"TAKE YOUR CESSNA HOME FOR SERVICE AT THE SIGN OF THE CESSNA SHIELD"

multi-engine SERVICE LETTER

MARKETING DIVISION • CESSNA AIRCRAFT COMPANY
WICHITA, KANSAS 67201 • CABLE ADDRESS / CESSCO WICHITA

July 17, 1978

ME78-2
(Supplement #1)

SUBJECT: FRONT AND REAR WING SPAR INSPECTION

Multiengine Service Letter ME78-2 was released in February, 1978 calling for an inspection of the front and rear wing spar cap as as well as an inspection of the front spar web.

The following revisions have been made to ME78-2 since it was issued:

1) Revised Serialization - Shown below is a revised serialization chart for the Spar Web inspection which reduces the total number of aircraft affected and adds the Reims manufactured FTB337 series aircraft.

SPAR WEB (Front Spar Only)

MODEL	SERIAL NUMBER
336	336-0001 thru 336-0195
337	3370001 thru 3370185 2
T337G	P3370001 thru P3370313
F337, FT337	F337-0001 thru F337-0086
FT337GP	FP337-0001 thru FP337-0023
FTB337	FTB337-0001 thru FTB337-0066

The attached page 4 of the Front Spar Cap Inspection Instructions has been revised to reflect this change in serialization.

2) To coordinate the Front Spar Web inspection intervals with the inspection requirements of the Front Spar Cap inspection, procedures for the Front Spar Web inspection have been revised as follows:

a) If flown predominately below 1500 ft. AGL, inspect at 3000 hours and each 300 hours thereafter.

b) If flown predominately above 1500 ft. AGL, inspect at 5000 hours (10,000 hours for pressurized Skymasters) and each 500 hours thereafter.

continued . . . .

c) If past history is unknown, inspect at 3000 hours and each 300 hours thereafter.

In the event that cracks are found in the spar web and web doubler, these parts must be replaced.

3) Figure 9 of the inspection instructions has been revised to include more detail of the front spare inboard end (attached).

The changes outlines in this supplement should be incorporated in future inspection procedures.

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(Owner Notification System - No. 1)

CESSNA AIRCRAFT COMPANY

FRONT & REAR SPAR CAP INSPECTION INSTRUCTIONS

AIRCRAFT APPLICABILITY:

MODELS AFFECTED	SERIALS AFFECTED
336	336-0001 thru 336-0195
337, T337	33700001 thru 33701548
T337G	P3370001 thru P3370138
F337, FT337	F337-0001 thru F337-0063
FT337GP	FP337-0001 thru FP337-0008

FRONT SPAR CAP INSPECTION

I. PREPARATION OF AIRCRAFT.

METHOD A - Standard.

1. Turn fuel selector to AUX. FUEL or OFF.
2. Drain auxiliary fuel tank in each wing at drain near wing root.
3. Remove rectangular inspection plate from lower wing surface between wing root and auxiliary fuel tank drain.
4. Disconnect fuel line on inboard side of auxiliary fuel tank and remove strainer from tank.
5. Remove auxiliary tank fuel gage transmitter cover from upper wing surface.
6. Remove auxiliary fuel tank bay cover from upper surface between boom and wing root.
7. Disconnect fuel vent on outboard side of auxiliary fuel tank.
8. Disconnect scupper drain line on outboard side of auxiliary fuel tank.
9. Disconnect auxiliary tank fuel gage transmitter wiring.
10. Disconnect the two auxiliary fuel tank retaining straps and remove the tank.
11. Remove wing strut fairing.
12. Remove upper wing strut cuff.
13. Repeat steps 3 through 12 for the other wing.

NOTES

- If the aircraft does not have auxiliary fuel tanks installed, only items 6, 11 and 12 apply for both wings.
- Individuals not familiar with the Models 336 and 337 series aircraft should refer to the appropriate Service Manual and/or Parts Catalog for the locations of the items listed above.
- Some late Model 337's do not have fuel drain valves in the auxiliary fuel tank and this tank must be drained through the sump tank. Refer to the appropriate Service Manual for the proper procedure for defueling and removing the auxiliary fuel tank on these aircraft.

METHOD B - Alternate

1. Remove wing strut fairings.

2. Remove upper wing strut cuffs.

3. Drill a .625 inch hole in the upper wing skins outboard of the booms as shown in Figure 4. Before drilling, make certain that the hole location is centered as far away from stringers, rib flanges and spar flanges as possible. The hole must not be drilled through any of these. After drilling, the edge of the hole must be polished to remove any defects from which cracks could initiate.

NOTES

- After the inspection has been completed, a .625 inch plug button must be installed in the hole and sealer added around the hole to prevent moisture from entering the wing through this hole.

- The area around the hole should be carefully inspected (visually) at each 100 hour and/or annual inspection period to assure that if any skin cracking occurs, it will be caught at an early stage.

II. SPAR CAP INSPECTION

A. Introduction

"Eddy Current" is the technique to be used for inspecting the horizontal flanges of the lower cap of the front wing spar in the area in which the crack mentioned in Service Letter ME72-26 had started, and at the Jack Point. A method of accomplishing this is outlined below.

The area to be inspected is immediately outboard of the wing-strut attachment. Figure 1 shows this area, two fasteners (NAS 221 screws located at Wing Station 64.41) and the Jack Point screw that must be removed for the inspection. The NAS 221 screws secure the outboard edge of the boom, the lower wing skins, a doubler plate, the horizontal flanges of the lower spar cap and angles on top of the lower spar cap. A cross section of Wing Station 64.41 with the screws removed is shown in Figure 2. A cross section of the Jack Point location (Wing Station 68.45) is shown in Figure 5.

The lower spar cap is a T-section and the material is 2014-T6 or 2014-T6511, depending on the year the aircraft was manufactured. An exploded view of the spar assembly (less boom and wing skins) shows the relationship of the lower cap to the other parts at the strut attachment in Figure 3. Also shown in this figure is the initiation point for the crack mentioned in Service Letter ME72-26.

The two NAS 221 screws and the Jack Point screw in each wing must be removed one at a time and the inspection procedure shown below should be followed carefully. Access may be gained (from under the wing) to the nut and washer on the forward screw (No. 2) by reaching through the opening in the boom (obtained by removal of the strut cuff) and the inspection hole in the wing skin on the forward side of the strut attachment.

B. Inspection Equipment

1. Crack detector, eddy current unit, Model ED-520 (Magnaflux) or equivalent.

2. Probe, bolt hole, 3/16 inch diameter (with stem split for close fit), probe collar - 3/4 inch maximum diameter.

NOTE

If holes are found to be out of round, it may be necessary to insert rubber shim into split stem for closer fit.

C. Inspection Procedure

1. Standardize the eddy current instrument for balance and lift-off in accordance with the Manufacturer's Operator Handbook or see Item 2.

2. Adjustment for lift-off may be made by pushing coil away from side of fastener hole. Meter should read the same when coil is in contact or away from side of hole.

3. Adjust probe collar .21 inch from collar to center of coil for inspection of the aft fastener hole (No. 1).

4. Adjust probe collar .18 inch from collar to center of coil for inspection of the forward fastener hole (No. 2).

CAUTION

Boom fairing should be held firmly against inner thicknesses of material to insure proper probe depth settings during the inspection.

5. Adjust probe collar .18 inch from collar to center of coil for inspection of the Jack Point hole.

CAUTION

This setting is critical and may have to be adjusted slightly to minimize edge effects, since the hole in the spar cap is countersunk.

6. Rotate probe coil slowly through 360° of the fastener hole while observing the meter readings. The forward and aft areas of the holes are considered the most critical.

NOTE

If probe passes over a crack, the meter needle will deflect rapidly and return to approximately the original reading. Deflections can be as little as three to four meter scale divisions. Carefully repeat the inspection in the opposite direction to verify the crack indication. Gradual meter needle movement up or down scale may occur due to slightly out of round holes or minor changes in the conductivity of the material. This should be disregarded.

7. Any cracks detected while using the above probe depth settings will be in the horizontal flange of the spar cap.

REAR SPAR CAP INSPECTION

I. PREPARATION OF AIRCRAFT

1. Support outer wing panel and tail boom with cradle supports.

2. Remove tank cover from top of wing by removing screws around outer edge of cover and around filler opening.

II. SPAR CAP INSPECTION

1. Dye penetrant inspect lower spar cap over an area ranging from 2 to 3 inches outboard of the Wing Station 66.00 rib. (Refer to figures 6, 7 and 8)

FRONT SPAR WEB INSPECTION INSTRUCTIONS

AIRCRAFT APPLICABILITY

MODELS AFFECTED	SERIALS AFFECTED
336	336-0001 thru 336-0195
337	3370001 thru 33701852
T337G	P3370001 thru P3370313
F337, FT337	F337-0001 thru F337-0086
FT337GP	FP337-0001 thru FP337-0023
FTB337	FTB337-0001 thru FTB337-0066

FRONT SPAR WEB INSPECTION

I. PREPARATION OF AIRCRAFT

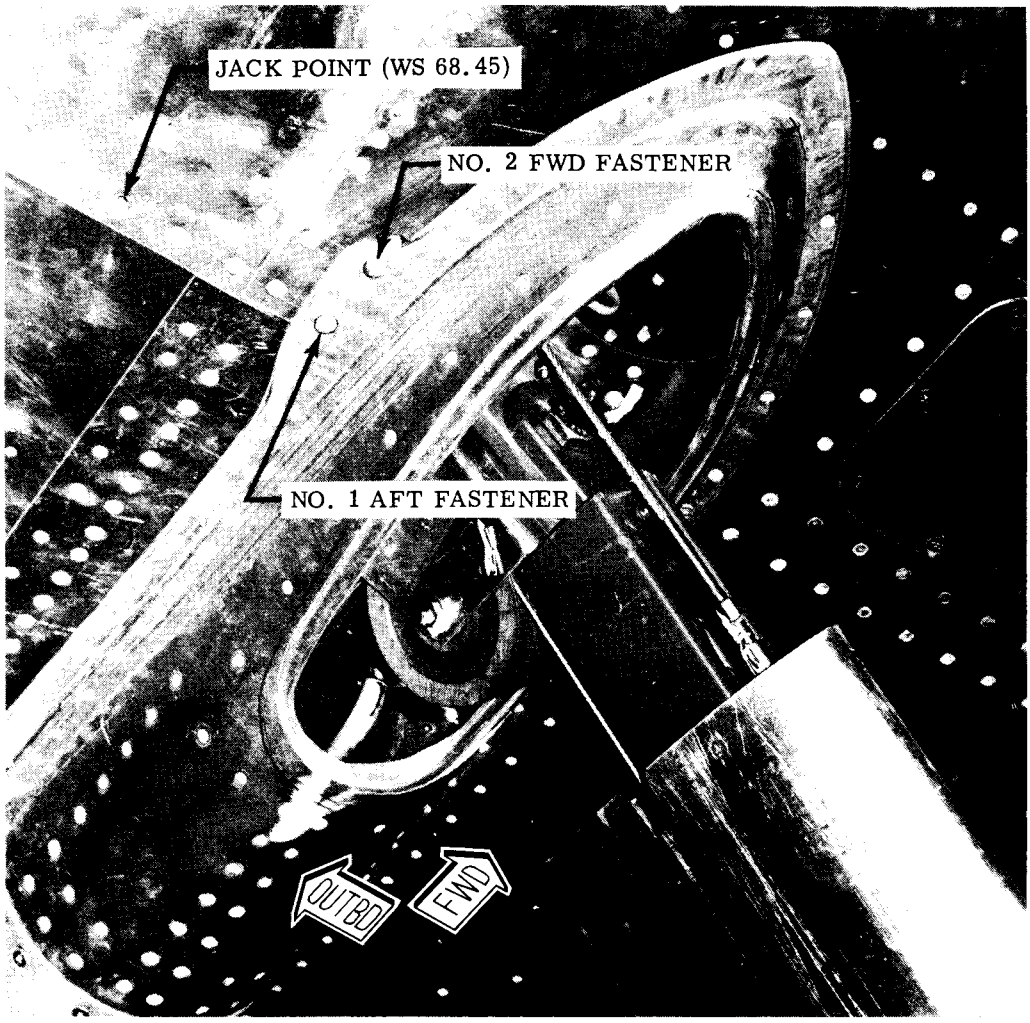
1. Remove wing root access panels and wing root fairing.

II. SPAR WEB INSPECTION

1. Visually inspect the radii of both the spar web and the web doubler in the shaded area as shown in Figure 9.

WING STRUT ATTACHMENT AREA

WITH STRUT CUFF REMOVED

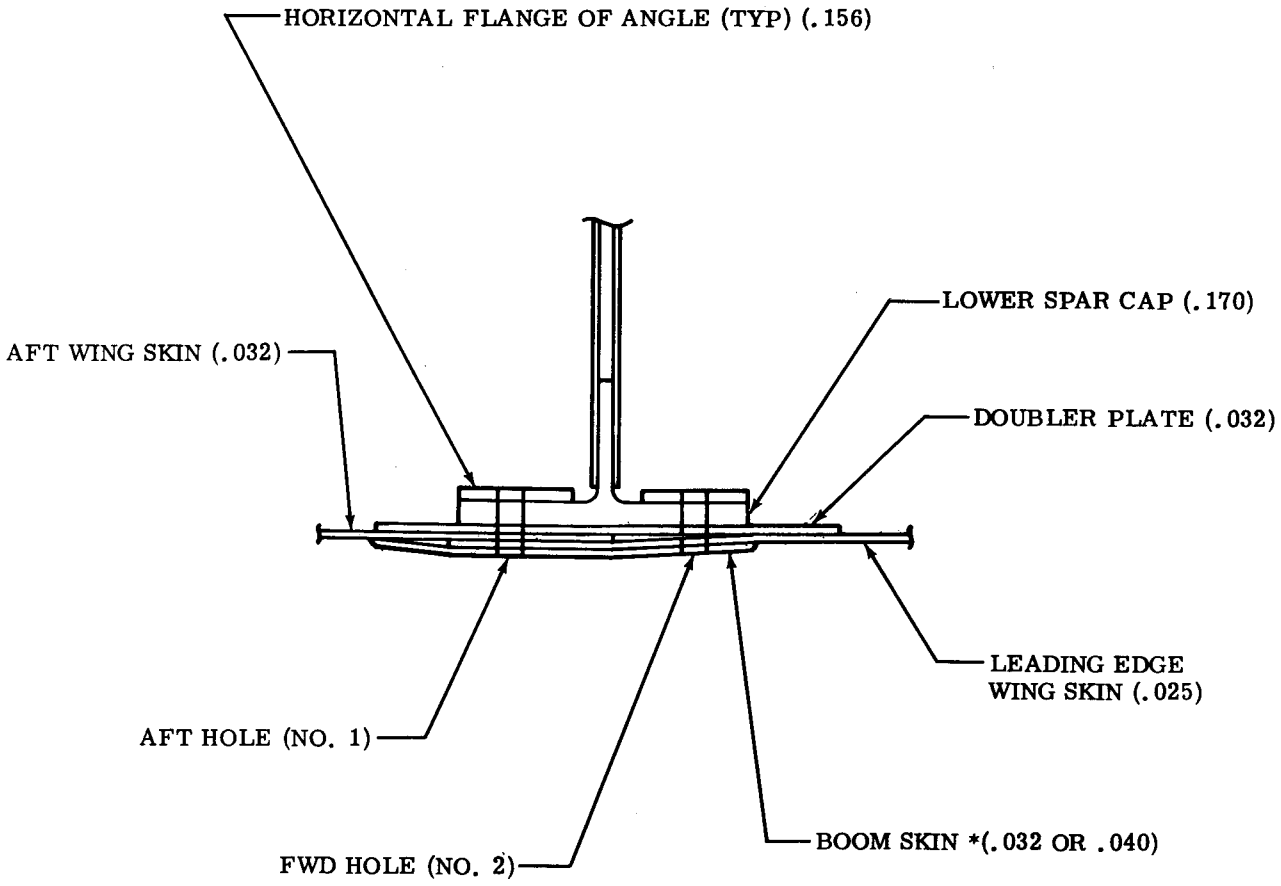


VIEW LOOKING UP AT R.H. WING - L.H. TYPICAL

Figure 1.

LOWER SPAR CAP AT FASTENERS

WING STATION 64.41



*.032 THRU SERIAL 337-0755
.040 SERIAL 337-0756 & ON

Figure 2.

FRONT WING SPAR-BOOM & STRUT ATTACHMENT AREA

L.H. SHOWN - R.H. TYPICAL

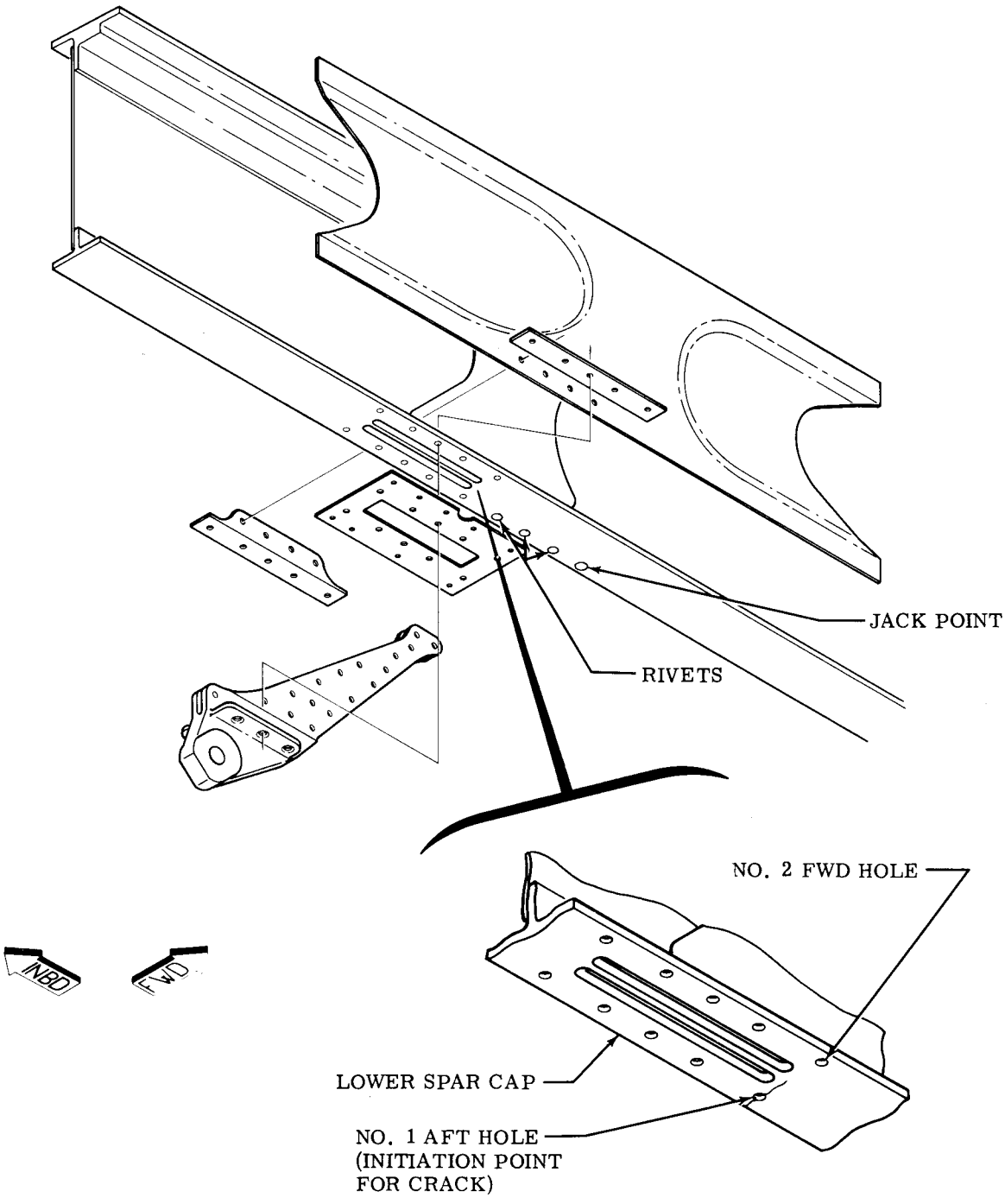
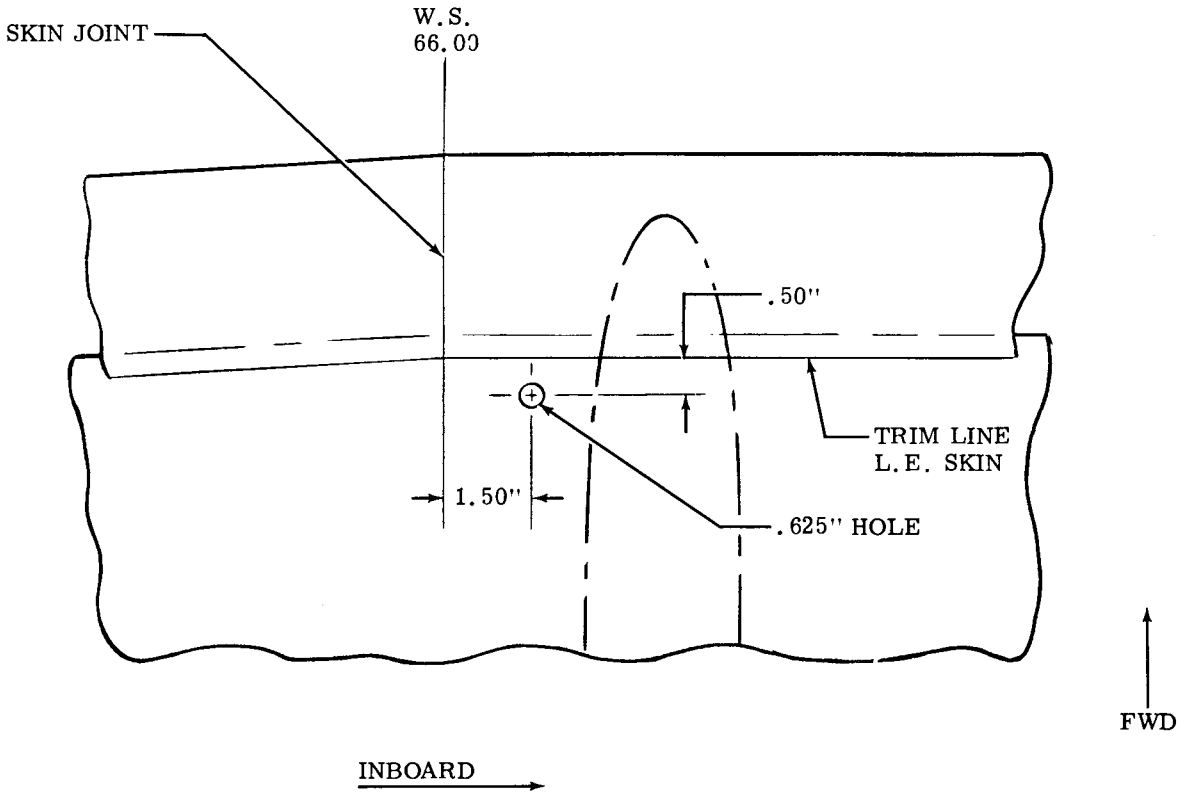


Figure 3.

ADDITION OF ACCESS HOLE FOR NO. 1 AFT FASTENER

WING STATION 64.41



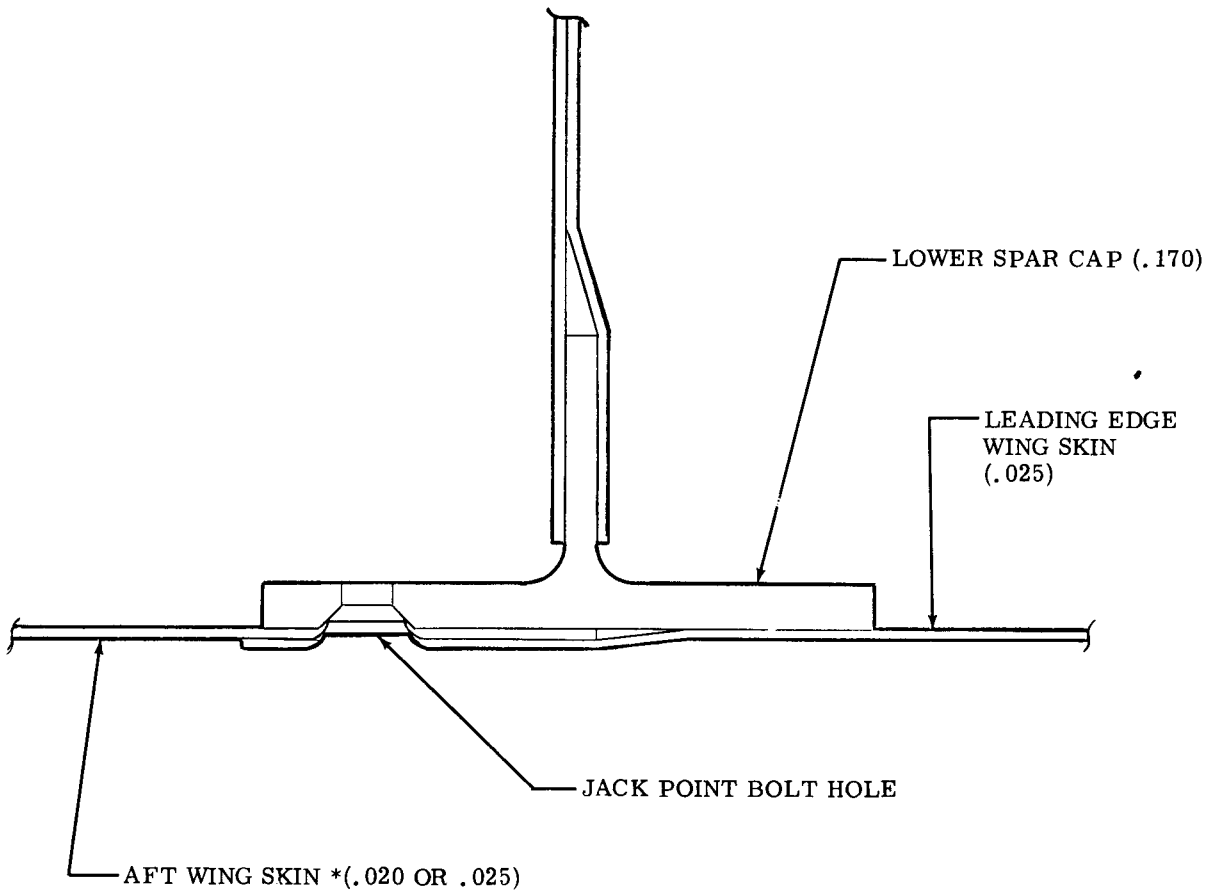
VIEW LOOKING DOWN

L.H. SHOWN - R.H. TYPICAL

Figure 4.

LOWER SPAR CAP AT JACK POINT

WING STATION 68.45



FWD →

*.020 THRU SERIAL 337-0755
.025 SERIAL 337-0756 & ON

Figure 5.

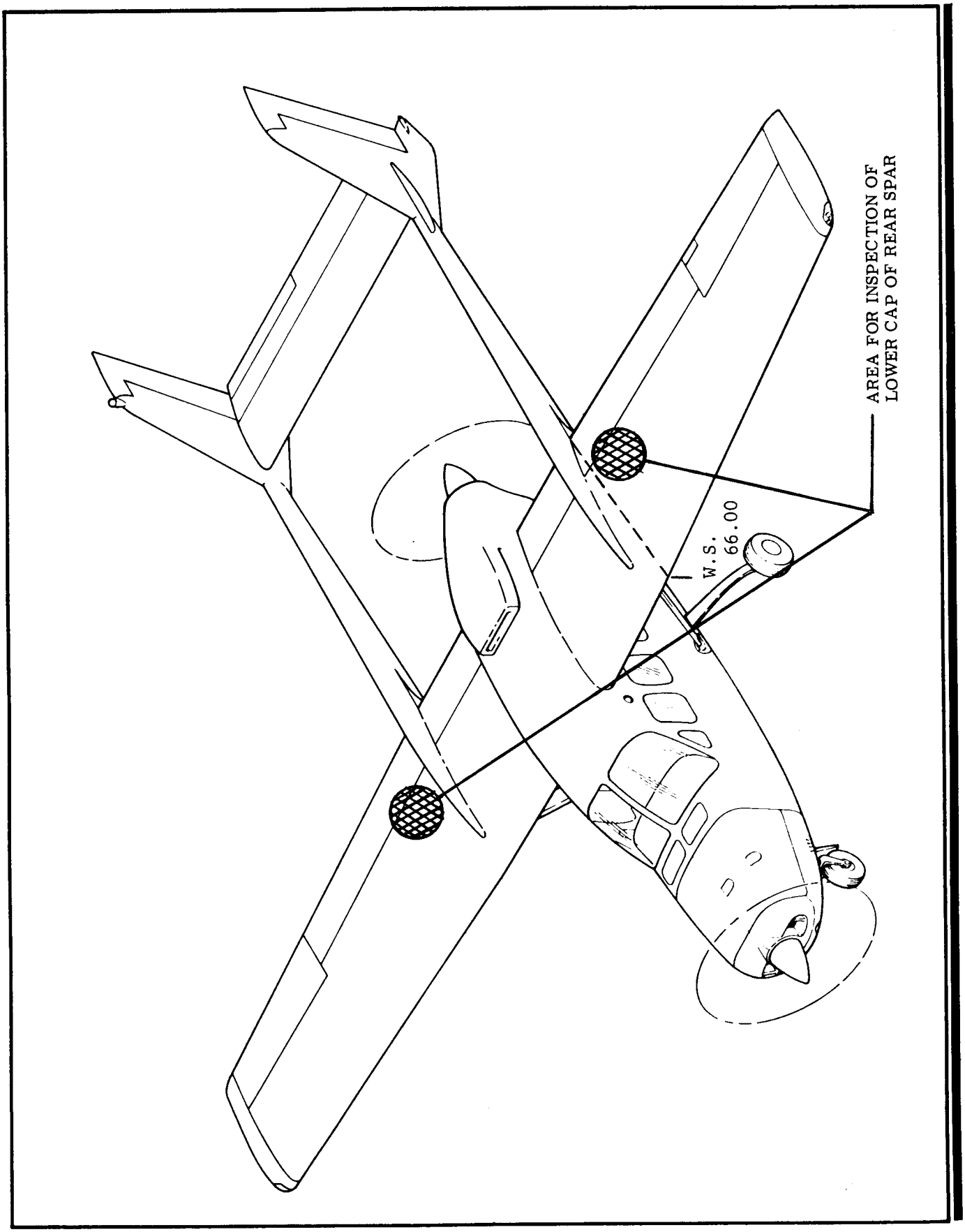


Figure 6. Rear Spar Lower Cap Inspection.

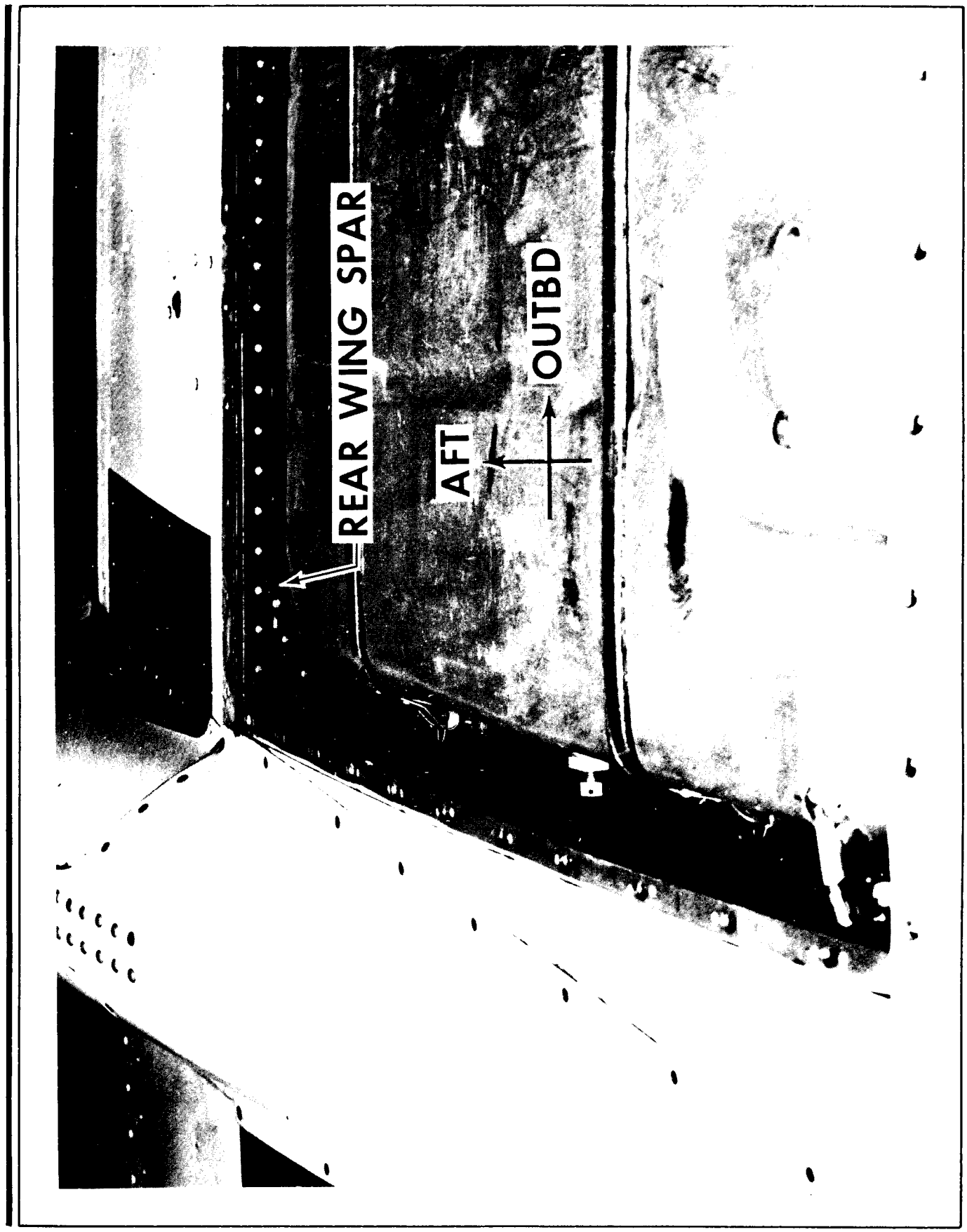


Figure 7. Left Rear Wing Spar. (fuel tank cover removed)

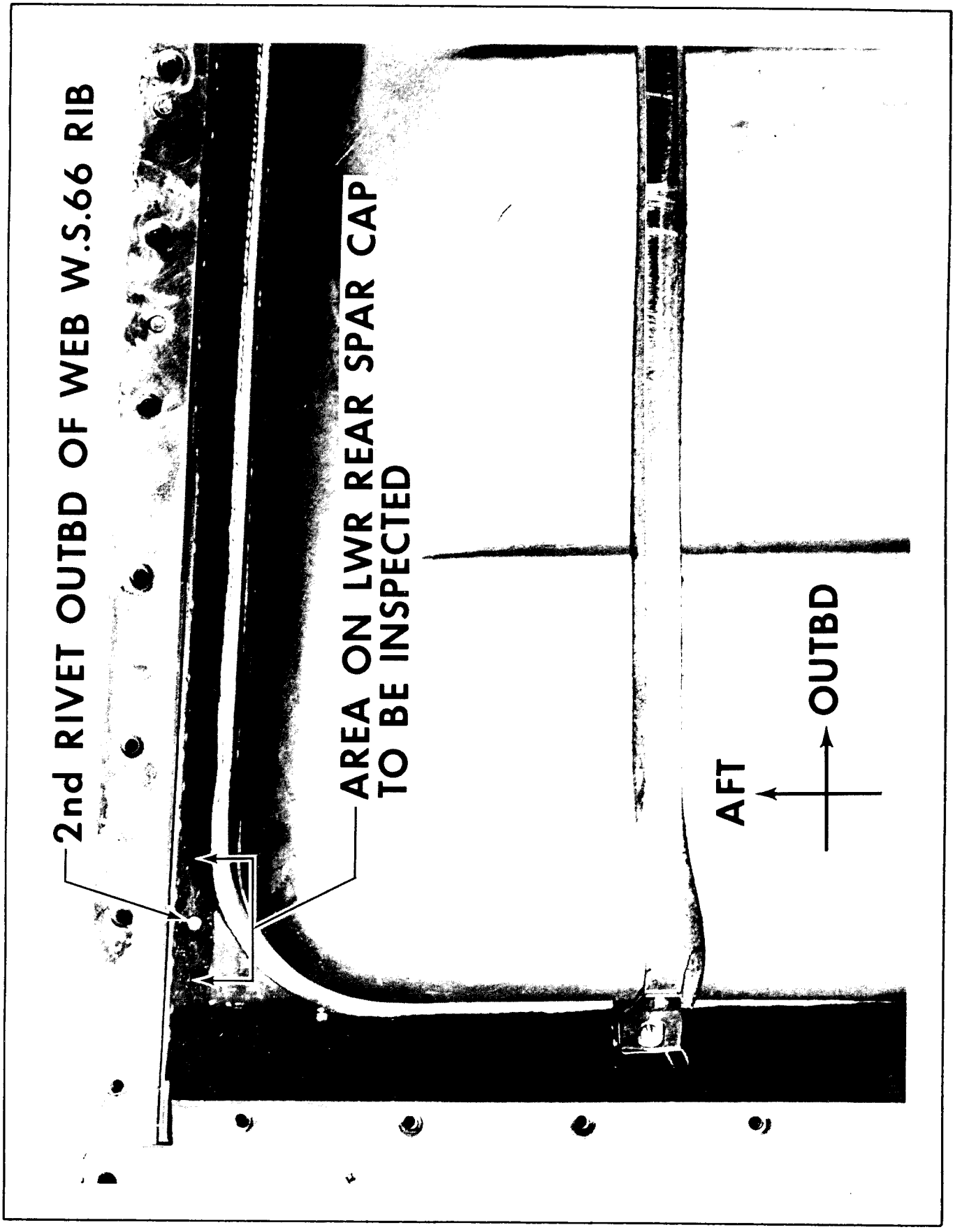
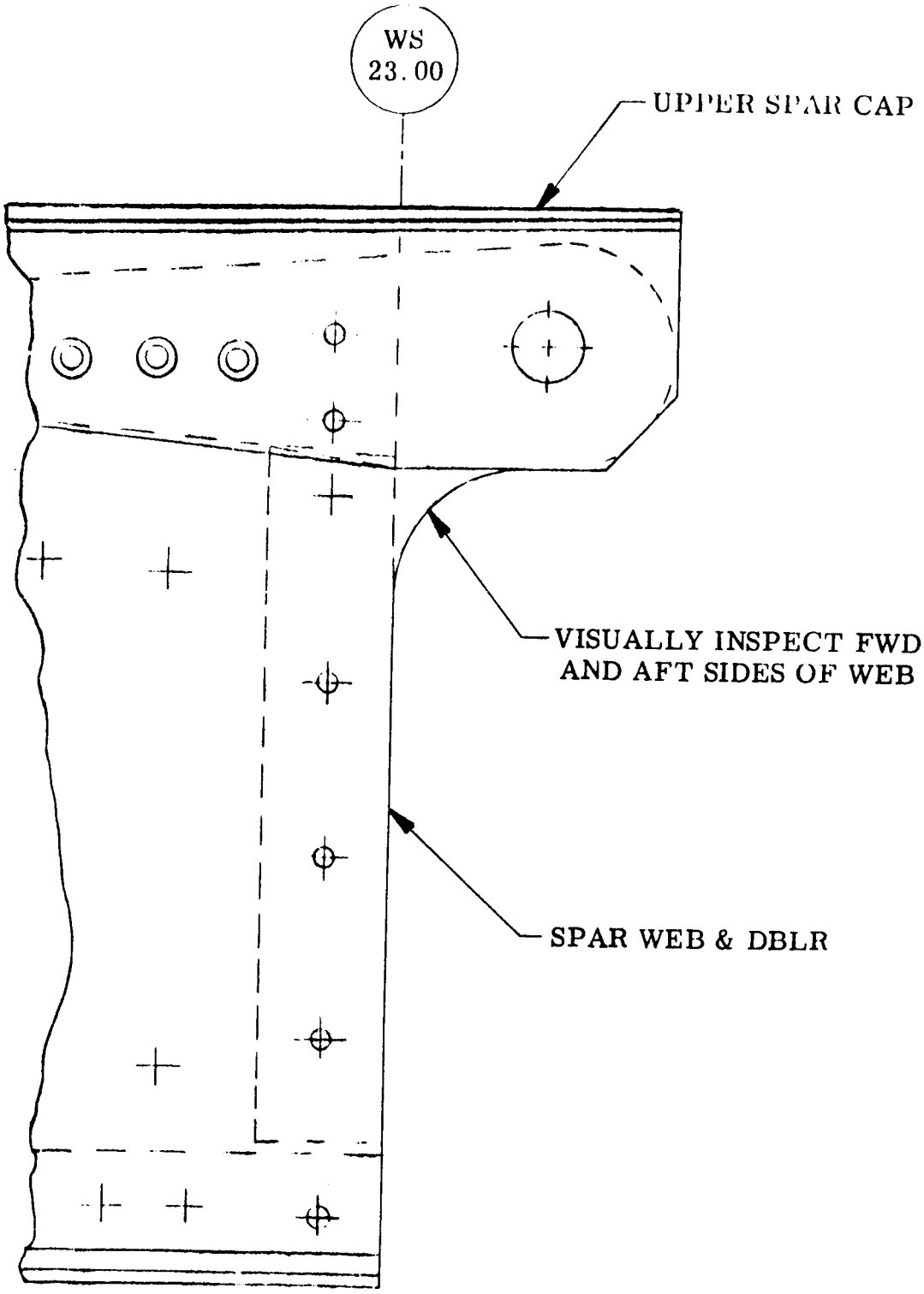


Figure 8. Inspection Area.



FRONT SPAR ASSY

FIGURE 9

Owner Advisory

December 12, 2012 ME78-2

TITLE:

FRONT AND REAR WING SPAR INSPECTION

TO:

Cessna 336, 337, T337G, F337, FT337, FT337GP, and FTB337 Owner

REASON

This owner advisory is to inform you that the Federal Aviation Administration (FAA) has issued a Global Alternate Method of Compliance (AMOC) to FAA Airworthiness Directive AD 78-09-05. AD 78-09-05 concerns Cessna Multi-Engine Service Letter ME78-2 Supplement #1, Front and Rear Wing Spar Inspection.

For affected airplanes, the AMOC approves the use of the latest FAA-approved revision of Supplemental Inspection Number 57-30-02 in Cessna Service Manuals to comply with AD78-09-05 rather than ME78-2 wherever ME78-2 is specified in the AD.

NOTE: Supplemental Inspection Number 57-30-02 provides revised inspection procedures which improve the probability of crack detection through the use of the Eddy Current Inspection Procedures in more areas. Cessna recommends the use of this revised inspection procedure.

This AMOC is approved by the FAA Wichita Aircraft Certification Office, by letter L115W-12-832, which is attached to this owner advisory.

Please refer to letter L115W-12-832 for specific Cessna Service Manuals and for further details.

As a convenience, service documents are now available online to all our customers through a simple, free-of-charge registration process. If you would like to sign up, please visit the www.cessnasupport.com Customer Access link to register.

Cessna Aircraft Company, Customer Service, P.O. Box 7706, Wichita, Kansas 67277, U.S.A. (316) 517-5800, Facsimile (316) 517-7271
www.cessnasupport.com

124921

U.S. Department
of Transportation
**Federal Aviation
Administration**

Small Airplane Directorate
Wichita Aircraft Certification Office
1801 Airport Road, Room 100
Wichita, Kansas 67209

December 4, 2012

L115W-12-832

Mr. John Bouma
Lead ODA Administrator
Cessna Aircraft Company
One Cessna Boulevard
P.O. Box 7704
Wichita, KS 67277-7704

Dear Mr. Bouma:

Subject: Global AMOC to FAA AD 78-09-05 that authorizes the use of Supplemental Inspection Documents (SIDs) rather than the Cessna Multi-Engine Service Letter ME78-2

References: (1) FAA AD78-09-05, Amendment 39-3202, effective date May 11, 1978
(2) Cessna letter L390-12-2011 dated September 21, 2012

The previous Alternate Method of Compliance (AMOC) in Letter Number L115W-12-652, with the same subject as this letter, dated October 10, 2012, remains approved.

This letter approves an AMOC for AD 78-09-05 using latest FAA approved revision of Supplemental Inspection Number 57-30-02 in Cessna Service Manuals for Model 336, Model 337 Series, and Model P337 Series. Currently, these manuals are provided as:

1. D238-2-13 Temporary Revision Number 6 dated August 2, 2010, and is located in Section 2-14-18 of Model 336 Service Manual dated January 5, 2004;
2. D2500-2-13 Temporary Revision Number 10 dated September 1, 2012, and is located in Section 2-14-20 of Model 337 Series (1965 – 1973) Service Manual dated January 5, 2004;
3. D2516-9-13 Temporary Revision Number 9 dated September 1, 2012, and is located in Section 2-14-25 of Model P337 Series Service Manual dated October 1, 1996.
4. D2506-8-13 Temporary Revision Number 10 dated September 1, 2012 and is located in Section 2-14-20 of Model 337 Series (1974-1980) Service Manual dated July 1, 1996.

The documents itemized in the above paragraph are approved by this letter, L115W-12-832, for use in complying with AD 78-09-05 rather than the Cessna Multi-Engine Service Letter ME78-2, wherever ME78-2 is specified in AD 78-09-05. Any updates to the Cessna Service Manuals that do not change the information in the Temporary Revisions; thus, removing the distinction of "temporary", are also approved.

Before using the AMOC, you must notify your Principal Inspector in the Flight Standard District Office (FSDO). Please note this AMOC is transferable to the other owners/operators.

All provisions of AD 78-09-05 that are not specifically referenced above remain fully applicable and must be complied with accordingly.

Should you have any questions, please contact Gary D. Park, 316-946-4123.

Sincerely,

Robert P. Busto
Manager, Continued Operational Safety
Wichita Aircraft Certification Office