



**FEDERAL AVIATION ADMINISTRATION
AIRWORTHINESS DIRECTIVES
SMALL AIRCRAFT, ROTORCRAFT, GLIDERS,
BALLOONS, & AIRSHIPS**

BIWEEKLY 2011-04

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U.S. Department of Transportation
Federal Aviation Administration
Regulatory Support Division
Delegation and Airworthiness Programs Branch, AIR-140
P. O. Box 26460
Oklahoma City, OK 73125-0460
FAX 405-954-4104

SMALL AIRCRAFT, ROTORCRAFT, GLIDERS, BALLOONS, & AIRSHIPS

| AD No. | Information | Manufacturer | Applicability |
|---|--------------|-------------------------|--|
| Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; - See AD for additional information; | | | |
| Biweekly 2011-01 | | | |
| 2010-17-18 R1 | R | Air Tractor | AT-802 and AT-802A |
| 2010-22-08 | COR | Eurocopter France | Rotorcraft: AS 350 B, BA, B1, B2, B3, and D, and Model AS355 E, F, F1, F2, and N |
| 2010-26-04 | | Piper | PA-28-161 |
| 2010-26-09 | | Sikorsky | Rotorcraft: S-76A, B, and C |
| 2010-26-11 | | Kaman Aerospace | Rotorcraft: K-1200 |
| 2011-01-52 | E | Schweizer | Rotorcraft: 269A, A-1, B, C, C-1, and Th-55 series |
| 2011-01-53 | E | Piaggio | P-180 |
| | S 2011-01-51 | | |
| Biweekly 2011-02 | | | |
| 2010-24-05 | COR | Pratt & Whitney Canada | Engine: PW305A and PW305B |
| 2010-26-54 | | Cessna | LC41-550FG, LC42-550FG |
| 2011-01-03 | | GROB-WERKE | G102 ASTIR CS, G102 CLUB ASTIR III, G102 CLUB ASTIR IIIb, G102 STANDARD ASTIR III |
| 2011-01-04 | | Embraer | EMB-500 |
| 2011-02-04 | | M7 Aerospace LP | SA26-AT, SA26-T, SA226-AT, SA226-T, SA226-T(B), SA226-TC, SA227-AC (C-26A), SA227-AT, SA227-BC (C-26A), SA227-CC, SA227-DC (C-26B), and SA227-TT |
| Biweekly 2011-03 | | | |
| 2011-01-53 | S 2011-01-51 | Piaggio Aero Industries | P-180 |
| 2011-02-02 | S 2008-19-06 | Socata | TBM 700 |
| 2011-02-08 | | Aircraft Industries | Glider: L 23 Super Blanik |
| Biweekly 2011-04 | | | |
| 2011-01-14 | S 2005-17-01 | Pilatus | 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 |
| 2011-01-53 | COR | Piaggio Aero Industries | P-180 |
| | S 2011-01-51 | | |
| 2011-03-04 | S 2009-09-09 | Cessna | LC40-550FG (300), LC41-550FG (400), and LC42-550FG (350) |
| 2011-03-05 | S 2007-11-03 | Dornier Luftfahrt GmbH | Dornier 228-100, Dornier 228-101, Dornier 228-200, Dornier 228-201, Dornier 228-202, and Dornier 228-212 |



2011-01-14 Pilatus Aircraft Limited: Amendment 39-16571; Docket No. FAA-2010-1011; Directorate Identifier 2010-CE-047-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective March 8, 2011.

Affected ADs

- (b) This AD supersedes AD 2005-17-01, Amendment 39-14221.

Applicability

(c) This AD applies to Pilatus Aircraft Ltd. 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, all manufacturer serial number (MSN) 101 through 999, and MSN 2001 through 2092, certificated in any category.

Note 1: For MSN 2001-2092, 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 5: Time Limits.

Reason

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

The current Aircraft Maintenance Manual (AMM) of PC-6 B2-H2 and B2-H4 models does not include a Chapter 04 in the Airworthiness Limitations Section (ALS). For PC-6 models other than B2-H2 and B2-H4, no ALS at all is included in the AMM.

With the latest Revision 12 of the AMM, a new Chapter 04 has been introduced in the AMM for PC-6 B2-H2 and B2-H4 models.

For PC-6 models other than B2-H2 and B2-H4, a new ALS document has been implemented as well.

These documents include the Mandatory Continuing Airworthiness Information (MCAI) which are maintenance requirements and/or airworthiness limitations developed by Pilatus Aircraft Ltd and approved by EASA. Failure to comply with these MCAI constitutes an unsafe condition.

For the reasons described above, this MCAI requires the implementation and the compliance with these new maintenance requirements and/or airworthiness limitations documents.

Actions and Compliance

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

(1) For all affected Models PC-6/B2-H2 and PC-6/B2-H4; Before further flight after March 8, 2011 (the effective date of this AD), incorporate the maintenance requirements as specified in Pilatus PC-6 AMM Chapter 04-00-00, Revision 12, Document Number 01975, dated May 14, 2010, into your FAA-accepted maintenance program.

(2) For all affected PC-6 models other than the Models PC-6/B2-H2 and PC-6/B2-H4; Before further flight after March 8, 2011 (the effective date of this AD), incorporate the maintenance requirements as specified in Pilatus PC-6 AMM ALS Document Number 02334, Revision 1, dated May 14, 2010, into your FAA-accepted maintenance program.

Note 2: The AMM revisions in this AD action include the repetitive inspections for the wing strut fittings and the spherical bearings currently included in AD 2009-18-03. AD 2009-18-03 (R1), Amendment 39-16570 has been revised to remove these repetitive inspections.

FAA AD Differences

Note 3: 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): 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.

(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, a federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave., SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

Related Information

(h) Refer to MCAI EASA AD No.: 2010-0176, dated August 20, 2010; and Pilatus PC-6 AMM Chapter 04-00-00, Revision 12, Document Number 01975, Revision 12, dated May 14, 2010; or in the Pilatus PC-6 ALS Document Number 02334, Revision 1, dated May 14, 2010, for related information.

Material Incorporated by Reference

(i) You must use Pilatus PC-6 AMM Chapter 04-00-00, Revision 12, Document Number 01975, dated May 14, 2010; and incorporate the Pilatus PC-6 ALS Document Number 02334, Revision 1, dated May 14, 2010, 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 this service information 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 Service Manager, CH-6371 STANS, Switzerland; telephone: +41 (0) 41 619 65 01; fax: +41 (0) 41 619 65 76; Internet: <http://www.pilatus-aircraft.com>.

(3) You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call 816-329-4148.

(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.

Issued in Kansas City, Missouri, on December 28, 2010.

Earl Lawrence,
Manager, Small Airplane Directorate,
Aircraft Certification Service.



CORRECTION: [*Federal Register: February 11, 2011 (Volume 76, Number 29)*]; Page 7694-7695;
www.access.gpo.gov/su_docs/aces/aces140.html]

2011-01-53 PIAGGIO AERO INDUSTRIES S.p.A: Amendment 39-16582; Docket No. FAA-2011-0054; Directorate Identifier 2010-CE-070-AD.

Effective Date

(a) This AD is effective January 24, 2011 to all persons except those persons to whom it was made immediately effective by Emergency AD 2011-01-53, issued on December 20, 2010, which contains the requirements of this amendment.

Affected ADs

(b) This AD supersedes Emergency AD 2011-01-51, issued December 18, 2010, which was sent to owners/operators of PIAGGIO AERO INDUSTRIES S.p.A Model PIAGGIO P-180 airplanes. AD 2007-24-15, Amendment 39-15281 (72 FR 67843, December 3, 2007) is related to this subject and remains in effect.

Applicability

(c) This AD applies to PIAGGIO AERO INDUSTRIES S.p.A Model PIAGGIO P-180 airplanes, all serial numbers, certified in any category.

Subject

(d) Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 53, Fuselage.

Unsafe Condition

(e) This AD was prompted by reports of water accumulation in the belly of the fuselage that froze and caused the flight controls to jam. We are issuing this AD to prevent water or fluid from accumulating in the belly of the fuselage and freezing when the aircraft reaches and holds altitudes where the temperature is below the freezing point. This condition could cause the flight controls to jam, which could result in loss of control.

Compliance

(f) Comply with this AD within the compliance times specified.

Inspection and Corrective Actions

(g) Unless already done in compliance with Emergency AD 2011-01-51, before further flight, do the following actions using the instructions in Appendix 1 of this AD.

- (1) Remove the central floor panels in the cabin and inspect the fuselage belly; and
- (2) Functional test the fuselage drain holes.

Reporting Requirement

(h) Unless already done, within 24 hours after complying with the actions required in paragraph (g) of this AD, fill out the reporting form provided in Appendix 2 of this AD and send to the FAA at the address (facsimile, e-mail) referenced in the Related Information section, paragraph (l) of this AD.

(i) For the reporting requirement in this AD, a Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave., SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

Provision to Return to Home Base

(j) For the actions required in paragraph (g) of this AD, you may return/position the airplane to a home base, hangar, maintenance facility, etc., provided the following are adhered to:

- (1) A water drain hole test is done immediately before the repositioning flight and the airplane passes this test. The instructions for this test are included in Appendix 3 of this AD. If the airplane does not pass this test, then the actions of paragraph (g) of this AD must be done without a repositioning flight, unless a special flight permit is granted;
- (2) This repositioning flight does not exceed a total of 5 hours time-in-service; and
- (3) Use of autopilot is prohibited.

Alternative Methods of Compliance (AMOCs)

(k)(1) The Manager, Standards Office, Small Airplane Directorate, 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 Standards Office, send it to the attention of the person identified in the Related Information section of this AD.

(2) Accomplishment of Piaggio Service Bulletin (ALERT) No. 80-0324, dated December 20, 2010, in its entirety provides an acceptable level of safety to the actions of this AD and thus is considered an approved AMOC for AD 2011-01-53.

(3) Before using any approved AMOC, notify your Principal Maintenance Inspector or Principal Avionics Inspector, as appropriate, or lacking a principal inspector, your local Flight Standards District Office.

Related Information

(l) For further information about this AD, contact Mike Kiesov, Aerospace Engineer, Small Airplane Directorate, FAA, 901 Locust, Kansas City, MO 64106; phone: (816) 329-4144; fax: (816) 329-4090; e-mail: mike.kiesov@faa.gov.

Appendix 1 to AD 2011-01-53
Functional Test of the Fuselage Drain Holes

1. Remove the electrical power (Ref. AMM Chapter 24-00-00).
2. Remove the carpet from the aisle in the passenger compartment: The carpet is installed on the aircraft with Velcro; remove it by hand.
3. Remove the aisle floor panels 231 ALF, 231 FLF, 231 MLF, and 231 QLF (Ref. AMM Chapter 06-00-00).
4. Inspect the fuselage belly for presence of fluid or ice. Inspect the lateral bays through the lightening holes.
 - a. If fluid is found in the belly, drain it and collect. Take note of the amount of fluid removed from the belly, and in which bay the fluid was trapped.
 - b. If ice is found in the belly, thaw it, then drain and collect. Take note of the amount of fluid removed from the belly, and in which bay the ice was trapped.

NOTE: BEFORE THAWING THE ICE, PUT A SUITABLE CONTAINER BELOW THE EXTERNAL DRAIN HOLES TO COLLECT THE FLUID.

 - c. Evaluate the amount of fluid collected:
 - i. If water is found only in the bottom of the belly (i.e., undrainable within the keel beams), go to step 6. Step 5 does not need to be accomplished at this time.
 - ii. If water is found in excess of item above (4-c-i), do step 5.
5. Add 6.3 mm draining holes as per attached figure 1 (additional drain holes on keel beam webs) connecting the lateral bays to the center ones or, as alternative, apply Piaggio Aero Industries Service Bulletin 80-0291. Then proceed with step 6.
6. Inspect the fuselage belly for presence of dirt/debris. Take note of dirt/debris found and of its location (which bay).
7. Inspect the fuselage belly for signs of previous fluid pooling (waterlines or similar). Take note of any sign found.
8. Inspect the six (6) flapper valves (two near FR 20, FR 32, and FR 36) to verify if they are clogged, stuck to the fuselage skin, or laying against the skin for their entire length.
 - a. Clean any clogged flapper valve. Take note of any clogged flapper valve and its position.
 - b. Carefully free any stuck flapper valve. Take note of any stuck flapper valve and its position.
 - c. If—after cleaning and repositioning—the rubber flap is still laying against the skin for its entire length, cut off the rubber flap. Replace it at the next A check.
9. Inspect the six (6) external drain holes:
 - a. Verify if they are clogged. If any drain hole is clogged, clean it.
 - b. Check for proper dimension (3.2 mm). Rework to nominal dimension any external drain hole that is found undersized. Protect the reworked drain hole by means of Alodyne. Take note of any drain hole found clogged and/or reworked, and its position.

**Appendix 1 to AD 2011-01-53 (Continued)
Functional Test of the Fuselage Drain Holes**

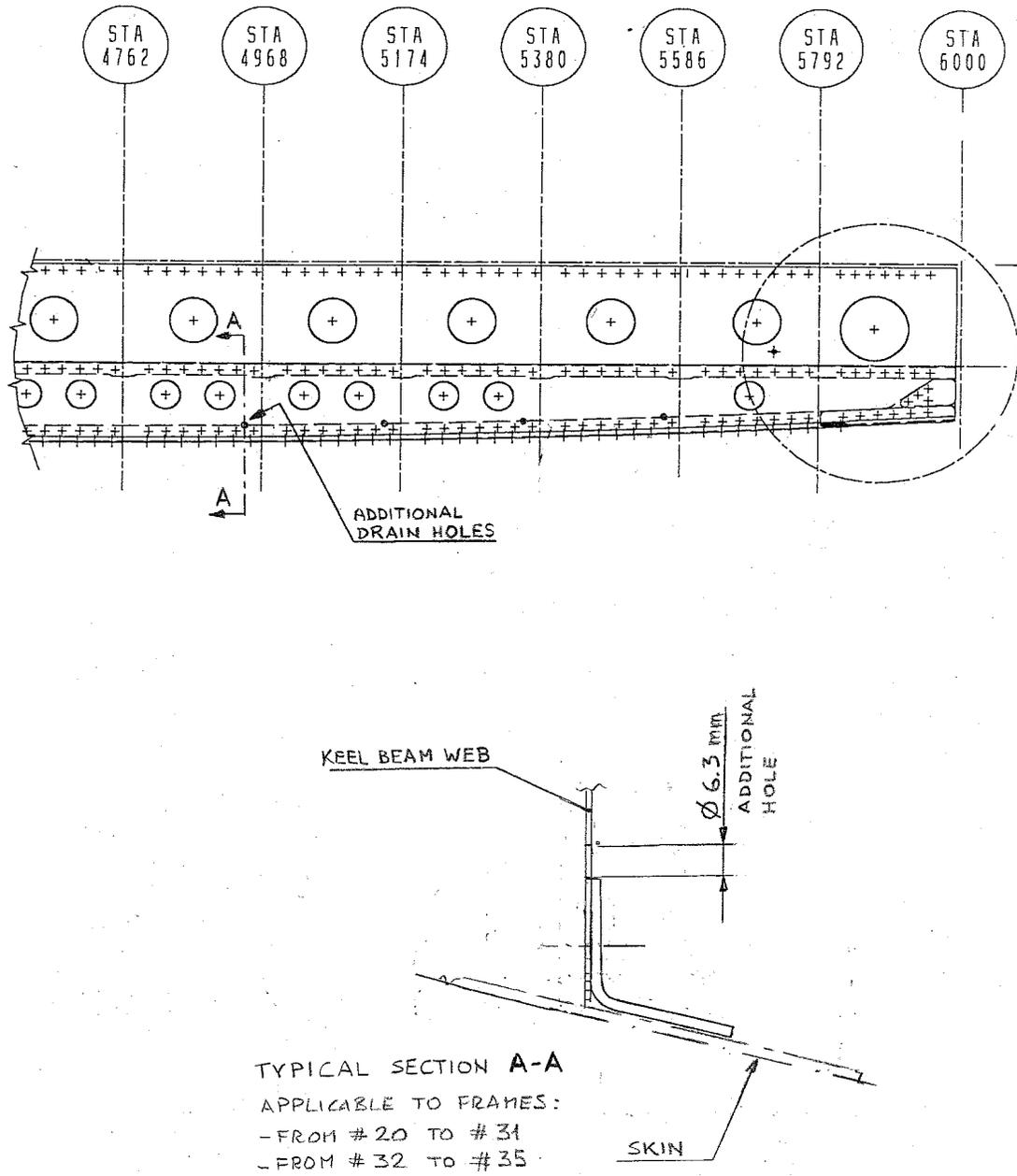


Figure 1. Additional drain holes on keel beam webs

Appendix 1 to AD 2011-01-53 (Continued)
Functional Test of the Fuselage Drain Holes

10. Clean the fuselage belly, removing debris. A vacuum cleaner may be used.
 11. If possible, identify clues of potential source of fluid, such as wet carpets, blue lavatory water, etc.
 12. Test the valves and drain holes as described:
 - a. Place an adequate amount of water in each bay between FR 19 and FR 36 (See figure 2) to verify that the water is conveyed in the central bays and that it is drained. Use at least 1/2 gallon (approximately 2 liters).
- NOTE: TAKE CARE NOT TO COME IN CONTACT WITH ELECTRICAL CONNECTORS WHILE POURING WATER.**
- b. A steady stream of water should be observed coming from the external drain holes. If not, the flapper valve does not drain properly. Cut off the rubber flap and replace the flapper valve at next A check. Take note of any cut rubber flap and its position.
 13. Dry the fuselage belly.
 14. Install the aisle floor panels 231ALF, 231 FLF, 231 MLF, and 231 QLF (Ref. AMM Chapter 06-00-00).
 15. Re-install the carpet:
 - a. Make sure that the floor is clean and free of objects.
 - b. Make sure that the Velcro is well fixed and cleaned.
 - c. Put the carpet in position on the floor and fix it with the Velcro.
 16. Collect information on total time flown in the last 6 months. Specify if the aircraft was exposed to heavy rain conditions while parked or during flights.
 17. Make an appropriate entry in the airplane logbook to show compliance with this emergency AD.

Appendix 1 to AD 2011-01-53 (Continued) Functional Test of the Fuselage Drain Holes

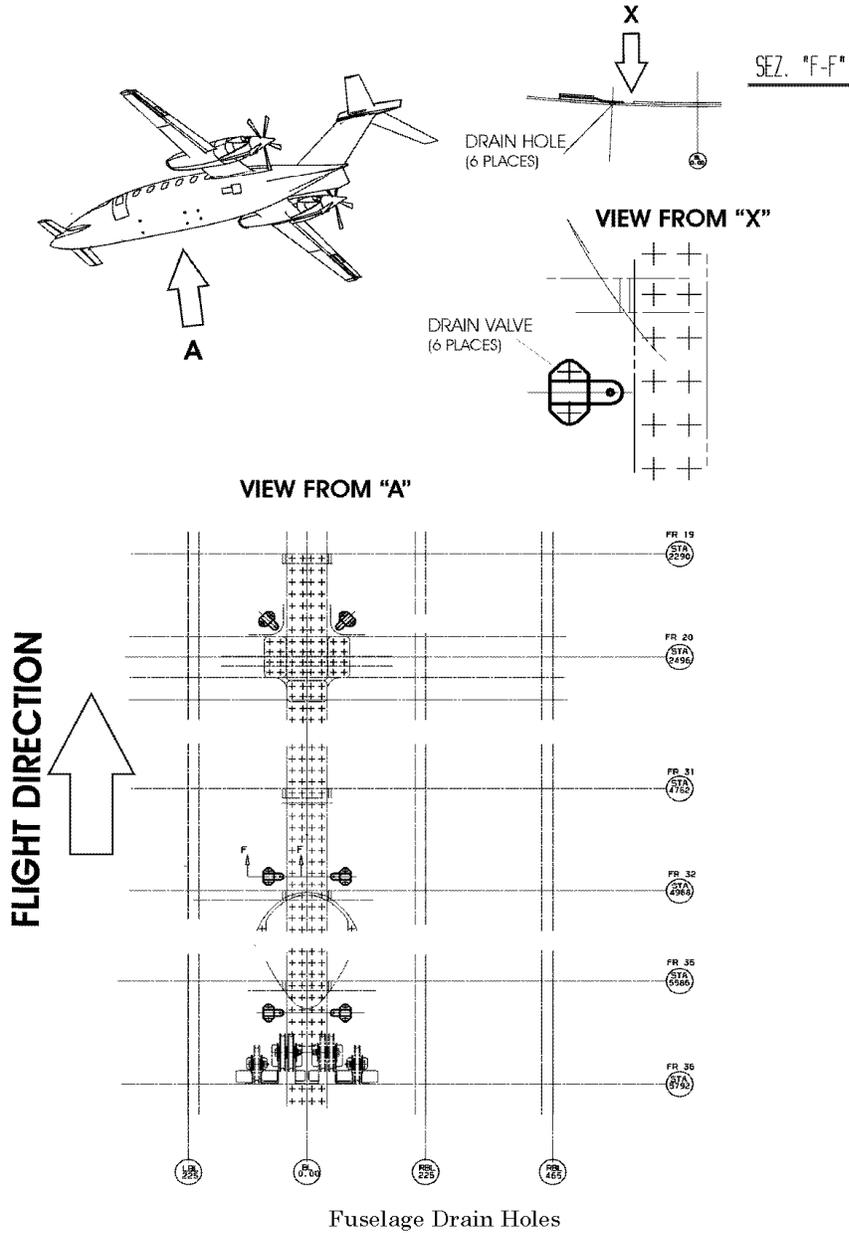


Figure 2. Fuselage Drain Holes

Appendix 2 to AD 2011-01-53 Reporting Form

| | | |
|---|---|-------------------|
| A/C S/N: | A/C Flight Hours: | A/C Registration: |
| Step 4a – water collected in the belly [YES] [NO] | If YES, specify amount and location: | |
| Step 4b – ice collected in the belly [YES] [NO] | If YES, specify amount and location: | |
| Step 5 – added drain holes [YES] [NO] | If YES, specify work performed: | |
| Step 6 – debris / dirt in the belly [YES] [NO] | If YES, specify amount and location: | |
| Step 7 – signs of previous fluid pooling [YES] [NO] | If YES, specify amount and location: | |
| Step 8 – flapper valves inspection | Specify, if any, which flapper valve was found clogged or stuck and, if any, which rubber flap was cut off. | |
| Step 9 – drain holes inspection | Specify, if any, which drain hole was found clogged. Specify, if any, which drain hole was found undersized. | |
| Step 11 – clues of potential source of fluid. | | |
| Step 12 – drain test | Specify, if any, which flapper valve does not have a steady stream of water. | |
| Step 16 – Total time flown in the last 6 months. Specify if the aircraft was exposed to heavy rain conditions while parked or during flights. | | |
| Date: | Accomplished by: | |
| Signature | | |
| Send report to: | | |
| Mike Kiesov, Aerospace Engineer, Small Airplane Directorate, FAA, 901 Locust, Kansas City, MO 64106; phone: (816) 329-4144; fax: (816) 329-4090; e-mail: mike.kiesov@faa.gov. | | |

Appendix 3 to AD 2011-01-53 Water Drain Hole Test

1. Put a container under the fuselage external drain holes.
2. Insert a plastic or wooden stick (or similar tool), minimum length 3 inches (7.5 cm), diameter 0.1 inch (2.5 mm) in each of the 6 fuselage external drain holes.
3. Verify the stick may enter freely in the drain hole.
4. If the stick does not enter freely, repositioning flight is not allowed.
5. If more than 1 cup (250 ml) of water is drained from 2 drain holes at each station while inserting the stick, repositioning flight is not allowed.

Issued in Kansas City, Missouri, on January 13, 2011.

Earl Lawrence,
Manager, Small Airplane Directorate,
Aircraft Certification Service.



2011-03-04 Cessna Aircraft Company (Type Certificate Previously Held by Columbia Aircraft Manufacturing (Previously The Lancair Company)): Amendment 39-16588; Docket No. FAA-2009-1186; Directorate Identifier 2009-CE-065-AD.

Effective Date

(a) This airworthiness directive (AD) is effective March 14, 2011.

Affected ADs

(b) This AD supersedes AD 2009-09-09, Amendment 39-15895.

Applicability

(c) This AD applies to the following Cessna Aircraft Company (type certificate previously held by Columbia Aircraft Manufacturing (previously The Lancair Company)) airplane models and serial numbers that are certificated in any category:

Group 1 Airplanes

| Model | Serial Nos. |
|------------------|--|
| LC40-550FG (300) | 40001, 40002, and 40004 through 40079. |
| LC41-550FG (400) | 41001 through 41569, 41571 through 41800, 411001 through 411087, 411089 through 411110, 411112 through 411138, 411140, 411142, and 411147. |
| LC42-550FG (350) | 42001 through 42009, 42011 through 42558, 42560 through 42569, 421001 through 421013, 421015 through 421017, and 421019. |

Group 2 Airplanes

| Model | Serial Nos. |
|------------------|--|
| LC41-550FG (400) | 41570, 411088, 411111, 411139, 411141, 411143 through 411146, and 411148 through 411153. |
| LC42-550FG (350) | 42010, 42559, 421014, 421018, and 421020. |

Subject

(d) Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 55, Stabilizers.

Unsafe Condition

(e) This AD is the result of reports received of a cracked lower rudder hinge bracket on two of the affected airplanes. We are issuing this AD to detect and correct damage, i.e., cracking,

deformation, and discoloration, in the rudder hinges and the rudder hinge brackets, which could result in failure of the rudder. This failure could lead to loss of control.

Compliance

(f) To address this problem, you must do the following, unless already done:

(1) For Group 1 airplanes specified in paragraph (c) of this AD: Using the compliance times specified in table 1 of this AD, inspect the rudder hinges and rudder hinge brackets for damage, i.e., cracking, deformation, and discoloration. Do the inspections following Cessna Single Engine Service Bulletin SB09-27-01, dated April 13, 2009; Cessna Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009; or Cessna Single Engine Service Bulletin SB09-27-01, Revision 3, dated July 20, 2010.

Table 1—Inspection Compliance Times

| Condition | Initially inspect... | Repetitively inspect... |
|---|--|---|
| (i) For airplanes with 25 hours time-in-service (TIS) or more as of May 11, 2009 (the effective date of AD 2009-09-09): | With the rudder removed and using 10X visual magnification, inspect all three rudder hinges and rudder hinge brackets at whichever of the following occurs first: (A) Within the next 10 hours TIS after May 11, 2009 (the effective date of AD 2009-09-09); or (B) Within the next 30 days after May 11, 2009 (the effective date of AD 009-09-09). | Thereafter inspect as follows until the modification required in paragraph (f)(5) of this AD is done: (A) Every 25 hours TIS or 3 months, whichever occurs first, without removing the rudder, visually inspect all three rudder hinges and rudder hinge brackets; and (B) Every 50 hours TIS or 6 months, whichever occurs first, with the rudder removed and using 10X visual magnification, inspect all three rudder hinges and rudder hinge brackets. |
| (ii) For airplanes with less than 25 hours TIS as of May 11, 2009 (the effective date of AD 2009-09-09): | Without removing the rudder, visually inspect all three rudder hinges and rudder hinge brackets, at whichever of the following occurs later: (A) Upon accumulating 25 hours TIS; or (B) Within the next 10 hours TIS after May 11, 2009 (the effective date of AD 2009-09-09). | Thereafter inspect as follows until the modification required in paragraph (f)(5) of this AD is done: (A) Every 25 hours TIS or 3 months, whichever occurs first, without removing the rudder, visually inspect all three rudder hinges and rudder hinge brackets; and (B) Every 50 hours TIS or 6 months, whichever occurs first, with the rudder removed and using 10X visual magnification, inspect all three rudder hinges and rudder hinge brackets. |

(2) For Group 1 airplanes specified in paragraph (c) of this AD: Before further flight after any inspection required in paragraphs (f)(1)(i) or (f)(1)(ii) of this AD in which damage is found on any of the rudder hinges and/or rudder hinge brackets, incorporate Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009; or Cessna Single Engine Modification Kit MK400-27-01A

dated July 20, 2010, as specified in Cessna Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009; and Cessna Single Engine Service Bulletin SB09-27-01, Revision 3, dated July 20, 2010. Incorporating either Modification Kit MK400-27-01 or Modification Kit MK400-27-01A, terminates the repetitive inspections required in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD.

(3) For Group 1 airplanes specified in paragraph (c) of this AD: If the repetitive inspections required in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD become due at the same time, credit for both inspections will be given by doing the rudder removal and 10X visual inspection.

(4) For Group 1 airplanes specified in paragraph (c) of this AD: Within the next 24 months after March 14, 2011 (the effective date of this AD), incorporate Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009; or Cessna Single Engine Modification Kit MK400-27-01A, dated July 20, 2010, as specified in Cessna Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009; and Cessna Single Engine Service Bulletin SB09-27-01, Revision 3, dated July 20, 2010, unless already done as specified in paragraph (f)(2) of this AD. Incorporating either Modification Kit MK400-27-01 or Modification Kit MK400-27-01A, terminates the repetitive inspections required in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD.

(5) For Group 1 airplanes specified in paragraph (c) of this AD: At any time after the initial inspections required in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD, as long as no damage is found, and no later than the compliance time specified in paragraph (f)(4) of this AD, you may incorporate Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009; or Cessna Single Engine Modification Kit MK400-27-01A, dated July 20, 2010, as specified in Cessna Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009; and Cessna Single Engine Service Bulletin SB09-27-01, Revision 3, dated July 20, 2010, to terminate the repetitive inspections required in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD.

(6) For any Group 1 airplane with Cessna Single Engine Service Bulletin SB09-27-01, Revision 1, dated August 31, 2009, already incorporated and for all Group 2 airplanes: Within the next 30 days after March 14, 2011 (the effective date of this AD), inspect for proper rudder hinge and rudder bracket hardware thread engagement and inspect the rudder travel. Do these inspections following the Accomplishment Instructions in Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009; or the Accomplishment Instructions in Cessna Single Engine Modification Kit MK400-27-01A, dated July 20, 2010.

(i) Before further flight after the inspection required in paragraph (f)(6) of this AD, if any discrepancies are found in the rudder hinge or rudder bracket hardware, replace the affected hardware. Do the replacements following the Accomplishment Instructions in Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009; or the Accomplishment Instructions in Cessna Single Engine Modification Kit MK400-27-01A, dated July 20, 2010.

(ii) Before further flight after the inspection required in paragraph (f)(6) of this AD, if the rudder travel is outside the limits specified in the Accomplishment Instructions in Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009; or the Accomplishment Instructions in Cessna Single Engine Modification Kit MK400-27-01A, dated July 20, 2010, reinstall the rudder following the Accomplishment Instructions in either Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009; or Cessna Single Engine Modification Kit MK400-27-01A, dated July 20, 2010.

(iii) After the inspection and any necessary corrective actions required in paragraphs (f)(6), (f)(6)(i), and (f)(6)(ii) of this AD, no further action is required.

Credit for Actions Accomplished in Accordance With Previous Service Information

(g) For all airplanes specified in paragraph (c) of this AD: As of March 14, 2011 (the effective date of this AD), if Cessna Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009, has already been incorporated, no further action is required.

Alternative Methods of Compliance (AMOCs)

(h)(1) The Manager, Wichita Aircraft Certification Office (ACO), 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 ACO, send it to the attention of the person identified in the Related Information section of this AD.

(2) Before using any approved AMOC, notify your Principal Maintenance Inspector or Principal Avionics Inspector, as appropriate, or lacking a principal inspector, your local Flight Standards District Office.

(3) AMOCs approved for AD 2009-09-09 are approved for this AD.

Related Information

(i) For more information about this AD, contact Gary Park, Aerospace Engineer, Wichita ACO, FAA, 1801 Airport Road, Room 100, Wichita, Kansas 67209; telephone: (316) 946-4123; fax: (316) 946-4107; e-mail: gary.park@faa.gov.

Material Incorporated by Reference

(j) You must use Cessna Single Engine Service Bulletin SB09-27-01, dated April 13, 2009; Cessna Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009; Cessna Single Engine Service Bulletin SB09-27-01, Revision 3, dated July 20, 2010; Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009; and Cessna Single Engine Modification Kit MK400-27-01A, dated July 20, 2010, 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 Cessna Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009; and Cessna Single Engine Service Bulletin SB09-27-01, Revision 3, dated July 20, 2010; Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009; and Cessna Single Engine Modification Kit MK400-27-01A, dated July 20, 2010, under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The Director of the Federal Register previously approved the incorporation by reference of Cessna Single Engine Service Bulletin SB09-27-01, dated April 13, 2009, on May 11, 2009 (74 FR 19873, April 30, 2009).

(3) For service information identified in this AD, contact Cessna Aircraft Company, Product Support, P.O. Box 7706; Wichita, Kansas 67277; telephone: (316) 517-5800; fax: (316) 942-9006; Internet: <http://www.cessna.com>.

(4) You may review copies of the service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call 816-329-4148.

(5) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, call 202-741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Kansas City, Missouri, on January 25, 2011.

John Colomy,
Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.



2011-03-05 Dornier Luftfahrt GmbH: Amendment 39-16589; Docket No. FAA-2010-1152; Directorate Identifier 2009-CE-026-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective March 14, 2011.

Affected ADs

- (b) This AD supersedes AD 2007-11-03, Amendment 39-15060.

Applicability

(c) This AD applies to Dornier Luftfahrt GmbH Model Dornier 228-100, Dornier 228-101, Dornier 228-200, Dornier 228-201, Dornier 228-202, and Dornier 228-212 airplanes, all serial numbers, that are certificated in any category.

Subject

- (d) Air Transport Association of America (ATA) Code 53: Fuselage.

Reason

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

The TC Holder received from operators, whose fleets are operated in demanding operating-conditions and with very frequent Short Take-Off and Landing (STOL) operations, reports of cracks located in the web of fuselage frame 19. On 05 February 2007, EASA issued Airworthiness Directive (AD) 2007-0028 which mandated Alert Service Bulletin (ASB) 228-266 and required an inspection of the frame 19 on all Dornier 228 aeroplanes. In addition, the TC Holder also initiated a flight-test campaign including strain measurements as well as finite element modelling and fatigue analyses to better understand the stress distribution onto the frame 19 and the associated structural components.

The results of these investigations confirmed that STOL operations diminish extensively the fatigue life of the frame 19.

Fuselage frame 19 supports the rear attachment of the Main Landing Gear (MLG). This condition, if not corrected, could cause rupture of frame 19, leading to subsequent collapse of a MLG.

For the reasons described above, this new AD requires installation of reinforcements and butt straps on frame 19 at the lower part of the fuselage for aeroplanes used in

operations where this frame may be subject to high stress and recurring inspections of that frame for all aeroplanes.

Actions and Compliance

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

(1) For all airplanes, within 25 hours time-in-service (TIS) after June 26, 2007 (the effective date of AD 2007-11-03), visually inspect the affected fuselage frame 19 using the instructions in Dornier 228 RUAG Alert Service Bulletin No. ASB-228-266, dated December 1, 2006.

(2) If any crack is found during the inspection required in paragraph (f)(1) of this AD, before further flight, contact RUAG Aerospace Services GmbH, Dornier 228 Customer Support, P.O. Box 1253, 82231 Wessling, Germany; telephone: +49-(0)8153-30-2280; fax: +49-(0)8153-30-3030; e-mail: customersupport.dornier228@ruag.com for FAA-approved repair instructions and incorporate the repair on the airplane.

(3) After accomplishment of paragraph (f)(1) or (f)(2) of this AD, as applicable, repetitively thereafter do Structural Significant Item (SSI) Task No. 53.37 of Structure Inspection Program of Dornier 228 Time Limits/Maintenance Checks Manual, Temporary Revision No. 05-27, dated August 4, 2008, at intervals not to exceed 2,400 landings or 72 months, whichever occurs first.

(g) If the number of landings is unknown, calculate the compliance times of landings in this AD by using hours TIS. Multiply the number of hours TIS by 0.8 to come up with the number of landings. For the purpose of this AD:

- (1) 800 landings equals 1,000 hours TIS; and
- (2) 1,600 landings equals 2,000 hours TIS.

FAA AD Differences

Note: This AD differs from the MCAI and/or service information as follows:

(1) The MCAI requires different compliance times for airplanes operated in different conditions. The FAA is not able to enforce compliance times based on airplane operations since there is no way of determining the amount of operations in different conditions. To ensure the unsafe condition is addressed adequately and timely, we are requiring the inspection for all airplanes following a guideline combining number of landings and life limits.

(2) The service information allows flight with known cracks provided they do not exceed a certain limit. FAA policy does not allow flight with cracks in primary structure. Since the fuselage is considered primary structure, we are mandating repair before further flight after any crack is found.

Other FAA AD Provisions

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

(1) Alternative Methods of Compliance (AMOCs): 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: Greg Davison, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4130; 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.

(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, a federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

Related Information

(i) Refer to MCAI European Aviation Safety Agency (EASA) AD No.: 2009-0085, dated April 14, 2009; RUAG Alert Service Bulletin No. ASB-228-266, dated December 1, 2006; and Dornier 228 Time Limits/Maintenance Checks Manual, Temporary Revision No. 05-27, dated August 4, 2008, for related information. For service information related to this AD, contact RUAG Aerospace Services GmbH, Dornier 228 Customer Support, P.O. Box 1253, 82231 Wessling, Germany; telephone: + 49 (0) 8153-302280; fax: + 49 (0) 8153-303030. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call 816-329-4148.

Material Incorporated by Reference

(h) You must use RUAG Alert Service Bulletin No. ASB-228-266, dated December 1, 2006; and Dornier 228 Time Limits/Maintenance Checks Manual, Temporary Revision No. 05-27, dated August 4, 2008, 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 Dornier 228 Time Limits/Maintenance Checks Manual, Temporary Revision No. 05-27, dated August 4, 2008, under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) On June 26, 2007 (72 FR 28591, May 22, 2007), the Director of the Federal Register previously approved the incorporation by reference of RUAG Alert Service Bulletin No. ASB-228-266, dated December 1, 2006.

(3) For service information identified in this AD, contact RUAG Aerospace Services GmbH, Dornier 228 Customer Support, P.O. Box 1253, 82231 Wessling, Germany; telephone: + 49 (0) 8153-302280; fax: + 49 (0) 8153-303030.

(4) You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call 816-329-4148.

(5) 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.

Issued in Kansas City, Missouri, on January 25, 2011.

John Colomy,
Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.