

TITLE

COMMUNICATIONS - AVIATOR 300 SATCOM INTERMEDIATE GAIN ANTENNA (IGA) REPLACEMENT

EFFECTIVITY

| MODEL | SERIAL NUMBERS |
|---------|------------------|
| 560XLS+ | -6106 thru -6289 |

The equivalent of this service document has been incorporated on production airplanes -6290 and On.

REASON

To replace the IGA-5006 Aviator 300 SATCOM Intermediate Gain Antenna (IGA) with the IGA-5001 Aviator 300 SATCOM Antenna.

DESCRIPTION

This service bulletin provides parts and instruction to remove the IGA-5006 Aviator 300 Satcom antenna and replace with the IGA-5001 Aviator 300 SATCOM antenna.

COMPLIANCE

OPTIONAL. This service document can be accomplished at the discretion of the owner.

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.

APPROVAL

Textron Aviation received FAA approval for the technical data in this publication that changes the airplane type design.

FLIGHT CREW OPERATIONS

No Changes

June 16, 2021

SB560XL-23-10
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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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CONSUMABLE MATERIAL

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

| NAME | NUMBER | MANUFACTURER | USE |
|--------------------------------|---|---|---|
| Adhesive | U074031S, Type V, Class A (RTV-732 White) | Textron Aviation Parts & Distribution 7121 Southwest Boulevard Wichita, KS 67215 | To seal the antenna screws to prevent water infiltration. |
| Alumigrip 10P8-11 Epoxy Primer | Alumigrip 10P8-11 | AkzoNobel 1 East Water St Waukegan, IL 60085 https://aerospace.akzonobel.com/ | Corrosion Resistant Primer. |
| Color Chemical Film Treatment | U074093 (Alodine 1132 Touch n Prep) | Textron Aviation Parts Distribution 7121 Southwest Boulevard Wichita, KS 67215 | |
| Paint, Polyurethane (Top Coat) | Matterhorn White No. 54-19232 (or equivalent that meets MIL-C-83286 or MIL-P-85285) | Commercially available | To paint the airplane exterior. |
| Sealant (Type XIV Class B) | U470545 (2.5 ounce Simkit) | Textron Aviation Parts Distribution | For sealing applications. |

TOOLING

| NAME | NUMBER | MANUFACTURER | USE |
|--------------------|--------|------------------------|---|
| PC Laptop Computer | | Commercially Available | To modify the aircraft configuration files. |
| Ethernet Cable | | Commercially Available | To connect the laptop to the aircraft. |

WEIGHT AND BALANCE INFORMATION**MODEL**

| | |
|-------------------------|---------------------|
| WEIGHT CHANGE | +1.02 pounds |
| RESULTANT MOMENT | +414.12 inch-pounds |
| MOMENT/100 | +4.14 inch-pounds |

REFERENCES

- Cessna Model 560XL Maintenance Manual
- Cessna Model 560XL Interiors Maintenance Manual

PUBLICATIONS AFFECTED

- Cessna Model 560XL Illustrated Parts Catalog

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 tailcone baggage compartment ceiling panels to access to the lower side of the IGA-5006 Aviator 300 SATCOM Intermediate Gain Antenna. (Refer to the Model 560XL Maintenance Manual, Chapter 53, Tailcone Baggage Compartment - Maintenance Practices.)
 3. Remove the IGA-5006 Aviator 300 SATCOM Intermediate Gain Antenna. (Refer to the Model 560XL Maintenance Manual, Chapter 23, Aero-I Airborne Satellite Telecommunications System - Maintenance Practices.) For airplanes -6106 and On. (Refer to the Model 560XL Maintenance Manual, Aircell Swift Broadband System - Maintenance Practices Airplanes -6106 and On.)
 - A. Remove and discard the 10102-000 Adapter Plate (if installed).
 - B. Remove the eight MS27039-1-08 Screws that attach the spacer assembly.
 - C. (Airplanes -6001 thru -6105.) Remove the 8690119-3 Spacer Assembly.
 - D. (Airplanes -6106 and On.) Remove the 8623012-3 Spacer Assembly.
 - E. Remove J1 and J2 Coax Adapters and keep.
 - F. (Refer to Figure 1, Sheet 1.) Drill out the three CM3827AD4-6 Rivets as shown. (Refer to the Model 560XL Structural Repair Manual, Chapter 51, Fastener Installation and Removal.)
 - G. Remove and discard the 8623012-7 Shim.
 - H. Remove the MS51975-45 Screws that attach the bonding straps and keep the screws.
 - I. Discard the bonding straps.
 4. (Refer to Figure 1, Sheet 2.) Assemble the 8690138-2 Spacer.
 - A. Temporarily install the MS21075-3 Nutplates.
 - B. Use the MS21075-3 Nutplate as a guide, match drill 8 number 40 (0.098 inch-diameter) holes.
 - C. Remove the MS21075-3 Nutplates.
 - D. Countersink the rivet holes on the upper side of the 8690138-2 Spacer. (Refer to the Model 560XL Structural Repair Manual, Chapter 51, Countersinking.)
 - E. Deburr the drilled holes.
 - F. Protect all exposed bare metal with color chemical film treatment and corrosion resistant primer. (Refer to the Model 560XL Structural Repair Manual, Chapter 51, Protective Treatment of Metal.)
 - G. Install the MS21075-3 Nutplates with CM3827AD3-9 Rivets.
 5. Install the 405001A-PMA Inmarsat IGA.
 - A. (Refer to Figure 1, Sheet 1.) If necessary, install one CM3827AD4-6 Rivet in the forward hole location. (Refer to the Model 560XL Structural Repair Manual, Chapter 51, Fastener Installation and Removal.)

NOTE: This hole will be plugged and not used.
 - B. Install one kept MS51975-45 Screw in the forward bonding strap hole location to plug the hole.
 - C. Temporarily install the 8690138-3 Shim along the right side of the butt line of the airplane fuselage.
 - D. Back drill the 8690138-3 Shim with the four Number 12 (0.1890 inch-diameter) existing holes in the fuselage.

- E. Match drill the two CM3827AD4 Rivet holes through the 8690138-3 Shim.
 - F. Match drill a Number 17 (0.173 inch-diameter) hole through the 8623012-3 Shim at the aft bonding strap location.
 - G. Temporarily install the 8690138-2 Spacer.
 - H. Match drill four Number 12 (0.1890 inch-diameter) holes from the 8690138-2 Spacer to the fuselage.
 - I. Deburr the drilled holes.
 - J. Protect all exposed bare metal with color chemical film treatment and corrosion resistant primer. (Refer to the Model 560XL Structural Repair Manual, Chapter 51, Protective Treatment of Metal.)
 - K. Fay seal the 8623012-3 Shim to the airplane skin with Type XIV Class B Sealant. (Refer to the Citation Standard Practices Manual, Chapter 20, Fuel, Weather, Pressure and High-Temperature Sealing - Maintenance Practices.)
 - L. Install two CM3827AD4-6 Rivets through the 8690138-3 Shim.
 - M. Install one kept MS51975-45 Screw through the 8623012-3 Shim at the aft bonding strap location.
 - N. (Refer to Figure 1, Sheet 1, Detail B.) Cut out the coax holes in the shim to match the holes in the fuselage for J1 and J2 Coax Adapters.
 - O. Install J1 and J2 Coax Adapters.
 - P. Touch up paint as required with a polyurethane paint to match the airplane color. (Refer to the Model 560XL Maintenance Manual, Chapter 20, Exterior Finish - Cleaning/Painting.)
 - Q. Fay seal the 8690138-2 Spacer to the 8690138-3 Shim and fuselage with Type XIV Class B Sealant. (Refer to the Citation Standard Practices Manual, Chapter 20, Fuel, Weather, Pressure and High-Temperature Sealing - Maintenance Practices.)
 - R. Install the 8690138-2 Spacer with eight MS27039 Screws as shown and torque to 13-17 inch-pounds. (Refer to the Citation Standard Practices Manual, Chapter 20, Torque Data - Maintenance Practices.)
 - S. Fill in the top of the eight MS27039 Screws with Type V, Class A White Sealant. (Refer to the Citation Standard Practices Manual, Chapter 20, Fuel, Weather, Pressure and High-Temperature Sealing - Maintenance Practices.)
 - T. Fay seal the 405001A-PMA Inmarst SATCOM IGA Antenna to the 8690138-2 Spacer. (Refer to the Citation Standard Practices Manual, Chapter 20, Fuel, Weather, Pressure and High-Temperature Sealing - Maintenance Practices.)
 - U. Install the 405001A-PMA Inmarst SATCOM IGA Antenna with the (four) MS27039-1-25 Screws and torque to 13-17 inch-pounds. (Refer to the Citation Standard Practices Manual, Chapter 20, Torque Data - Maintenance Practices.)
 - V. Install the screw sealing caps supplied with the antenna to cover the screws.
- 6. Do a Type I Method B electrical bond check. (Refer to the Citation Standard Practices Manual, Chapter 20, Electrical Bonding and Grounding - Maintenance Practices.)
 - 7. Touch up paint with a polyurethane paint to match the airplane color. (Refer to the Citation Standard Practices Manual, Chapter 20, Exterior Finish - Cleaning/Painting.)
 - 8. Fillet Seal around the 405001A-PMA Inmarst SATCOM IGA Antenna to the 8690138-2 Spacer Assembly with Type XIV Class B Sealant. (Refer to the Citation Standard Practices Manual, Chapter 20, Fuel, Weather, Pressure and High-Temperature Sealing - Maintenance Practices.)
 - 9. Fillet Seal the edge of the 8690138-2 Spacer Assembly to the airplane skin with Type XIV Class B Sealant. (Refer to the Citation Standard Practices Manual, Chapter 20, Fuel, Weather, Pressure and High-Temperature Sealing - Maintenance Practices.)

NOTE: Do not fillet seal the drain holes.

10. Install the tailcone baggage compartment ceiling panels to access to the lower side of the IGA-5006 Aviator 300 SATCOM Intermediate Gain Antenna. (Refer to the Model 560XL Maintenance Manual, Chapter 53, Tailcone Baggage Compartment - Maintenance Practices.)
11. Remove the maintenance warning tags and connect the airplane battery.
12. Configure the Aviator 300 System.

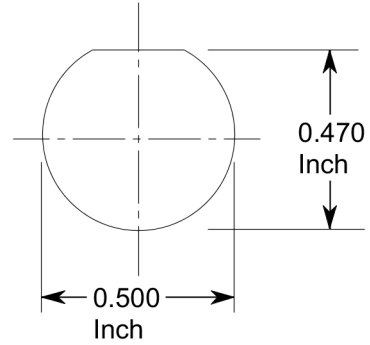
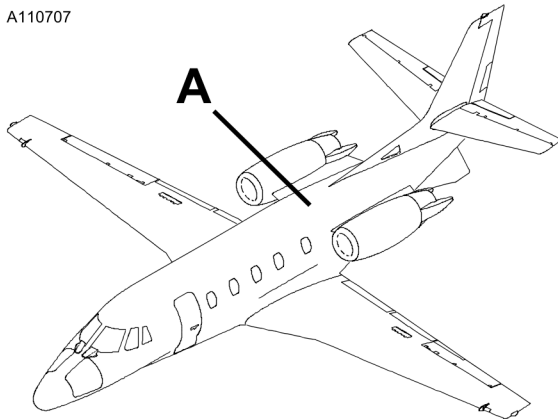
NOTE: To configure the system properly the web browser Internet Explorer should be used.

- A. Connect a laptop to the Swift Broadband Unit (SBU) with an Ethernet cable to the maintenance port that is found behind the hinged door on the front of the SBU.
 - (1) Make sure the laptop acquires a network address of 192.168.0.X where X is some value other than 1. If the laptop does not acquire such a network address, the IP address should be set manually, with a network gateway address of "192.168.0.1" and a subnet of "255.255.255.0".
 - (2) Open a new browser session on the laptop and type "192.168.0.1" as the target URL.
 - (3) Select the "ADMINISTRATION" tab from the left-hand pane of the bookmarks.
 - (4) Enter the username "admin" and password "1234", both without quotes and click OK.
 - (5) Under the "SETTINGS" tab from the left-hand pane and select "EXTERNAL SYSTEMS".
 - (6) Set the Antenna Type to "IGA-5001" and select apply.
 - (7) Log off the URL.
 - (8) Close the browser session.
 - (9) Disconnect the laptop and close the hinged door on the front of the SBU.
 - B. Do an operational check of the Aircell Swift Broadband system. (Refer to the Model 560XL Maintenance Manual, Chapter 23, Aero-I Airborne Satellite Telecommunications System - Adjustment/Test.) For airplanes -6106 an On. (Refer to the 560XL Maintenance Manual, Chapter 23, Aircell Swift Broadband System - Adjustment/Test Airplanes -6106 & On.)
13. Make an entry in the airplane logbook that states compliance and method of compliance with this service document.

NOTE: Textron Aviation recommends that compliance with all service documents is reported to a maintenance tracking system provider.

- Complete a record of compliance. (Maintenance Transaction Report, Log Book Entry, or other record of compliance.)
- Put a copy of the completed record of compliance in the airplane logbook.
- Send a copy of the completed record of compliance to the maintenance tracking system provider used.

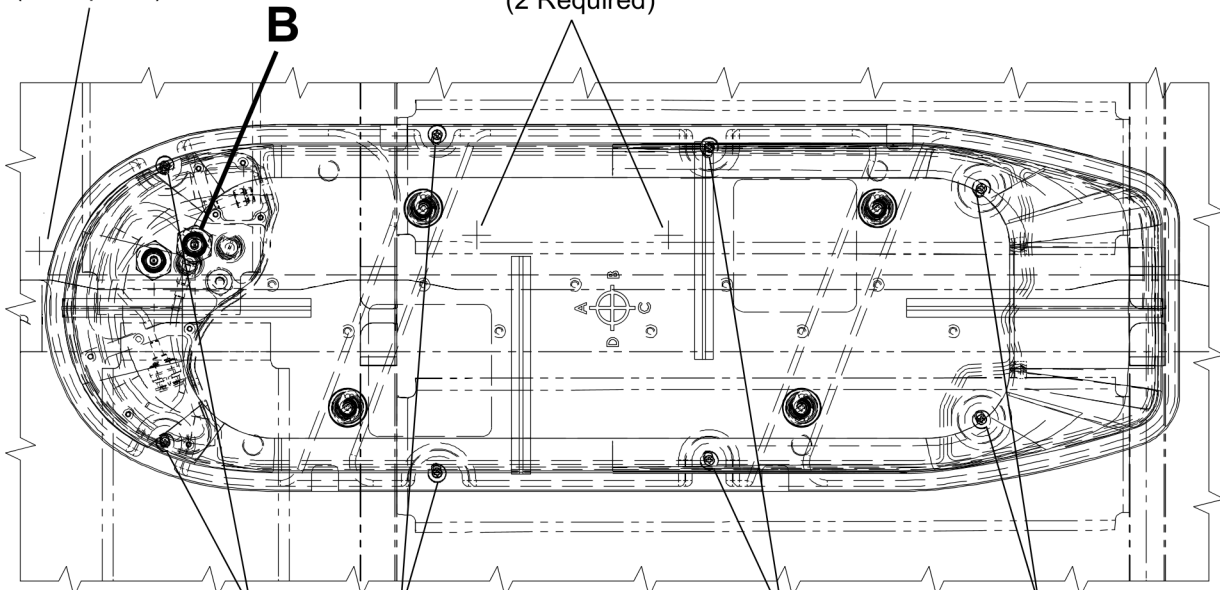
A110707



DETAIL B

CM3827AD4-6
Rivet
(1 Required)

CM3827AD4-6
Rivet
(2 Required)



MS27039-1-17
Screw
(2 Required)

MS27039-1-18
Screw
(2 Required)

MS27039-1-19
Screw
(2 Required)

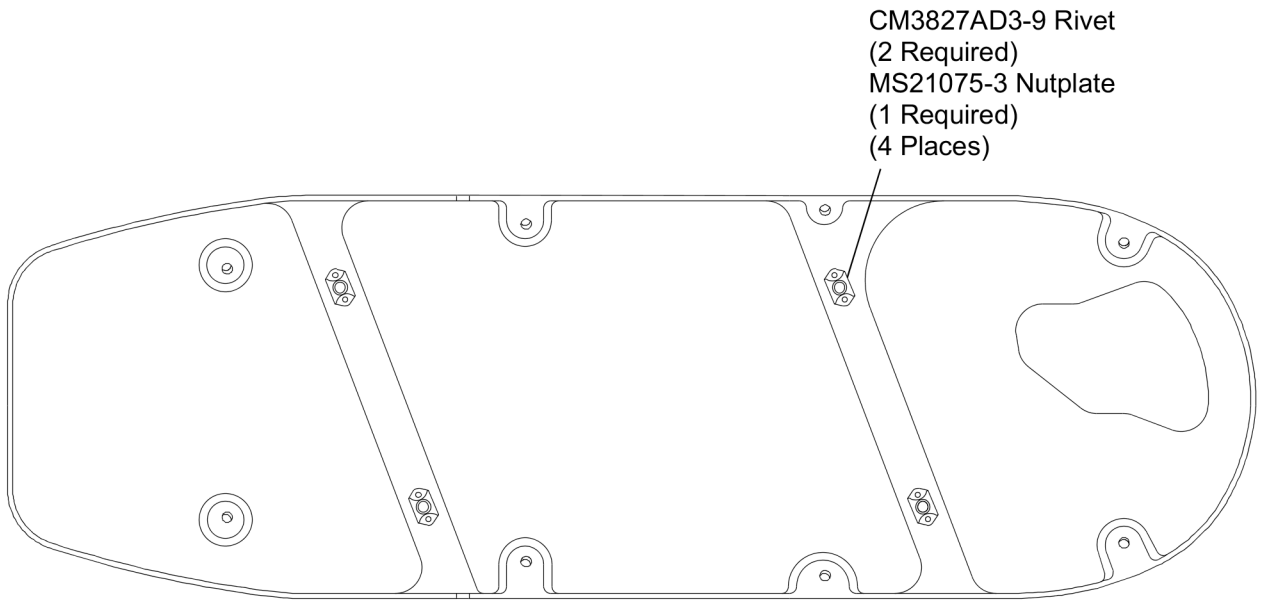
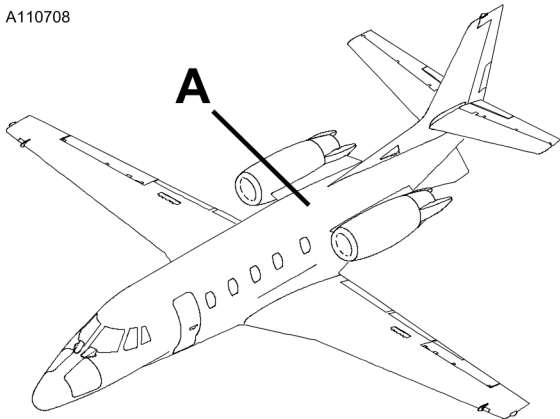
MS27039-1-20
Screw
(2 Required)

DETAIL A

6610T1001
A8690138-1

Figure 1. IGA-5001 Aviator 300 SATCOM Antenna (Sheet 1)

A110708



CM3827AD3-9 Rivet
(2 Required)
MS21075-3 Nutplate
(1 Required)
(4 Places)

DETAIL A

Figure 1. IGA-5001 Aviator 300 SATCOM Antenna (Sheet 2)

6610T1001
A8690138-2

MATERIAL INFORMATION

Order the kit/parts below to install this modification.

| NEW P/N | QUAN- TITY | KEY WORD | OLD P/N | INSTRUCTIONS/ DISPOSITION |
|----------------------|---------------|---|-------------|------------------------------|
| SB560XL-23-10 | 1 | Kit , consisting of the following parts: | | |
| CM3827AD3-9 | 10 | Rivet | | Install |
| CM3827AD4-6 | 5 | Rivet | | Install |
| MS21075-3 | 4 | Nutplate | | Install |
| MS27039-1-17 | 2 | Screw | | Install |
| MS27039-1-18 | 2 | Screw | | Install |
| MS27039-1-19 | 2 | Screw | | Install |
| MS27039-1-20 | 2 | Screw | | Install |
| MS27039-1-25 | 4 | Screw | | Install |
| 405001A-PMA | 1 | Antenna | 405006A-PMA | Remove old, install new |
| 8690138-2 | 1 | Antenna Spacer | 8623012-3 | Remove old, install new |
| 8690138-3 | 1 | Shim | 8623012-7 | Install |
| SB5650XL-23-10 | 1 | Instructions | | |

* Please contact Textron Aviation Parts Distribution for current cost and availability of parts listed in this service document. Phone at 1-800-835-4000 (Domestic) or 1-316-517-5603 (International).

For more information, please visit the TAPD Support & Aftermarket Account Management website at <https://ww2.txtav.com/Parts/Promos/TAPD>.

Based on availability and lead times, parts may require advanced scheduling.

TITLE

COMMUNICATIONS - Aviator 300 SATCOM Intermediate Gain Antenna (IGA) Replacement

TO:

Citation 560XL Aircraft Owner

REASON

To replace the IGA-5006 Aviator 300 SATCOM Intermediate Gain Antenna (IGA) with the IGA-5001 Aviator 300 SATCOM Antenna.

COMPLIANCE

OPTIONAL. This service document can be accomplished at the discretion of the owner.

LABOR HOURS

| WORK PHASE | LABOR-HOURS |
|---------------------|--------------|
| Modification | As Necessary |
| Test and Inspection | As Necessary |

MATERIAL AVAILABILITY

| PART NUMBER | AVAILABILITY | COST |
|---------------|--------------|------|
| SB560XL-23-10 | * | * |

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For more information, please visit the TAPD Support & Aftermarket Account Management website at <https://ww2.txtav.com/Parts/Promos/TAPD>.

Based on availability and lead times, parts may require advanced scheduling.

WARRANTY

None

NOTE: 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 Customer Access link at www.txtavsupport.com to register.

