

Service Bulletin

January 22, 2001

SEB01-1

TITLE RUDDER STOP MODIFICATION

EFFECTIVITY:

<u>Model Series</u>	<u>Year</u>	<u>Serial Numbers</u>
150F	1966	15061533 thru 15064532
150G	1967	15064533 thru 15064969
150G	1967	15064971 thru 15067198
150H	1968	15067199 thru 15069308
150H		649
150J	1969	15069309 thru 15071128
150K	1970	15071129 thru 15072003
150L	1971	15072004 thru 15072628
150L	1972	15072629 thru 15073658
150L	1973	15073659 thru 15074850
150L	1974	15074851 thru 15075781
150M	1975	15075782 thru 15077005
150M	1976	15077006 thru 15078505
150M	1977	15078506 thru 15079405
A150K	1970	A1500001 thru A1500226
A150L	1971	A1500227 thru A1500276
A150L	1972	A1500277 thru A1500342
A150L	1973	A1500343 thru A1500429
A150L	1974	A1500430 thru A1500432
A150L	1974	A1500434 thru A1500523
A150M	1975	A1500524 thru A1500609
A150M		15064970
A150M	1976	A1500610 thru A1500684
A150M	1977	A1500685 thru A1500734
152	1978	15279406 thru 15282031
152	1979	15282032 thru 15283591
152	1980	15283592 thru 15284541
152	1981	15284542 thru 15285161
152	1982	15285162 thru 15285594
152	1983	15285595 thru 15285833
152	1984	15285834 thru 15285939
152	1985	15285940 thru 15286033

<u>Model Series</u>	<u>Year</u>	<u>Serial Numbers</u>
A152	1978	A1520735 thru A1520808
A152		A1500433
A152	1979	A1520809 thru A1520878
A152		681
A152	1980	A1520879 thru A1520943
A152	1981	A1520944 thru A1520983
A152	1982	A1520984 thru A1521014
A152	1983	A1521015 thru A1521025
A152	1984	A1521026 thru A1521027
A152	1985	A1521028 thru A1521049
A-150L	1972 thru 1973	A-1501001 thru A-1501039
A-A150L	1972 thru 1973	A-A1500001 thru A-A1500009
F150F	1966	F150-0001 thru F150-0067
F150G	1967	F150-0068 thru F150-0219
F150H	1968	F150-0220 thru F150-0389
F150J	1969	F150-0390 thru F150-0529
F150K	1970	F15000530 thru F15000656
F150L	1971	F15000659 thru F15000738
F150L	1972	F15000739 thru F15000863
F150L	1973	F15000864 thru F15001013
F150L	1974	F15001014 thru F15001143
F150M	1975	F15001144 thru F15001248
F150M	1976	F15001249 thru F15001338
F150M	1977	F15001339 thru F15001428
FA150K	1970	FA1500001 thru FA1500081
FA150L	1971	FA1500082 thru FA1500120
FA150L	1972	FA1500121 thru FA1500166
FA150L	1973	FA1500167 thru FA1500211
FA150L	1974	FA1500212 thru FA1500261
FA150M	1975	FA1500262 thru FA1500281
FA150M	1976	FA1500282 thru FA1500311
FA150M	1977	FA1500312 thru FA1500336
F152	1978	F15201429 thru F15001528
F152	1979	F15201529 thru F15201673
F152	1980	F15201674 thru F15201808
F152	1981	F15201809 thru F15201893
F152	1982	F15201894 thru F15201928
F152	1983	F15201929 thru F15201943
F152	1984	F15201944 thru F15201952
F152	1985	F15201953 thru F15201965
F152	1986	F15201966 thru F15201980
FA152	1978	FA1520337 thru FA1520347
FA152	1979	FA1520348 thru FA1520357
FA152	1980	FA1520358 thru FA1520372
FA152	1981	FA1520373 thru FA1520377
FA152	1982	FA1520378 thru FA1520382

<u>Model Series</u>	<u>Year</u>	<u>Serial Numbers</u>
FA152	1983	FA1520383 thru FA1520387
FA152	1985	FA1520388 thru FA1520415
FA152	1986	FA1520416 thru FA1520425

PURPOSE

To provide an enhanced rudder stop, bumper, doubler and attachment hardware designed to assist in preventing the possibility of the rudder overriding the stop bolt during full left and/or right operation of the rudder.

COMPLIANCE

Mandatory; within the next 100 hours of operation or 12 months, whichever occurs first.

APPROVAL

FAA approval has been obtained on technical data in this publication that affects airplane type design.

For Reims Aviation airplanes: DGAC approval has been obtained on technical data in this publication that affects airplane type design

MAN-HOURS

Approximately 4.0 man-hours to install SK152-24 or SK152-25.

MATERIAL

The following parts are available from Cessna Parts Distribution through an appropriate Cessna Service Station for the suggested list price shown.

<u>Part Number</u>	<u>Description</u>	<u>Qty/Airplane</u>	<u>Price</u>
SK152-24	Rudder Stop Modification Kit (Sheet metal Bulkhead)	1	\$ 67.60 (A) ea.
SK152-25	Rudder Stop Modification Kit (Forged Bulkhead)	1	\$ 54.20 (A) ea.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

ACCOMPLISHMENT INSTRUCTIONS

Change In Weight And Balance

Negligible

SK152-24 and SK152-25 instructions are attached.

NOTE: This information shall be considered an amendment to the Cessna Manufacturer's Service/Maintenance Manual or Instructions for continued airworthiness, and must be accomplished for ongoing airworthiness compliance as required per FAR43.13.

CREDIT

Not applicable

OWNER NOTIFICATION

On January 22, 2001 the following Owner Advisory message will be sent to applicable owners of record in SEB01-1A.

Dear Cessna Owner:

This Owner Advisory is to inform you that Cessna has issued Service Bulletin SEB01-1 which provides a modification for the rudder stop on your airplane.

This modification provides an enhanced rudder stop, bumper, doubler and attachment hardware designed to assist in preventing the possibility of the rudder overriding the stop bolt during full left and/or right operation of the rudder.

Compliance is mandatory: shall be accomplished within the next 100 hours of operation or 12 months, whichever occurs first.

The information contained in the referenced Cessna Service Bulletin shall be considered an amendment to the Cessna Manufacturer's Service/Maintenance Manual or Instructions for continued airworthiness, and must be accomplished for ongoing airworthiness compliance as required per FAR43.13.

Please contact a Cessna Single Engine Service Station for detailed information and arrange to have Cessna Service Bulletin SEB01-1 accomplished on your airplane.

* * * * *

SERVICE KIT



SK152-24A

TITLE RUDDER STOP MODIFICATION - SHEET METAL BULKHEAD

EFFECTIVITY

NOTE: Some airplanes in this serial range may have a forged bulkhead installed after leaving the factory. Service Kit SK152-25A or later revision must be used to modify these airplanes.

MODEL SERIES

SERIAL NUMBERS

150	15061533 thru 15079405
150	649
A150	A1500001 thru A1500734
152	15279406 thru 15284541
A152	A1520735 thru A1520943
F150	F150-0001 thru F150-0529
F150	F15000530 thru F15001428
FA150	FA1500001 thru FA1500336
F152	F15201429 thru F15201828
FA152	FA1520337 thru FA1520372
A-150	A-1501001 thru A-1501039
A-A150	A-A1500001 thru A-A1500009

DESCRIPTION

This kit provides parts and instructions to replace rudder stops, rudder stop bumpers and nutplates; also adds doublers and replaces safety wire with jamnuts.

APPROVAL

FAA approval has been obtained on technical data in this publication that affects airplane type design.

For Reims Aviation airplanes: DGAC approval has been obtained on technical data in this publication that affects airplane type design.

REFERENCE

SEB01-1

CHANGE IN WEIGHT AND BALANCE

Negligible

NOTE: The accomplishment of this service bulletin will have a negligible effect on the control surface balance.

January 22, 2001
Revision A - March 9, 2001

Page 1 of 6

To obtain satisfactory results, procedures specified in this publication must be accomplished in accordance with accepted methods and prevailing government regulations. Cessna Aircraft Company cannot be responsible for the quality of work performed in accomplishing the requirements of this publication.

Cessna Aircraft Company, Product Support, P.O. Box 7706, Wichita, Kansas 67277, U.S.A. (316) 517-5800 Facsimile (316) 942-9006

COPYRIGHT©2001

SERVICE KIT

SK152-24A

10. Mark location of existing nutplate rivet holes onto outboard face of 0433142-3 Doubler. Remove doubler.
11. Install replacement MS21069L3K Nutplate using two MS20426AD3-4.5A Rivets in existing holes through the tailcone skin and bulkhead only.
NOTE: Installing new nutplate provides improved rudder stop system integrity.
12. (Refer to Figures 1 and 2.) Counterbore approximately half the thickness of the 0433142-3 Doubler in the two locations marked in step 10, using a Number 21 (0.159 inch diameter) drill bit. The counterbored holes allow the doubler to nest over the nutplate rivet butts and to seat flush with the inboard flange of the tailcone bulkhead. Do not drill through doubler.
NOTE: The 0433142-3 Doubler is 0.10 inch thick.
13. (Refer to Figure 3.) Layout two additional rivet locations on tailcone skin, 0.47 inch above and below the nutplate's horizontal centerline (bolt hole) and approximately 0.28 inch forward of the tailcone skin aft edge.
14. Verify additional rivet locations will not interfere with any other structure, and drill rivet holes through tailcone skin and bulkhead using a Number 40 (0.098 inch diameter) drill bit.
15. (Refer to Figures 1, 2, and 3.) Test fit 0433142-3 Doubler by placing counterbores over nutplate rivet butts. Pencil mark new rivet hole locations onto doubler. Remove doubler and verify 0.15 inch minimum edge distance for new holes.
16. (Refer to Figures 1 and 2.) Clamp 0433142-3 Doubler in place and match drill rivet holes into doubler using a Number 40 (0.098 inch diameter) drill bit. Remove doubler and deburr all holes.
17. (Refer to Figures 1 and 2.) Install 0433142-3 Doubler using two MS20470AD3-6A Rivets.
18. (Refer to Figure 1 and 2.) Install 0433142-1 Stop Bolt in nutplate. Install NAS1149F0332P Washer and MS21042-3 Nut onto inboard end of stop bolt.
NOTE: Safety wire as called out in Service Manual is not used with this installation.
19. Repeat steps 2 through 18 for opposite side.
20. (Refer to Service Manual.) If the rudder was removed in Step 1., install rudder to vertical stabilizer. Rig rudder control system and safety wire clevises.
21. (Refer to Service Manual.) Check rudder for proper deflection and direction of travel when operated by the rudder pedals. Adjust 0433142-1 Stop Bolt as required. Tighten MS21042-3 Nut to secure adjustment of stop bolt.
22. Check rudder stop operation by applying approximately 150 to 200 pounds of force to pilot's outboard rudder pedal. Position an observer near the rudder to ensure good stop bolt/bumper contact. Repeat stop check for pilot's inboard rudder pedal.
23. Make an entry in the airplane logbook stating that this service kit has been installed.

SERVICE KIT

SK152-24A

MATERIAL INFORMATION

PART NUMBER	QUANTITY	DESCRIPTION
SK152-24A	1	Kit, Consisting of the following parts:
0433142-1	2	Stop Bolt
0433142-2	2	Bumper
0433142-3	2	Doubler
MS20426AD3-4.5A	4	Rivet
MS20470AD4-5A	6	Rivet
MS20470AD3-6A	4	Rivet
MS21069L3K	2	Nutplate
MS21042-3	2	Nut
NAS1149F0332P	2	Washer
	1	Instructions

ACCOMPLISHMENT INSTRUCTIONS

NOTE: Instructions and illustrations are shown for left rudder stop. Right rudder stop is opposite. Rudder removal is not required, but is optional for improved access.

1. (Refer to Service Manual.) Remove rudder from vertical stabilizer (recommended for improved access to rudder stop).
2. (Refer to Figure 1.) Remove rivets attaching rudder stop bumper to rudder horn assembly. Remove rudder stop bumper.
3. Locate new 0433142-2 Bumper on horn by matching pre-drilled Number 30 (0.128 inch diameter) hole in bumper with aft bumper attach hole in horn assembly. Secure with temporary fastener. Align middle pilot hole in bumper with existing hole in horn assembly. Clamp bumper in place.
4. Drill out middle Number 40 pilot hole to final size using Number 30 (0.128 inch diameter) drill bit.
NOTE: Middle hole location is already drilled to Number 30 through horn assembly. Ensure that enlarging the pilot hole in new bumper matches hole in horn assembly.
5. Match drill forward pre-piloted Number 40 (0.098 inch diameter) hole in bumper to horn assembly. Drill to final size using Number 30 (0.128 inch diameter) drill bit.
6. Remove rudder stop bumper and deburr holes in bumper and horn assembly.
7. Install 0433142-2 Bumper using three MS20470AD4-5A Rivets.
8. Remove and discard existing rudder stop bolt or screw, nutplate and safety wire.
9. (Refer to Figures 1 and 2.) Test fit replacement MS21069L3K Nutplate and 0433142-3 Doubler. Clamp in place with temporary fastener.

NOTE: Ensure that aft edge of 0433142-3 Doubler is nearly flush with aft flange of bulkhead and doubler cutout clears the nutplate. Cutout opens forward.

SERVICE KIT

SK152-24A

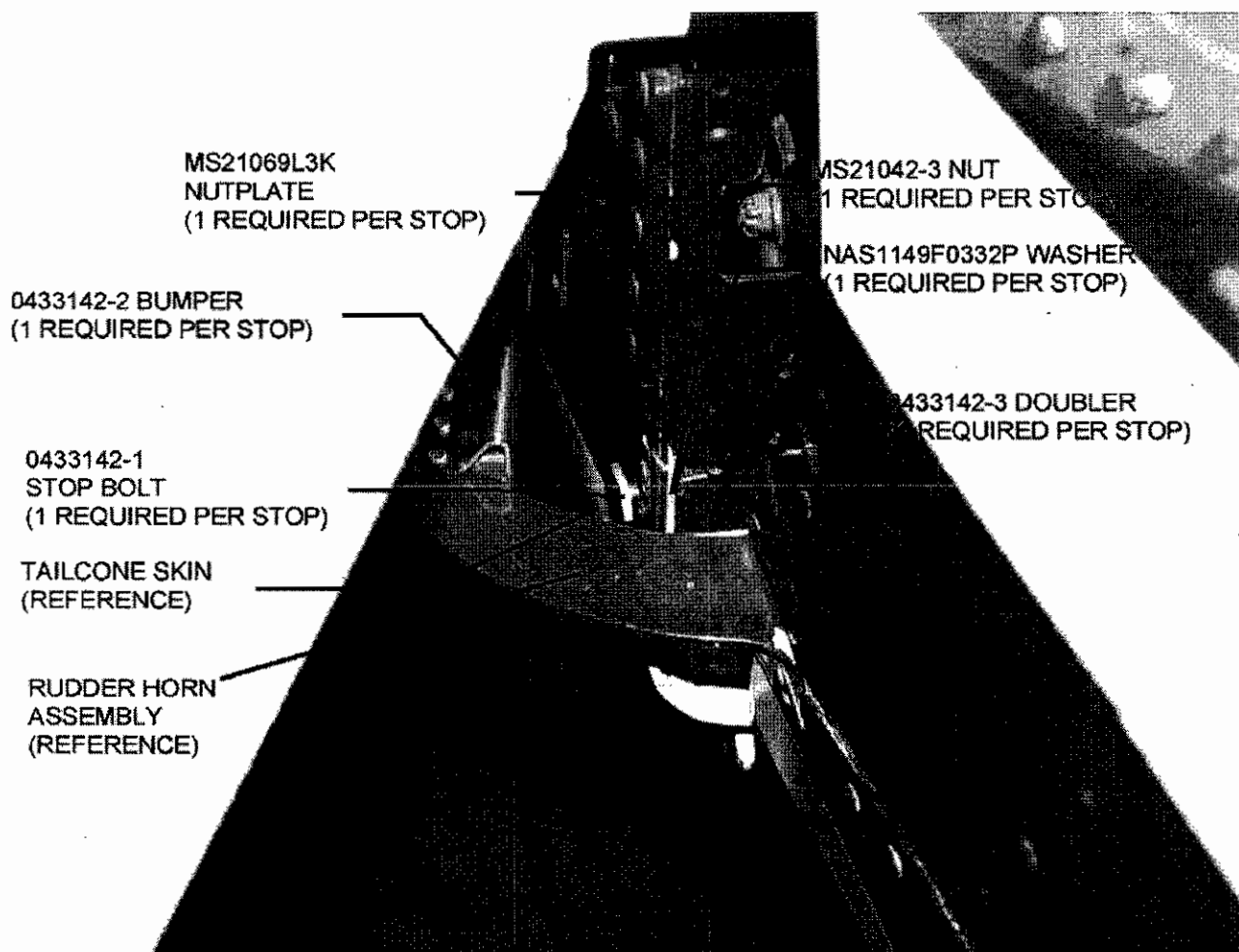


FIGURE 1.

VIEW LOOKING FORWARD AT RUDDER AND AFT
TAILCONE BULKHEAD AFTER MODIFICATION

NOTE: INSTRUCTIONS AND ILLUSTRATIONS ARE
SHOWN FOR LEFT RUDDER STOP. RIGHT
RUDDER STOP IS OPPOSITE.

SERVICE KIT

SK152-24A

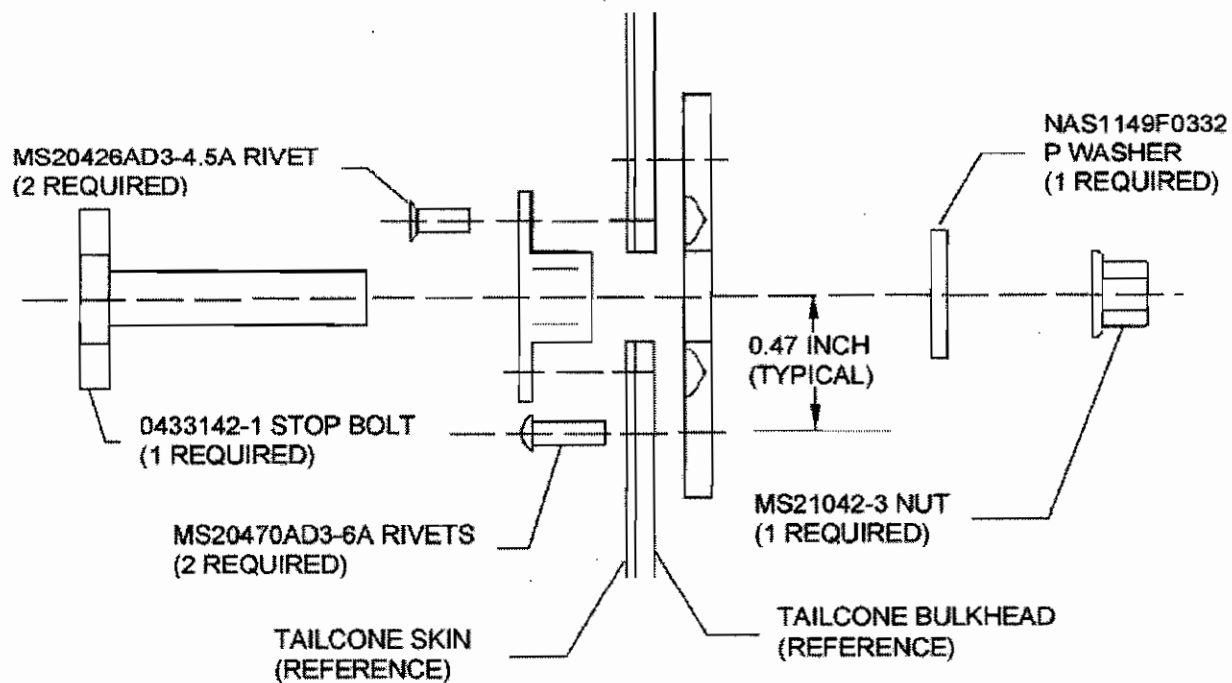


FIGURE 2 .
VIEW LOOKING FORWARD AT LEFT RUDDER STOP.

NOTE: INSTRUCTIONS AND ILLUSTRATIONS ARE SHOWN FOR LEFT RUDDER STOP. RIGHT RUDDER STOP IS OPPOSITE.

SERVICE KIT

SK152-24A

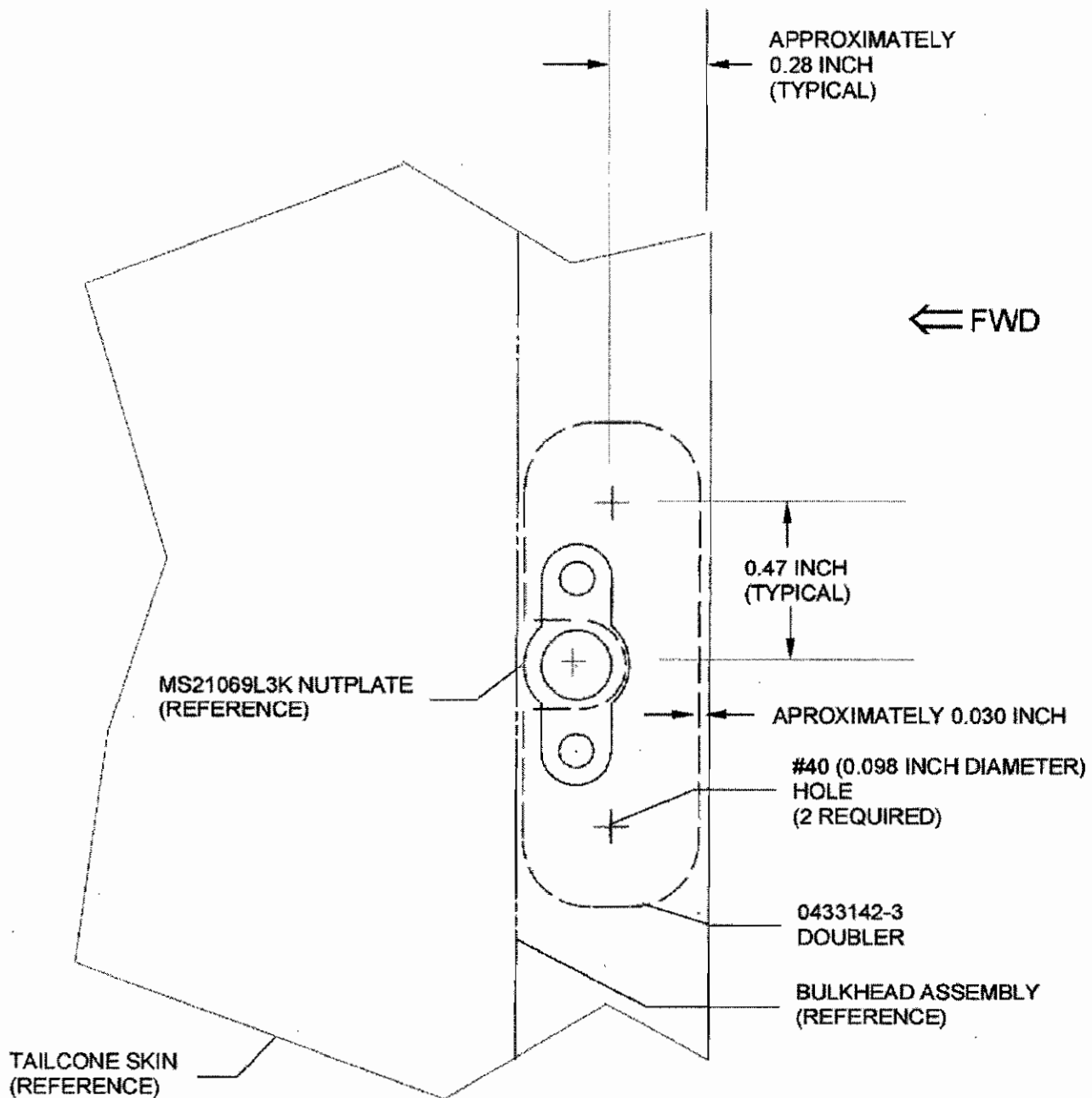



FIGURE 3. 

VIEW LOOKING INBOARD AT RUDDER
STOP ATTACH BOLT LOCATION

NOTE: INSTRUCTIONS AND ILLUSTRATIONS ARE
SHOWN FOR LEFT RUDDER STOP. RIGHT
RUDDER STOP IS OPPOSITE.