

TITLE

LANDING GEAR - LANDING GEAR WARNING HORN REPLACEMENT

EFFECTIVITY

MODEL	SERIAL NUMBERS
310Q/T310Q	310Q0460 thru 310Q1160
310R/T310R	310R0001 thru 310R2140

REASON

The original landing gear warning horn is no longer available. If the landing gear warning horn needs to be replaced, a new landing gear warning horn is available and will require an additional bracket for installation.

DESCRIPTION

This service document provides parts and instructions to remove the original landing gear warning horn and install a new landing gear warning horn.

NOTE: If the customer would like to replace the stall warning horn in conjunction with the landing gear warning horn, refer to MEB-34-05: Stall Warning Horn Replacement.

NOTE: Different configurations may be installed on the aircraft.

- **CONFIGURATION 1:** Aircraft replacing the 9910080-1 Landing Gear Warning Horn and the 9910080-2 Stall Warning Horn.
- **CONFIGURATION 2:** Aircraft replacing only the 9910080-1 Landing Gear Warning Horn.
- **CONFIGURATION 3:** Aircraft that have installed **CONFIGURATION 2**, from MEB-34-05: Stall Warning Horn Replacement, that have a 9910080-6 Stall Warning Horn, and the 9910080-1 Landing Gear Warning Horn needs to be replaced.

NOTE: The removal and installation procedures are the same for all Model 310Q and 310R airplanes.

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.

October 11, 2022

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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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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

CONSUMABLE MATERIAL

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

NAME	NUMBER	MANUFACTURER	USE
Color Chemical Film Treatment	Alodine 1132 Touch n Prep Pen	Commercially Available	To protect bare aluminum surface.

TOOLING

No specialized tooling is required to complete this service document.

WEIGHT AND BALANCE INFORMATION

Negligible

REFERENCES

Cessna Model 310P thru 310Q (1969-1974) Illustrated Parts Catalog

Cessna Model 310P and 310Q (1969-1974) Service Manual

Cessna Model 310R and T310R (1975-1981) Maintenance Manual

MEB-34-05: Stall Warning Horn Replacement

NOTE: To make sure all publications used are complete and current. Refer to www.txtavsupport.com.

PUBLICATIONS AFFECTED

Cessna Model 310P thru 310Q (1969-1974) Illustrated Parts Catalog

Cessna Model 310R (1975-1981) 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.

NOTE: Use the references that follow for the removal and operational procedures.

MODEL 310Q

- Cessna Model 310P thru 310Q (1969-1974) Illustrated Parts Catalog, Chapter 24, Electrical Power - Figure 04 - Electrical Equipment Installation.
- Cessna Model 310P and 310Q (1969-1974) Service Manual.

MODEL 310R

- Cessna Model 310R and T310R (1975-1981) Maintenance Manual, Chapter 32, Landing Gear - Position and Warning - Removal/Installation.

2. Gain access as required to get to the 9910080-1 Landing Gear Warning Horn.

CONFIGURATION 1

3. (For Model 310Q Refer to Figure 1, Sheet 1, and for Model 310R Figure 2, Sheet 1.) Remove the 9910080-1 Landing Gear Warning Horn as follows:
- A. Remove and discard the screw and lock washer from the 9910080-1 Landing Gear Warning Horn.
 - B. Disconnect and label the electrical wiring from the 9910080-1 Landing Gear Warning Horn.
 - C. Discard all electrical hardware from the 9910080-1 Landing Gear Warning Horn.
 - D. Discard the 9910080-1 Landing Gear Warning Horn.
 - E. Remove and discard the screw and lock washer from the 9910080-2 Stall Warning Horn.
 - F. Disconnect and label the electrical wiring from the 9910080-2 Stall Warning Horn.
 - G. Discard all electrical hardware from the 9910080-2 Stall Warning Horn.
 - H. Discard the 9910080-2 Stall Warning Horn.
 - I. Remove and discard the mounting screws from the 5118331-X Channel.
 - J. Discard the 5118331-X Channel.
4. (For Model 310Q Refer to Figure 3, Sheet 1 and 2, and for Model 310R Figure 4, Sheet 1 and 2.) Install the 9910080-5 Landing Gear Warning Horn as follows:

NOTE: To install the 9910080-6 Stall Warning Horn, reference **CONFIGURATION 1** procedures and parts from MEB-34-05: Stall Warning Horn Replacement.

- A. (For Model 310Q airplanes.) Match drill the two Number 11/64 (0.172 inch diameter) holes of the 0813005 Plate Assembly to the 5290604-5 Bracket.
 - (1) Deburr the drilled holes from the 5290604-5 Bracket.
 - (2) Apply Color Chemical Film Treatment to all bare metal.
 - (3) Go to Step 4C.
- B. (For Model 310R airplanes.) Match drill the two Number 11/64 (0.172 inch diameter) holes of the 0818109 Support Assembly to the 5290604-5 Bracket.
 - (1) Deburr the drilled holes from the 5290604-5 Bracket.
 - (2) Apply Color Chemical Film Treatment to all bare metal.
- C. Install the 5290604-5 Bracket with the two MS35206-244 Screws and the two NAS1149FN816P Washers into the 0813005 Plate Assembly or the 0818109 Support Assembly.
- D. Install the 9910080-5 Landing Gear Warning Horn into the 5290604-5 Bracket.

- E. Install the knurled nut onto the 9910080-5 Landing Gear Warning Horn.

NOTE: The plastic knurled nut must be installed with the three indents toward the bracket and horn assembly. On the internal circumference, the smooth side without threads is installed first, towards the bracket and horn. This technique of installation will make sure the nut fully seats against the bracket and not bottom-out on the threads. If not installed correctly the knurled nut will bottom-out on the threads and the horn assembly will not be fully tightened in the bracket.

- F. Install the labeled electrical wiring, screws, and the two MS35333-37 Lock Washers into the 9910080-5 Landing Gear Warning Horn.

NOTE: The screws are supplied with the 9910080-5 Landing Gear Warning Horn.

5. Install the 9910080-6 Stall Warning Horn. (Refer to MEB-34-05: Stall Warning Horn Replacement, **CONFIGURATION 1.**)

6. Do the operational check of the 9910080-5 Landing Gear Warning Horn as follows:

- A. Remove the maintenance warning tags and connect the airplane battery.
- B. Jack the airplane until all tires are off of the ground.
- C. Retract the landing gear to the up and locked position.
- D. Put the flap lever to the full down position.

NOTE: The landing gear warning horn should produce an audible sound once the flaps are past the 15 degree position.

- E. Put the flap lever to the full up position.
- F. Extend the landing gear to the down and locked position.
- G. Put the aircraft onto the ground and remove the aircraft jacks.

7. Go to Step 19.

CONFIGURATION 2

8. (For Model 310Q Refer to Figure 1, Sheet 1, and for Model 310R Figure 2, Sheet 1.) Remove the 9910080-1 Landing Gear Warning Horn as follows:

- A. Remove and discard the screw and lock washer from the 9910080-1 Landing Gear Warning Horn.
- B. Disconnect and label the electrical wiring from the 9910080-1 Landing Gear Warning Horn.
- C. Discard all electrical hardware from the 9910080-1 Landing Gear Warning Horn.
- D. Discard the 9910080-1 Landing Gear Warning Horn.
- E. Remove and keep the screw and lock washer from the 9910080-2 Stall Warning Horn.

NOTE: The kept screw and lock washer will be used during installation.

- F. Keep the 9910080-2 Stall Warning Horn.

NOTE: The kept 9910080-2 Stall Warning Horn will be used during installation .

- G. Remove and discard the mounting screws from the 5118331-X Channel.
- H. Discard the 5118331-X Channel.

9. (For Model 310Q Refer to Figure 5, Sheet 1 and 2, and for Model 310R Figure 6, Sheet 1 and 2.) Install the 9910080-5 Landing Gear Warning Horn as follows:

- A. (For Model 310Q airplanes.) Match drill the two Number 11/64 (0.172 inch diameter) holes of the 0813005 Plate Assembly to the 5290604-3 Bracket.

(1) Debur the drilled holes from the 5290604-3 Bracket.

- (2) Apply Color Chemical Film Treatment to all bare metal.
- (3) Go to Step 9C.
- B. (For Model 310R airplanes.) Match drill the two Number 11/64 (0.172 inch diameter) holes of the 0818109 Support Assembly to the 5290604-3 Bracket.
 - (1) Deburr the drilled holes from the 5290604-3 Bracket.
 - (2) Apply Color Chemical Film Treatment to all bare metal.
- C. Install the 5290604-3 Bracket with the two MS35206-244 Screws and the two NAS1149FN816P Washers into the 0813005 Plate Assembly or the 0818109 Support Assembly.
- D. Install the 9910080-5 Landing Gear Warning Horn into the 5290604-3 Bracket.
- E. Install the knurled nut onto the 9910080-5 Landing Gear Warning Horn.

NOTE: The plastic knurled nut must be installed with the three indents toward the bracket and horn assembly. On the internal circumference, the smooth side without threads is installed first, towards the bracket and horn. This technique of installation will make sure the nut fully seats against the bracket and not bottom-out on the threads. If not installed correctly the knurled nut will bottom-out on the threads and the horn assembly will not be fully tightened in the bracket.
- F. Install the labeled electrical wiring, screws, and the two MS35333-37 Lock Washers into the 9910080-5 Landing Gear Warning Horn.

NOTE: The screws are supplied with the 9910080-5 Landing Gear Warning Horn.
- 10. Install the 9910080-2 Stall Warning Horn into the 5290604-3 Bracket with the screw and lock washer.
- 11. Do the operational check for the stall warning horn as follows:
 - A. Remove the maintenance warning tags and connect the airplane battery.
 - B. Put the avionics power switch to the ON position.
 - C. On the left wing tip, activate the stall vane by pushing the tab up.

NOTE: The stall warning horn should produce an audible sound.
- 12. Do the operational check of the 9910080-5 Landing Gear Warning Horn as follows:
 - A. Jack the airplane until all tires are off of the ground.
 - B. Retract the landing gear to the up and locked position.
 - C. Put the flap lever to the full down position.

NOTE: The landing gear warning horn should produce an audible sound once the flaps are past the 15 degree position.
 - D. Put the flap lever to the full up position.
 - E. Extend the landing gear to the down and locked position.
 - F. Put the aircraft onto the ground and remove the aircraft jacks.
- 13. Go to Step 19.

CONFIGURATION 3

NOTE: Make sure that **CONFIGURATION 2** from MEB-34-05: Stall Warning Horn Replacement has been installed.

- 14. (For Model 310Q Refer to Figure 7, Sheet 1, and for Model 310R Figure 9, Sheet 1.) Remove the 9910080-1 Landing Gear Warning Horn as follows:
 - A. Remove and discard the screw and lock washer from the 9910080-1 Landing Gear Warning Horn.

- B. Disconnect and label the electrical wiring from the 9910080-1 Landing Gear Warning Horn.
- C. Discard all electrical hardware from the 9910080-1 Landing Gear Warning Horn.
- D. Discard the 9910080-1 Landing Gear Warning Horn.
- E. Remove and keep the 9910080-6 Stall Warning Horn.

NOTE: The kept 9910080-6 Stall Warning Horn will be used during installation.

- F. Remove and keep the two mounting screws and the two washers from the 5290604-3 Bracket.

NOTE: The kept mounting screws and washers will be used during installation.

- G. Discard the 5290604-3 Bracket.

15. (For Model 310Q Refer to Figure 8, Sheet 1 and 2, and for Model 310R Figure 10, Sheet 1 and 2.) Install the 9910080-5 Landing Gear Warning Horn as follows:

- A. (For Model 310Q airplanes.) Match drill the two Number 11/64 (0.172 inch diameter) holes of the 0813005 Plate Assembly to the 5290604-5 Bracket.

- (1) Debur the drilled holes from the 5290604-5 Bracket.
- (2) Apply Color Chemical Film Treatment to all bare metal.
- (3) Go to Step 15C.

- B. (For Model 310R airplanes.) Match drill the two Number 11/64 (0.172 inch diameter) holes of the 0818109 Support Assembly to the 5290604-5 Bracket.

- (1) Debur the drilled holes from the 5290604-5 Bracket.
- (2) Apply Color Chemical Film Treatment to all bare metal.

- C. Install the 5290604-5 Bracket with the kept mounting screws and washers into the 0813005 Plate Assembly or the 0818109 Support Assembly.

- D. Install the 9910080-5 Landing Gear Warning Horn into the 5290604-5 Bracket.

- E. Install the knurled nut onto the 9910080-5 Landing Gear Warning Horn.

NOTE: The plastic knurled nut must be installed with the three indents toward the bracket and horn assembly. On the internal circumference, the smooth side without threads is installed first, towards the bracket and horn. This technique of installation will make sure the nut fully seats against the bracket and not bottom-out on the threads. If not installed correctly the knurled nut will bottom-out on the threads and the horn assembly will not be fully tightened in the bracket.

- F. Install the labeled electrical wiring, screws, and the two MS35333-37 Lock Washers into the 9910080-5 Landing Gear Warning Horn.

NOTE: The screws are supplied with the 9910080-5 Landing Gear Warning Horn.

16. Install the kept 9910080-6 Stall Warning Horn into the 5290604-5 Bracket.

17. Do the operational check for the stall warning horn as follows:

- A. Remove the maintenance warning tags and connect the airplane battery.
- B. Put the avionics power switch to the ON position.
- C. On the left wing tip, activate the stall vane by pushing the tab up.

NOTE: The stall warning horn should produce an audible sound.

18. Do the operational check of the 9910080-5 Landing Gear Warning Horn as follows:

- A. Jack the airplane until all tires are off of the ground.
- B. Retract the landing gear to the up and locked position.

- C. Put the flap lever to the full down position.

NOTE: The landing gear warning horn should produce an audible sound once the flaps are past the 15 degree position.

- D. Put the flap lever to the full up position.
 - E. Extend the landing gear to the down and locked position.
 - F. Put the aircraft onto the ground and remove the aircraft jacks.
- 19. Put the avionics power switch to the OFF position.
 - 20. Disconnect the airplane battery.
 - 21. Install all access panels and interior that were removed during this bulletin.
 - 22. Make an entry in the airplane logbook that states compliance and method of compliance with this service document.

B22175

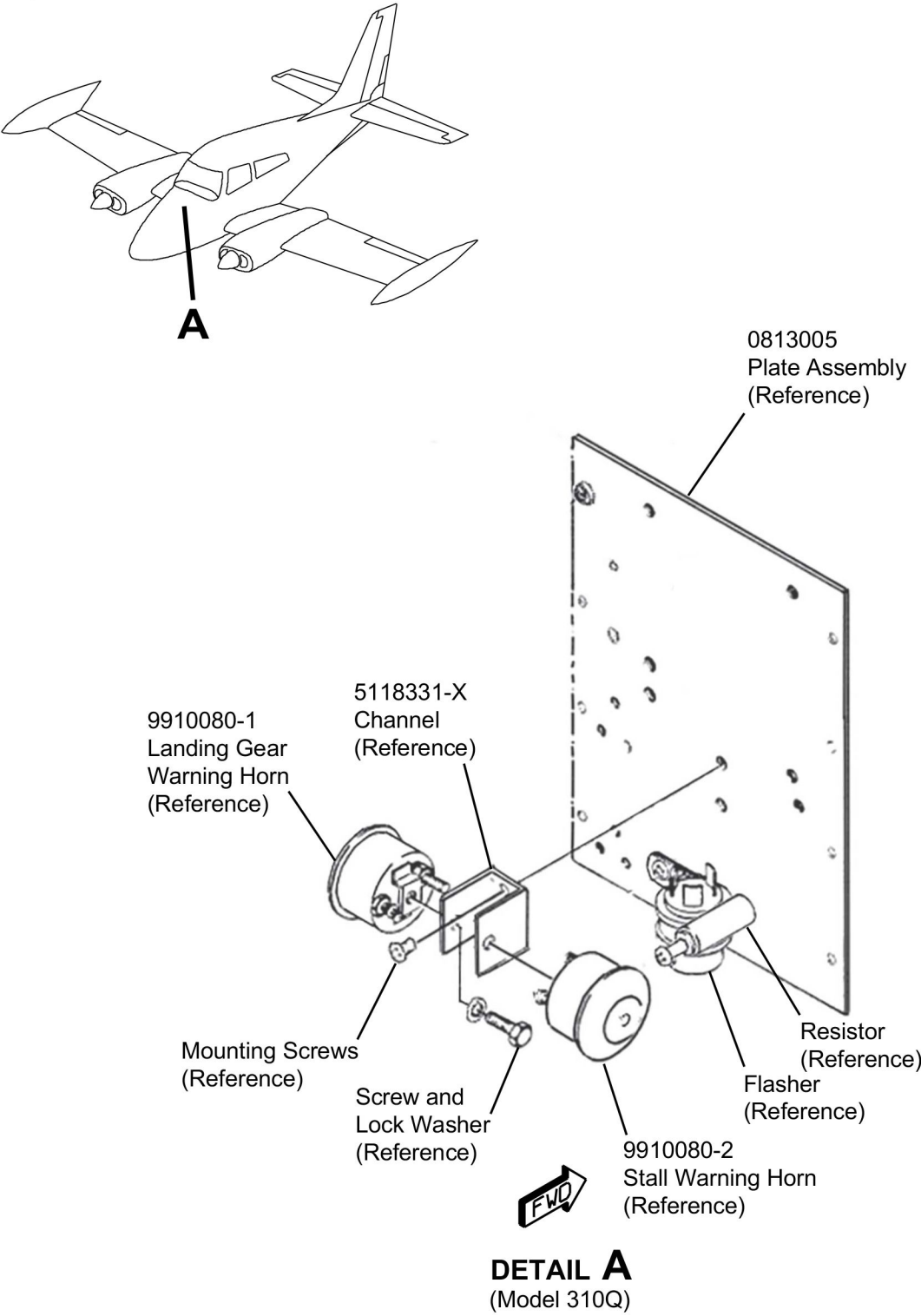


Figure 1. 310Q Before Modification (Sheet 1)

B22176

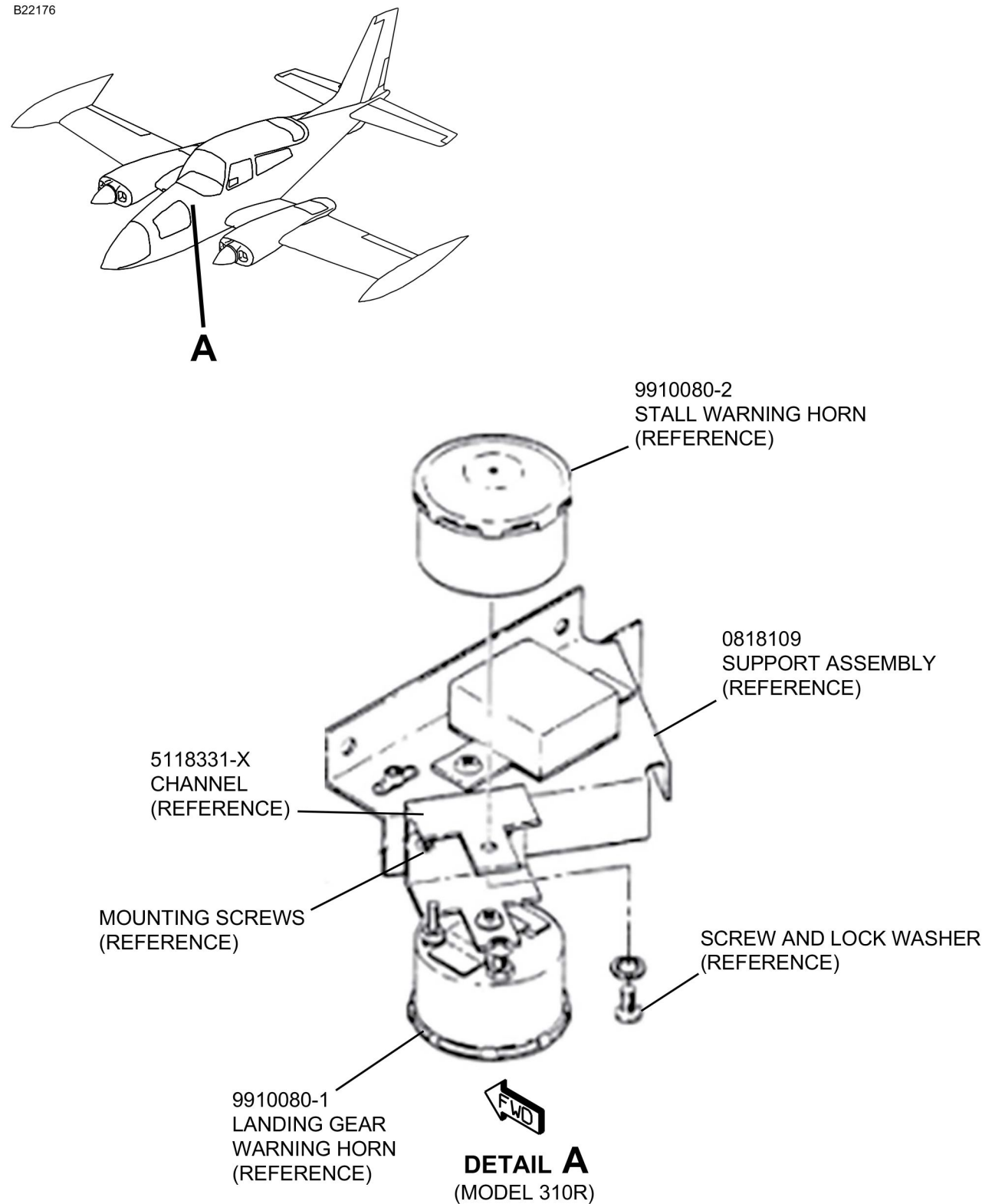
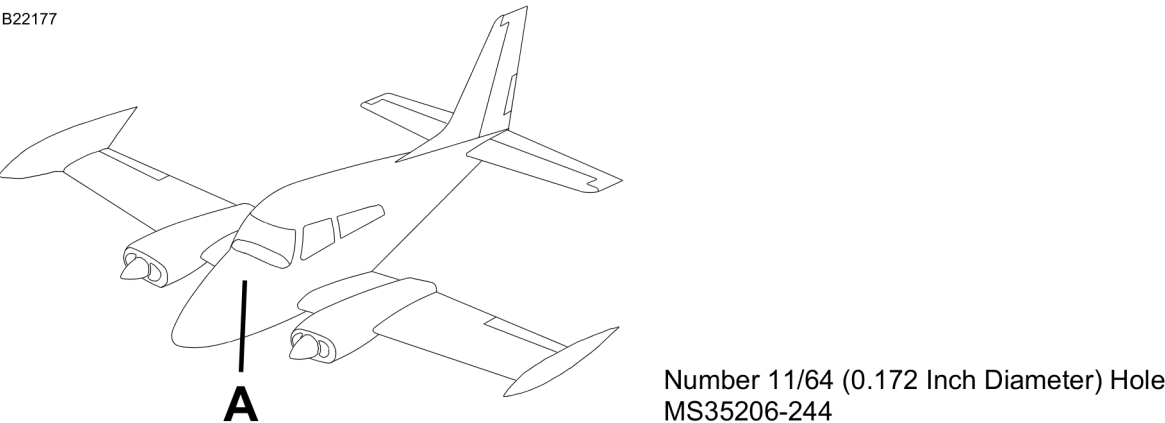
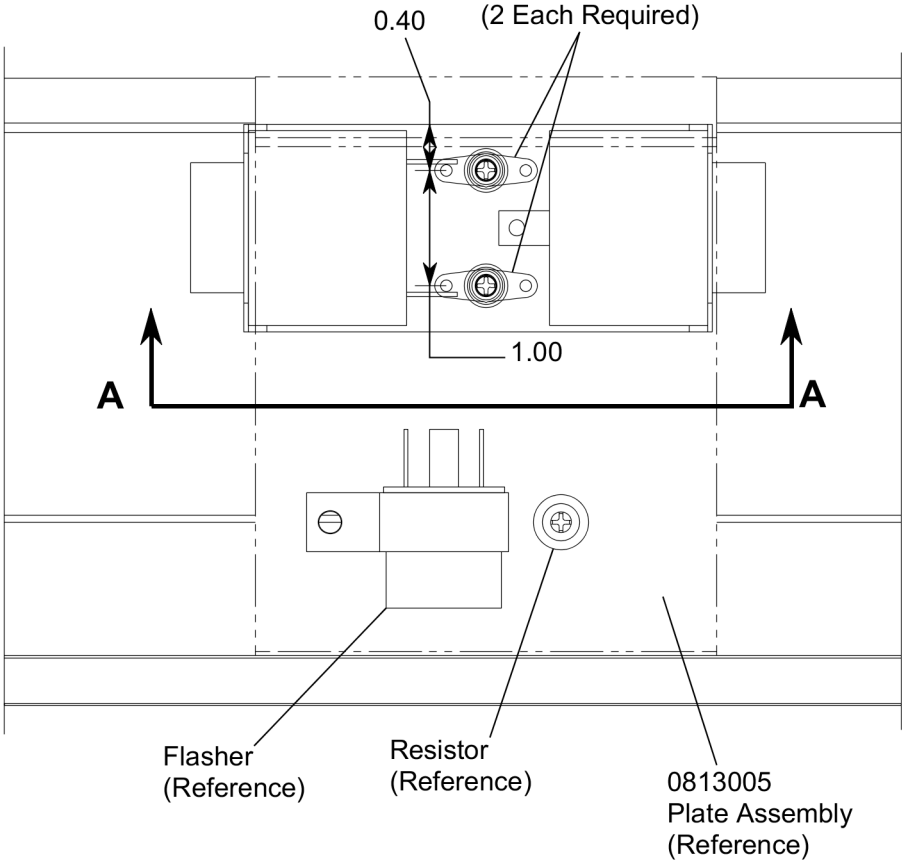


Figure 2. 310R Before Modification (Sheet 1)

B22177



Number 11/64 (0.172 Inch Diameter) Hole
MS35206-244
Screw
NAS1149FN816P
Washer
(2 Each Required)



DETAIL A

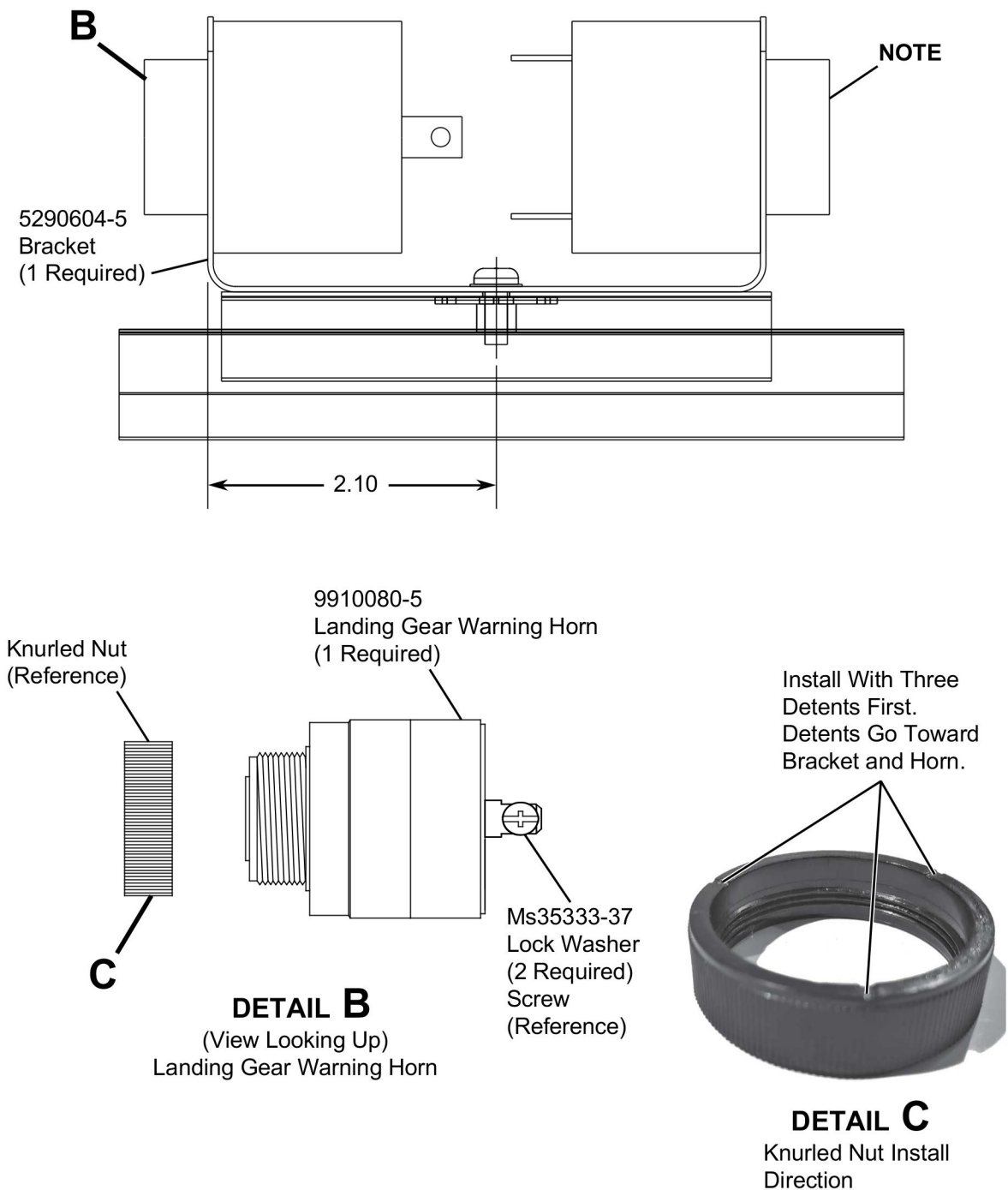
(View Looking Forward)

NOTE: All Dimensions are in Inches.

0890604-1

Figure 3. 310Q Configuration 1 (Sheet 1)

B22178

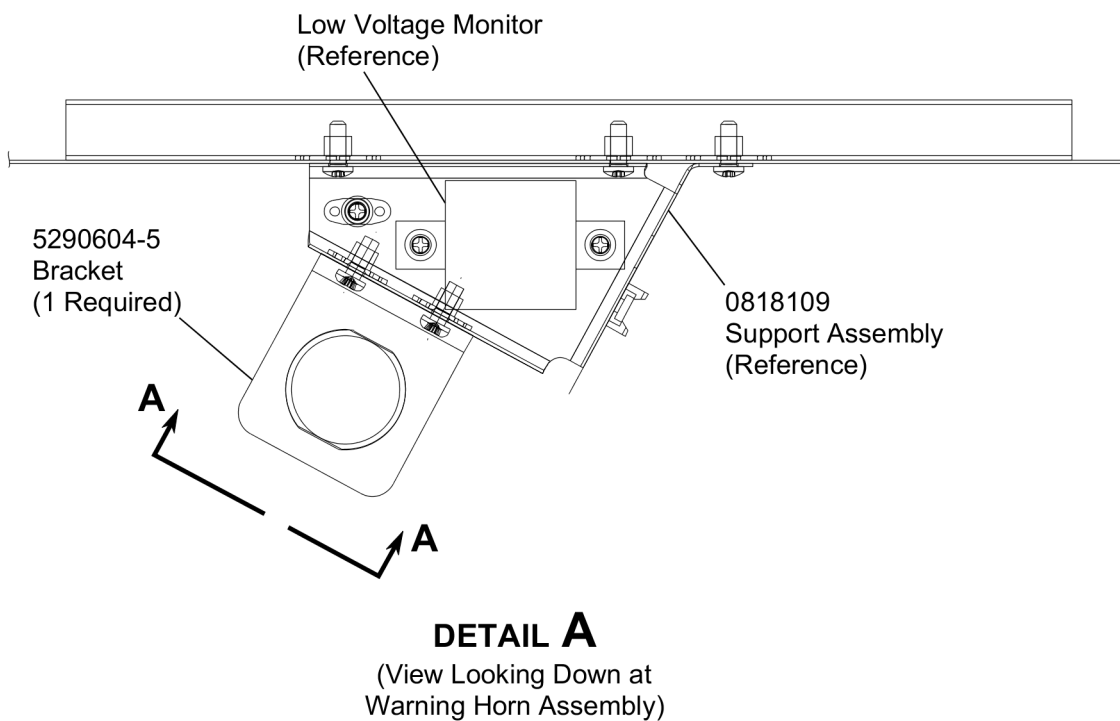
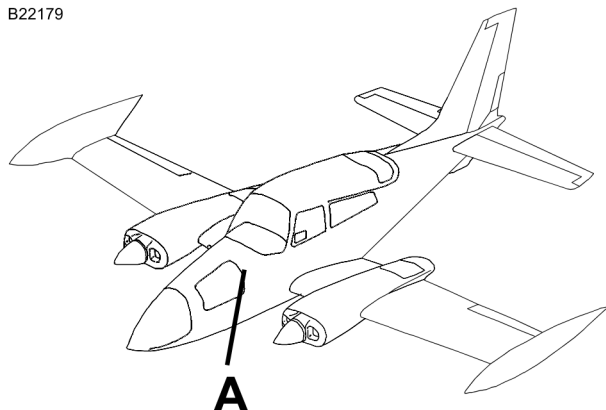


NOTE: For Stall Warning Horn Parts Refer to MEB-34-05: Stall Warning Horn Replacement.

0890604-1

Figure 3. 310Q Configuration 1 (Sheet 2)

B22179



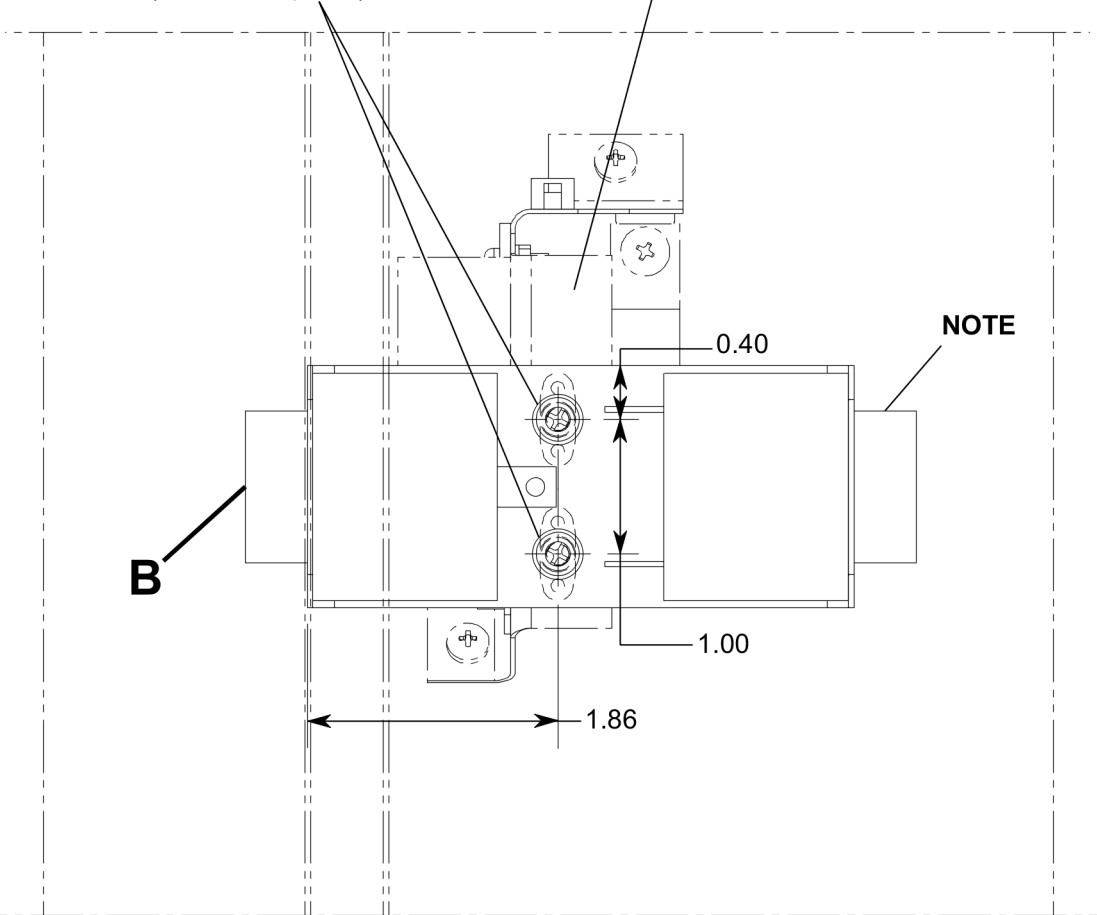
NOTE: All Dimensions are in Inches.

0890604-2

Figure 4. 310R Configuration 1 (Sheet 1)

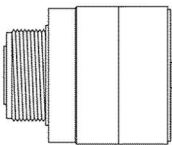
B22180

- Number 11/64
(0.172 Inch Diameter) Hole
MS35206-244
Screw
NAS1149FN816P
Washer
(2 Each Required)
- 0818109
Support Assembly
(Reference)



Knurled Nut
(Reference)

C



DETAIL B

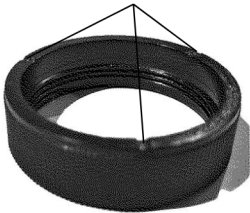
(View Looking Outboard)
Landing Gear Warning Horn

VIEW A-A

(View Looking Outboard)

- 9910080-5
Landing Gear
Warning Horn
(1 Required)
MS35333-37
Lock Washer
(2 Required)
Screw
(Reference)

Install With Three
Detents First. Detents Go
Toward Bracket and Horn.



DETAIL C

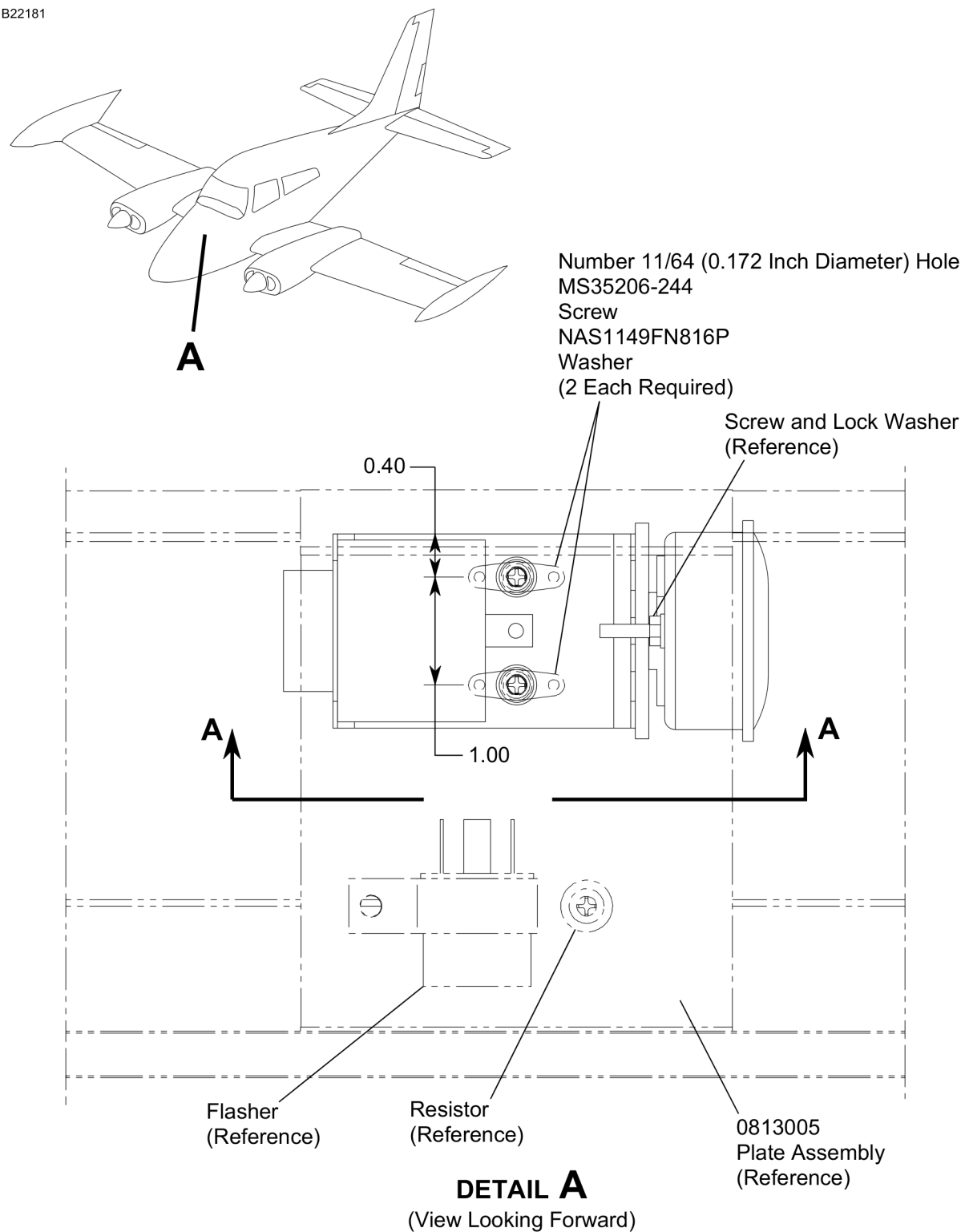
Knurled Nut Install Direction

NOTE: For Stall Warning Horn Parts Refer to MEB-34-05: Stall
Warning Horn Replacement.

0890604-2

Figure 4. 310R Configuration 1 (Sheet 2)

B22181



NOTE: All Dimensions are in Inches.

08602904-1

Figure 5. 310Q Configuration 2 (Sheet 1)

B22182

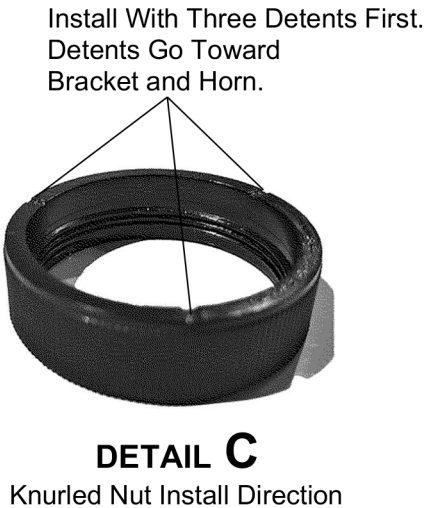
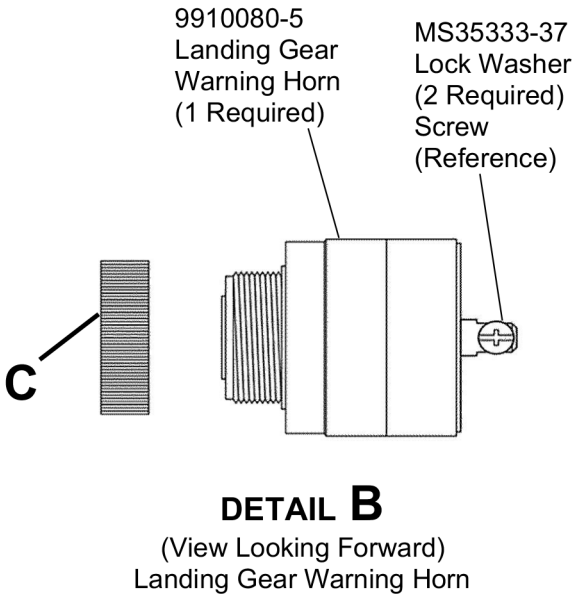
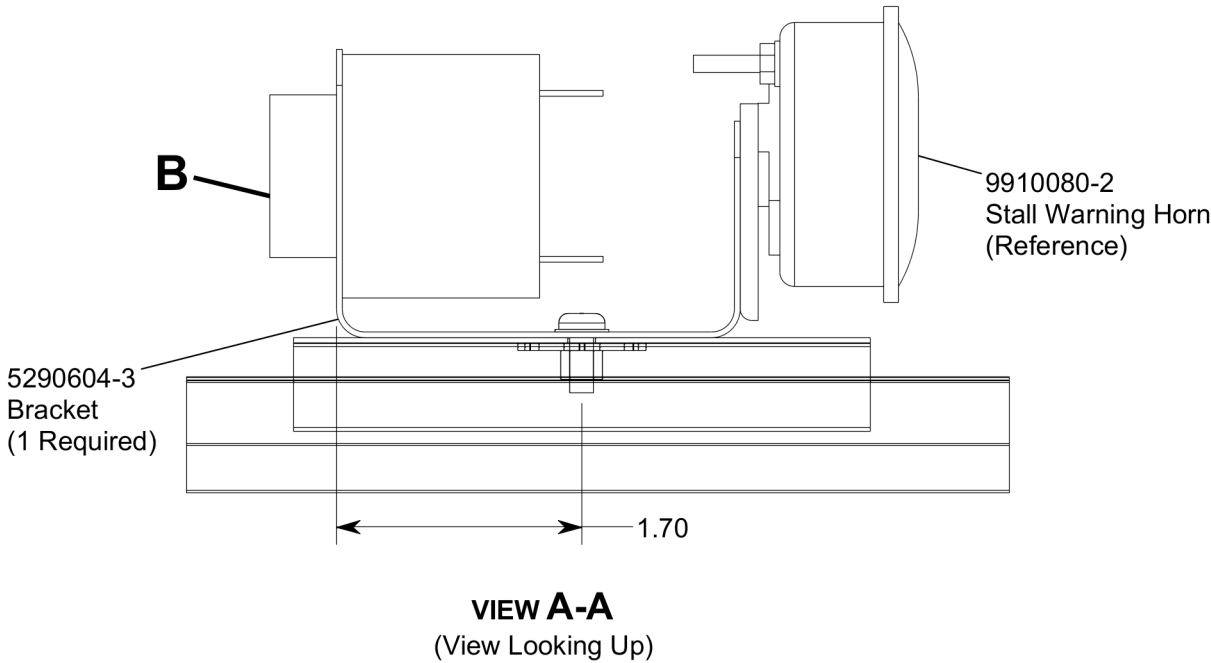
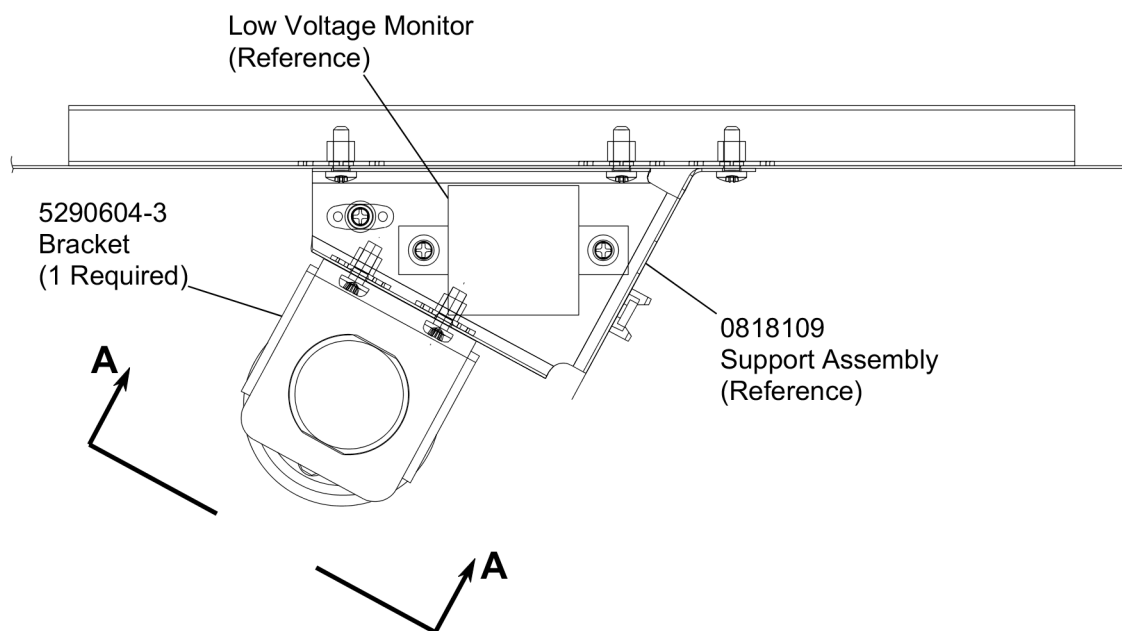
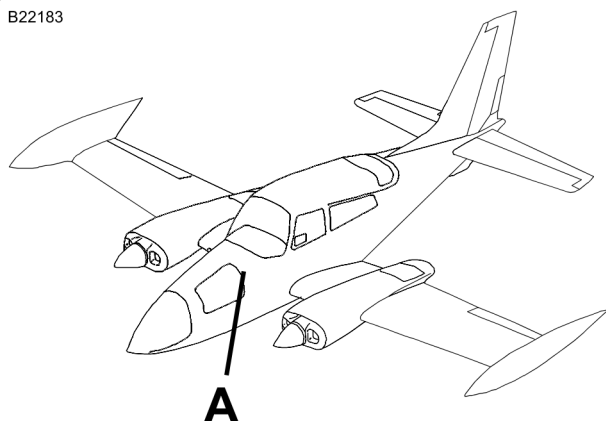


Figure 5. 310Q Configuration 2 (Sheet 2)

0890604-1

B22183



DETAIL A
(View Looking Down at
Warning Horn Assembly)

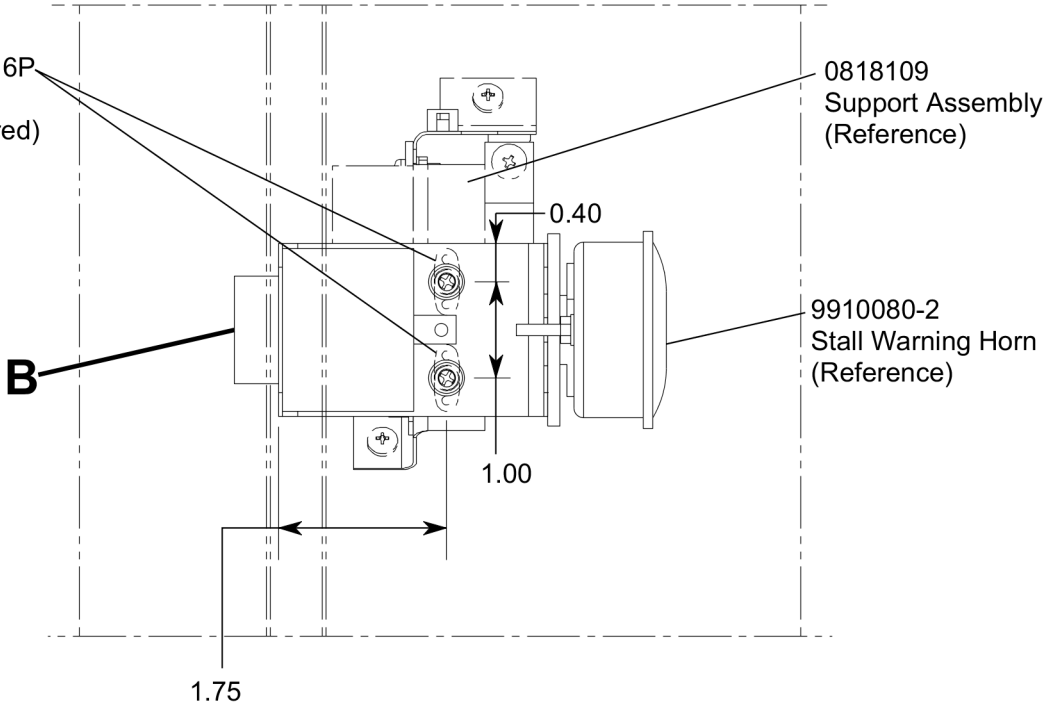
NOTE: All Dimensions are in Inches.

0890604-2

Figure 6. 310R Configuration 2 (Sheet 1)

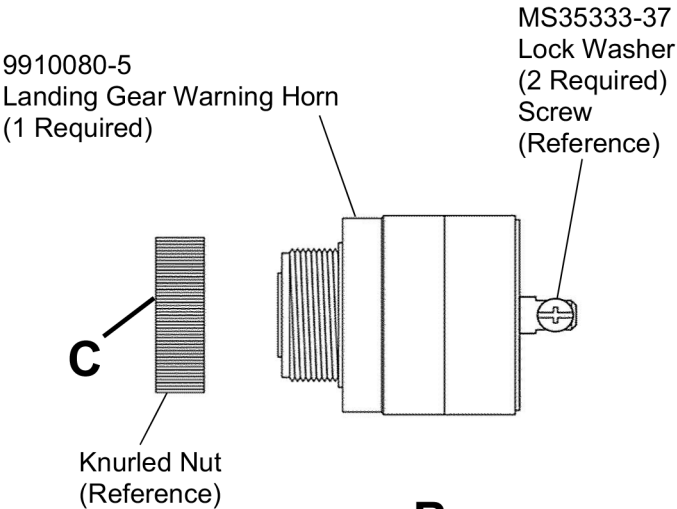
B22184

Number 11/64 (0.172 Inch Diameter) Hole
MS35206-244
Screw
NAS1149FN816P
Washer
(2 Each Required)



VIEW A-A

(View Looking Outboard)



DETAIL B

(View Looking Outboard)
Landing Gear Warning Horn



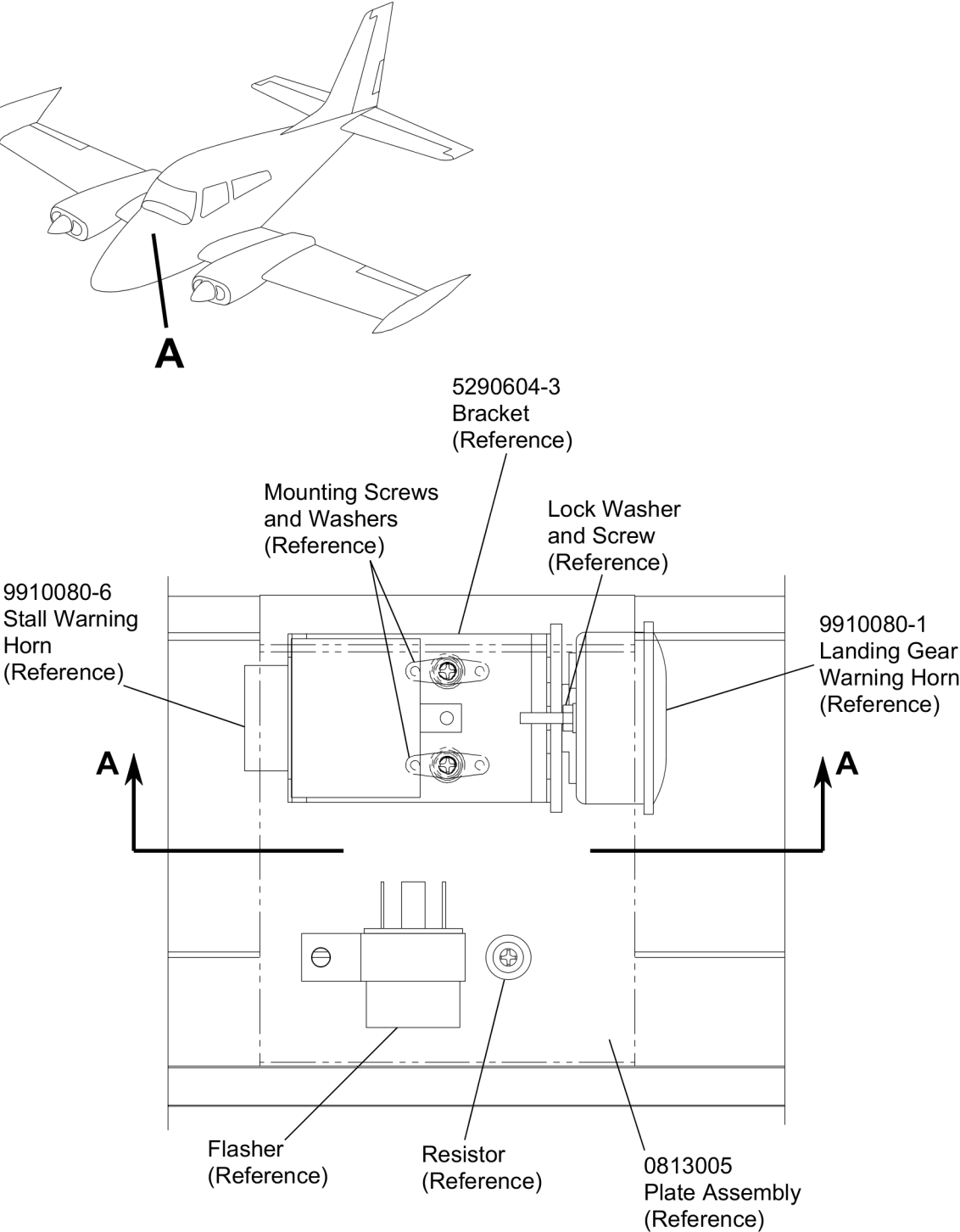
DETAIL C

Knurled Nut Install Direction

Figure 6. 310R Configuration 2 (Sheet 2)

0890604

B22185

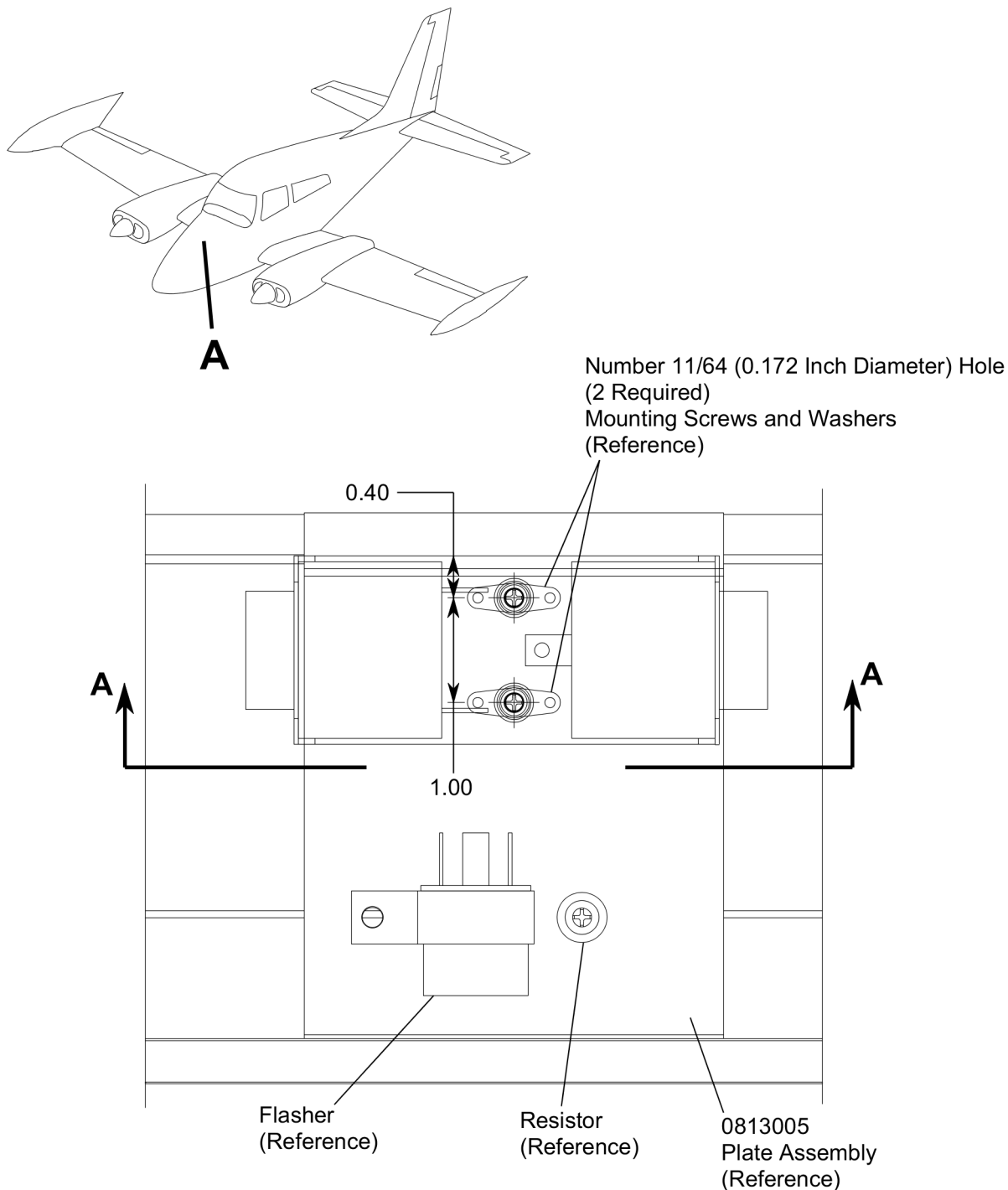


DETAIL A
(View Looking Forward)

0890604

Figure 7. 310Q Before Configuration 3 Modification (Sheet 1)

B22186



DETAIL A
(View Looking Forward)

NOTE: All Dimensions are in Inches.

8290624

Figure 8. 310Q Configuration 3 (Sheet 1)

B22187

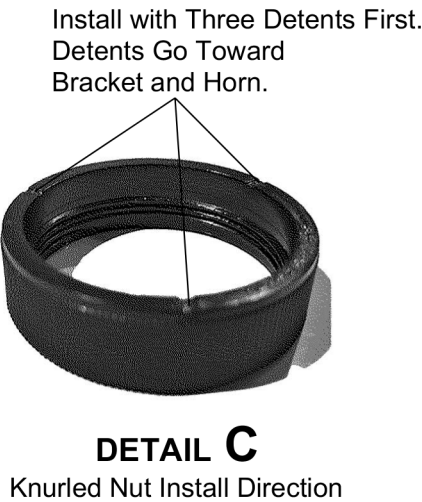
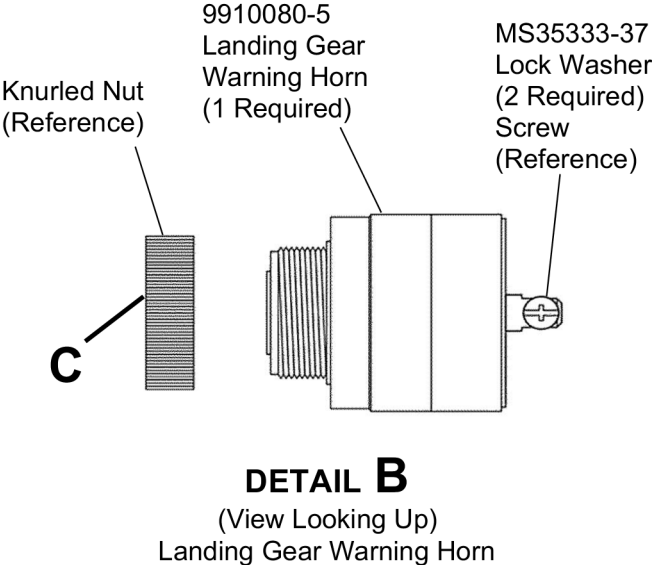
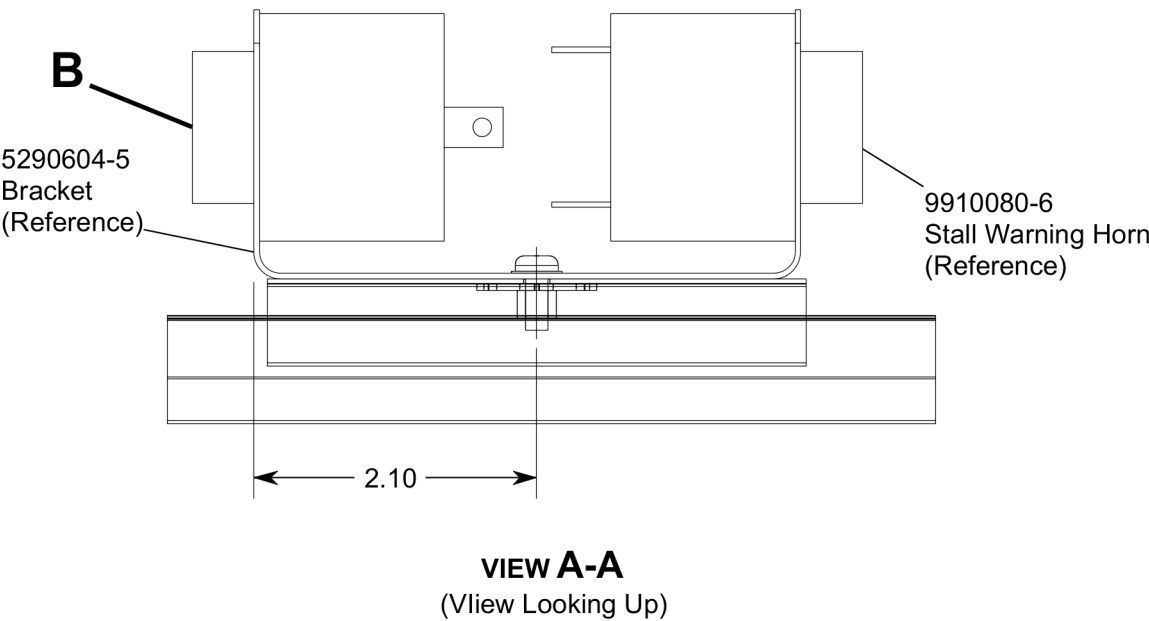
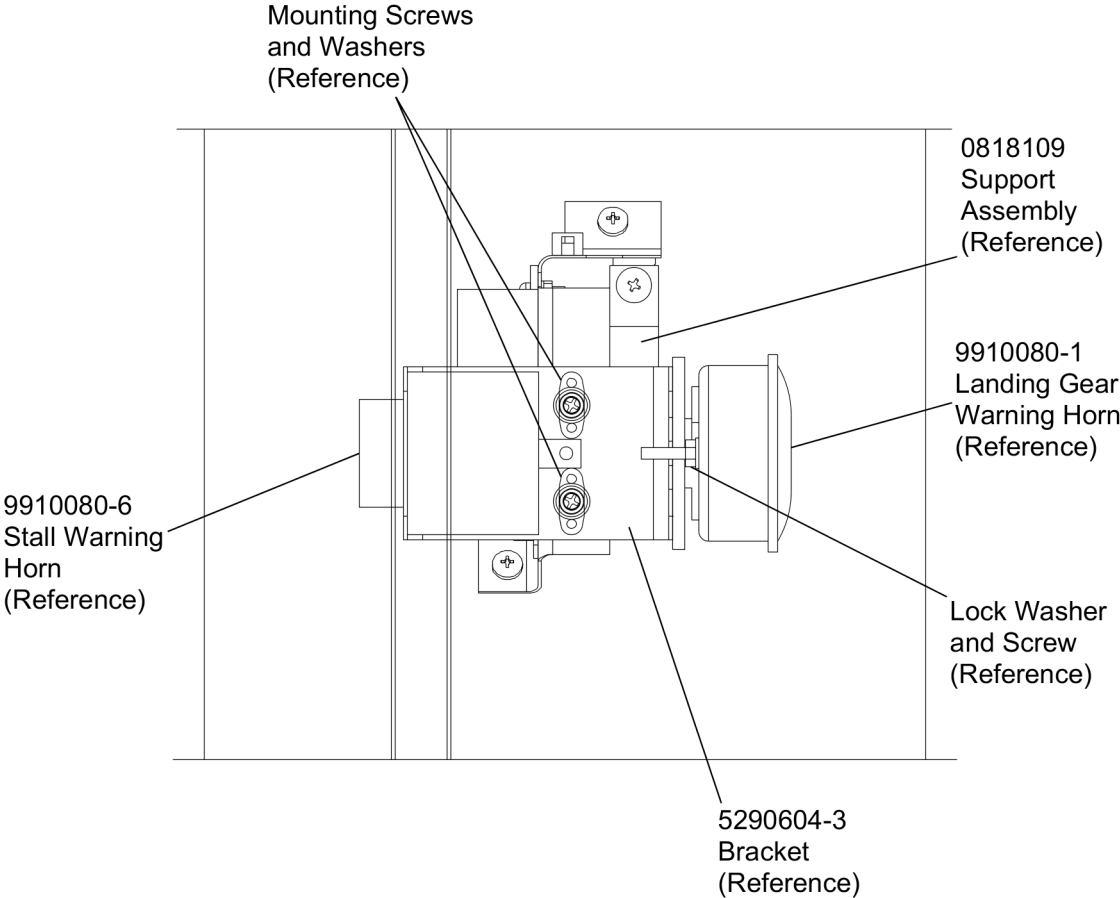
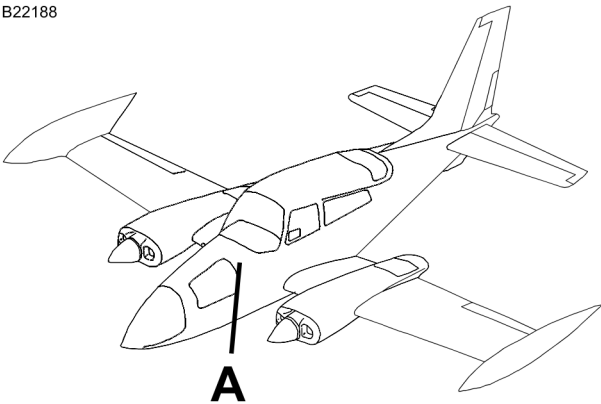


Figure 8. 310Q Configuration 3 (Sheet 2)

8290604

B22188

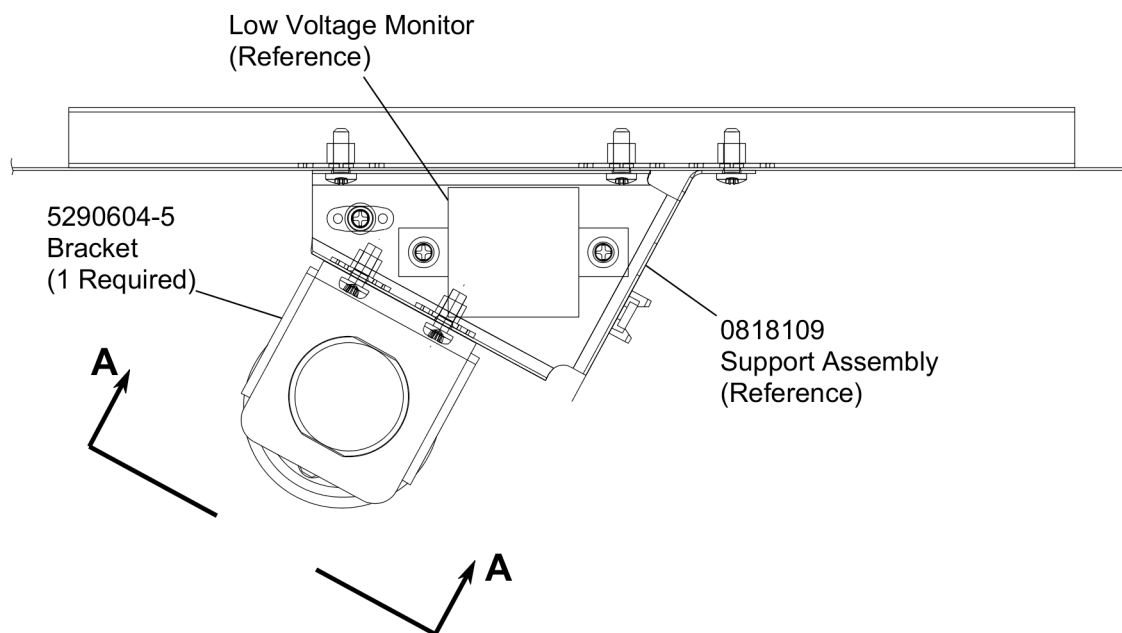
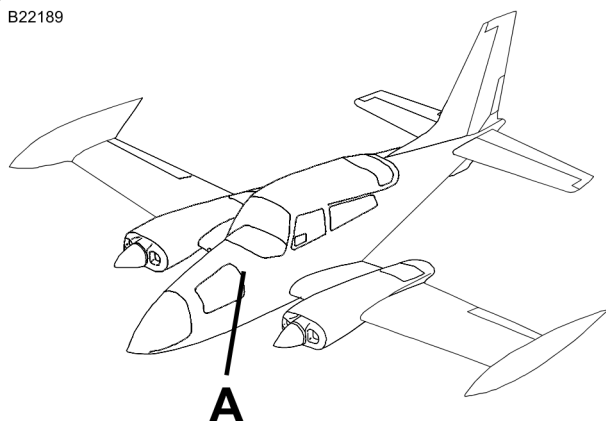


DETAIL A
(View Looking Outboard)

Figure 9. 310R Before Configuration 3 Modification (Sheet 1)

8290264

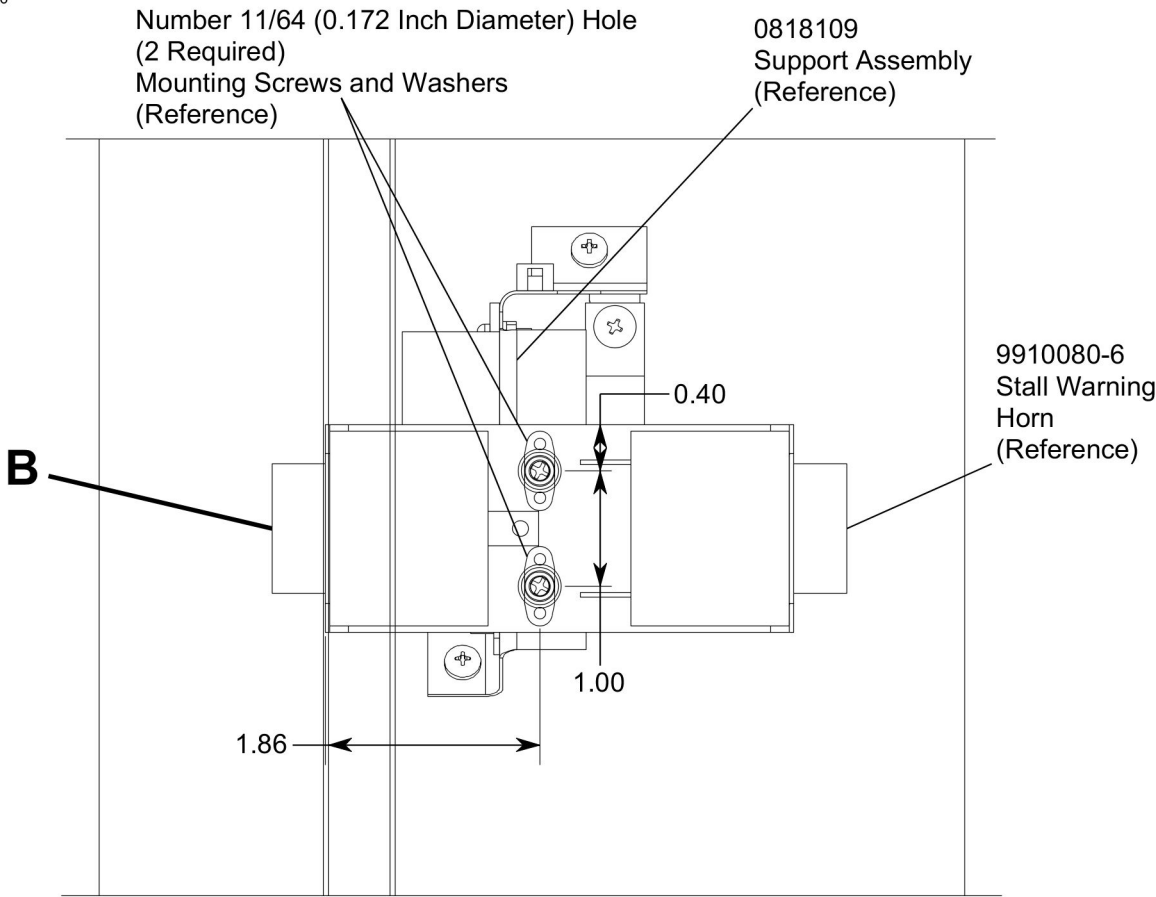
B22189

**DETAIL A**(View Looking Down at
Warning Horn Assembly)**NOTE:** All Dimensions are in Inches.

0890604-2

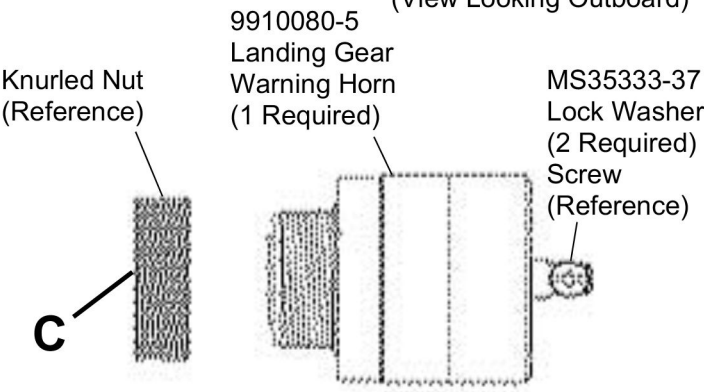
Figure 10. 310R Configuration 3 (Sheet 1)

B22190



VIEW A-A

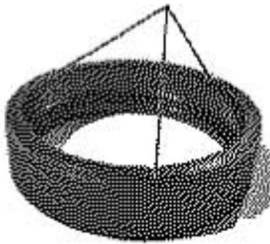
(View Looking Outboard)



DETAIL B

(View Looking Up)
Landing Gear Warning Horn

Install with Three Detents First.
Detents Go Toward
Bracket and Horn.



DETAIL C

Knurled Nut Install Direction

Figure 10. 310R Configuration 3 (Sheet 2)

8290604

MATERIAL INFORMATION

CONFIGURATION 1 order the kit below to install this modification.

NOTE: To install the stall warning horn in conjunction with the 9910080-5 Landing Gear Warning Horn, order the kit from MEB-34-05: Stall Warning Horn Replacement.

NEW P/N	QUAN- TITY	KEY WORD	OLD P/N	INSTRUCTIONS/ DISPOSITION
MEB-32-01-0	1	Kit , consisting of the following parts:		
MS35333-37	2	Lock Washer	N/A	Install
MS35206-244	2	Screw	MS35206-241	Discard
NAS1149FN816P	2	Washer	N/A	Install
5290604-5	1	Bracket	5118331-X	Discard
9910080-5	1	Landing Gear Warning Horn	9910080-1	Discard
MEB-32-01	1	Instructions		

CONFIGURATION 2 order the kit below to install this modification.

NEW P/N	QUAN- TITY	KEY WORD	OLD P/N	INSTRUCTIONS/ DISPOSITION
MEB-32-01-1	1	Kit , consisting of the following parts:		
MS35206-244	2	Screw	MS35206-241	Discard
MS35333-37	2	Lock Washer	N/A	Install
NAS1149FN816P	2	Washer	N/A	Install
5290604-3	1	Bracket	5118331-X	Discard
9910080-5	1	Landing Gear Warning Horn	9910080-1	Discard
MEB-32-01	1	Instructions		

CONFIGURATION 3 order the kit below to install this modification.

NEW P/N	QUAN- TITY	KEY WORD	OLD P/N	INSTRUCTIONS/ DISPOSITION
MEB-32-01-2	1	Kit , consisting of the following parts:		
MS35333-37	2	Lock Washer	N/A	Install
5290604-5	1	Bracket	5290604-3	Discard
9910080-5	1	Landing Gear Warning Horn	9910080-1	Discard
MEB-32-01	1	Instructions		

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

* Please contact a Textron Aviation Authorized Service Facility for current cost and availability of parts listed in this service document.

TITLE

LANDING GEAR - LANDING GEAR WARNING HORN REPLACEMENT

TO:

Cessna Model 310Q and 310R Aircraft Owner

REASON

The original landing gear warning horn is no longer available. If the landing gear warning horn needs to be replaced, a new landing gear warning horn is available and will require an additional bracket for installation.

COMPLIANCE

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

LABOR HOURS

For planning purposes only:

WORK PHASE	LABOR-HOURS
Modification	As Required
Test and Inspection	As Required

MATERIAL AVAILABILITY

PART NUMBER	AVAILABILITY	COST
MEB-32-01-0	*	*
MEB-32-01-1	*	*
MEB-32-01-2	*	*

* Please contact a Textron Aviation Authorized Service Facility for current cost and availability of parts listed in this service document.

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.

October 11, 2022

MEB-32-01
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