

**2009-18-03 Pilatus Aircraft Ltd.:** Amendment 39-15999; Docket No. FAA-2009-0622; Directorate Identifier 2009-CE-034-AD.

### **Effective Date**

(a) This airworthiness directive (AD) becomes effective October 1, 2009.

### **Affected ADs**

(b) This AD supersedes AD 2007-19-14, Amendment 39-15205.

### **Applicability**

(c) This AD applies to Models PC-6, PC-6-H1, PC-6-H2, PC-6/350, PC-6/350-H1, PC-6/350-H2, PC-6/A, PC-6/A-H1, PC-6/A-H2, PC-6/B-H2, PC-6/B1-H2, PC-6/B2-H2, PC-6/B2-H4, PC-6/C-H2, and PC-6/C1-H2 airplanes, manufacturer serial numbers (MSN) 101 through 999 and MSN 2001 through 2092, certificated in any category.

Note 1: These airplanes are also identified as Fairchild Republic Company PC-6 airplanes, Fairchild Industries PC-6 airplanes, Fairchild Heli Porter PC-6 airplanes, or Fairchild-Hiller Corporation PC-6 airplanes.

### **Subject**

(d) Air Transport Association of America (ATA) Code 57: Wings.

### **Reason**

(e) The mandatory continuing airworthiness information (MCAI) states:

Findings of corrosion, wear and cracks in the upper wing strut fittings on some PC-6 aircraft have been reported in the past. It is possible that the spherical bearing of the wing strut fittings installed in the underwing can be loose in the fitting or cannot rotate because of corrosion. In this condition, the joint cannot function as designed and fatigue cracks may then develop. Undetected cracks, wear and/or corrosion in this area could cause failure of the upper attachment fitting, leading to failure of the wing structure and subsequent loss of control of the aircraft.

To address this problem, FOCA published AD TM-L Nr. 80.627-6/ Index 72-2 and HB-2006-400 and EASA published AD 2007-0114 to require specific inspections and to obtain a fleet status. Since the issuance of AD 2007-0114, the reported data proved that it was necessary to establish and require repetitive inspections.

EASA published Emergency AD 2007-0241-E to extend the applicability and to require repetitive eddy current and visual inspections of the upper wing strut fitting for evidence of cracks, wear and/or corrosion and examination of the spherical bearing and replacement of cracked fittings. Collected data received in response to Emergency AD 2007-0241-E resulted in the issuance of EASA AD 2007-0241R1 that permitted extending the intervals for the repetitive eddy current and visual inspections from 100 Flight Hours (FH) to 300 FH and from 150 Flight Cycles (FC) to 450 FC, respectively. In

addition, oversize bolts were introduced by Pilatus PC-6 Service Bulletin (SB) 57-005 R1 and the fitting replacement procedure was adjusted accordingly.

Based on fatigue test results, EASA AD 2007-0241R2 was issued to extend the repetitive inspection interval to 1 100 FH or 12 calendar months, whichever occurs first, and to delete the related flight cycle intervals and the requirement for the "Mild Corrosion Severity Zone". In addition, some editorial changes have been made for reasons of standardization and readability.

Revision 3 of this AD refers to the latest revision of the PC-6 Aircraft Maintenance Manual (AMM) Chapter 5 limitations which includes the same repetitive inspection intervals and procedures already mandated in the revision 2 of AD 2007-0241. Besides the inspections, the latest revision of the PC-6 AMM contains the replacement procedures for the fittings.

Additionally, it is possible to replace the wing strut fitting with a new designed wing strut fitting. With this optional part replacement, in the repetitive inspection procedure the 1 100 FH interval is deleted so that only calendar defined intervals of inspections remain applicable.

### **Actions and Compliance**

(f) Unless already done, do the following actions:

(1) For airplanes that have not had both wing strut fittings replaced within the last 100 hours time-in-service (TIS) before September 26, 2007 (the effective date of AD 2007-19-14), or have not been inspected using an eddy current inspection method following Pilatus Aircraft Ltd. Pilatus PC-6 Service Bulletin No. 57-004, dated April 16, 2007, within the last 100 hours TIS before September 26, 2007 (the effective date of AD 2007-19-14): Before further flight after September 26, 2007 (the effective date of AD 2007-19-14), visually inspect the upper wing strut fittings and examine the spherical bearings following the Pilatus Aircraft Ltd. Pilatus PC-6 Service Bulletin No. 57-005, REV No. 2, dated May 19, 2008.

(2) For all airplanes: Within 25 hours TIS after September 26, 2007 (the effective date of AD 2007-19-14), or within 30 days after September 26, 2007 (the effective date of AD 2007-19-14), whichever occurs first, visually and using eddy current methods, inspect the upper wing strut fittings and examine the spherical bearings following Pilatus Aircraft Ltd. Pilatus PC-6 Service Bulletin No. 57-005, REV No. 2, dated May 19, 2008.

(3) After doing the inspection specified in paragraph (f)(2) of this AD or replacing the upper wing strut fitting, repetitively do the following inspections:

(i) For all airplanes: at intervals not to exceed every 3 calendar months visually inspect the upper wing strut fittings and examine the spherical bearings following Chapter 57-00-02 of Pilatus Aircraft Ltd. Pilatus PC-6 Aircraft Maintenance Manual, dated November 30, 2008 (referenced as revision 9 in European Aviation Safety Agency (EASA) AD No.: 2007-0241R3). For airplanes equipped with wing strut fitting part number (P/N) 6102.0041.00, P/N 111.35.06.055, P/N 111.35.06.056, P/N 111.35.06.184, P/N 111.35.06.185, or P/N 111.35.06.186, you may also do these inspections following Pilatus Aircraft Ltd. Pilatus PC-6 Service Bulletin No. 57-005, REV No. 2, dated May 19, 2008.

(ii) For airplanes equipped with wing strut fitting P/N 6102.0041.00, P/N 111.35.06.055, P/N 111.35.06.056, P/N 111.35.06.184, P/N 111.35.06.185, or P/N 111.35.06.186: at intervals not to exceed every 1,100 hours TIS or 12 calendar months, whichever occurs first, visually and using eddy current methods, inspect the upper wing strut fittings and examine the spherical bearings following Pilatus Aircraft Ltd. Pilatus PC-6 Service Bulletin No. 57-005, REV No. 2, dated May 19, 2008, or Chapter 57-00-02 of Pilatus Aircraft Ltd. Pilatus PC-6 Aircraft Maintenance Manual, dated November 30, 2008 (referenced as revision 9 in EASA AD No.: 2007-0241R3).

(iii) For airplanes equipped with wing strut fitting P/N 111.35.06.193, P/N 111.35.06.194, or P/N 111.35.06.195: at intervals not to exceed every 12 calendar months, visually and using eddy current methods, inspect the upper wing strut fittings and examine the spherical bearings following Chapter 57-00-02 of Pilatus Aircraft Ltd. Pilatus PC-6 Aircraft Maintenance Manual, dated November 30, 2008 (referenced as revision 9 in EASA AD No.: 2007- 0241R3).

(4) You may also take "unless already done" credit for any inspection specified in paragraphs (f)(1), (f)(2), or (f)(3) of this AD if done before October 1, 2009 (the effective date of this AD) following Pilatus Aircraft Ltd. Pilatus PC-6 Service Bulletin No. 57-005, dated August 30, 2007; or Pilatus Aircraft Ltd. Pilatus PC-6 Service Bulletin No. 57-005, REV No. 1, dated November 19, 2007.

(5) For all airplanes: If during any inspection required by paragraphs (f)(1), (f)(2), or (f)(3) of this AD you find cracks in the upper wing strut fitting or the spherical bearing is not in conformity, before further flight, replace the cracked upper wing strut fitting and/or the nonconforming spherical bearing following Chapter 57-00-02 of Pilatus Aircraft Ltd. Pilatus PC-6 Aircraft Maintenance Manual, dated November 30, 2008 (referenced as revision 9 in EASA AD No.: 2007-0241R3).

(6) For all airplanes: Replacement of one or both upper wing strut fitting(s) does not terminate the repetitive inspection specified in paragraph (f)(3) of this AD.

### **FAA AD Differences**

Note 2: This AD differs from the MCAI and/or service information as follows: No differences.

### **Other FAA AD Provisions**

(g) The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs):

(i) The Manager, Standards Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Doug Rudolph, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4059; fax: (816) 329-4090. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(ii) AMOCs approved for AD 2007-19-14 are not approved for this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) Reporting Requirements: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

### **Related Information**

(h) Refer to MCAI EASA AD No.: 2007-0241R3, dated May 6, 2009; Pilatus Aircraft Ltd. Pilatus PC-6 Service Bulletin No. 57-005, REV No. 2, dated May 19, 2008; Pilatus Aircraft Ltd. Pilatus PC-6 Service Bulletin No. 57-005, REV No. 1, dated November 19, 2007; Pilatus Aircraft Ltd. Pilatus PC-6 Service Bulletin No. 57-005, dated August 30, 2007; Pilatus Aircraft Ltd. Pilatus PC-6 Service Bulletin No. 57-004, dated April 16, 2007; and Chapter 57-00-02 of Pilatus Aircraft Ltd. Pilatus PC-6 Aircraft Maintenance Manual, dated November 30, 2008 (referenced as revision 9 in EASA AD No.: 2007-0241R3), for related information.

### **Material Incorporated by Reference**

(i) You must use Pilatus Aircraft Ltd. Pilatus PC-6 Service Bulletin No. 57-005, REV No. 2, dated May 19, 2008; and Chapter 57-00-02 of Pilatus Aircraft Ltd. Pilatus PC-6 Aircraft Maintenance Manual, dated November 30, 2008 (referenced as revision 9 in EASA AD No.: 2007-0241R3), to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of Pilatus Aircraft Ltd. Pilatus PC-6 Service Bulletin No. 57-005, REV No. 2, dated May 19, 2008, and Chapter 57-00-02 of Pilatus Aircraft Ltd. Pilatus PC-6 Aircraft Maintenance Manual, dated November 30, 2008 (referenced as revision 9 in EASA AD No.: 2007-0241R3), under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Pilatus Aircraft Ltd., Customer Liaison Manager, CH 6371 STANS, Switzerland; telephone: + 41 (0)41 619 6580; fax: + 41 (0)41 619 6576; e-mail: foder matt@pilatus aircraft.com.

(3) You may review copies of the service information incorporated by reference for this AD at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the Central Region, call (816) 329-3768.

(4) You may also review copies of the service information incorporated by reference for this AD at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).