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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-0054; Directorate Identifier 2010-CE-070-AD; Amendment 39-16582; AD 2011-01-53]

RIN 2120-AA64

Airworthiness Directives; PIAGGIO AERO INDUSTRIES S.p.A Model PIAGGIO P-180 Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This emergency AD was sent previously to all known U.S. owners and operators of these airplanes. This AD supersedes Emergency AD 2011-01-51, requires an immediate functional test of the fuselage drain holes, and requires sending a report of the results to the FAA. This AD also allows, with noted exceptions, for the return/position of the airplane to a home base, hangar, maintenance facility, etc. 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 with consequent loss of control.

DATES: 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 contained the requirements of this amendment.

We must receive comments on this AD by March 10, 2011.

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.gov; or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION 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.

SUPPLEMENTARY INFORMATION:

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, is considered the State of Design for PIAGGIO AERO INDUSTRIES S.p.A Model PIAGGIO P-180 airplanes. A reported occurrence of the flight controls jamming on a Model PIAGGIO P-180 airplane prompted EASA to issue AD No. 2007-0025, dated February 1, 2007. This prompted the FAA to issue AD 2007-24-15, Amendment 39-15281 (72 FR 67843, December 3, 2007). AD 2007-24-15 requires correcting the fuselage drain system and ensuring that the drain lines of the environmental unit condenser are not clogged.

Since AD 2007-24-15 became effective, we received reports of two additional incidences of water accumulating in the belly of the fuselage that froze and caused the flight controls to jam on Model PIAGGIO P-180 airplanes. These reports prompted us to issue Emergency AD 2011-01-51 on December 18, 2010, to require an immediate functional test of the fuselage drain holes and submitting a report of the results to the FAA. It also allows, with noted exceptions, for the return/position of the airplane to a home base, hangar, maintenance facility, etc.

After we issued Emergency AD 2011-01-51, we realized that we inadvertently omitted figure 2 in Appendix 1. This prompted us to supersede Emergency AD 2011-01-51 and issue Emergency AD 2011-01-53.

This condition, if not corrected, could result in water or fluid accumulating in the belly of the fuselage and freezing when the aircraft reaches and holds altitudes where the temperature is below the freezing point, which could cause the flight controls to jam with consequent loss of control.

FAA's Determination

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

AD Requirements

We are superseding Emergency AD 2011-01-51 with a new AD, which was issued as Emergency AD 2011-01-53 on December 20, 2010. This AD retains the actions from Emergency AD 2011-01-51, adds figure 2 to Appendix 1, and corrects other minor typographical errors.

Interim Action

We consider this AD interim action. The FAA is working with EASA and PIAGGIO on this unsafe condition. Due to the nature of the immediate safety of flight situation, the FAA is working

this AD concurrently with EASA instead of waiting for EASA, as the State of Design, to issue an AD. Thus, this action is considered unilateral AD action.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because water or fluid accumulating in the belly of the fuselage and freezing could cause the flight controls to jam with consequent loss of control. Therefore, we find that notice and opportunity for prior public comment are impracticable and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2011-0054 and Directorate Identifier 2010-CE-070-AD at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

Costs of Compliance

We estimate that this AD affects 102 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Functional test of the fuselage drain holes	3 work-hours X $85 per hour = $255	Not applicable	$255	$26,010

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

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.

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 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) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska, and

(4) 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, Safety.

Adoption of 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 (AD):

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. 80-0234, 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.

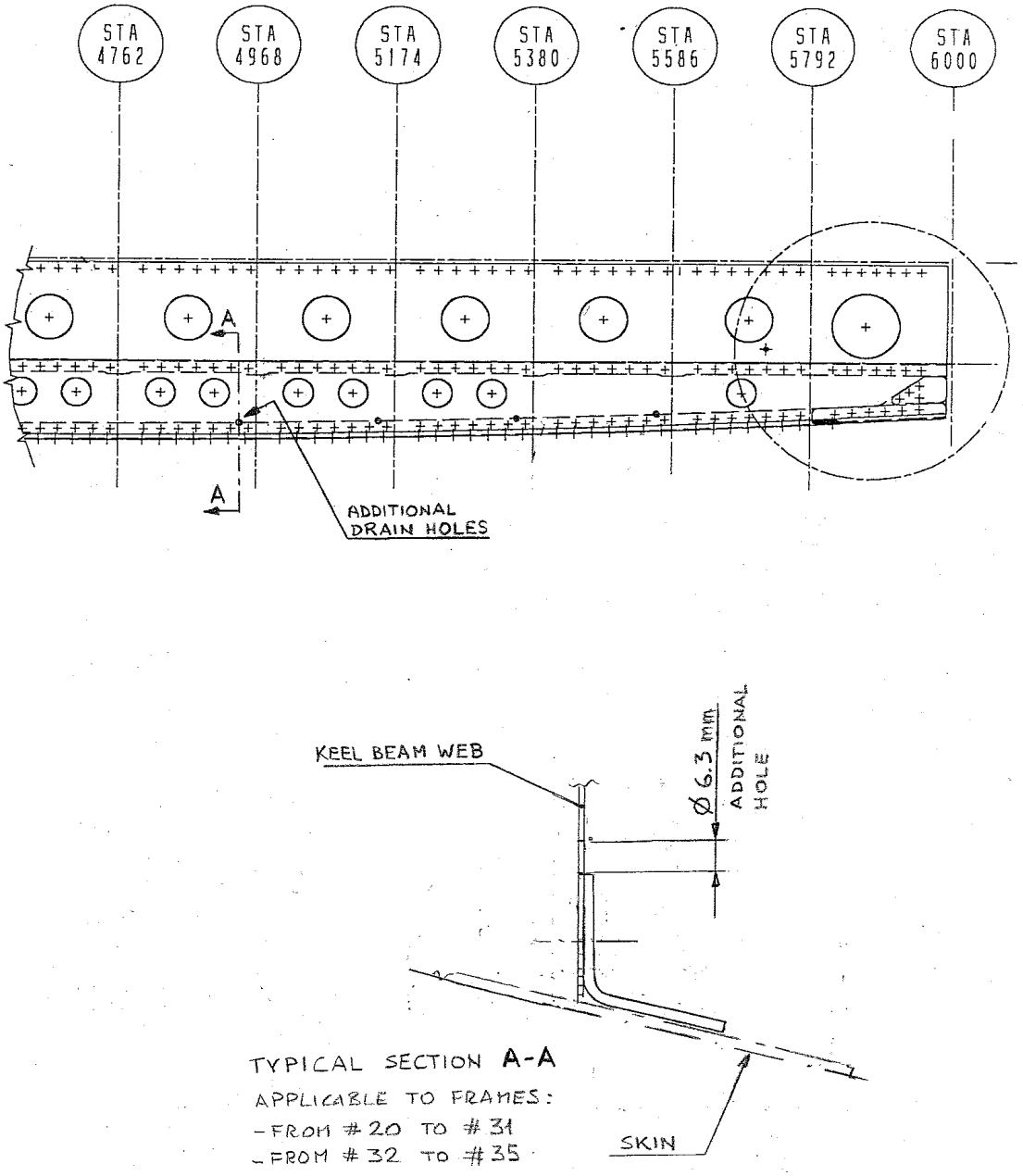


Figure 1. Additional drain holes on keel beam webs

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:

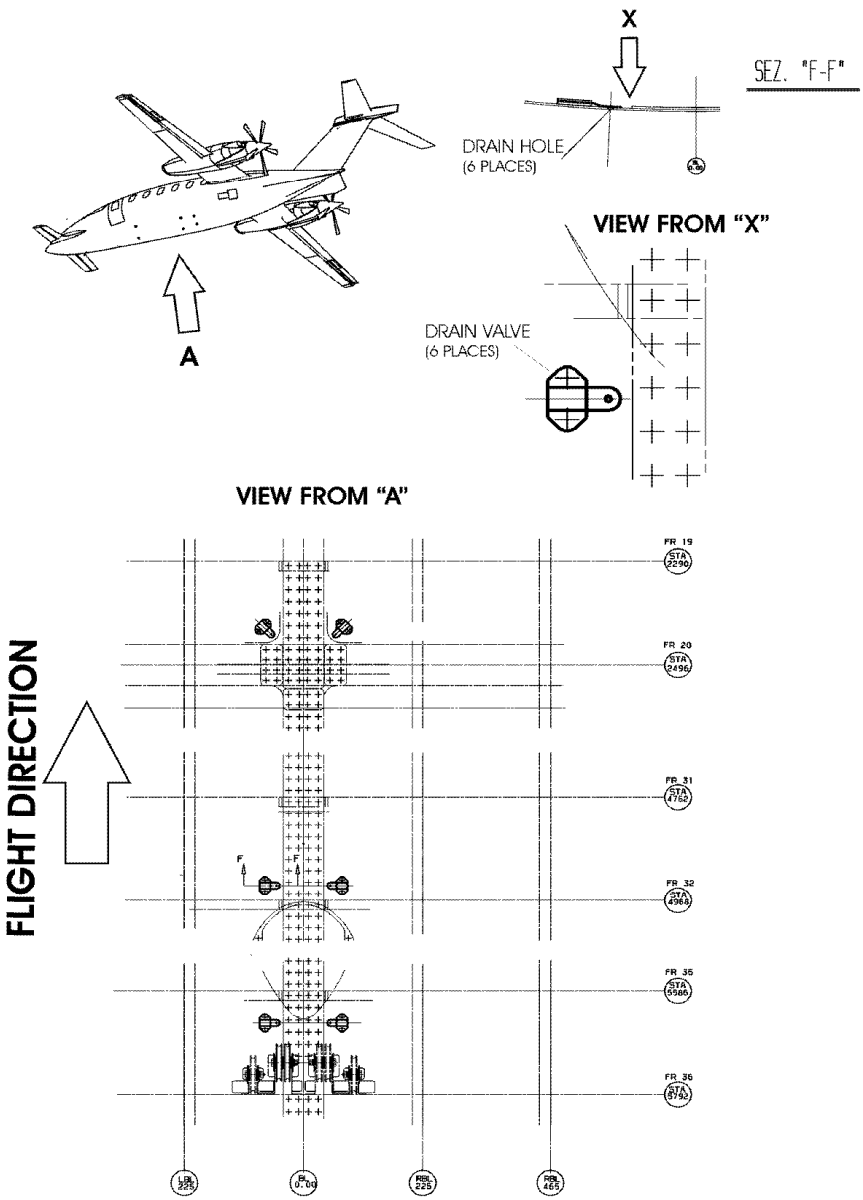
a. Make sure that the floor is clean and free of objects.

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.



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.