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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-0450; Directorate Identifier 2011-CE-010-AD; Amendment 39-16758; AD 2011-15-11]

RIN 2120-AA64

Airworthiness Directives; Cessna Aircraft Company (Cessna) Models 337, 337A (USAF 02B), 337B, 337C, 337D, 337E, T337E, 337F, T337F, 337G, T337G, M337B, F 337E, FT337E, F 337F, FT337F, F 337G, and FT337GP Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD requires inspecting the wings for internal and external damage, repairing any damage, reinforcing the wings, installing operational limitation placards in the cockpit, and adding limitations to the airplane flight manual supplement. This AD was prompted by a review of installed Flint Aero, Inc. wing tip auxiliary fuel tanks, Supplemental Type Certificate (STC) SA5090NM. We are issuing this AD to detect and correct damage in the wings and to prevent overload failure of the wing due to the installation of the STC. Damage in the wing or overload failure of the wing could result in structural failure of the wing, which could result in loss of control.

DATES: This AD is effective September 6, 2011.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of September 6, 2011.

ADDRESSES: For service information identified in this AD, contact Flint Aero, Inc., 1942 Joe Crosson Drive, El Cajon, CA 92020; phone: (619) 448-1551; fax: (619) 448-1571; Internet: <http://www.flintaero.com>. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility 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 address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Dara Albouyeh, Aerospace Engineer, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Blvd., Lakewood, CA 90712; phone: (562) 627-5222; fax: (562) 627-5210; e-mail: dara.albouyeh@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM published in the Federal Register on May 4, 2011 (76 FR 25264). That NPRM proposed to require inspecting the wings for internal and external damage, repairing any damage, reinforcing the wings, installing operational limitation placards in the cockpit, and adding limitations to the Flint Aero, Inc. Airplane Flight Manual Supplement.

Comments

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

Request To Remove Certain Steps From Appendix 1

Dennis L. Hamblin from Flint Aero, Inc. stated that steps 11, 13, and 14 should be removed from Appendix 1 of this AD. The inspection procedures in Appendix 1 are focused on damage caused by trimming of the close-out rib to allow passage of the fuel line. The Flint Aero, Inc. STC kit provides a close-out rib that replaces the Cessna close-out rib. This configuration allows for the passage of the fuel line. Additionally, the Flint Aero, Inc. STC kit provides reinforcement doublers for all added inspection openings/cutouts; therefore, there should be no unreinforced cutouts.

We do not agree with the commenter. All steps in Appendix 1 are required to check for any damage to the affected close-out rib, spar cap, and cut-outs that may have been caused by an overload condition regardless of the STC installation configuration.

We have not changed the final rule AD action based on this comment.

Request To Incorporate Revised Service Information

Flint Aero, Inc. issued a revision to Service Bulletin FA2 to correct a part number reference. We inferred that Flint Aero, Inc. wanted the FAA to include reference to the revised service bulletin into the final rule AD action.

We agree. We have revised the final rule AD action to incorporate the revised service bulletin.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD with the change described previously and any minor editorial changes. We have determined that these minor changes:

- 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.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

Costs of Compliance

We estimate that this AD affects 33 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
Inspection of the wing for damage	5 work-hours X \$85 per hour = \$425 per inspection cycle	Not applicable	\$425 per inspection cycle	\$14,025 per inspection cycle
Fabricating and installing placards in the cockpit	1 work-hour X \$85 per hour = \$85	Not applicable	\$85	\$2,805
Modifying the Limitations section of the Flint Aero, Inc. Airplane Flight Manual Supplement	.5 work-hour X \$85 per hour = \$42.50	Not applicable	\$42.50	\$1,402.50
Reinforcing the upper wing skin, stringer, and wing front spar cap	25 work-hours X \$85 per hour = \$2,125	\$1,070	\$3,195	\$105,435

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, Incorporation by reference, 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):



CORRECTED: The original copy of this AD omitted Figure 7.

2011-15-11 Cessna Aircraft Company: Amendment 39-16758; Docket No. FAA-2011-0450; Directorate Identifier 2011-CE-010-AD.

(a) Effective Date

This AD is effective September 6, 2011.

(b) Affected ADs

AD 2010-21-18, Amendment 39-16478, is related to the subject of this AD.

(c) Applicability

This AD applies to Cessna Aircraft Company (Cessna) Models 337, 337A (USAF 02B), 337B, 337C, 337D, 337E, T337E, 337F, T337F, 337G, T337G, M337B, F 337E, FT337E, F 337F, FT337F, F 337G, and FT337GP airplanes, all serial numbers, that:

- (1) Are certificated in any category; and
- (2) Are or have ever been modified by Flint Aero, Inc. Supplemental Type Certificate (STC) SA5090NM.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 57; Wings.

(e) Unsafe Condition

This AD was prompted by a review of installed Flint Aero, Inc. wing tip auxiliary fuel tanks, STC SA5090NM. We are issuing this AD to detect and correct damage in the wings and to prevent overload failure of the wing due to the installation of the STC. Damage in the wing or overload failure of the wing could result in structural failure of the wing, which could result in loss of control.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

- (1) Within the next 50 hours time-in-service (TIS) after September 6, 2011 (the effective date of this AD) or within 30 days after September 6, 2011 (the effective date of this AD), whichever occurs first, do a general and focused inspection of the left and right wing for internal and external damage at wing stations (WSTA) 150 and 177. Do the inspections following Appendix 1 of this AD.

(2) After the inspection required in paragraph (g)(1) of this AD if no damage was found and before the modification required in paragraph (g)(5) of this AD is incorporated, anytime severe and/or extreme turbulence is encountered during flight, before the next flight do a focused inspection of the wing for damage following steps 1, 2, 3, 4, 7, and 10 in Appendix 1 of this AD. Also inspect for signs of distress in the upper front spar in the area around WSTA 150 and 177. The definition of severe and extreme turbulence can be found in table 7-1-9 of the FAA Aeronautical Information Manual (AIM). You may obtain a copy of the FAA AIM at http://www.faa.gov/air_traffic/publications/atpubs/aim/.

(3) For airplanes that have not had the modification specified in paragraphs (g)(4) and (g)(5) incorporated, within the next 50 hours time-in-service (TIS) after September 6, 2011 (the effective date of this AD) or within 30 days after September 6, 2011 (the effective date of this AD), fabricate a placard (using at least 1/8-inch letters) with the following words and install the placard on the instrument panel within the pilot's clear view:

(i) "MAINTAIN AT LEAST 12 GAL OF FUEL IN EACH WING TIP FUEL TANK FOR AIRPLANE WEIGHTS BETWEEN 3,400 LBS AND 4,330 LBS."

(ii) "MAINTAIN FULL FUEL IN EACH WING TIP FUEL TANK FOR AIRPLANE WEIGHTS AT OR ABOVE 4,330 LBS."

(4) If damage or signs of distress are found during the inspections required in paragraphs (g)(1) and (g)(2) of this AD, before further flight do the following:

(i) Repair all damaged and distressed parts following FAA Advisory Circular (AC) 43.13-1B, Chapter 4, which can be found at <http://rgl.faa.gov/>;

(ii) Incorporate the modification reinforcement specified in Flint Aero, Inc. Service Bulletin FA2, Rev 2, dated April 8, 2011, or Flint Aero, Inc. Service Bulletin FA2, Rev 3, dated May 3, 2011, following Flint Aero, Inc. Drawing FA2, Rev A, dated April 8, 2011;

(iii) Remove the placard specified in paragraph (g)(3) of this AD;

(iv) Fabricate a new placard (using at least 1/8-inch letters) with the following words and install the placard on the instrument panel within the pilot's clear view: "MAINTAIN AT LEAST 12 GAL OF FUEL IN EACH WING TIP FUEL TANK FOR AIRPLANE WEIGHTS AT OR ABOVE 4,330 LBS"; and

(v) Incorporate the information from Appendix 2 of this AD into the Limitations section of the Flint Aero, Inc. Airplane Flight Manual Supplement.

(5) If no damage or signs of distress are found during the inspections required in paragraphs (g)(1) and (g)(2) of this AD, within the next 100 hours TIS after September 6, 2011 (the effective date of this AD) or within 12 months after September 6, 2011 (the effective date of this AD), whichever occurs first, do the following:

(i) Incorporate the modification reinforcement specified in Flint Aero, Inc. Service Bulletin FA2, Rev 2, dated April 8, 2011, or Flint Aero, Inc. Service Bulletin FA2, Rev 3, dated May 3, 2011, following Flint Aero, Inc. Drawing FA2, Rev A, dated April 8, 2011;

(ii) Remove the placard specified in paragraph (g)(3) of this AD;

(iii) Fabricate a new placard (using at least 1/8-inch letters) with the following words and install the placard on the instrument panel within the pilot's clear view: "MAINTAIN AT LEAST 12 GAL OF FUEL IN EACH WING TIP FUEL TANK FOR AIRPLANE WEIGHTS AT OR ABOVE 4,330 LBS"; and

(iv) Incorporate the information from Appendix 2 of this AD into the Limitations section of the Flint Aero, Inc. Airplane Flight Manual Supplement.

(6) You may incorporate the modification reinforcement specified in Flint Aero, Inc. Service Bulletin FA2, Rev 2, dated April 8, 2011, or Flint Aero, Inc. Service Bulletin FA2, Rev 3, dated May 3, 2011, following Flint Aero, Inc. Drawing FA2, Rev A, dated April 8, 2011, at any time after the inspection required in paragraph (g)(1) of this AD but no later than the compliance time specified in paragraph (g)(5) of this AD as long as no cracks were found. As required in paragraph (g)(4) of this AD, the modification reinforcement must be incorporated before further flight if damage or signs of distress are found.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles 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 appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(i) Related Information

For more information about this AD, contact Dara Albouyeh, Aerospace Engineer, FAA, Los Angeles ACO, 3960 Paramount Blvd., Lakewood, CA 90712; phone: (562) 627-5222; fax: (562) 627-5210; e-mail: dara.albouyeh@faa.gov.

(j) Material Incorporated by Reference

(1) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) under 5 U.S.C. 552(a) and 1 CFR part 51 of the following service information on September 6, 2011:

- (i) Flint Aero, Inc. Service Bulletin FA2, Rev 2, dated April 8, 2011;
- (ii) Flint Aero, Inc. Service Bulletin FA2, Rev 3, dated May 3, 2011; and
- (iii) Flint Aero, Inc. Drawing FA2, Rev A, dated April 8, 2011.

(2) For service information identified in this AD, contact Flint Aero, Inc., 1942 Joe Crosson Drive, El Cajon, CA 92020; phone: (619) 448-1551; fax: (619) 448-1571; Internet: <http://www.flintaero.com>.

(3) You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, MO 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 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.

Appendix 1 to AD 2011-15-11

General and Focused Inspection Procedures

Perform a general and focused inspection of the wing for internal and external damage from wing station (WSTA) 23 to the wing tip. The general inspection must be performed in accordance with 14 CFR 43.15(c), using a checklist that includes at least the scope and detail of the items contained in Appendix D of 14 CFR part 43. The focused inspection must include the items listed below. Remove all wing access panels to conduct the inspections. Do these inspections following the manufacturer's service information and any other appropriate guidance, such as FAA Advisory Circular (AC) 43.13-1B Acceptable Methods, Techniques, and Practices—Aircraft Inspection and Repair. AC 43.13-1B can be found at <http://rgl.faa.gov/>.

Focused inspection items to look for:

- (1) Wrinkles in upper wing skins, from the outboard edge on the fuel tank access covers (WSTA 150 or 177) to the WSTA 222 (See View B, Figure 3).
- (2) Wrinkles in the upper wing skins from WSTA 55 to 66, adjacent to the booms (See View E, Figure 6).
- (3) Cracking of the upper wing skins. Pay particular attention to any wrinkles, the radius between stiffeners at WSTA 150 (under fuel tank covers), and unreinforced access holes (See View B, Figure 3).
- (4) Working (smoking) rivets outboard of the wing tank access covers.
- (5) Fasteners with less than two diameters edge distance.
- (6) Fasteners with less than four diameters center to center spacing.
- (7) Looseness of attachments of the tip extension to the wing and wing tip to wing extension when pushing up and down on the tip.
- (8) Any signs of distress along both front and rear spars, particularly in the area around WSTA 177.
- (9) Inspect under any repairs to the upper skins, particularly in the area just outboard of the fuel tank access covers as these may be covering up existing damage.
- (10) Inter-rivet buckling of the stringers attached to the upper surface skin, outboard of the fuel tank access covers (See View F, Figure 7).
- (11) Inspect rib at WSTA 222 for damage. Trimming of the rib may have been done to allow installation of fuel lines (See View A, Figure 2). Repair in accordance with AC 43.13-1B, Chapter 4, paragraph 4-58(g) and Figure 4-14, or by using another FAA-approved method that restores equivalent strength of the wing rib.
- (12) Inspect and identify screws, installed in tapped (threaded) holes in metal substructure, used to attach wing tips, stall fences, fuel and electrical components, and access doors. For tapped holes, remove fastener and open up the diameter to provide a smooth bore hole, for the smallest oversize fastener, using close tolerance holes noted in AC 43.13-1B, paragraph 7-39 or other FAA-approved scheme. Maintain minimum 2 x fastener diameter edge distance and 4 x fastener diameter center to center spacing. Select and install new, equivalent strength or stronger, fasteners with nuts/collars in accordance with AC 43.13-1B, Chapter 7 and AC 43.13-2B, paragraph 108 or other FAA-approved repair. New fasteners must not have threads in bearing against the sides of the holes.
- (13) Inspect wing skins for unreinforced cutouts. (See View C, Figure 4).
- (14) Inspect the upper spar cap horizontal flanges for open holes (See View D, Figure 5).

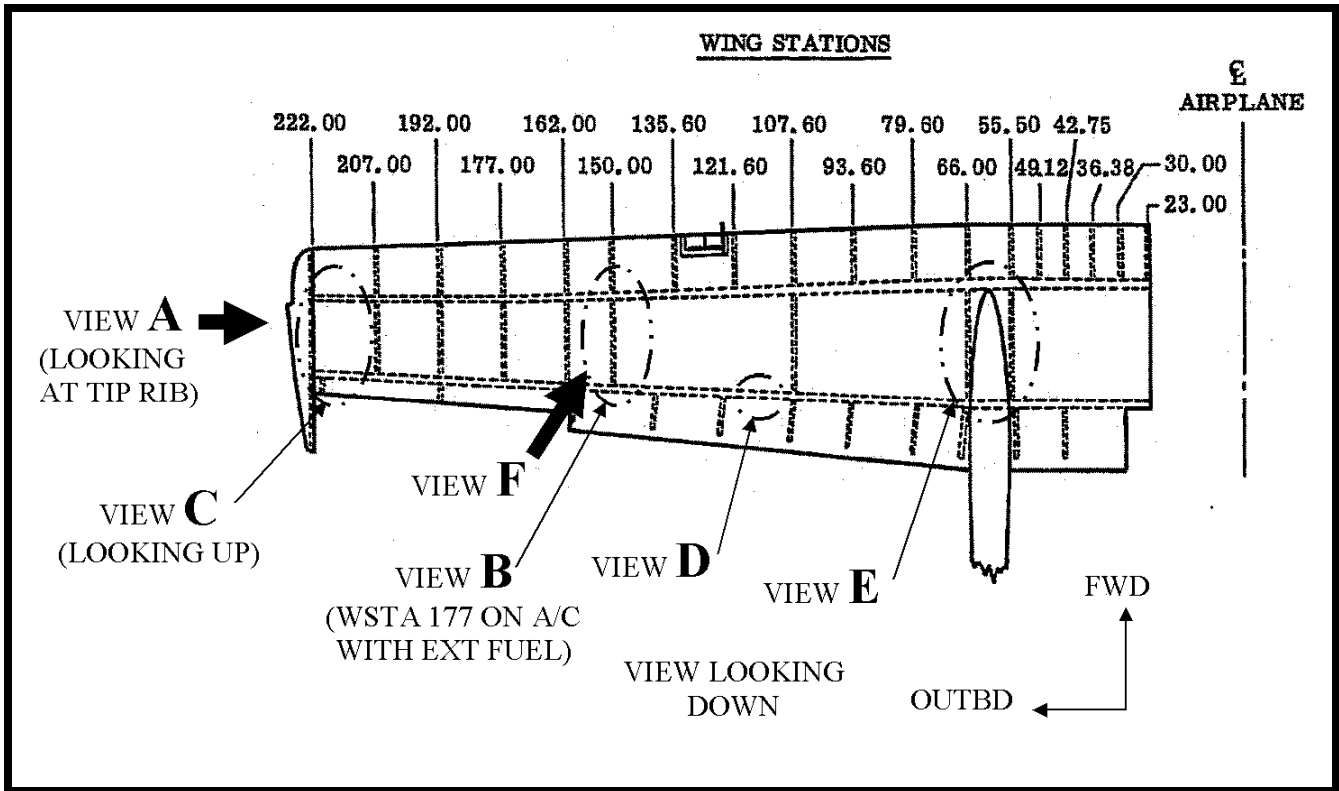


Figure 1

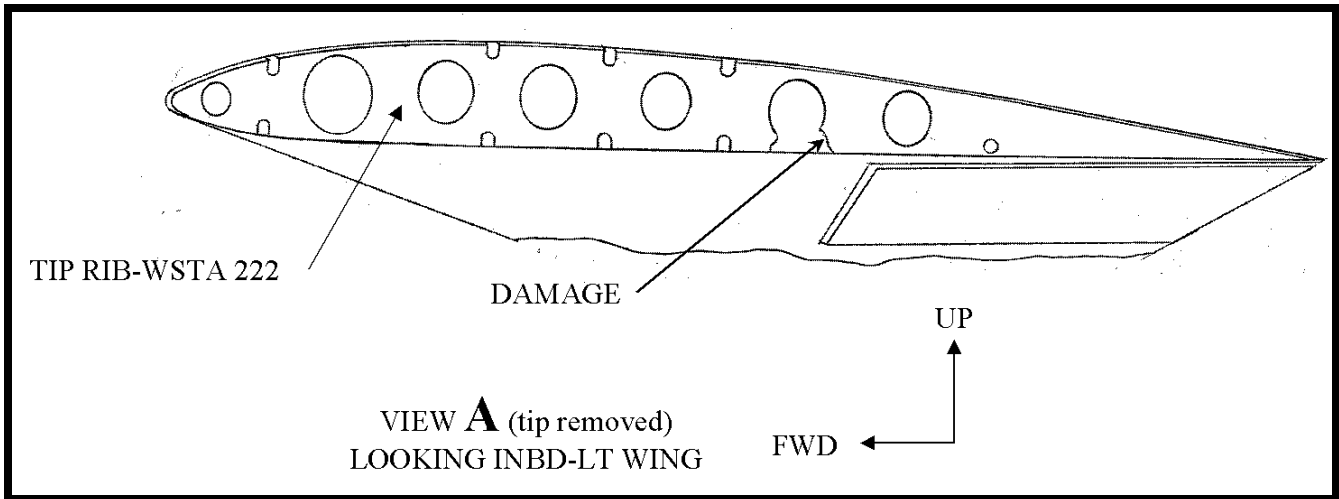


Figure 2

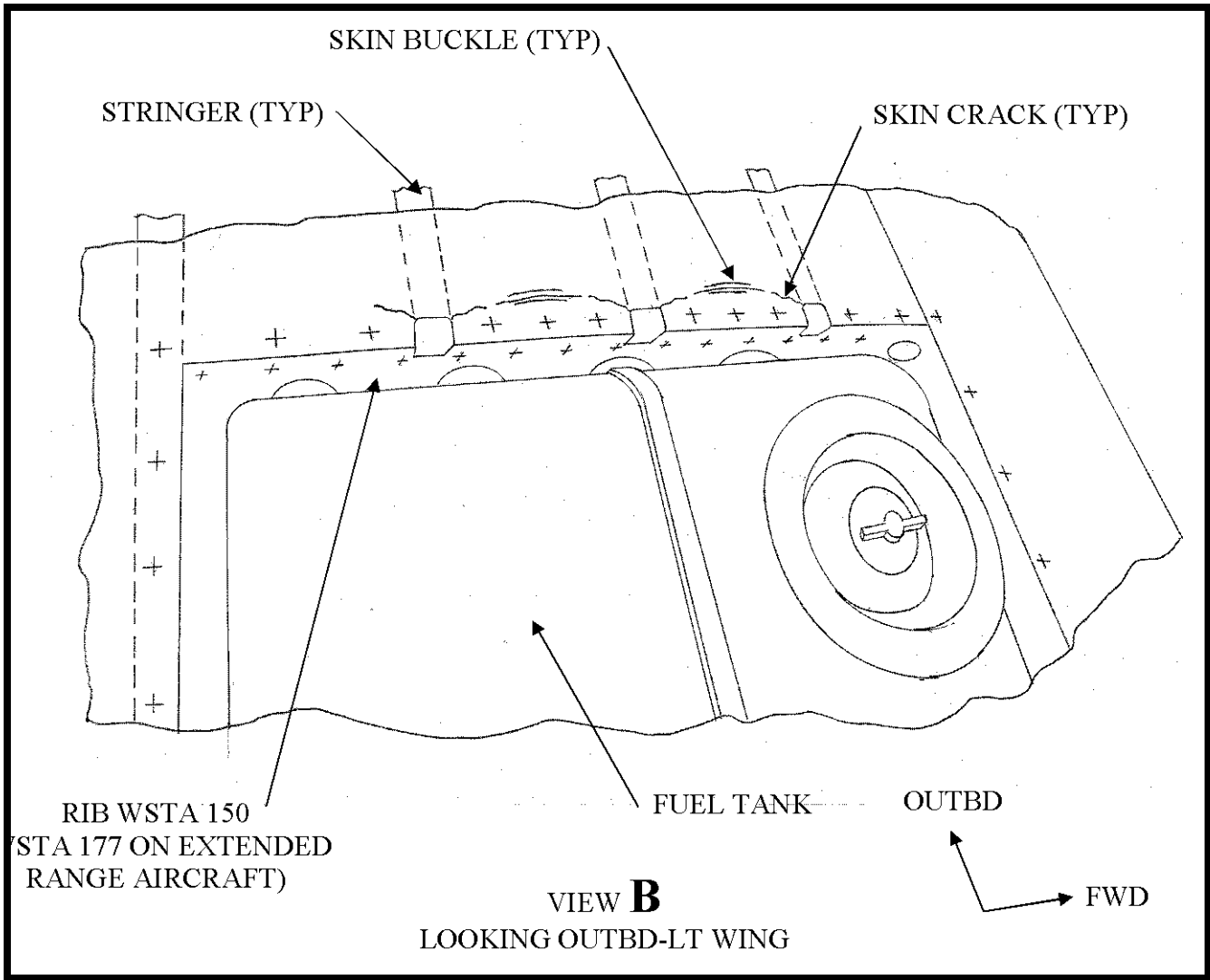


Figure 3

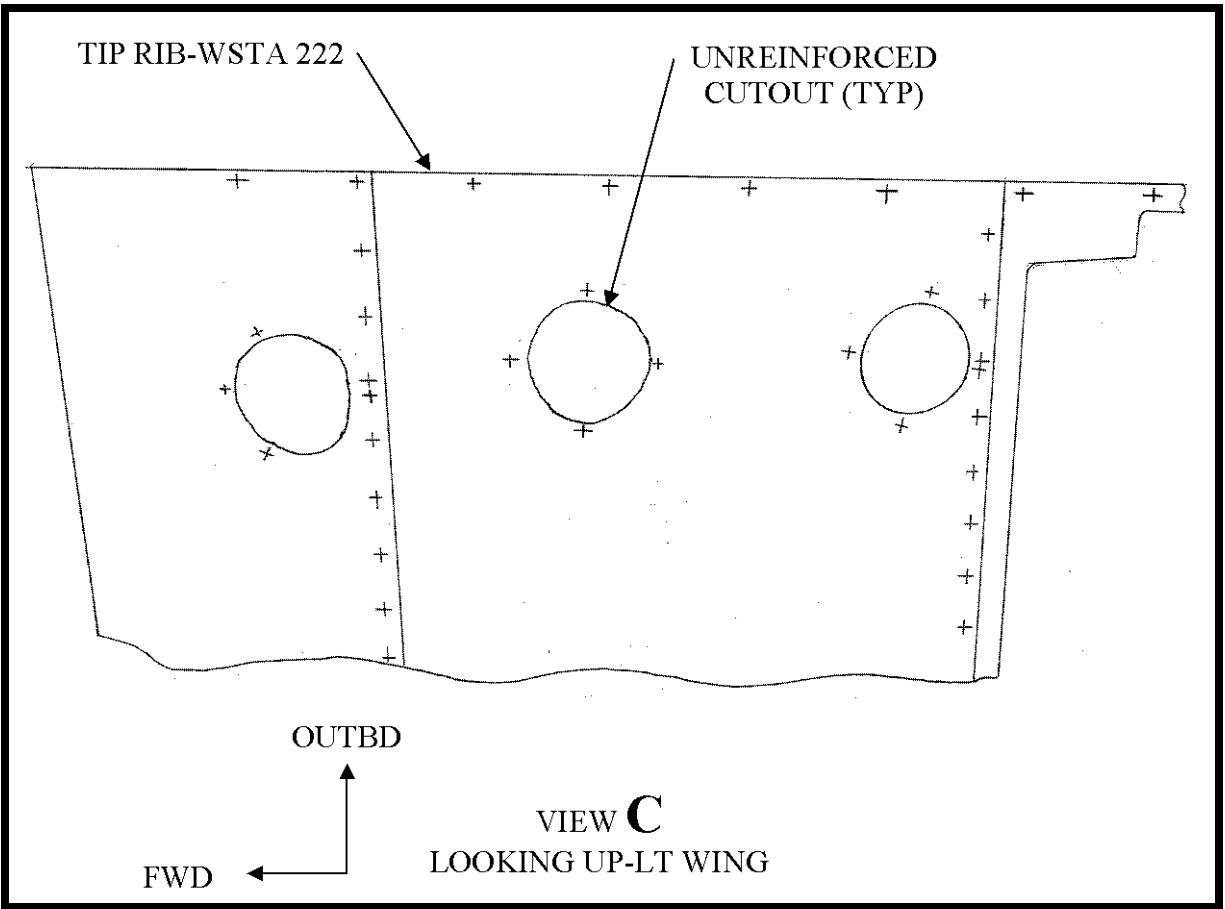


Figure 4

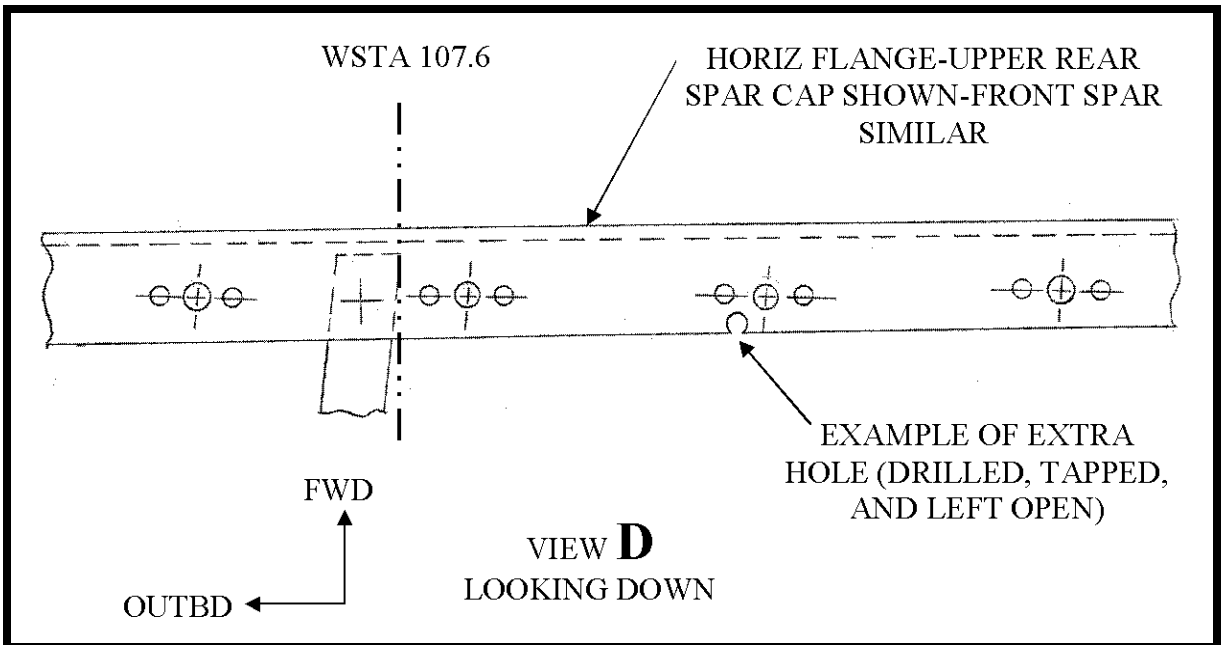


Figure 5

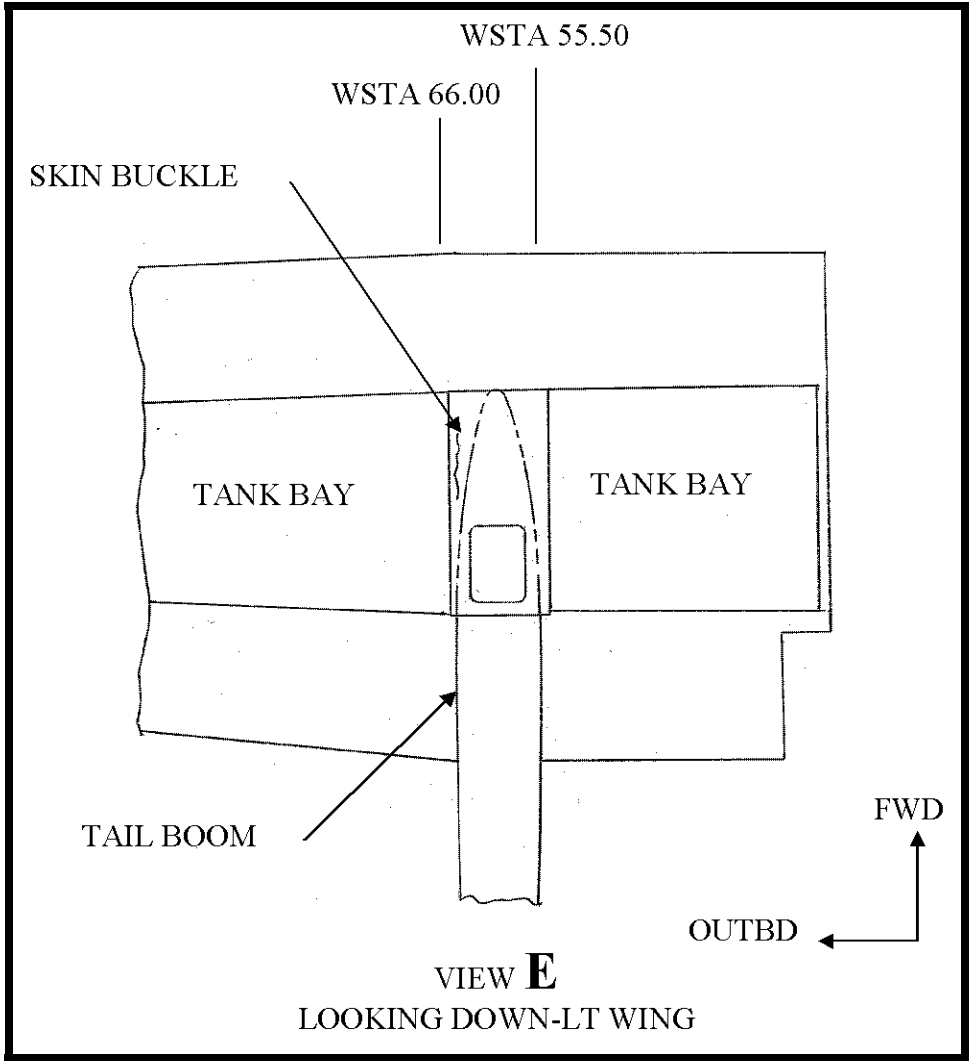


Figure 6

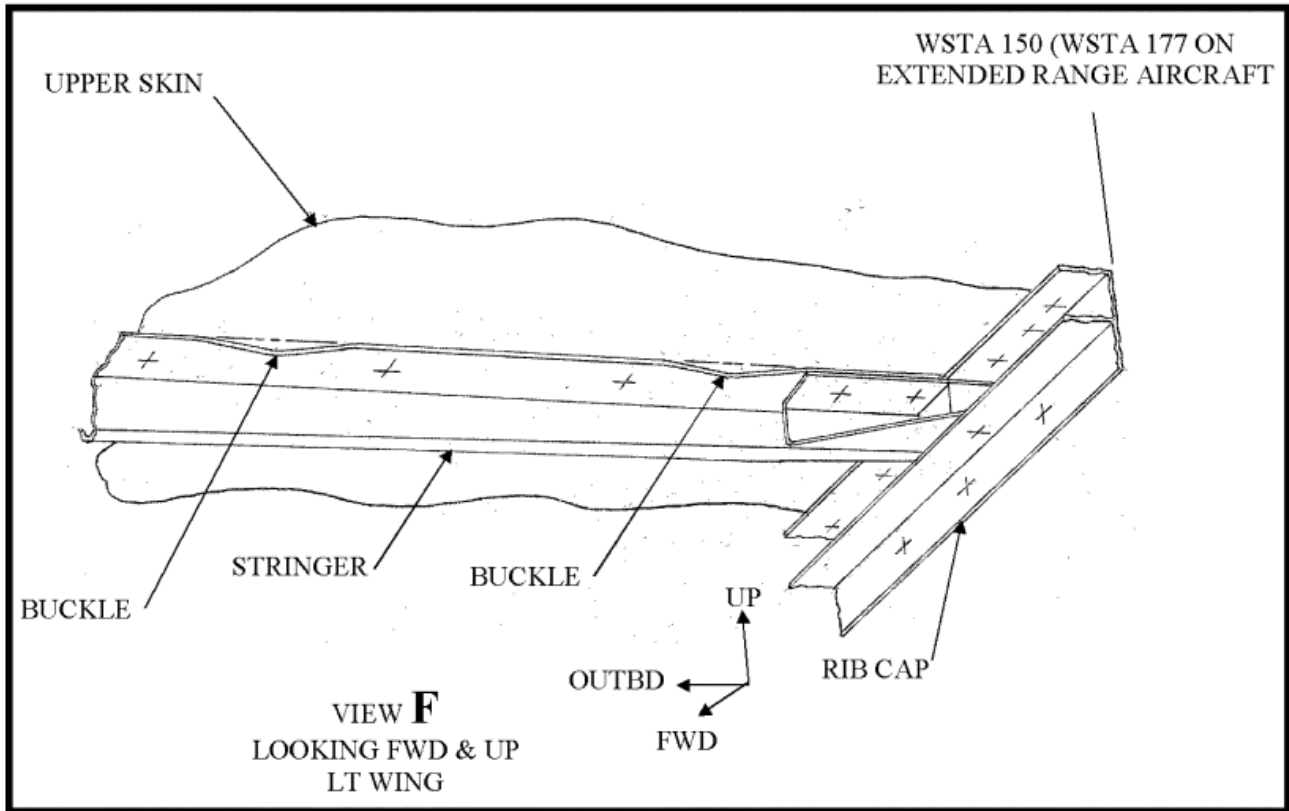


Figure 7

Appendix 2 to AD 2011-15-11

Airworthiness Limitations for the Flint Aero, Inc. Airplane Flight Manual Supplement.

"MAINTAIN AT LEAST 12 GAL OF FUEL IN EACH WING TIP FUEL TANK FOR AIRPLANE WEIGHTS AT OR ABOVE 4,330 LBS."

Issued in Kansas City, Missouri, on July 14, 2011.

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