

**TITLE**

FLIGHT CONTROLS - GARMIN GSM 86 ELEVATOR TRIM MODIFICATION

**EFFECTIVITY****MODEL**

525B (CJ3+)

**SERIAL NUMBERS**

-0057, -0451 thru -0631

The equivalent of this service document has been incorporated on production airplanes -0632 and On.

**REASON**

The current continuous travel capstan design may cause the elevator trim bridle cable to slip.

**DESCRIPTION**

This service bulletin provides parts and instructions to remove the current elevator servo mount and elevator trim cables and install an improved design.

**COMPLIANCE**

OPTIONAL. This service bulletin 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.

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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

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**CONSUMABLE MATERIAL**

No specialized consumable materials are required to complete this service document.

**TOOLING**

No specialized tooling is required to complete this service document.

**WEIGHT AND BALANCE INFORMATION**

Negligible

**REFERENCES**

Cessna Model 525B Maintenance Manual

Citation Standard Practices Manual

**PUBLICATIONS AFFECTED**

Cessna Model 525B Maintenance Manual

Cessna Model 525B 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 the airplane battery.
    - (2) Disconnect external electrical power.
  - 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. Open the tailcone baggage compartment door.
3. Remove aft baggage compartment panels 322CT and 322ET to get access to the elevator trim servo gearbox. (Refer to the Model 525B, Maintenance Manual, Chapter 6, Access Plates and Panels Identification - Description and Operation.)
4. Remove the Garmin GSA 81 Elevator Trim Servo Motor. (Refer to the Model 525B, Maintenance Manual, Chapter 27, Elevator and Tab System Components - Removal/Installation.)
5. Remove the 011-01904-01/ 011-02490-20 GSM 86 Servo Gearbox.
  - A. Remove and discard the MS21256-2 Clips from the MS21251-B2L Turnbuckle that connects the 6361011-12 Aft Elevator Trim Cable Assembly and the 6361012-5 Forward Elevator Trim Cable Assembly. (Refer to the Citation Standard Practices Manual, Chapter 20, Safetying - Maintenance Practices.)
    - (1) Loosen the turnbuckle to release the cable tension.
    - (2) Keep the MS21251-B2L Turnbuckle.
  - B. (On Airplane -0057, and Airplanes -0451 thru -0535.) Loosen the clamp block nuts and discard the 6361010-3 Clamp Block, 6361010-4 Clamp Blocks and three each MS24694-C7 Screws, NAS1149FN816P Washers and MS21044N08 Nuts.
    - (1) Remove and keep the 6361011-12 Elevator Trim Aft Cable Assembly.
  - C. (On Airplanes -0536 thru -0631.) Remove and keep the three each MS24667-20 Screws that attach the 6361011-41 and 6361011-42 Clamp Blocks Halves.
    - (1) Remove and keep the 6361011-41 and 6361011-42 Clamp Blocks Halves.

- (2) Remove and keep the 6361011-12 Elevator Trim Aft Cable Assembly.
  - D. (On Airplanes -0057, and -0451 thru -0535.) Loosen the clamp block nuts and discard the 6361010-3 Clamp Block, 6361010-4 Clamp Blocks and three each MS24694-C7 Screws, NAS1149FN816P Washers and MS21044N08 Nuts.
  - E. (On Airplanes -0536 thru -0631), Remove and keep the three each MS24667-20 that attach the 6361011-41 and 6361011-42 Clamp Blocks Halves.
  - F. Remove and keep the four each AN3-4A Bolts and the NAS1149F0363P Washers that attach the GSM 86 Servo Gearbox to the bracket assembly.
  - G. Remove the 011-02490-20 GSM 86 Servo Gearbox and the 6361012-5 Forward Elevator Trim Cable Assembly from the airplane.
  - H. Remove and keep the capstan cover screws, washers, capstan cover and five cable guard pins.
  - I. Remove the 6361012-5 Forward Elevator Trim Cable Assembly from the GSM 86 capstan drum.
    - (1) Remove the 6361012-5 Forward Elevator Trim Cable Assembly from the spiral wrap capstan by sliding the cable ball end past the 'retaining' clip while pressing the retaining clip with a flat screwdriver or similar tool.
    - (2) Discard the 6361012-5 Forward Elevator Trim Cable Assembly.
  - J. Reinstall the capstan cover screws, washers, capstan cover and five cable guard pins on the removed 011-02490-17 GSM 86 Servo Gearbox.
6. (Refer to Figure 1). Install the 011-02490-21 GSM 86 Servo Mount.
- A. Remove and keep the capstan cover screws, washers, capstan cover and five cable guard pins.
  - B. Carefully install the ball ends of the 6361013-19 Upper Elevator Trim Cable Assembly and 6361013-18 Lower Elevator Trim Cable Assembly on the 011-02490-21 GSM 86 Servo Mount.
    - (1) Make sure that the ball is fully seated in the capstan drum.
  - C. Install using the kept cable guard pins in its positions on the 011-02490-21 GSM 86 Servo Mount.
    - (1) (Refer to Figure 1, Sheet 2). Make sure that the cable guard pins are located at B, E, H and L.
  - D. Put the kept capstan cover in its position on the cable guard pins.
    - (1) Install using the kept capstan cover screws and washers but do not tighten.
    - (2) Torque the capstan cover screws from 8 to 12 inch-pounds (0.91 to 1.35 Nm). (Refer to the Citation Standard Practices Manual, Chapter 20, Torque Data - Maintenance Practices.)
  - E. Put the 011-02490-21 GSM 86 Servo Mount and the cable assemblies in their position at the servo mount bracket assembly.
  - F. Install the 011-02490-21 GSM 86 Servo Mount using the kept four each AN3-4A Bolts and the NAS1149F0363P Washers.
  - G. (On Airplane -0057, and Airplanes -0451 thru -0535), Put the 6361013-19 Upper Elevator Trim Cable Assembly and the new 6361011-41 and 6361011-42 Clamp Blocks Halves in its position.

**CAUTION:** The clamp blocks and the nuts must be installed in the correct position to make sure that they do not catch on the adjacent cables or structure. Damage to the cables or the structure can occur if the clamp blocks or the nuts are not installed in the correct position.

**NOTE:** (Refer to Figure 1, Sheet 2). The forward edge of the forward clamp block is  $1.17 \pm 0.25$  inches ( $29.72 \pm 6.35$  mm) from the edge of the left aft elevator trim cable terminal.

(1) Install the new three MS24667-20 Screws to attach the 6361011-41 and 6361011-42 Clamp Blocks Halves.

(a) Torque the three MS24667-20 Screws from 30 to 40 inch-pounds (3.39 to 4.51 Nm). Make sure that the clamp blocks do not slip. (Refer to the Citation Standard Practices Manual, Chapter 20, Torque Data - Maintenance Practices.)

H. (On Airplanes -0536 thru -0631), Put the 6361013-19 Upper Elevator Trim Cable Assembly and the kept 6361011-41 and 6361011-42 Clamp Blocks Halves in its position.

**NOTE:** (Refer to Figure 1, Sheet 2). The forward edge of the forward clamp block is  $1.17 \pm 0.25$  inches ( $29.72 \pm 6.35$  mm) from the edge of the left aft elevator trim cable terminal.

(1) Install using the kept three MS24667-20 Screws to attach the 6361011-41 and 6361011-42 Clamp Blocks Halves.

(a) Torque the three MS24667-20 Screws from 30 to 40 inch-pounds (3.39 to 4.51 Nm). Make sure that the clamp blocks do not slip. (Refer to the Citation Standard Practices Manual, Chapter 20, Torque Data - Maintenance Practices.)

I. (On Airplane -0057, and Airplanes -0451 thru -0535), Put the kept 6361011-12 Aft Elevator Trim Cable Assembly and the new 6361011-41 and 6361011-42 Clamp Blocks Halves in its position.

**NOTE:** (Refer to Figure 1, Sheet 2). The forward edge of the aft clamp block is  $2.08 \pm 0.25$  inches ( $52.83 \pm 6.35$  mm) from the edge of the right aft elevator trim cable terminal.

(1) Install the new three MS24667-20 Screws to attach the 6361011-41 and 6361011-42 Clamp Blocks Halves.

(a) Torque the three MS24667-20 Screws from 30 to 40 inch-pounds (3.39 to 4.51 Nm). Make sure that the clamp blocks do not slip. (Refer to the Citation Standard Practices Manual, Chapter 20, Torque Data - Maintenance Practices.)

J. (On Airplanes -0536 thru -0631.) Put the kept 6361011-12 Aft Elevator Trim Cable Assembly and the kept 6361011-41 and 6361011-42 Clamp Blocks Halves in its position.

**NOTE:** (Refer to Figure 1, Sheet 2). The forward edge of the aft clamp block is  $2.08 \pm 0.25$  inches ( $52.83 \pm 6.35$  mm) from the edge of the right aft elevator trim cable terminal.

(1) Install using the kept three MS24667-20 Screws to attach the 6361011-41 and 6361011-42 Clamp Blocks Halves.

(a) Torque the three MS24667-20 Screws from 30 to 40 inch-pounds (3.39 to 4.51 Nm). Make sure that the clamp blocks do not slip. (Refer to the Citation Standard Practices Manual, Chapter 20, Torque Data - Maintenance Practices.)

7. Connect the 6361011-12 Aft Elevator Trim Cable Assembly and the 6361013-18 Lower Elevator Trim Cable Assembly using the kept MS21251-B2L Turnbuckle.

8. Rig the elevator trim cables. (Refer to the Model 525B Maintenance Manual, Chapter 27, Elevator and Tab System Control Cables - Adjustment/Test.)

9. Install using the new MS21256-2 Clips in the kept MS21251-B2L Turnbuckle. (Refer to the Citation Standard Practices Manual, Chapter 20, Safetying - Maintenance Practices.)

10. Install the Garmin GSA 81 Elevator Trim Servo Motor. (Refer to the Model 525B, Maintenance Manual, Chapter 27, Elevator and Tab System Components - Removal/Installation.)

11. Do an elevator and elevator trim tab travel check. (Refer to the Model 525B Maintenance Manual, Chapter 27, Elevator and Tab System Control Cables - Adjustment/Test.)
12. Install aft baggage compartment panels 322CT and 322ET. (Refer to the Model 525B, Maintenance Manual, Chapter 6, Access Plates and Panels Identification - Description and Operation.)
13. Close the tailcone baggage compartment door.
14. Remove the maintenance warning tags and connect the airplane battery.
15. 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.

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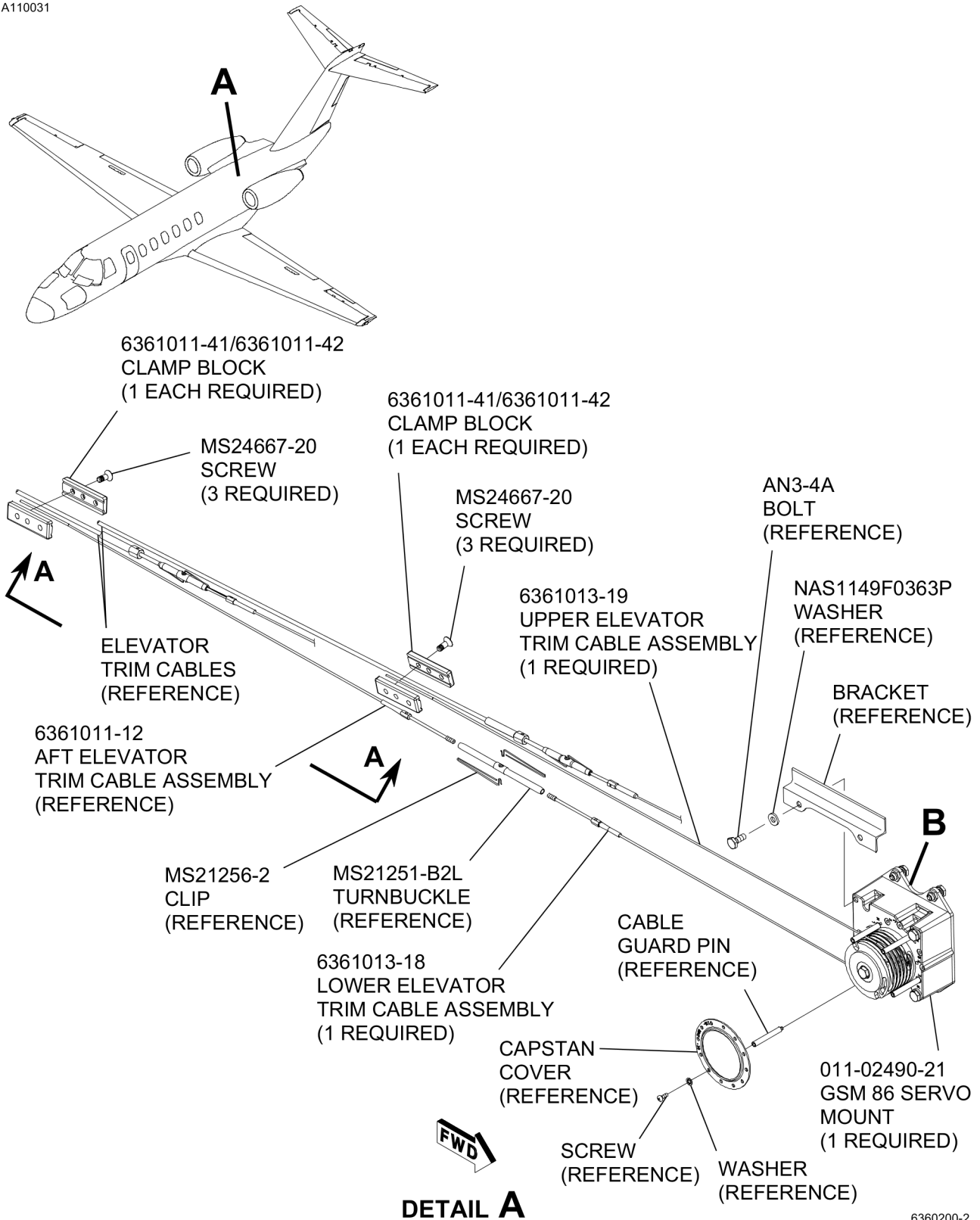
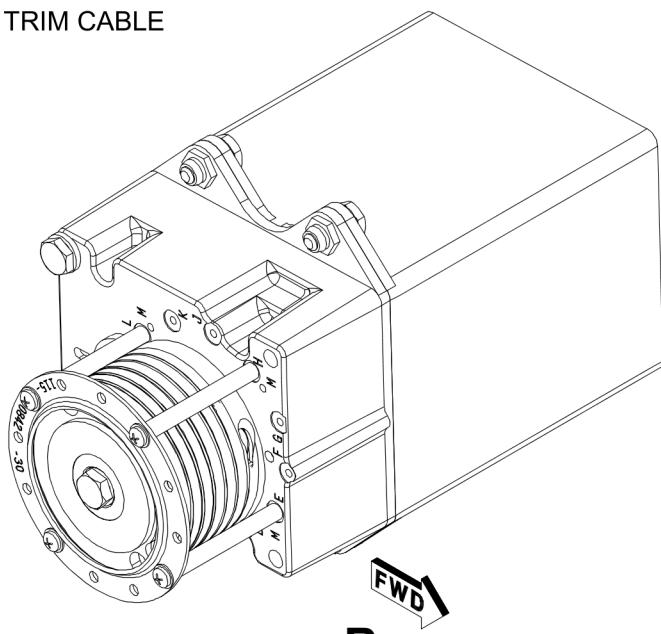
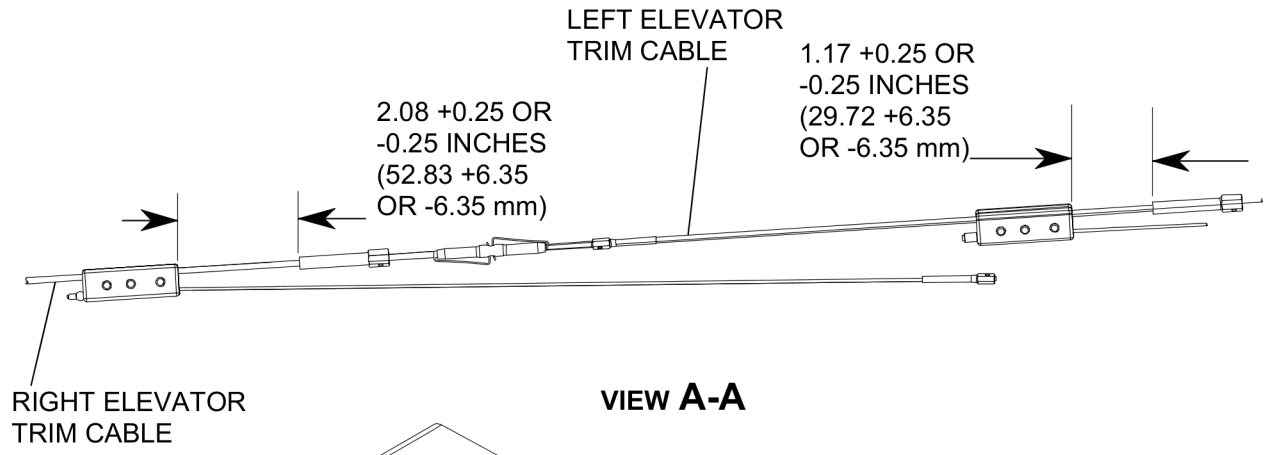
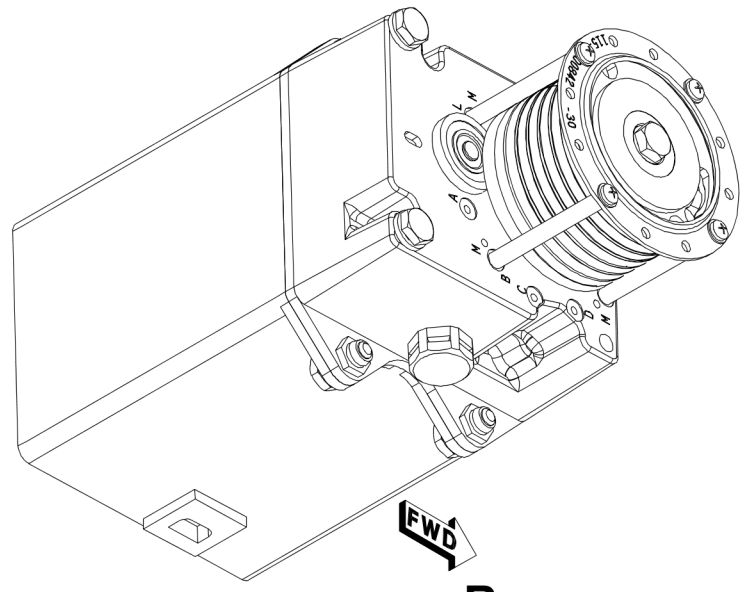


Figure 1. Installation Of The Elevator Trim Capstan and Servo Mount (Sheet 1)

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DETAIL B (NOTE)



DETAIL B (NOTE)

NOTE: THE CABLE GUARD PINS SHOULD BE LOCATED AT B, E, H AND L.

Figure 1. Installation Of The Elevator Trim Capstan and Servo Mount (Sheet 2)

6360200-2  
AA6360200-2  
B6396323-3

**MATERIAL INFORMATION**

Order the kit/parts below to install this modification.

NEW P/N	QUANTITY	KEY WORD	OLD P/N	INSTRUCTIONS/ DISPOSITION
<b>SB525B-27-05-0</b>	1	<b>Kit</b> , consisting of the following parts:		
MS21256-2	2	Clips	MS21256-2	Discard
011-01028-09	1	Standoff Kit	011-01908-02 or 011-01028-08 and 011-02147-01	Discard
6361013-18	1	Cable Assembly	6361012-5	Discard
6361013-19	1	Cable Assembly		
SB525B-27-05	1	Instructions		

In addition to the SB525B-27-05-0 kit, airplanes -0057 and -0451 thru -0535 must order the following kit.

NEW P/N	QUANTITY	KEY WORD	OLD P/N	INSTRUCTIONS/ DISPOSITION
<b>SB525B-27-05-1</b>	1	<b>Kit</b> , consisting of the following parts:		
MS24667-20	6	Screw	MS24694-C7, NAS1149FN816P, MS21044N08	Discard
6361011-41	2	Clamp Block	6361010-3	Discard
6361011-42	2	Clamp Block	6361010-4	Discard

It will be necessary to order the following part to install this modification.

NEW P/N	QUANTITY	KEY WORD	OLD P/N	INSTRUCTIONS/ DISPOSITION
011-02490-21	1	GSM86 Servo Mount	011-01904-01	Discard

\* 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). Send email to: [parts@txtav.com](mailto:parts@txtav.com).

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



**TITLE**

FLIGHT CONTROLS - GARMIN GSM 86 ELEVATOR TRIM MODIFICATION

**TO:**

Cessna Model 525B Aircraft Owner

**REASON**

The current continuous travel capstan design may cause the elevator trim bridle cable to slip.

**COMPLIANCE**

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

**LABOR HOURS****WORK PHASE**

Modification

**LABOR-HOURS**

As Required

**MATERIAL AVAILABILITY**

Order the kit below to complete this service document.

PART NUMBER	AVAILABILITY	COST
SB525B-27-05-0	*	*
SB525B-27-05-1	*	*
011-02490-21	*	*

\* 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). Send email to: [parts@txtav.com](mailto:parts@txtav.com).

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](http://www.txtavsupport.com) to register.

