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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-20720; Directorate Identifier 2005-CE-17-AD; Amendment 39-14108; AD 2005-11-06]

RIN 2120-AA64

Airworthiness Directives; Pilatus Aircraft Ltd. Models 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) for certain Pilatus Aircraft Ltd. (Pilatus) Models PC-12 and PC-12/45 airplanes. This AD requires you to insert a temporary revision into the Limitations Section of the Pilot Operating Handbook (POH). This AD also requires you to replace the pitch actuator with an improved design pitch actuator and make the necessary wiring and circuit breaker changes, as applicable. Installing the improved design pitch actuator terminates the need for the temporary revision in the POH. This AD results from mandatory continuing airworthiness information (MCAI) issued by the airworthiness authority for Switzerland. We are issuing this AD to prevent an out-of-trim condition from occurring when the flaps are at a 40-degree flight phase and the pilot disconnects the autopilot. This condition could lead to reduced ability to control the airplane.

DATES: This AD becomes effective on July 18, 2005.

As of July 18, 2005, the Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulation.

ADDRESSES: To get the service information identified in this AD, contact Pilatus Aircraft Ltd., Customer Liaison Manager, CH-6371 Stans, Switzerland; telephone: +41 41 619 6208; facsimile: +41 41 619 7311; e-mail: SupportPC12@pilatus-aircraft.com or from Pilatus Business Aircraft Ltd., Product Support Department, 11755 Airport Way, Broomfield, Colorado 80021; telephone: (303) 465-9099; facsimile: (303) 465-6040.

To view the AD docket, go to the Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-001 or on the Internet at <http://dms.dot.gov>. The docket number is FAA-2005-20720; Directorate Identifier 2005-CE-17-AD.

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

What events have caused this AD? The Federal Office for Civil Aviation (FOCA), which is the airworthiness authority for Switzerland, recently notified FAA that an unsafe condition may exist on certain Pilatus Models PC-12 and PC-12/45 airplanes. The FOCA reports that an abrupt nose down pitch condition occurred on a PC-12 airplane.

Investigation revealed that the pilot disconnected the autopilot when the flaps were at a 40-degree selection.

Pilatus has determined that the pitch actuator sense circuitry becomes over-active during a 40-degree flight phase. Therefore, Pilatus designed a new pitch actuator that modifies sense output signals and removes the flap in motion signal to the autopilot.

What is the potential impact if FAA took no action? This condition, if not corrected, could result in an out-of-trim condition when the flaps are at a 40-degree flight phase and the pilot disconnects the autopilot. This condition could lead to reduced ability to control the airplane.

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 certain Pilatus Models PC-12 and PC-12/45 airplanes. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on April 13, 2005 (70 FR 19342). The NPRM proposed to require you to insert the temporary revision into the Limitations Section of the Pilot Operating Handbook (POH). The NPRM also proposed to require you to replace the pitch actuator with an improved design pitch actuator and make the necessary wiring and circuit breaker changes, as applicable. Installing the improved design pitch actuator would terminate the need for the temporary revision in the POH.

Comments

Was the public invited to comment? We provided the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal and FAA's response to each comment:

Comment Issue: Change the Compliance Time for Replacing the Pitch Actuator

What is the commenter's concern? Two commenters state the requirement to replace the pitch actuator within 6 months after the effective date of the AD may place an unnecessary burden on both the operators and service centers.

The Pilatus PC-12 fleet consists of over 500 airplanes worldwide. Because of material quantity constraints, the logistics associated with replacing the pitch actuator within six months would be nearly impossible for all operators.

Extensive flight-testing identified the unsafe condition associated with operation of the autopilot with 40-degree flaps.

The AD requires inserting a temporary revision into the Pilot Operating Handbook (POH) prohibiting the use of the autopilot with the flaps at the 40-degree position, which removes the risk of a major out of trim condition.

The commenters request the compliance time for replacing the pitch actuator be changed from "Within the next 6 months after the effective date of this AD, unless already done," to "Before December 31, 2006."

What is FAA's response to the concern? We partially agree with the commenters.

Since it has been identified through flight-testing that the unsafe condition can be avoided by inserting Temporary Revision No. 11 or No. 40 into the Limitation Section of the POH, we agree to extend the compliance time for replacing the pitch actuator.

Extending the compliance time will allow the owners/operators more time to get the pitch actuator replaced and allows the supplier to meet the demand for parts in a timely manner. However, we rarely use a specific calendar date to express compliance time and only then when engineering analysis establishes a direct relationship between the date and either the compliance "threshold" or the "grace period."

Basically, the commenters are requesting an additional 12 months to replace the pitch actuator.

Therefore, we will change the final rule AD action and increase the compliance time for replacing the pitch actuator to "Within the next 18 months after the effective date of this AD, unless already done."

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 the changes discussed above and minor editorial corrections. We have determined that these changes and 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 330 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 incorporate the Pilot Operating Handbook (POH) Temporary Revision:

Labor cost	Parts cost	Total cost per Airplane	Total cost on U.S. operators
1 work hour × \$65 per hour = \$65.	Not applicable	\$65	\$21,450

Pilatus will provide warranty credit for replacing the pitch actuator to the extent stated in the service information.

Authority for This Rulemaking

What authority does FAA have for issuing this rulemaking action? 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.

We are 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 AD.

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 other information as included in the Regulatory Evaluation) 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 "Docket No. FAA-2005-20720; Directorate Identifier 2005-CE-17-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. FAA amends § 39.13 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).

2005-11-06 Pilatus Aircraft Ltd.: Amendment 39-14108; Docket No. FAA-2005-20720; Directorate Identifier 2005-CE-17-AD.

When Does This AD Become Effective?

- (a) This AD becomes effective on July 18, 2005.

What Other ADs Are Affected By This Action?

- (b) None.

What Airplanes Are Affected by This AD?

- (c) This AD affects Models PC-12 and PC-12/45 airplanes, Manufacturers Serial Numbers (MSN) 101 through 620, that are certificated in any category.

What Is the Unsafe Condition Presented in This AD?

- (d) This AD is the result of mandatory continuing airworthiness information (MCAI) issued by the airworthiness authority for Switzerland. The actions specified in this AD are intended to prevent an out-of-trim condition from occurring when the flaps are at a 40-degree flight phase and the pilot disconnects the autopilot. This condition could lead to reduced ability to control the airplane.

What Must I Do To Address This Problem?

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

Actions	Compliance	Procedures
(1) Insert Temporary Revision No. 11 (Report No. 02211) or No. 40 (Report No. 01973-001) into the Limitations Section of the PC-12 Pilot's Operating Handbook (POH).	Within the next 90 days after July 18, 2005 (the effective date of this AD), unless already done.	The owner/operator holding at least a private pilot certificate as authorized by section 43.7 of the Federal Aviation Regulations (14 CFR 43.7) may modify the POH as specified in paragraph (e)(1) of this AD. Make an entry into the aircraft records showing compliance with this portion of the AD following section 43.9 of the Federal Aviation Regulations (14 CFR 43.9).

(2) Replace the pitch actuator, part number (P/N) 985.92.03.161, with an improved design pitch actuator, P/N 985.92.03.164; and make the associated wiring and circuit breaker changes (as applicable).	Within the next 18 months after July 18, 2005 (the effective date of this AD), unless already done.	Follow Pilatus PC12 Service Bulletin No. 22-004, dated December 21, 2004.
(3) Remove the Temporary Revision to the POH specified in paragraph (e)(1) of this AD after the pitch actuator is replaced as required in paragraph (e)(2) of this AD.	Before further flight after the pitch actuator is replaced with an improved design pitch actuator.	The owner/operator holding at least a private pilot certificate as authorized by section 43.7 of the Federal Aviation Regulations (14 CFR 43.7) may modify the POH as specified in paragraph (e)(3) of this AD. Make an entry into the aircraft records showing compliance with this portion of the AD following section 43.9 of the Federal Aviation Regulations (14 CFR 43.9).
(4) Do not install a P/N 985.92.03.161 pitch actuator.	As of July 18, 2005 (the effective date of this AD).	Not applicable.

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.

Is There Other Information That Relates to This Subject?

(g) Swiss AD Number HB-2005-128, effective date March 29, 2005, also addresses the subject of this AD.

Does This AD Incorporate Any Material by Reference?

(h) You must do the actions required by this AD following the instructions in Pilatus PC12 Service Bulletin No. 22-004, dated December 21, 2004. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To get a copy of this service information, contact Pilatus Aircraft Ltd., Customer Liaison Manager, CH-6371 Stans, Switzerland; telephone: +41 41 619 6208; facsimile: +41 41 619 7311; e-mail: SupportPC12@pilatus-aircraft.com or from Pilatus Business Aircraft Ltd., Product Support Department, 11755 Airport Way, Broomfield, Colorado 80021; telephone: (303) 465-9099; facsimile: (303) 465-6040. To review copies of this service information, go to the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html or call (202) 741-6030. To view the AD docket, go to the Docket Management Facility; U.S.

Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401,
Washington, DC 20590-001 or on the Internet at <http://dms.dot.gov>. The docket number is FAA-
2005-20720; Directorate Identifier 2005-CE-17-AD.

Issued in Kansas City, Missouri, on May 25, 2005.

David R. Showers,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

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