

**MANDATORY****MEL-57-04****TITLE**

WINGS - DETAILED INSPECTION OF FORWARD SPAR UPPER CAP

**EFFECTIVITY****MODEL**

402C

**SERIAL NUMBERS**

402C0001 thru 402C1020

**REASON**

Cracks have been found in the front spar upper cap. An undetected crack can cause the spar cap to break which could result in flight instability and potential loss of control.

**DESCRIPTION**

This service document has instructions to do a detailed visual inspection of the forward spar upper cap.

**WARNING:** Further flight with a cracked spar cap is prohibited. The spar cap must be replaced before further flight.

**NOTE:** In order to reduce possible damage to the structure, it is recommended that the access panels be installed with MEB-57-02 or SK421-152B.

**COMPLIANCE**

MANDATORY. The initial inspection must be accomplished at 18,000 flight hours and then every 1,000 flight hours thereafter.

Upon receipt of this service document, airplanes with 18,000 or more flight hours, have 100 flight hours or 90 days, whichever occurs first, to complete this service document.

A service document published by Textron Aviation may be recorded as *completed* in an aircraft log only when the following requirements are satisfied:

- 1) The mechanic must complete all of the instructions in the service document, including the intent therein.
- 2) The mechanic must correctly use and install all applicable parts supplied with the service document kit. Only with written authorization from Textron Aviation can substitute parts or rebuilt parts be used to replace new parts.
- 3) The mechanic or airplane owner must use the technical data in the service document only as approved and published.
- 4) The mechanic or airplane owner must apply the information in the service document only to aircraft serial numbers identified in the *Effectivity* section of the document.
- 5) The mechanic or airplane owner must use maintenance practices that are identified as acceptable standard practices in the aviation industry and governmental regulations.

No individual or corporate organization other than Textron Aviation is authorized to make or apply any changes to a Textron Aviation-issued service document or flight manual supplement without prior written consent from Textron Aviation.

Textron Aviation is not responsible for the quality of maintenance performed to comply with this document, unless the maintenance is accomplished at a Textron Aviation-owned Service Center.

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Textron Aviation Customer Service, P.O. Box 7706, Wichita, KS 67277, U.S.A. 1-316-517-5800

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**MANDATORY****MEL-57-04****CONSUMABLE MATERIAL**

You must use the consumable materials that follow, or their equivalent, to complete this service document.

NAME	NUMBER	MANUFACTURER	USE
Isopropyl Alcohol	TT-I-735	Commercially Available	Type I Cleaning Solvent for surface cleaning prior to inspection.
Extreme Simple Green Aircraft and Precision Cleaner		Commercially Available	To be used for cleaning soiled surface

**CAUTION:** Do not use any other Simple Green products other than Extreme Simple Green as some have been found to be corrosive.

**TOOLING**

NAME	NUMBER	MANUFACTURER	USE
10X Magnifying Lens		Commercially Available	For detailed visual inspection of forward spar cap

**REFERENCES**

Cessna Model 402C (1979-1985) Maintenance Manual, Revision 10 or later

Cessna Model 402C, 5-13-01, Nondestructive Inspection Methods and Requirements

**NOTE:** To make sure all publications used are complete and current. Refer to [www.txtavsupport.com](http://www.txtavsupport.com).

**PUBLICATIONS AFFECTED**

None

**ACCOMPLISHMENT INSTRUCTIONS**

1. Prepare the airplane for maintenance.
  - A. Make sure that the airplane is electrically grounded.
  - B. Make sure that all switches are in the OFF/NORM position.
  - C. Disconnect electrical power from the airplane.
    - (1) Disconnect external electrical power.
    - (2) Disconnect the airplane battery.
  - D. Attach maintenance warning tags to the battery and external power receptacle that have "**DO NOT CONNECT ELECTRICAL POWER - MAINTENANCE IN PROGRESS**" written on them.
2. Remove the left and right leading-edge panels just inboard of the engines. (Refer to the Model 402C (1979-1985) Maintenance Manual, Chapter 6, Access Plates and Panels Identification - Description and Operation.)
3. (Refer to Figure 1.) Clean the forward spar and upper cap at the area to be inspected as follows:
  - A. Use a suitable solvent to remove all grease and dirt.
  - B. Wash the remaining solvent off with soap and water and let air dry.

**NOTE:** The area to clean for the inspection will be between Wing Station 58.94 and Wing Station 77.62.

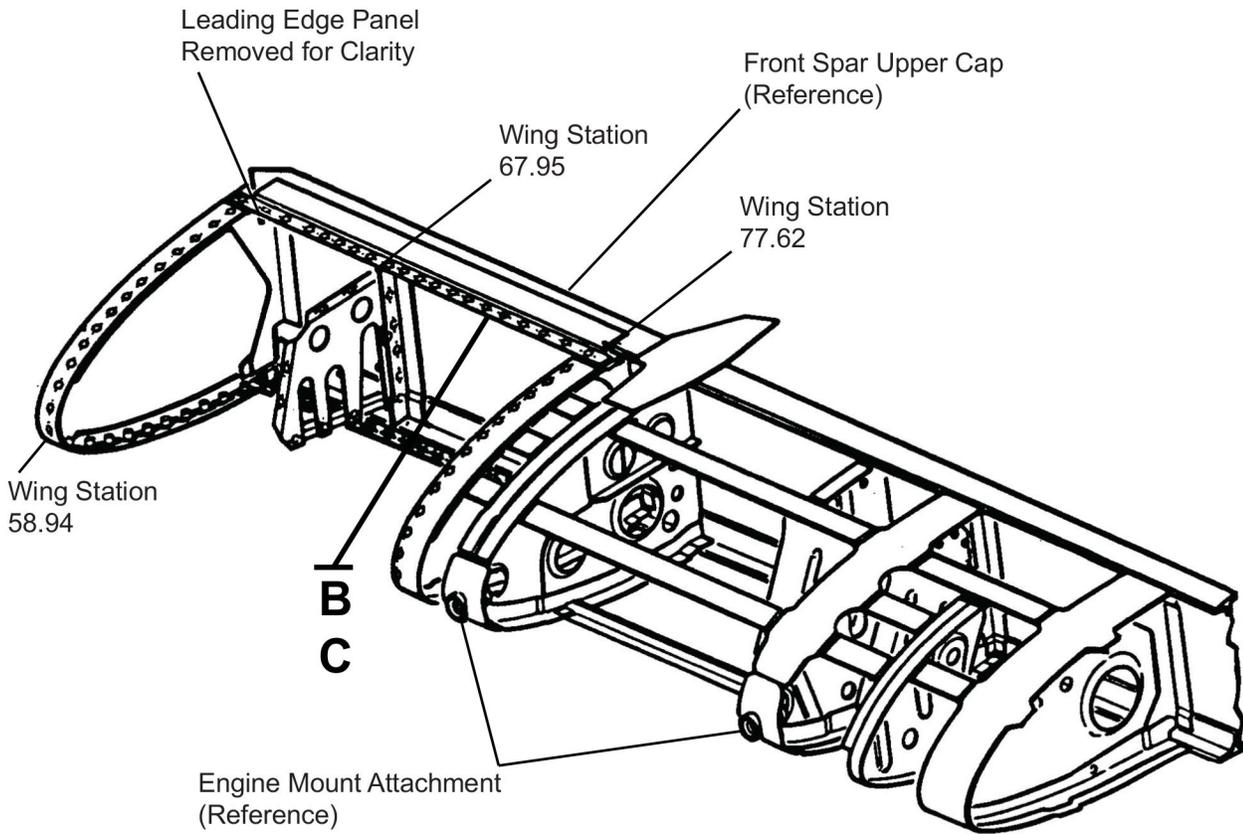
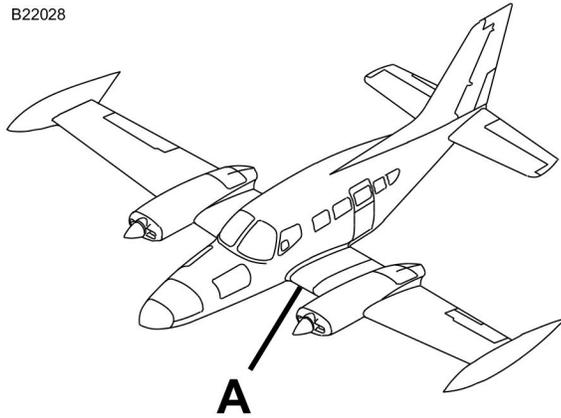
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4. (Refer to Figure 1.) Do a detailed visual inspection as follows:  
**NOTE:** A detailed inspection is described as an intensive visual examination of a specific structural area, system, installation or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate by the inspector. Inspection aids such as mirrors, magnifying lenses, etc. may be used. Surface cleaning and elaborate access procedures may be required.
  - A. Use a suitable light source and a 10X Magnifying Lens to inspect the forward spar and upper cap.
  - B. If a crack is found, no further flight is permitted. Contact Textron Aviation Team Structures at: [structures@txtav.com](mailto:structures@txtav.com), or phone: 316-517-6061.
  - C. If an area is suspect, do a surface eddy current inspection of the suspect area, go to Step 5.
  - D. If no cracks or questionable areas are found, go to Step 6.
5. Do an eddy current inspection of the carry-thru spar cap at any area where a crack is suspect. (Refer to the Model 402C, Maintenance Manual, Chapter 5 (5-13-01), Nondestructive Inspection Methods and Requirements:
  - A. If eddy current inspections do not indicate a crack, no further action is required, go to Step 6.
  - B. If a crack is found, no further flight is permitted, complete the INSPECTION RESULTS FORM and contact Textron Aviation Team Structures at: [structures@txtav.com](mailto:structures@txtav.com), or phone: 316-517-6061.
6. Complete the attached INSPECTION RESULTS FORM and return to Textron Aviation Team Structures at [structures@txtav.com](mailto:structures@txtav.com). (Refer to the attached INSPECTION RESULTS FORM.)  
**NOTE:** Return the INSPECTION RESULTS FORM to Textron Aviation Team Structures even if no crack is found.
7. Install all removed access panels.
8. Remove the maintenance warning tags and connect the airplane battery.
9. Make an entry in the airplane logbook that states compliance and method of compliance with this service document.

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**DETAIL A**

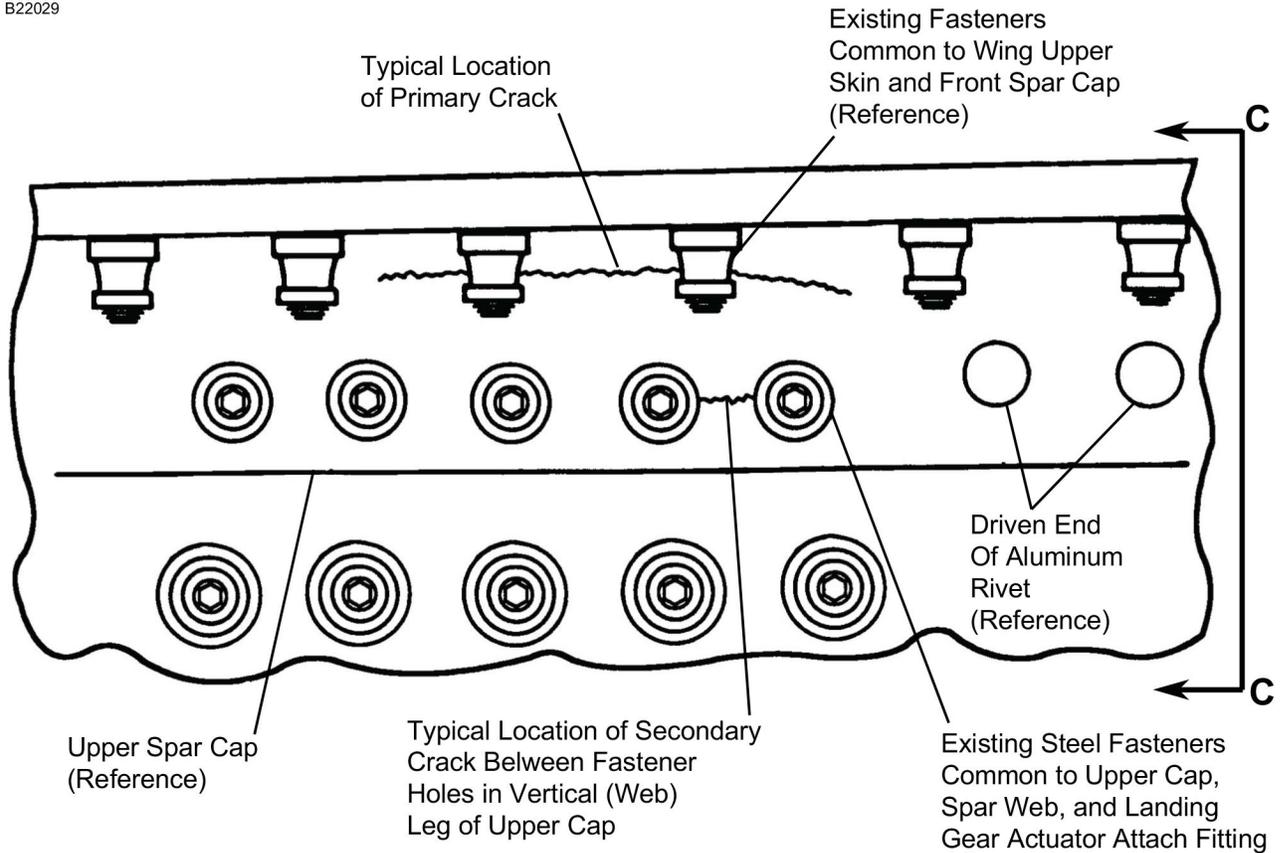
LH Wing Leading Edge Structure Shown, RH Opposite

Figure 1. Forward Spar Upper Cap Inspection (Sheet 1)

MANDATORY

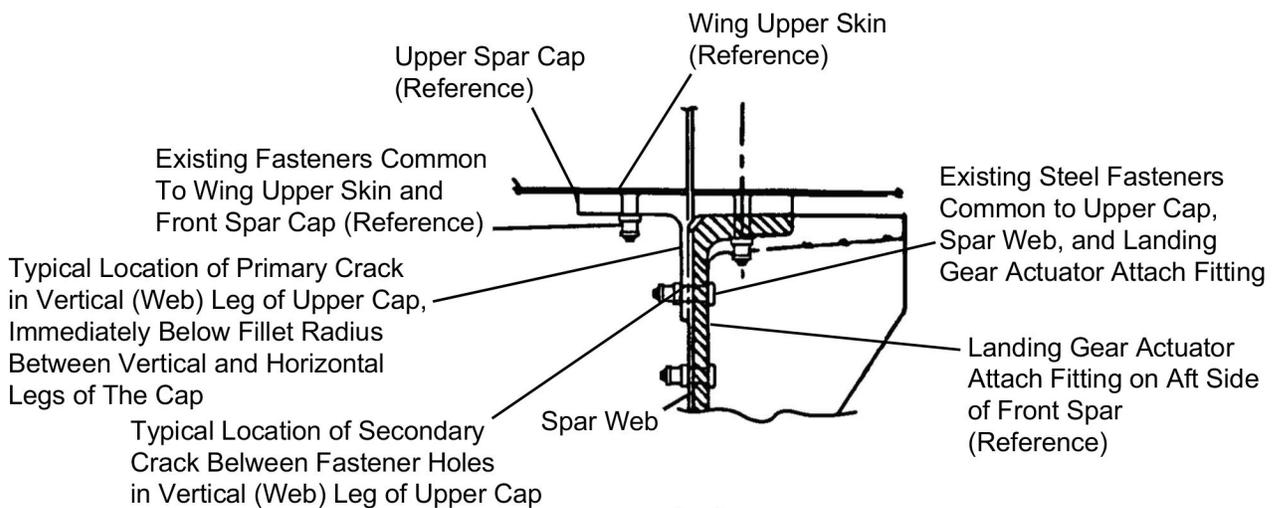
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**DETAIL B**

View Looking Aft at Upper LH Front Spar Cap - RH Opposite



**VIEW C-C**

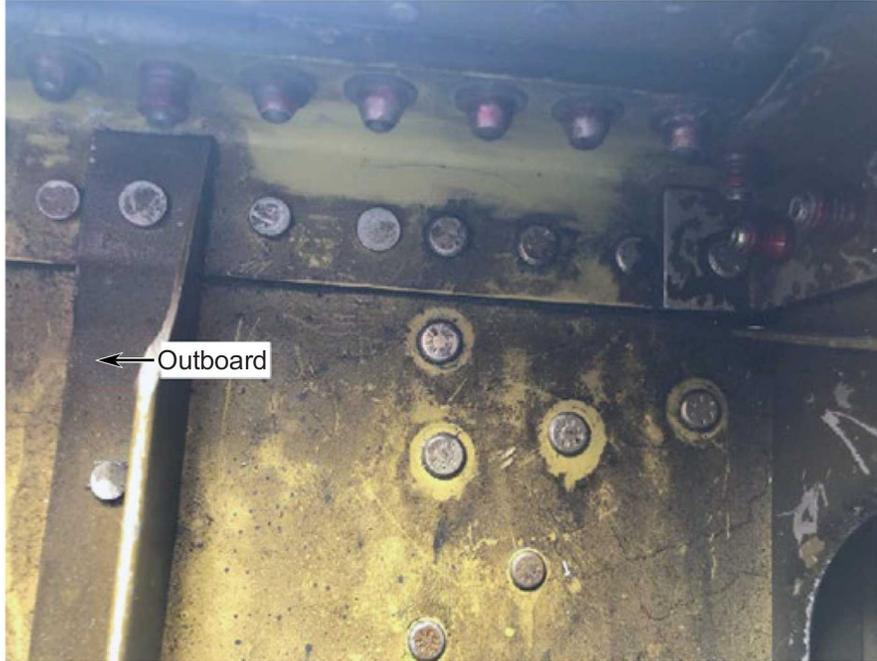
Looking Outboard at LH Front Spar Upper Cap - RH Opposite

Figure 1. Forward Spar Upper Cap Inspection (Sheet 2)

**MANDATORY**

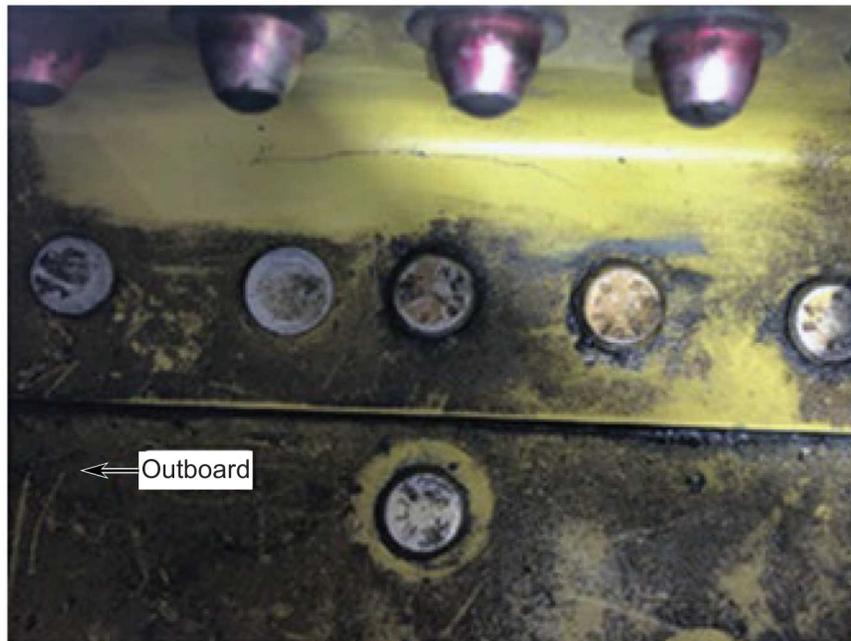
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**DETAIL C**

M402C Front Spar Upper Cap General Crack Location W.S 65.59



**DETAIL C**

M402C Front Spar Upper Cap General Crack Location W.S 65.59

Figure 1. Forward Spar Upper Cap Inspection (Sheet 3)

**MANDATORY**

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**MATERIAL INFORMATION**

No parts are required to complete this service document.

## SPAR CAP INSPECTION RESULTS FORM

<b>Airplane Model Number</b>		<b>Airplane Serial Number</b>	
<b>Total Airframe Hours</b>		<b>Left Engine Hours</b>	
<b>Forward Upper Spar Cap Hours</b>		<b>Right Engine Hours</b>	
<b>Owner's Name</b>		<b>Inspection Facility Name</b>	
<b>Owner's address</b>		<b>Inspection Facility Address</b>	
<b>List all STC installed on the airplane</b>			

In the table that follows please provide detailed and dimensioned descriptions of any crack(s). Attach pictures to this form as necessary.

## SPAR CAP INSPECTION RESULTS FORM CONTINUED

Was a crack found: Yes/No?

Detailed description: (Attach pictures and additional details as necessary, if a crack was found with visual inspection or with a surface eddy current inspection?)

Send completed form/attachments to Textron Aviation Team Structures at [structures@txtav.com](mailto:structures@txtav.com)



**TITLE**

WINGS - DETAILED INSPECTION OF FORWARD SPAR UPPER CAP

**TO:**

Cessna Model 402C Aircraft Owner

**REASON**

Cracks have been found in the front spar upper cap. An undetected crack can cause the spar cap to break which could result in flight instability and potential loss of control.

**COMPLIANCE**

MANDATORY. The initial inspection must be accomplished at 18,000 flight hours and then every 1,000 flight hours thereafter.

Upon receipt of this service document, airplanes with 18,000 or more flight hours, have 100 flight hours or 90 days, whichever occurs first, to complete this service document.

**MATERIAL AVAILABILITY**

No part are required to complete this service document.

**WARRANTY**

None

