On February 28, 2002 (67 FR 2323, January 17, 2002), the Director of the Federal Register approved the incorporation by reference of Pilatus PC-7 Service Bulletin No. 28-006 and Pilatus PC-12 Service Bulletin No. 28-009, both dated August 10, 2001.

As of March 29, 2004, the Director of the Federal Register approved the incorporation by reference of the following:

- Pilatus PC-7 Service Bulletin No. 28-007, Revision No. 1, dated October 1, 2002;
- Pilatus PC-7 Service Bulletin No. 28-008, Revision 1, dated September 24, 2002; and
- Pilatus PC-12 Service Bulletin No. 28-010, dated September 16, 2002.

ADDRESSES: You may get the service information identified in this AD from Pilatus Aircraft Ltd., Customer Liaison Manager, CH-6371 Stans, Switzerland; telephone: +41 41 619 63 19; facsimile: +41 41 619 6224; or from Pilatus Business Aircraft Ltd., Product Support Department, 11755 Airport Way, Broomfield, Colorado 80021; telephone: (303) 465-9099; facsimile: (303) 465-6040.

You may view the AD docket at FAA, Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2003-CE-45-AD, 901 Locust, Room 506, Kansas City, Missouri 64106. Office hours are 8 a.m. to 4 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Doug Rudolph, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4059; facsimile: (816) 329-4090.

SUPPLEMENTARY INFORMATION: –

Discussion

Has FAA taken any action to this point? Reports of fuel leaking from certain engine-driven pumps on Pilatus Models PC-7, PC-12, and PC-12/45 airplanes caused FAA to issue AD 2002-01-09, Amendment 39-12600 (67 FR 2323, January 17, 2002). AD 2002-01-09 currently requires the following on all Pilatus Models PC-7, PC-12, and PC-12/45 airplanes:

- Inspecting the joints between the engine-driven pump housing, the relief valve housing, and the relief valve cover for signs of fuel leakage and extruding gasket material;
- Replacing any engine-driven pump with signs of fuel leakage or extruding gasket material; and
- Ensuring that the relief valve attachment screws are adequately torqued and re-torqued as necessary.

What has happened since AD 2002-01-09 to initiate this action? The Federal Office for Civil Aviation (FOCA), which is the airworthiness authority for Switzerland, recently notified FAA of the need to change AD 2002-01-09. The FOCA reports that problems are occurring on other engine-driven pumps that could be installed on the affected airplanes, and that the affected airplanes should have a certain engine-driven pump installed to ensure this unsafe condition does not reoccur.

What is the potential impact if FAA took no action? Gasket material extruding from the engine-driven pump housing and relief valve attachment screws with inadequate torque, if not detected and corrected, could lead to fuel leakage and result in a fire in the engine compartment.

Has FAA taken any action to this point? We issued a proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to all Pilatus Models PC-7, PC-12, and PC-12/45 airplanes that incorporate a certain engine-driven pump. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on December 5, 2003 (68 FR 67988). The NPRM proposed to supersede AD 2002-01-09 with a new AD that would:

- Retain the actions from AD 2002-01-09;
- Add certain engine-driven pumps to the applicability; and
- Require eventual replacement of the pump with an improved design pump to assure that the unsafe condition does not reoccur.

Comments

Was the public invited to comment? We provided the public the opportunity to participate in developing this AD. We received no comments on the proposal or on the determination of the cost to the public.

Conclusion

What is FAA's final determination on this issue? We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed except for minor editorial corrections. We have determined that these minor corrections:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Changes to 14 CFR Part 39—Effect on the AD

How does the revision to 14 CFR part 39 affect this AD? On July 10, 2002, the FAA published a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs the FAA's AD system. This regulation now includes material that relates to altered products, special flight permits, and alternative methods of compliance. This material previously was included in each individual AD. Since this material is included in 14 CFR part 39, we will not include it in future AD actions.

Costs of Compliance

How many airplanes does this AD impact? We estimate that this AD affects 278 airplanes in the U.S. registry.

What is the cost impact of this AD on owners/operators of the affected airplanes?

We estimate the following costs to accomplish the inspections and re-torque:

Labor cost	Parts cost	Total cost per airplane	Total cost on U.S. operators
2 workhours x \$65 per hour = \$130	Not applicable	\$130	\$130 x 278 = \$36,140.

We estimate the following costs to accomplish any necessary replacements that will be required based on the results of the inspection. We have no way of determining the number of airplanes that may need such replacement:

Labor cost	Parts cost	Total cost per airplane
1 workhour x \$65 per hour = \$65	\$3,900 per new pump	\$3,965 per airplane.

What is the difference between the cost impact of this AD and the cost impact of AD 2002-01-09? The only difference between this AD and AD 2002-01-09 is the addition of affected engine-driven pumps. The number of airplanes that could have an affected pump installed and the costs associated with inspection and replacement are the same.

Compliance Time of This AD

What is the compliance time of the inspections? The compliance time of the inspections that are required by this AD is "within 20 hours time-in-service (TIS) after the effective date of this AD or within the next 30 days after the effective date of this AD, whichever occurs first."

Why is the compliance time of the inspections presented in both hours TIS and calendar time? The deterioration and potential extrusion of the gasket occurs over time and is not a condition of repetitive airplane operation. However, the relief valve attachment screws becoming inadequately

torqued occurs as a result of airplane operation if the compression set of the gasket and diaphragm after thermal cycling causes the gasket of the engine-driven pump to extrude between the relief valve housing and the engine-driven pump housing.

Therefore, to ensure that you detect and correct the unsafe condition defined in this document is in a timely manner, we are stating the compliance in both calendar time and hours TIS.

Regulatory Findings

Will this AD impact various entities? We have determined that 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.

Will this AD involve a significant rule or regulatory action? For the reasons discussed above, I certify that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); 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.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "AD Docket No. 2003-CE-45-AD" in your request.

List of Subjects in 14 CFR Part 39

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

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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 removing Airworthiness Directive (AD) 2002-01-09, Amendment 39-12600 (67 FR 2323, January 17, 2002), and by adding a new AD to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2004-04-01 Pilatus Aircraft LTD.: Amendment 39-13481; Docket No. 2003-CE-45-AD;
Supersedes AD 2002-01-09, Amendment 39-12600.

When Does This AD Become Effective?

- (a) This AD becomes effective on March 29, 2004.

What Other ADs Are Affected by This Action?

- (b) This AD supersedes AD 2002-01-09, Amendment 39-12600.

What Airplanes Are Affected by This AD?

- (c) This AD affects the following airplane models and serial numbers that are certificated in any category:

Model	Serial numbers
(1) PC-7	All manufacturer serial numbers (MSN) equipped with either a Lear Romec part number (P/N) RG9570M (Pilatus P/N 968.84.51.103) engine-driven pump or a Lear Romec P/N RG9570M1 (Pilatus P/N 968.84.51.105) engine-driven pump.
(2) PC-12 and PC-12/45	All MSN equipped with a Lear Romec P/N RG9570R1 (Pilatus P/N 968.84.51.106) engine-driven pump.

Note: Pilatus installed these engine-driven pumps on MSN 101 through MSN 406 and MSN 408 through 419 of the Models PC-12 and PC-12/45 airplanes and MSN 101 through MSN 618 of the Model PC-7 airplanes. These engine-driven pumps could be installed through field approval on any MSN of the Models PC-7, PC-12, and PC-12/45 airplanes.

What Is the Unsafe Condition Presented in This AD?

- (d) The actions specified in this AD are intended to detect and correct gasket material extruding from the engine-driven pump housing and detect and correct relief valve attachment screws with inadequate torque. These conditions could lead to fuel leakage and result in a fire in the engine compartment.

What Must I Do To Address This Problem?

- (e) To address this problem, you must do the following:

(1) Inspection: Inspect the joints between the engine-driven pump housing, the relief valve housing, and the relief valve cover for signs of fuel leakage and extruding gasket material as follows:

Engine-driven pump P/N	Compliance	Procedures
(i) Lear Romec P/N RG9570M1 (Pilatus P/N 968.84.51.105) or Lear Romec P/N RG9570R1 (Pilatus P/N 968.84.51.106).	Within the next 20 hours time-in-service (TIS) after February 28, 2002 (the effective date of AD 2002-01-09) or within the next 30 days after February 28, 2002 (the effective date of AD 2002-01-09), whichever occurs first, unless already done.	Follow Pilatus PC-7 Service Bulletin No. 28-006 or Pilatus PC-12 Service Bulletin No. 28-009, both dated August 10, 2001, as applicable.
(ii) Lear Romec P/N RG9570M (Pilatus P/N 968.84.51.103).	Within the next 20 hours TIS after March 29, 2004 (the effective date of this AD) or within 30 days after March 29, 2004 (the effective date of this AD), whichever occurs first, unless already done.	Follow Pilatus PC-7 Service Bulletin No. 28-008, Revision 1, dated September 24, 2002.

(2) Replacement/Modification: Replace the engine-driven pump with one of the following before further flight after the inspection in paragraph (e)(1) of this AD if you find signs of fuel leakage or extruding gasket material or within 6 months after March 29, 2004 (the effective date of this AD) if you do not find signs of fuel leakage or extruding gasket material, unless already done:

Models	Pump replacement P/N	Procedures
(i) PC-7	LearRomec P/N RG9570M1/M(Pilatus P/N 968.84.51.107).	Pilatus PC-7 Service Bulletin No. 28-007, Revision No. 1, dated October 1, 2002.
(ii) PC-12 and PC-12/45	Lear Romec P/N RG9570R1/M(Pilatus P/N 968.84.51.108).	Pilatus PC-12 Service Bulletin No. 28-010, and dated September 16, 2002.

(3) Relief Valve Attachment Screw Torque: Before further flight after the inspection (if you find no fuel leakage or extruding gasket material) and replacement required by this AD, ensure that the relief valve attachment screws are adequately torqued and re-torqued as necessary using the following:

(i) For Pilatus Model PC-7 Airplanes: Pilatus PC-7 Service Bulletin No. 28-006, dated August 10, 2001, or Pilatus PC-7 Service Bulletin No. 28-008, Revision 1, dated September 24, 2002.

(ii) For Pilatus Models PC-12 and PC-12/45 Airplanes: Pilatus PC-12 Service Bulletin No. 28-009, dated August 10, 2001.

(4) Spares: As of March 29, 2004 (the effective date of this AD), install only an engine-driven pump that is a part number referenced in paragraphs (e)(2)(i) and (e)(2)(ii) of this AD. Before further flight after installation, do the relief valve attachment screw torque check as required by paragraph (e)(3) of this AD.

(5) Unless Already Done Credit: This AD retains actions from AD 2002-01-09.

(i) You may take inspection credit if you have one of the engine-driven pumps installed affected by AD 2002-01-09 and the specific actions are already done.

(ii) The actions of this AD do not apply if you have one of the engine-driven pumps installed that is referenced in paragraphs (e)(2)(i) and (e)(2)(ii) of this AD.

May I Request an Alternative Method of Compliance?

(f) You may request a different method of compliance or a different compliance time for this AD by following the procedures in 14 CFR 39.19. Unless FAA authorizes otherwise, send your request to your principal inspector. The principal inspector may add comments and will send your request to the Manager, Standards Office, Small Airplane Directorate, FAA. For information on any already approved alternative methods of compliance, contact Doug Rudolph, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4059; facsimile: (816) 329-4090.

Does This AD Incorporate Any Material by Reference?

(g) You must do the actions required by this AD following Pilatus PC-7 Service Bulletin No. 28-006 and Pilatus PC-12 Service Bulletin No. 28-009, both dated August 10, 2001; Pilatus PC-7 Service Bulletin No. 28-007, Revision No. 1, dated October 1, 2002; Pilatus PC-7 Service Bulletin No. 28-008, Revision 1, dated September 24, 2002; and Pilatus PC-12 Service Bulletin No. 28-010, dated September 16, 2002.

(1) On February 28, 2002 (67 FR 2323, January 17, 2002), and in accordance with 5 U.S.C. 552(a) and 1 CFR part 51, the Director of the Federal Register approved the incorporation by reference of Pilatus PC-7 Service Bulletin No. 28-006 and Pilatus PC-12 Service Bulletin No. 28-009, both dated August 10, 2001.

(2) As of March 29, 2004, and in accordance with 5 U.S.C. 552(a) and 1 CFR part 51, the Director of the Federal Register approved the incorporation by reference of Pilatus PC-7 Service Bulletin No. 28-007, Revision No. 1, dated October 1, 2002; Pilatus PC-7 Service Bulletin No. 28-008, Revision 1, dated September 24, 2002; and Pilatus PC-12 Service Bulletin No. 28-010, dated September 16, 2002.

(3) You may get a copy of these documents from Pilatus Aircraft Ltd., Customer Liaison Manager, CH-6371 Stans, Switzerland; telephone: +41 41 619 63 19; facsimile: +41 41 619 6224; or from Pilatus Business Aircraft Ltd., Product Support Department, 11755 Airport Way, Broomfield, Colorado 80021; telephone: (303) 465-9099; facsimile: (303) 465-6040. You may review copies at FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri 64106; or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

Is There Other Information That Relates to This Subject?

(h) FOCA (Switzerland) AD HB 2003-392, dated September 15, 2003; and FOCA (Switzerland) AD HB 2003-251, dated June 16, 2003, also address the subject of this AD.

Issued in Kansas City, Missouri, on February 10, 2004.

James E. Jackson,
Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

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