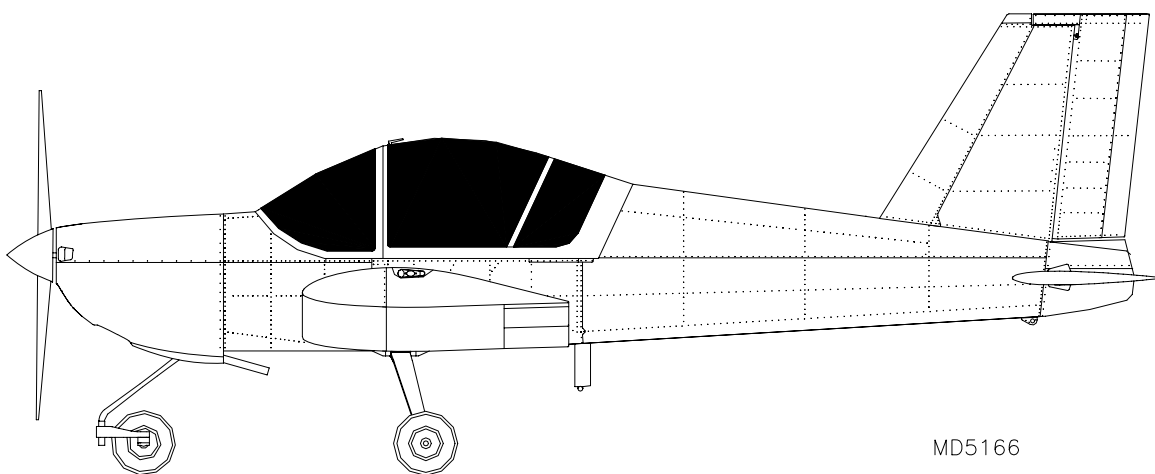




S-19 VENTERRA

FIGURES MANUAL



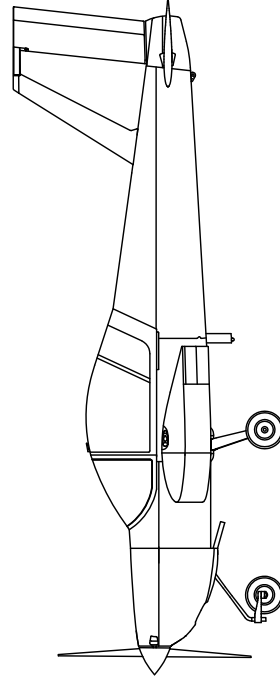
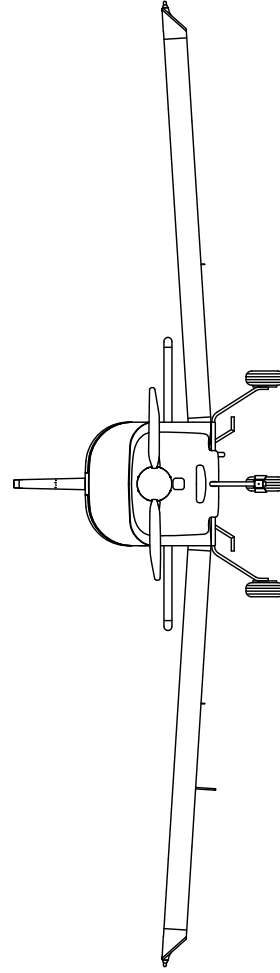
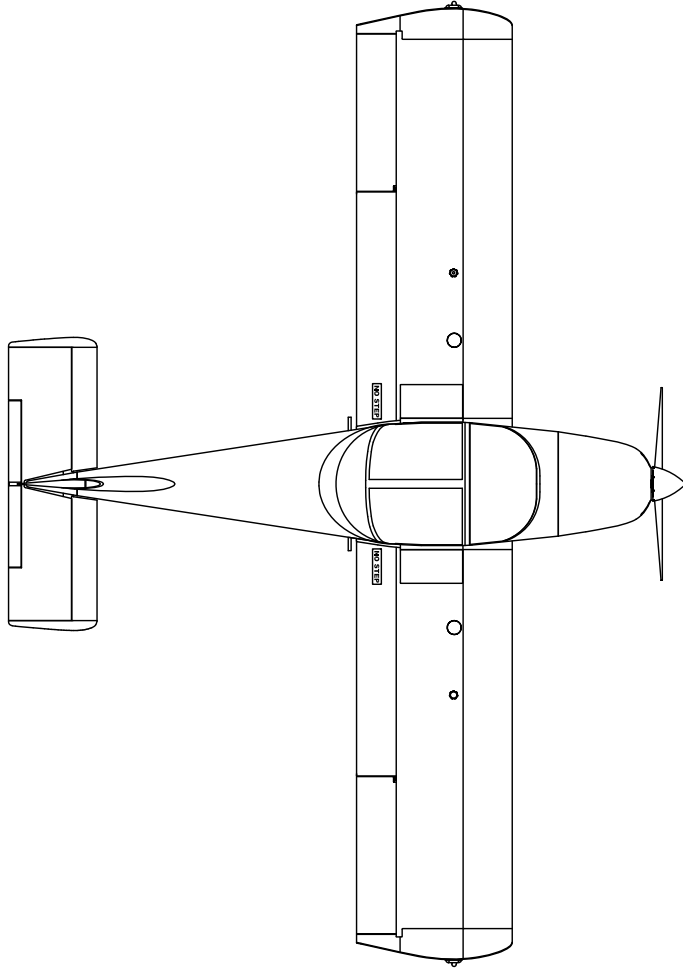
Serial Number:

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RANS S-19 VENTERRA



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Please note that the RANS FIGURE Manual numbering system does not follow a consecutive 1...2...3 style of nomenclature.

The RANS FIGURE Manual numbering system follows a numbering system which lists the chapter first, then the last 2 digits of the FIGURE number refers to the paragraph in the text.

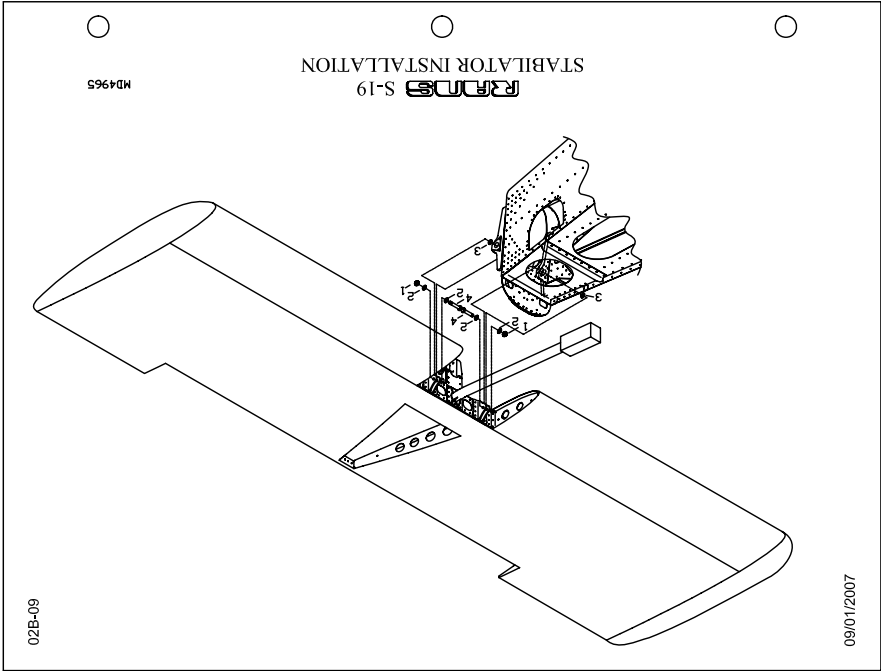
RANS has found this to aid greatly in the association of the correct paragraph with the correct FIGURE drawing it refers to. In the case of multiple FIGURES per paragraph then letters starting with "A" are added after the paragraph number.

00 – GENERAL INFO

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SERIAL NUMBER DATA PLATE LOCATION	00-04

ROTATE
PARTS DRAWING PAGE
TO FACE
PARTS DESCRIPTION PAGE

PARTS DRAWING PAGE



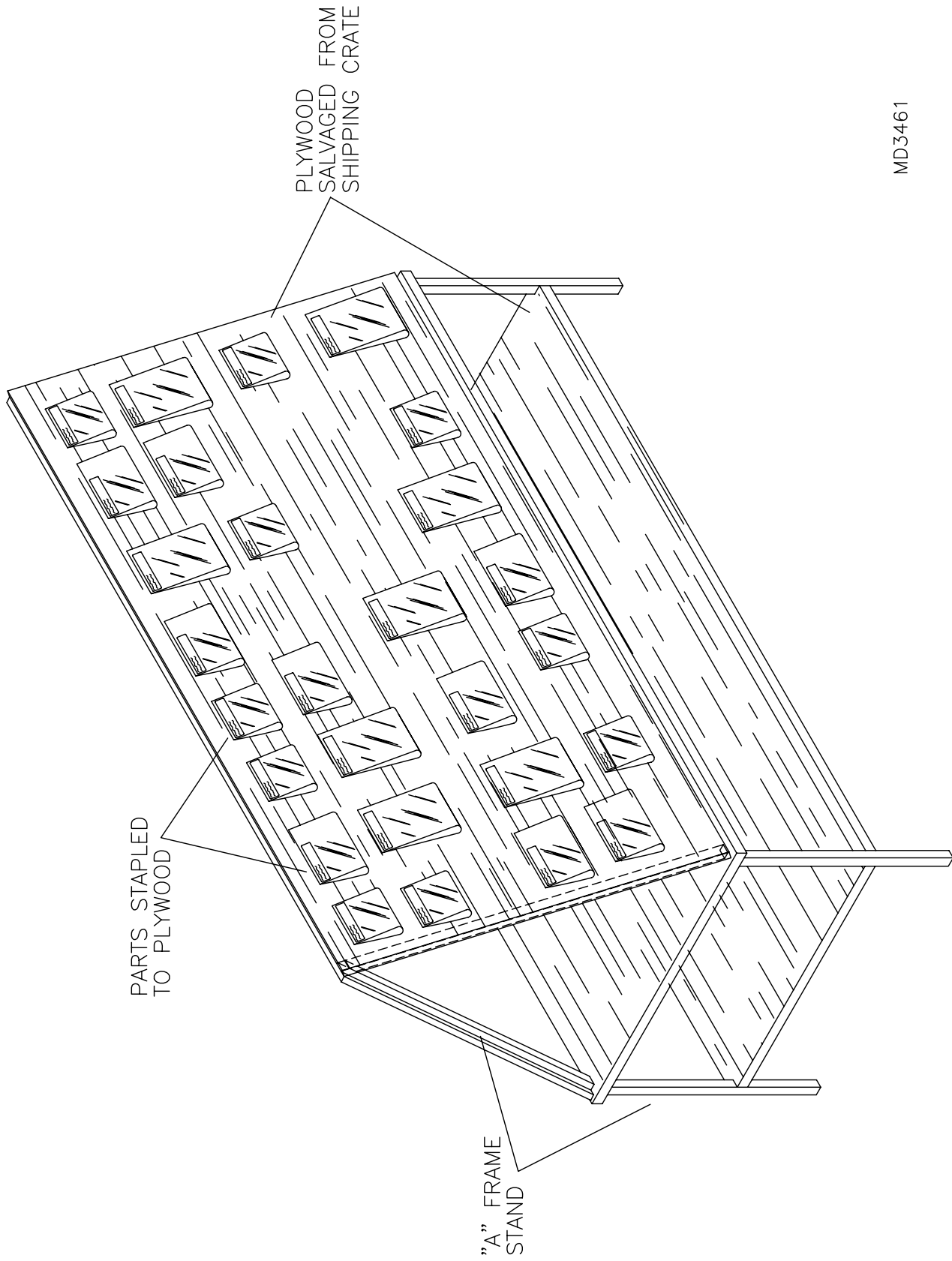
PARTS DESCRIPTION PAGE

02B-10

09/01/2007

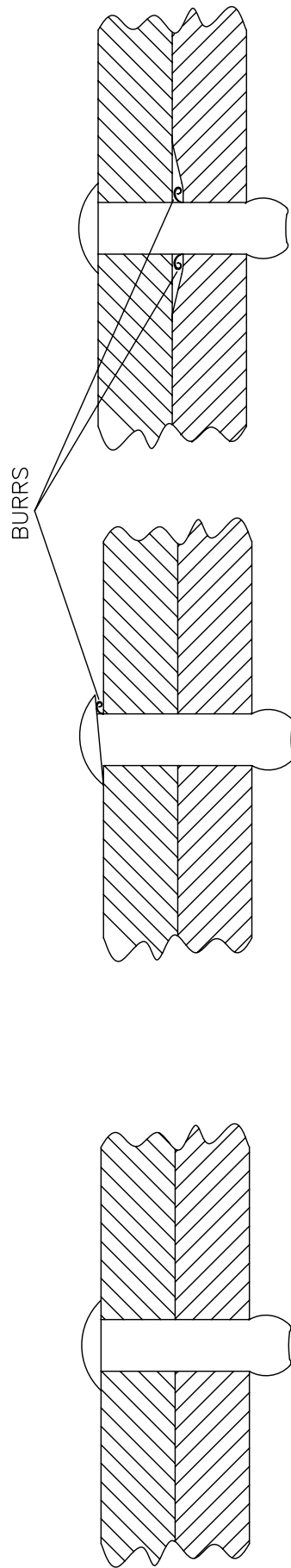
#	DESCRIPTION	PART NUMBER	QUANTITY
1.	1/4" Shear Nut	AN364-428A	2
2.	1/4" Thin Washer	AN960-416L	4
3.	1/4" Thick Washer	AN960-416	2
4.	1/4" Bolt	AN4-11A	2

2-PARTS_PAGE



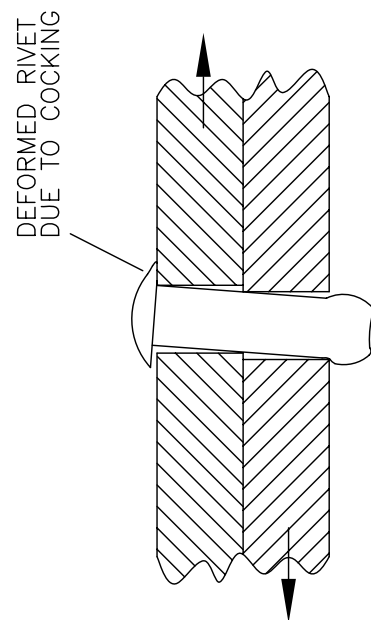
MD3461

RRMS S-19 VENTERRA
PARTS INVENTORY BOARD
FIGURE 00-02

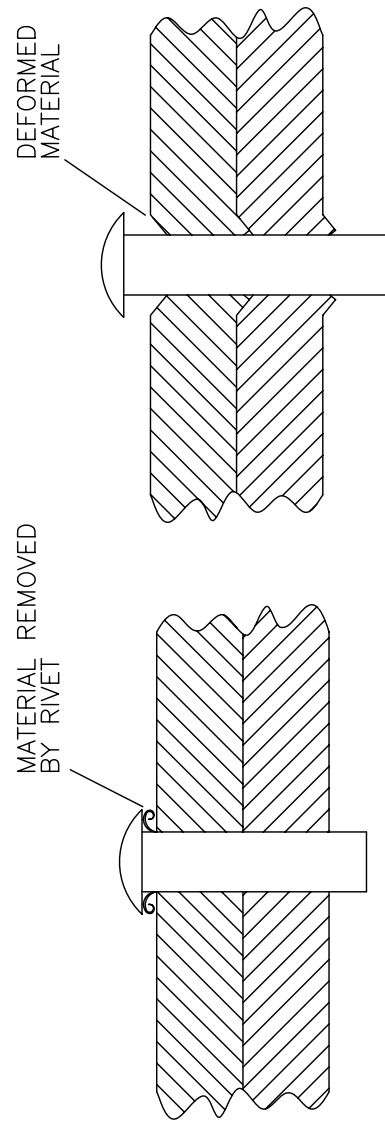


CORRECTLY INSTALLED RIVET

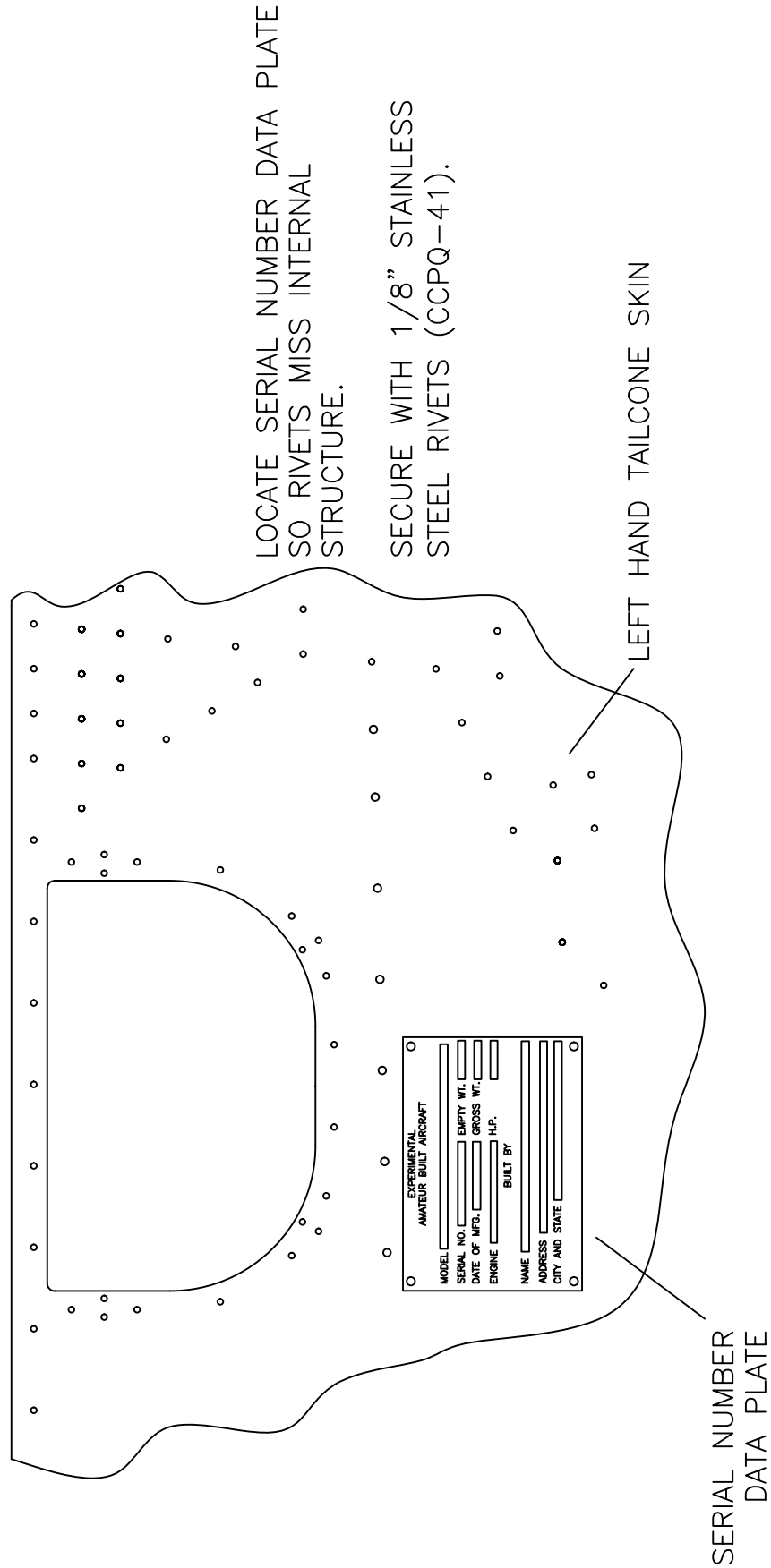
THE EFFECTS OF IMPROPER DE-BURRING



THE EFFECTS OF RIVETING THROUGH AN
OVERSIZED HOLE



THE EFFECTS OF FORCING A RIVET THROUGH AN
UNDERSIZED HOLE

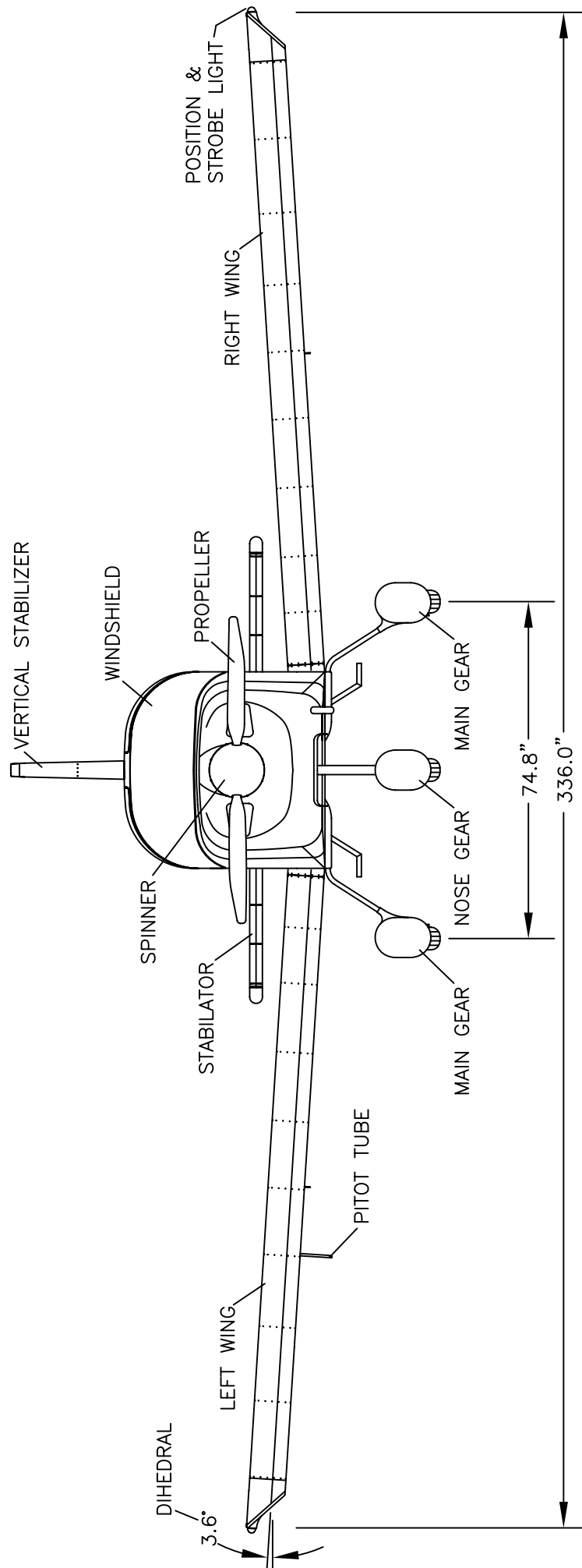


MD5155

RAMS S-19 VENTERRA **SERIAL NUMBER DATA PLATE LOCATION** **FIGURE 00-04**

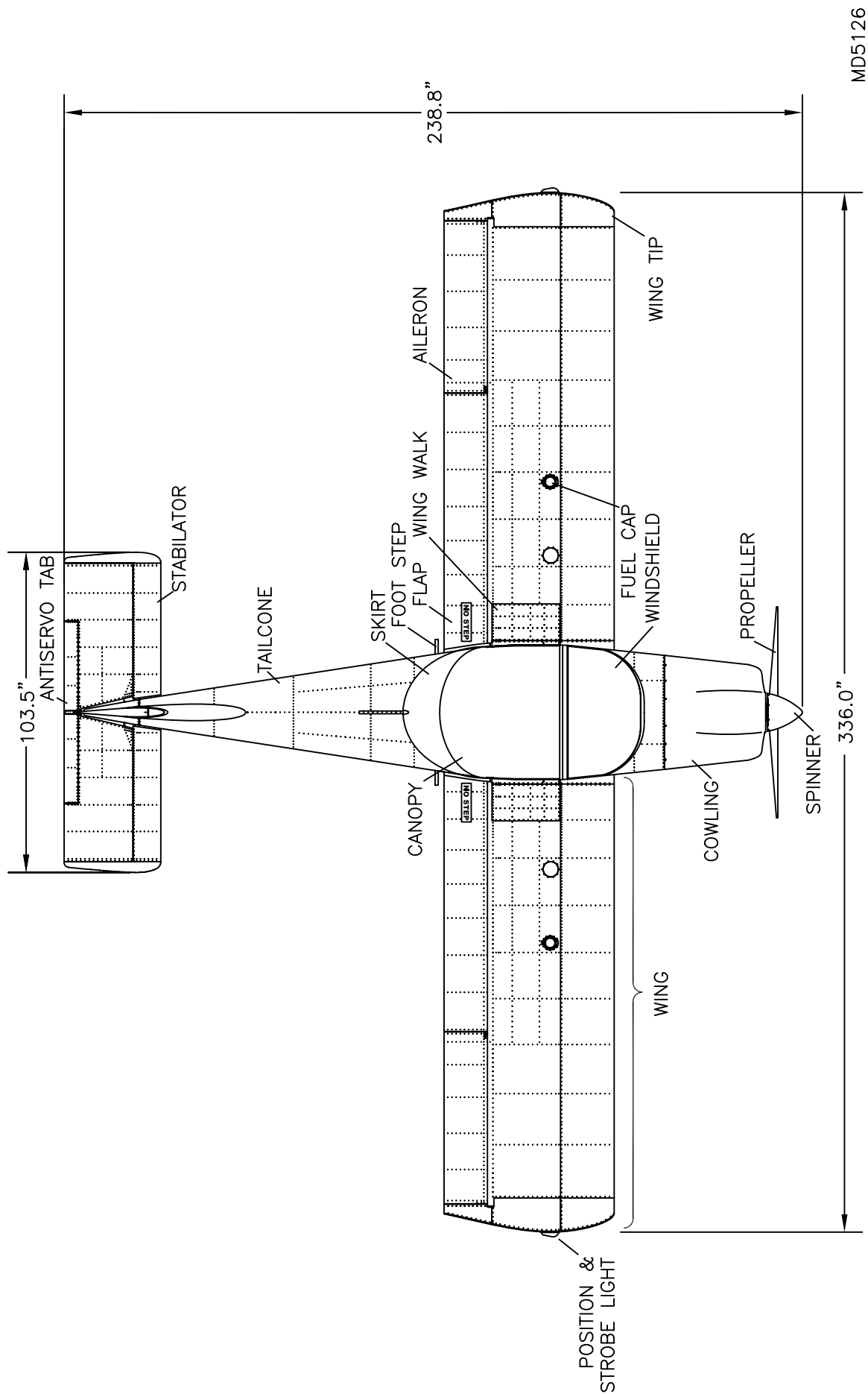
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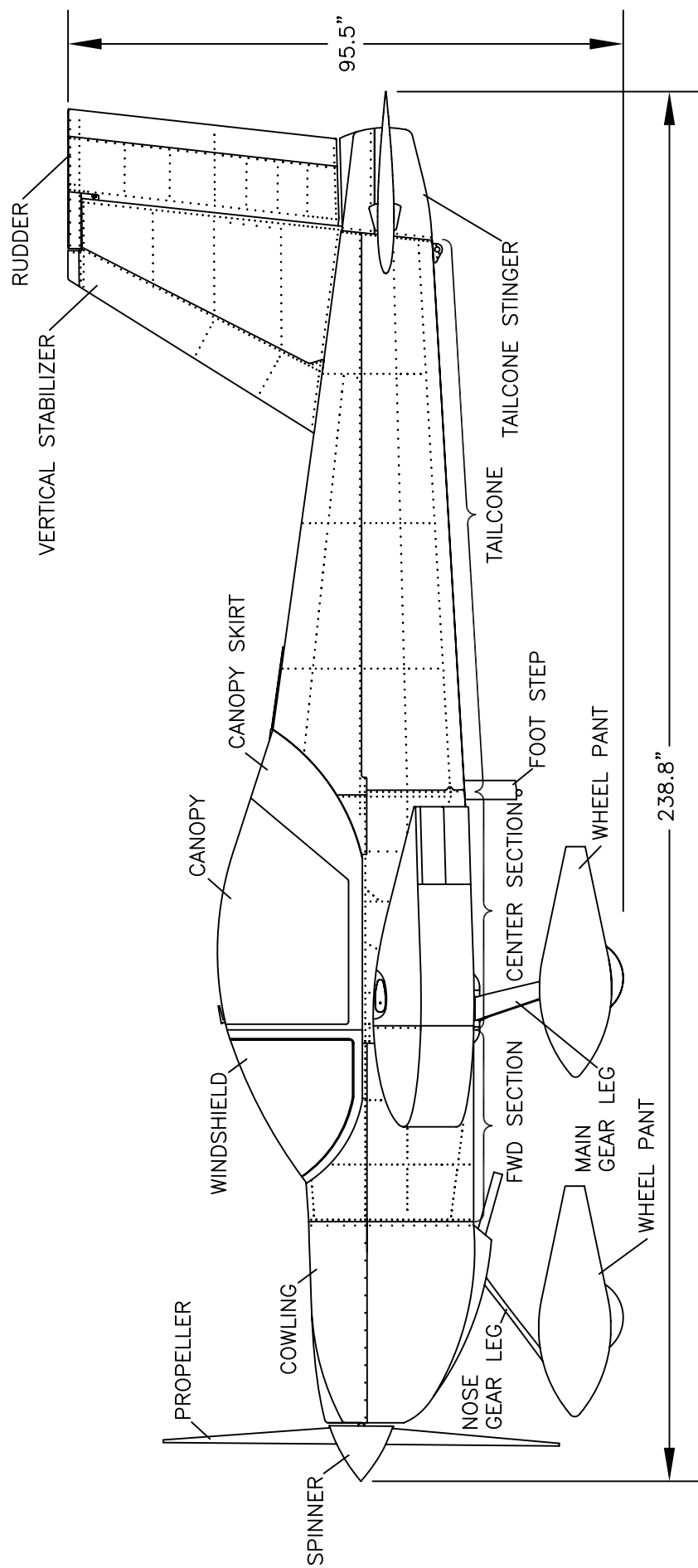
RAMS S-19 VENTERRA
EXTERIOR FEATURES
FIGURE 01-01

MD5126



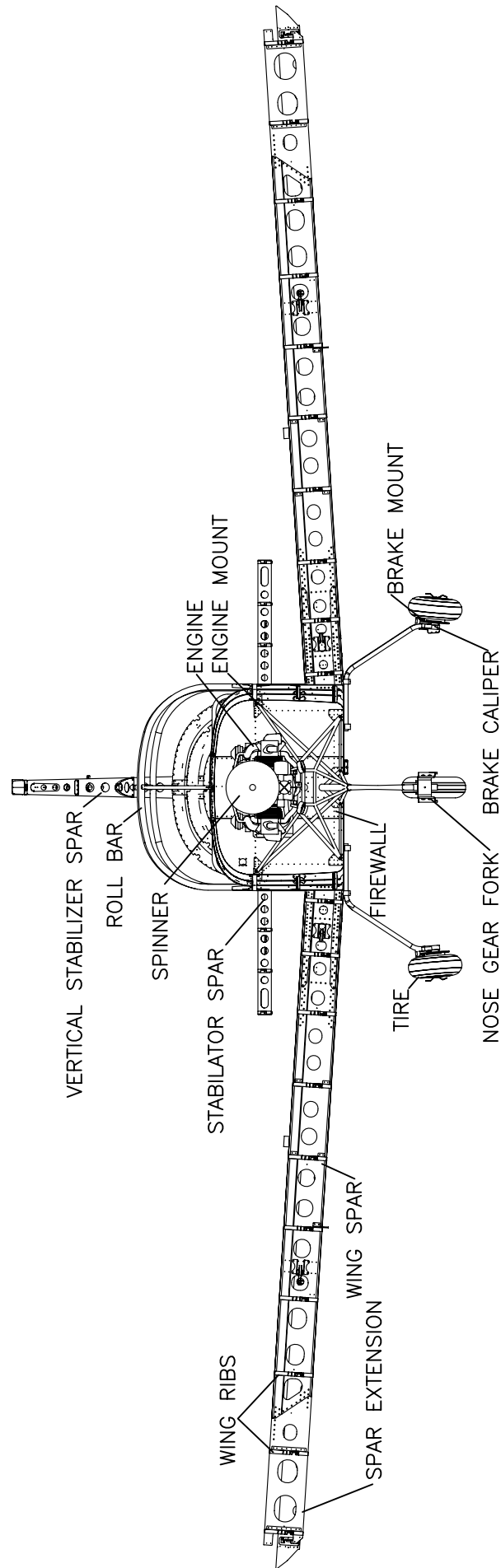
MD5126

RAMS S-19 VENTERRA
EXTERIOR FEATURES
FIGURE 01-02



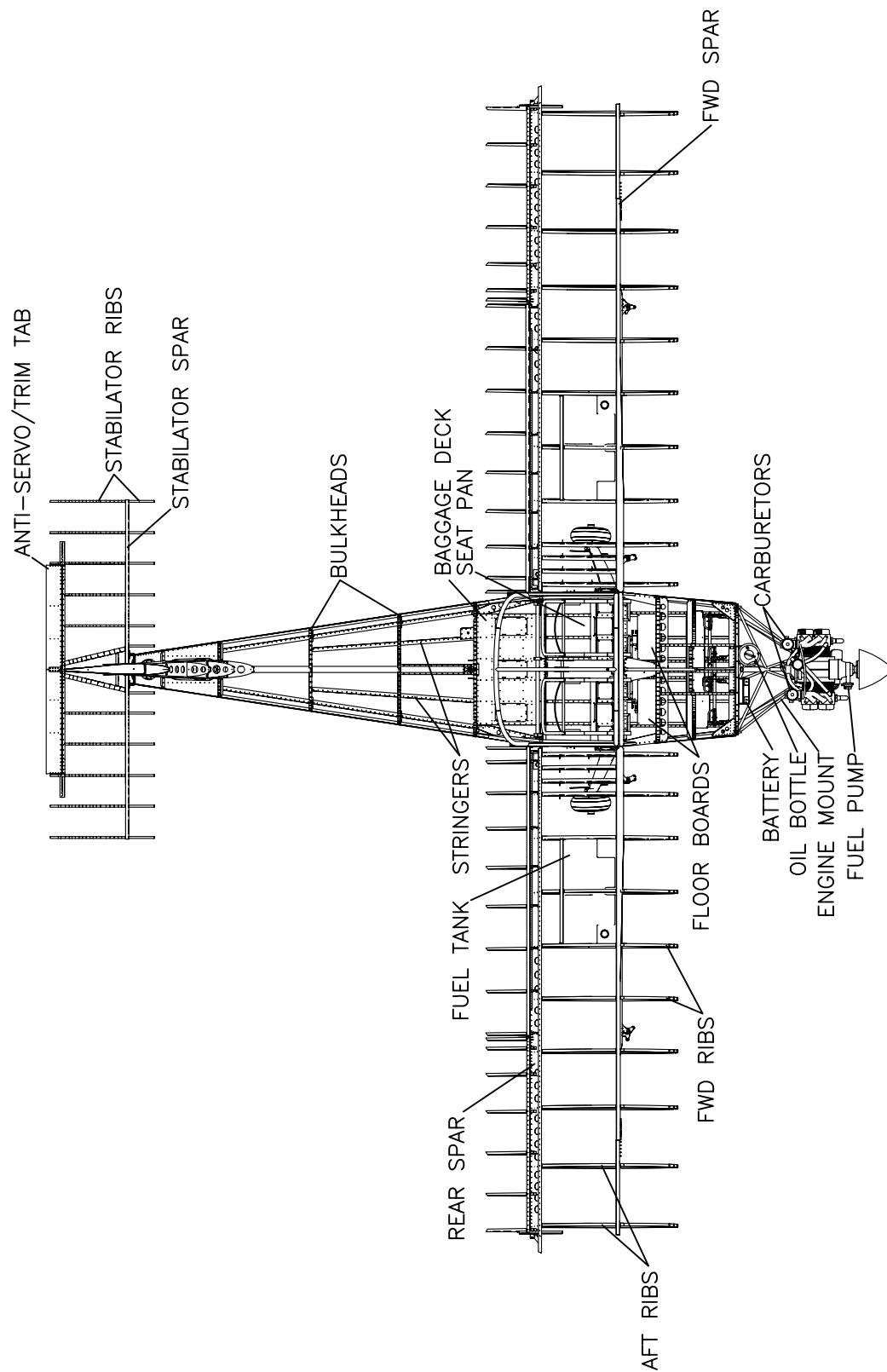
MD5126

RAM S-19 VENTERRA
EXTERIOR FEATURES
FIGURE 01-03



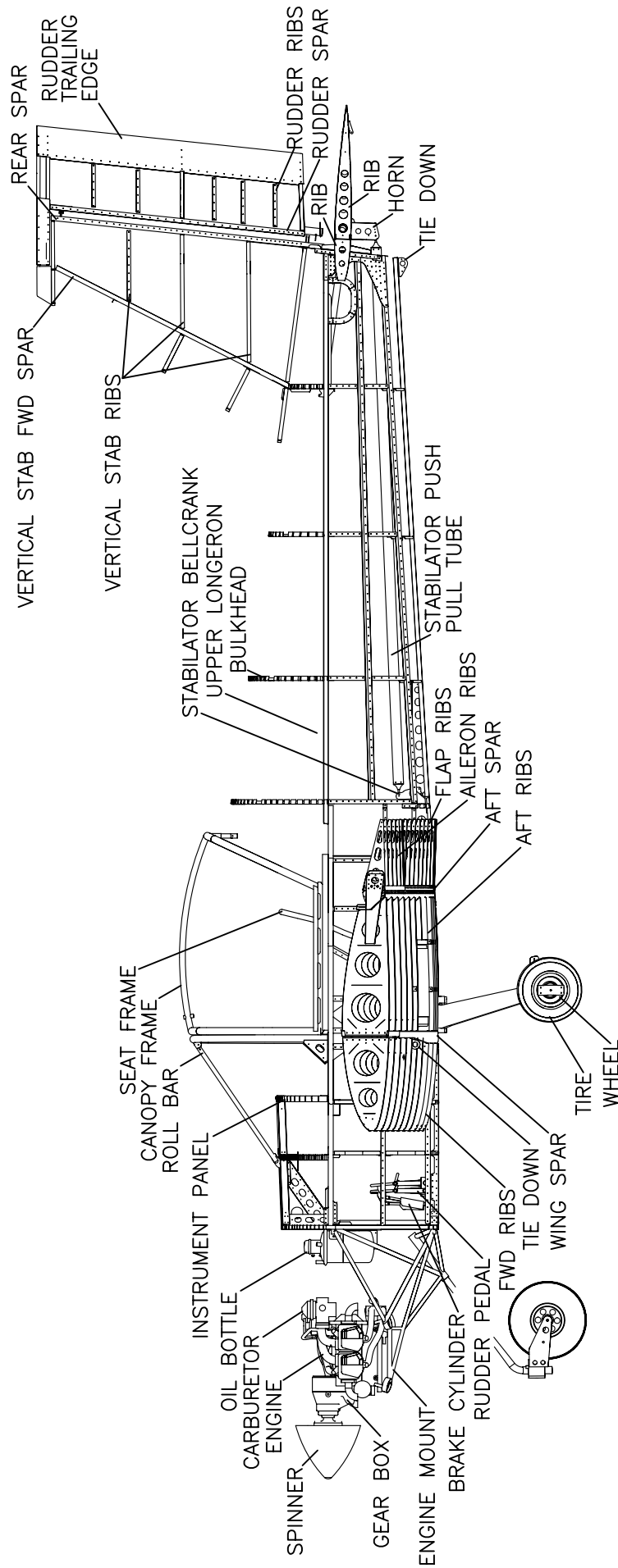
MD5127

RRMS S-19 VENTERRA
INTERIOR FEATURES
FIGURE 01-04

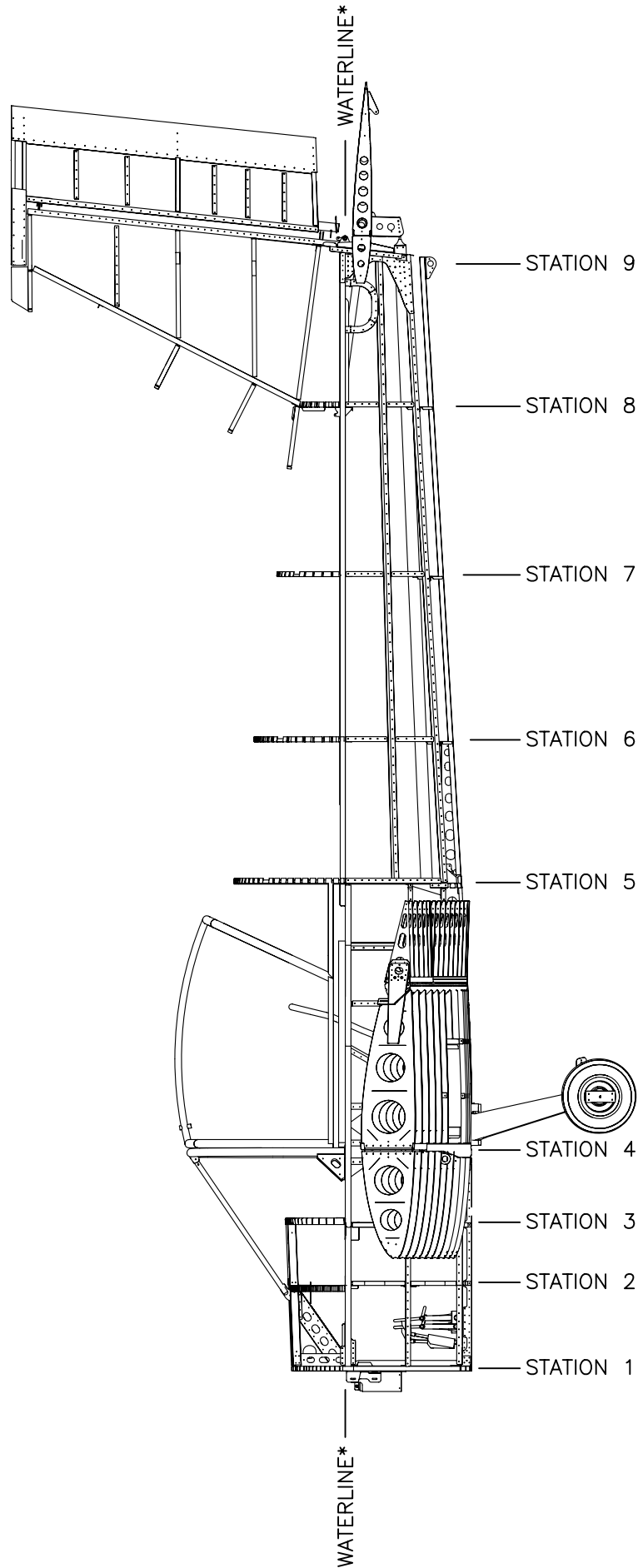


RAMON S-19 VENTURA
INTERIOR FEATURES
FIGURE 01-05

MD5127



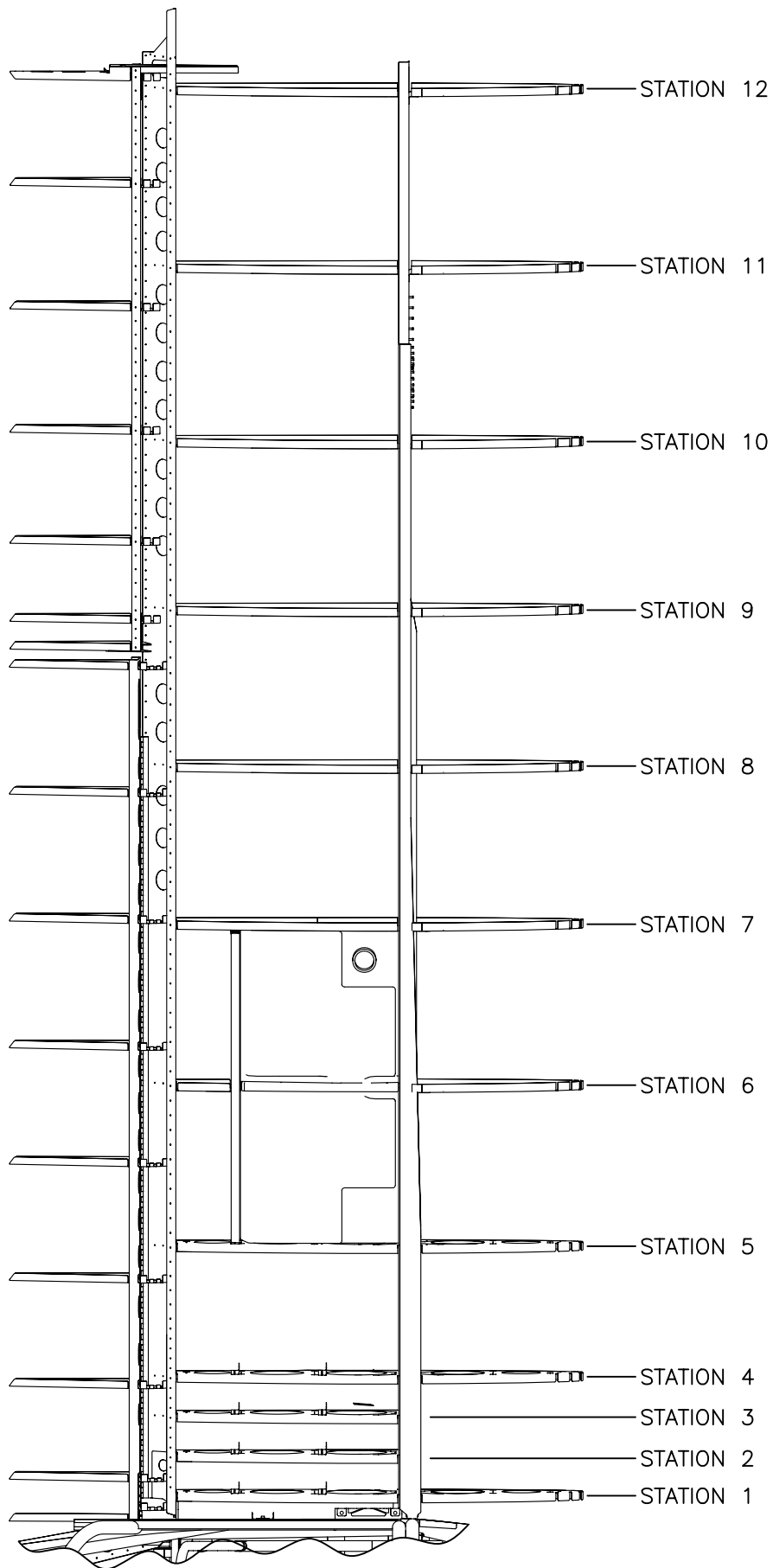
RRR S-19 VENTERRA
INTERIOR FEATURES
FIGURE 01-06



* WATERLINE IS TOP OF FWD LONGERON AND
BOTTOM OF AFT LONGERON

MD5149

RR S-19 VENTERRA FUSELAGE STATIONS FIGURE 01-07



LH WING SHOWN



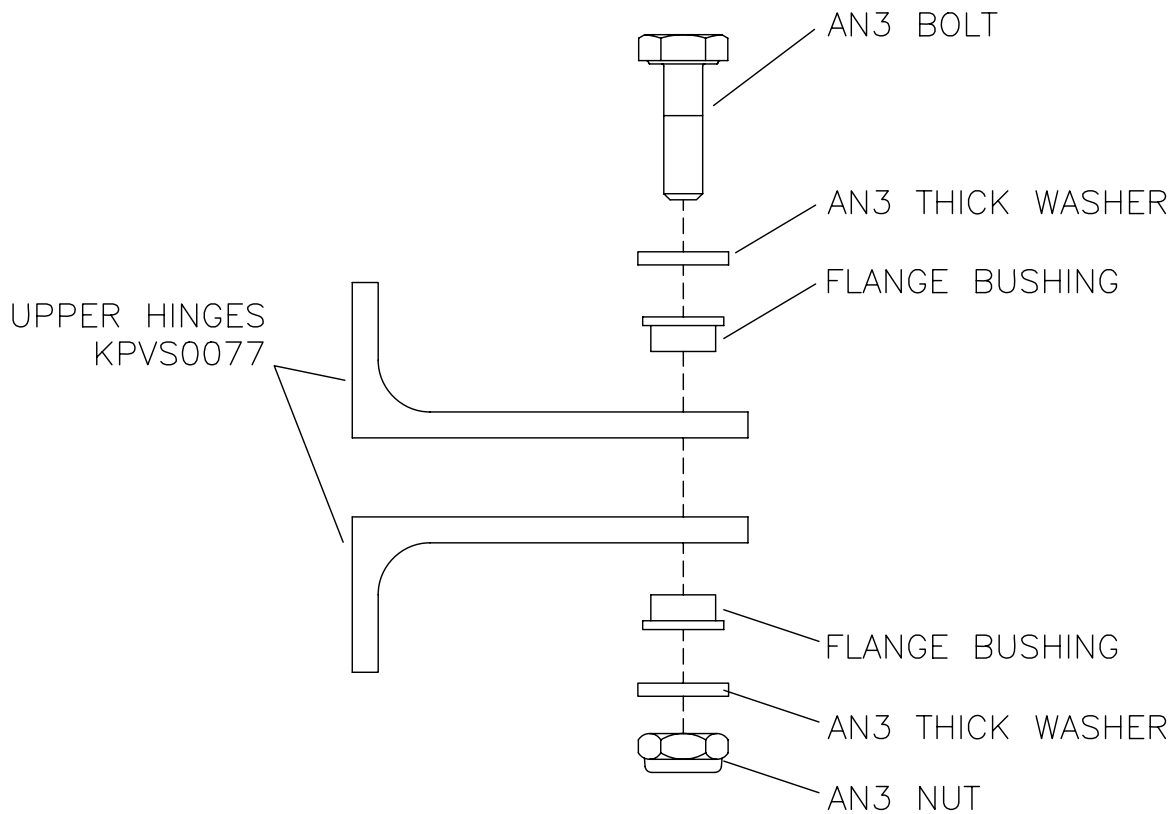
MD5148

RRM S-19 VENTERRA **WING STATIONS** **FIGURE 01-08**

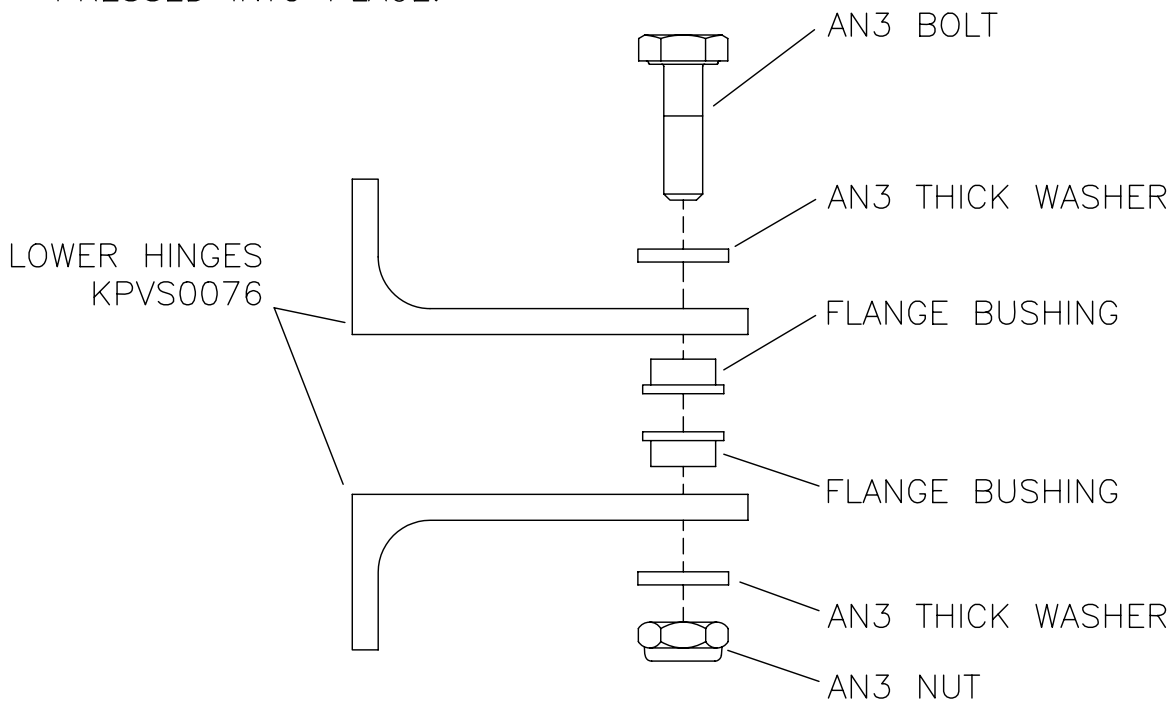
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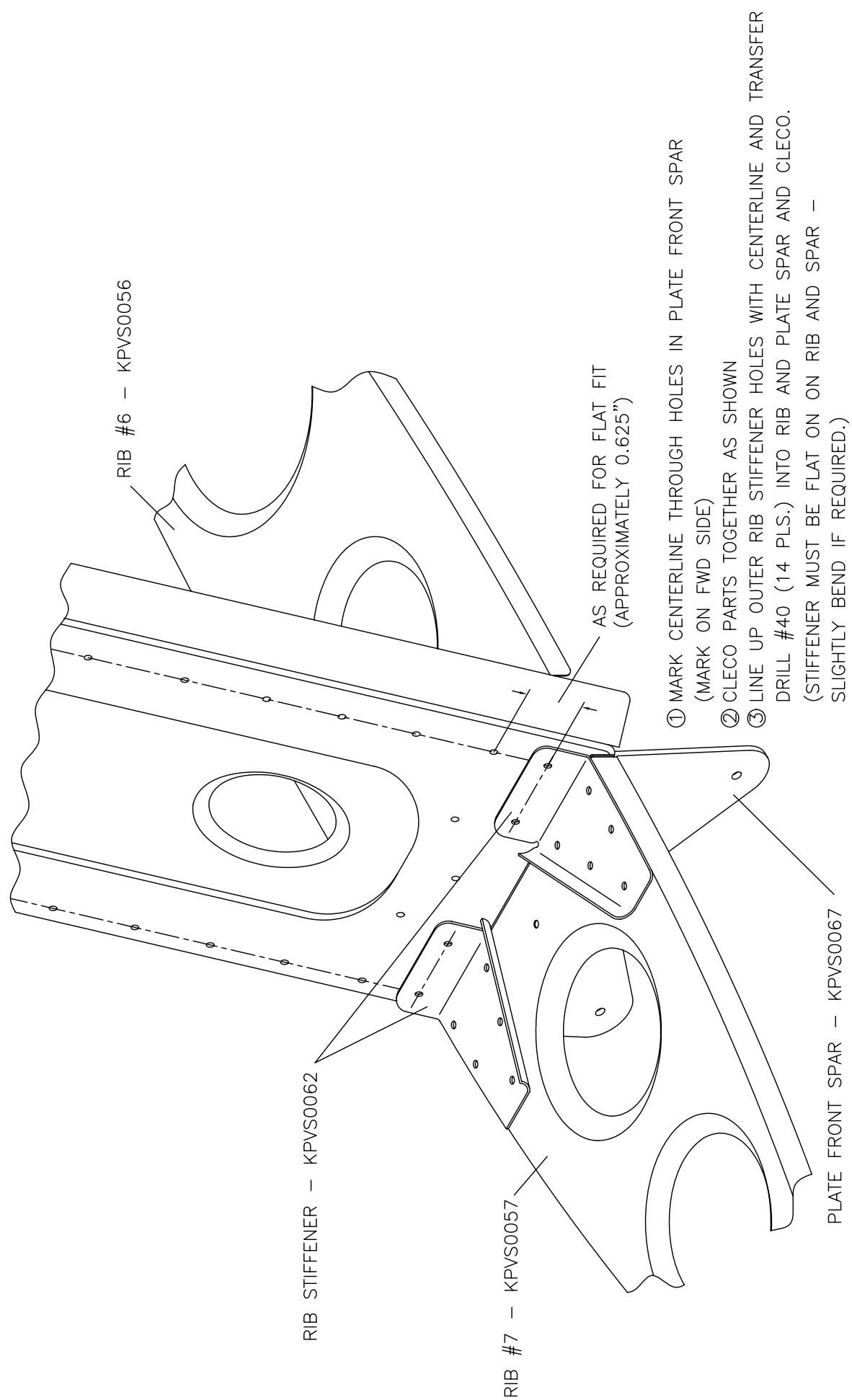
TIGHTEN NUT UNTIL
FLANGE BUSHINGS ARE
PRESSED INTO PLACE.



MD4893

RANS S-19 VENTERRA
VERTICAL STABILIZER HINGE ASSEMBLY
FIGURE 02-02

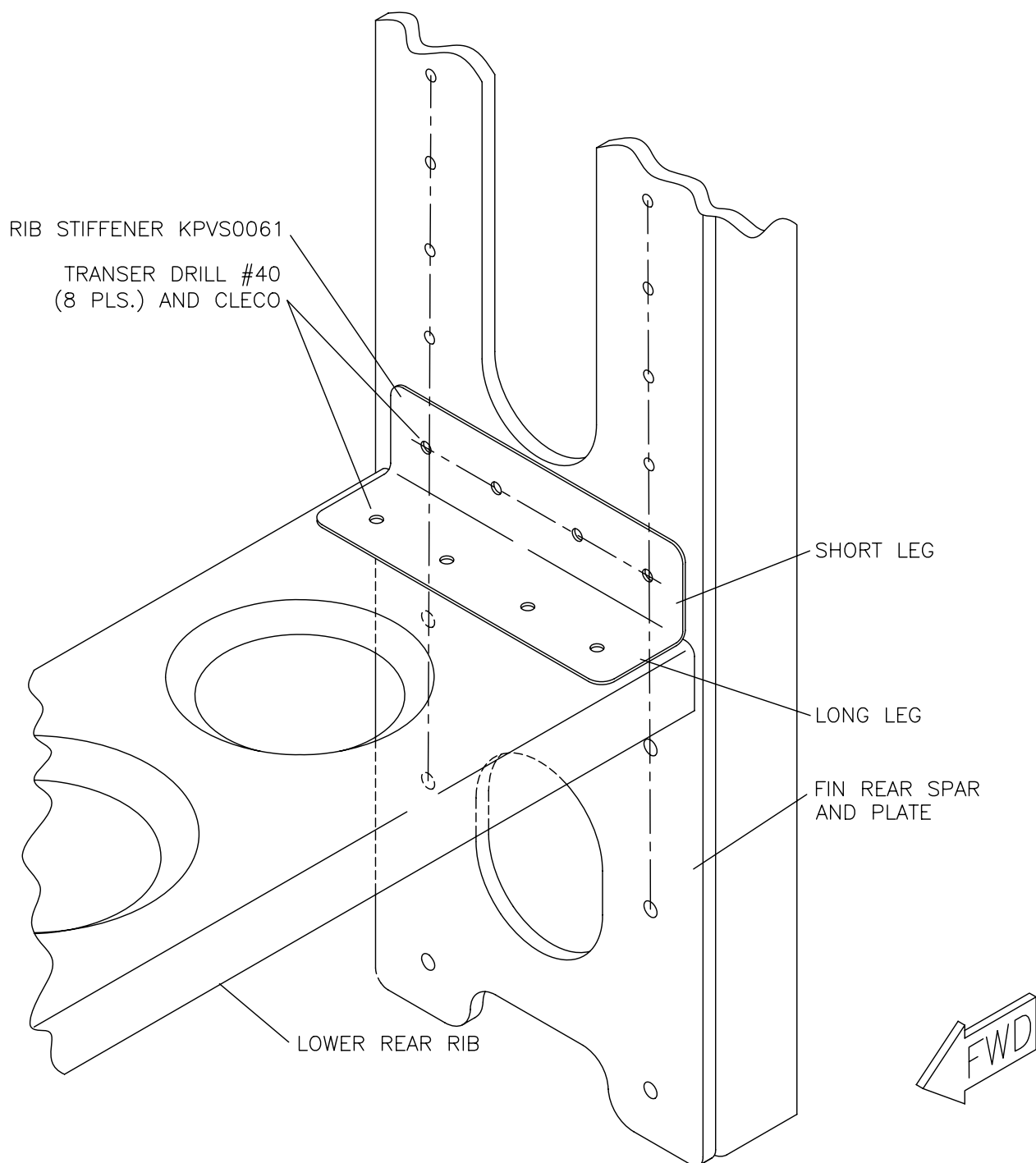
04/01/2011



MD4891

RAMS S-19 VENTERRA **VERTICAL STABILIZER - LOWER FWD RIB - RIB STIFFENER ATTACH** **FIGURE 02-04**

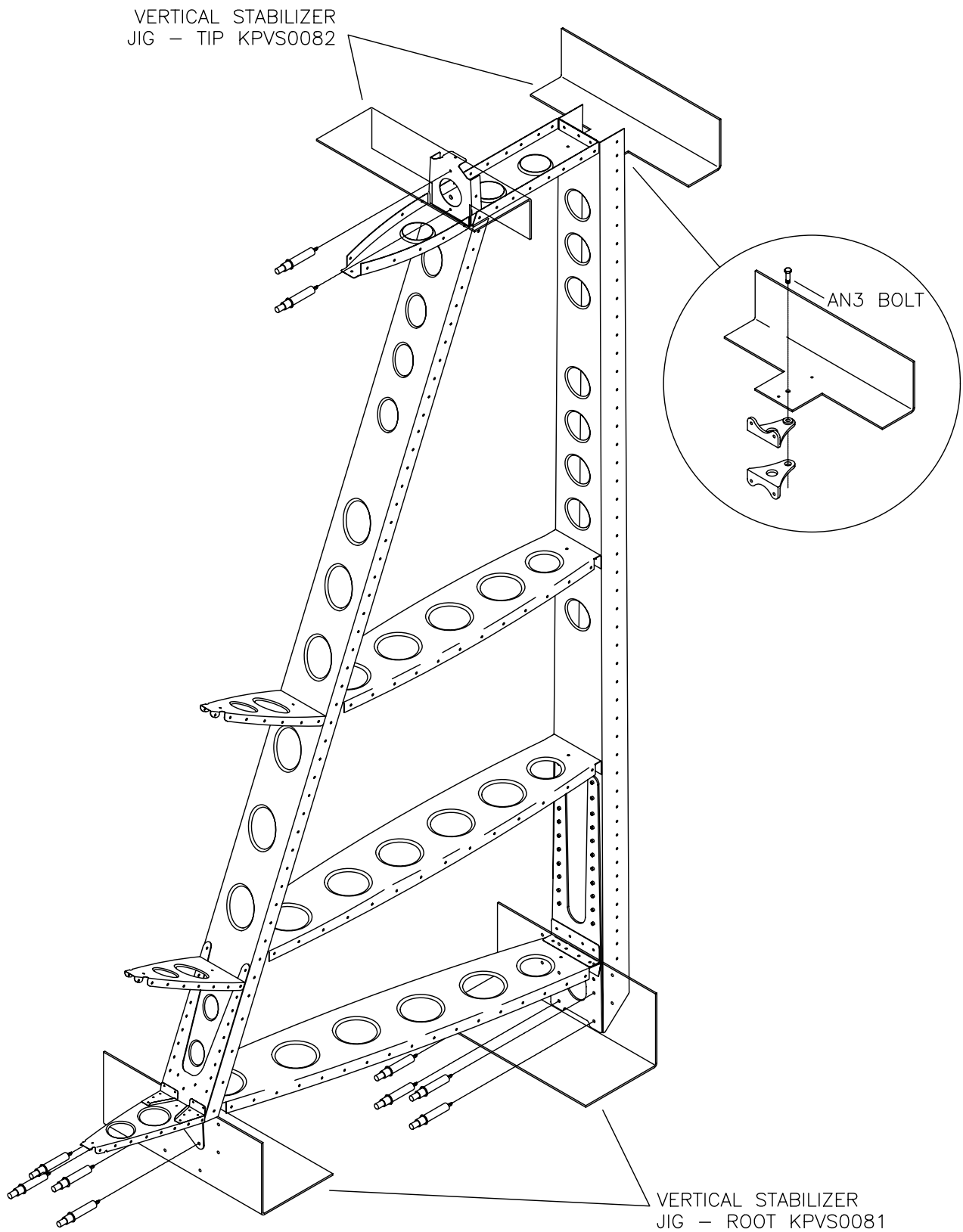
- ① MARK CENTERLINE THROUGH HOLES IN PLATE – REAR SPAR AS SHOWN
- ② CLECO PARTS TOGETHER (REAR SPAR – PLATE– RIB)
- ③ LINE UP RIB STIFFENER OUTER HOLES WITH CENTERLINE AND TRANSFER DRILL #40 (8 PLS.) IN RIB AND PLATE SPAR – CLECO. (STIFFENER MUST BE FLAT ON RIB AND SPAR. SLIGHTLY BEND AS REQUIRED)



MD4890

RANS S-19 VENTERRA
VERTICAL STABILIZER - LOWER REAR RIB
- RIB STIFFENER ATTACH
FIGURE 02-17

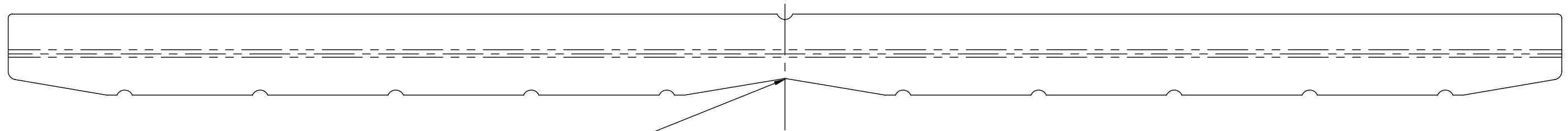
04/01/2011



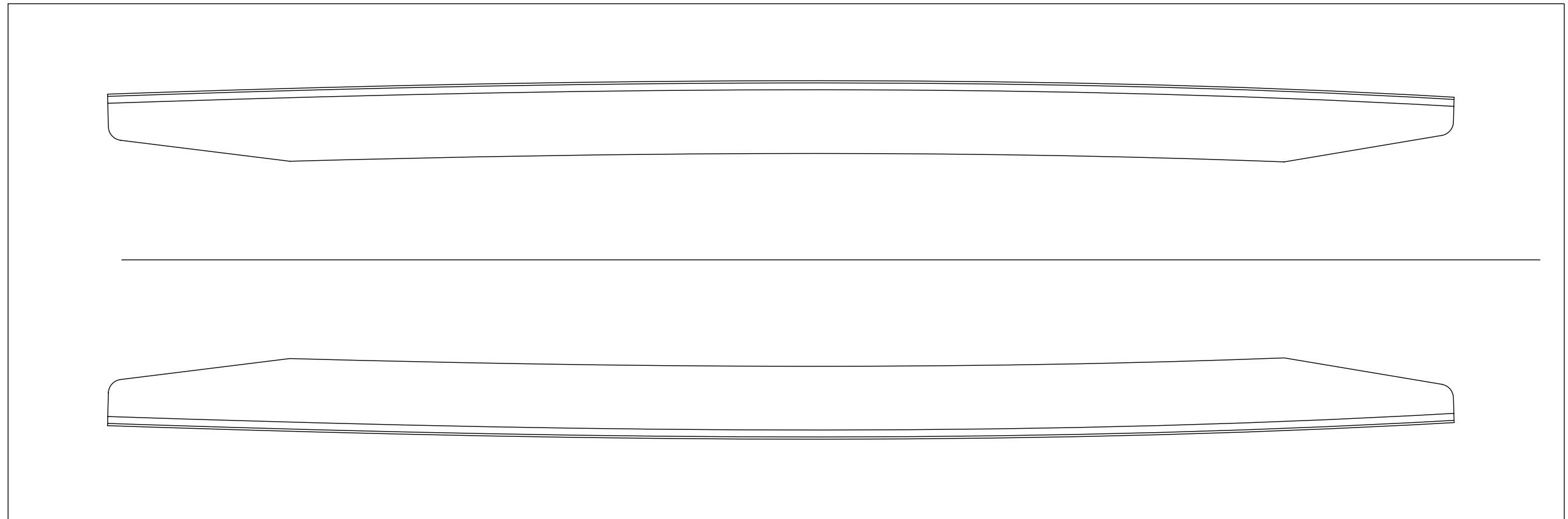
MD4894

RANS S-19 VENTERRA
VERTICAL STABILIZER JIGGING ANGLE
FIGURE 02-23

04/01/2011



← CUT, PROFILE AS SHOWN, RADIUS CORNERS AND USE FLUTING PLIERS TO ACHIEVE PROFILE AS SHOWN IN FULL SIZE FIGURE DWG.



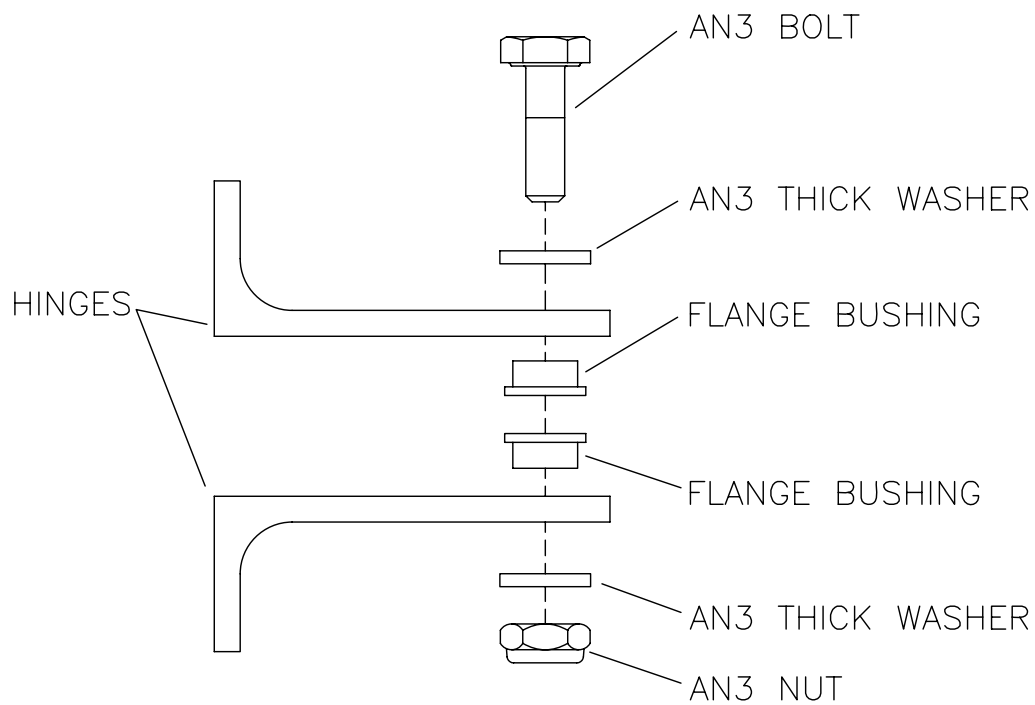
1 TO 1

MD4892

RANS S-19
VERTICAL STABILIZER SKIN STIFFENER MODIFICATION
FIGURE 02-25

09/01/2007

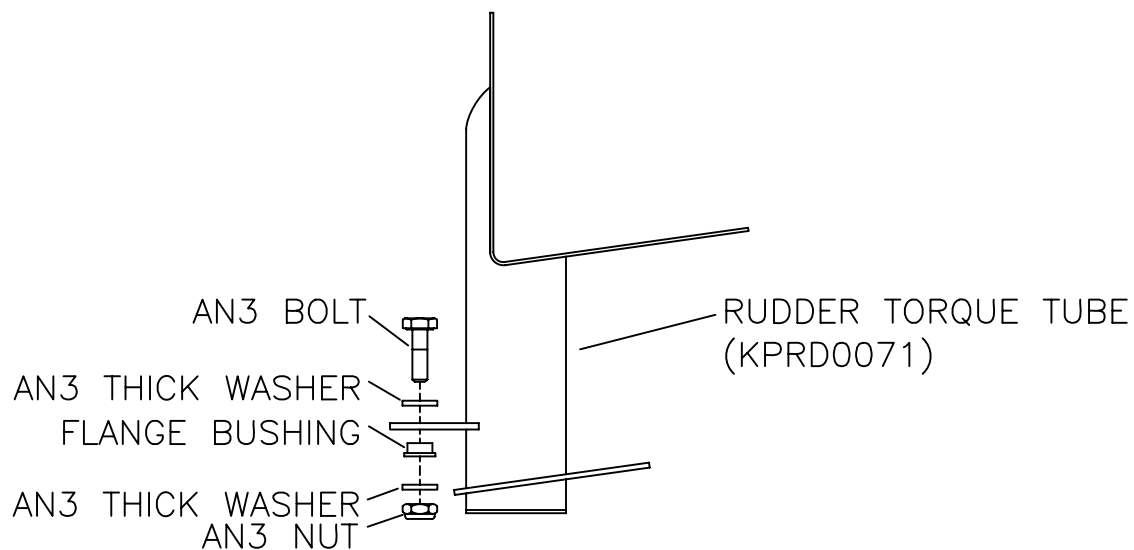
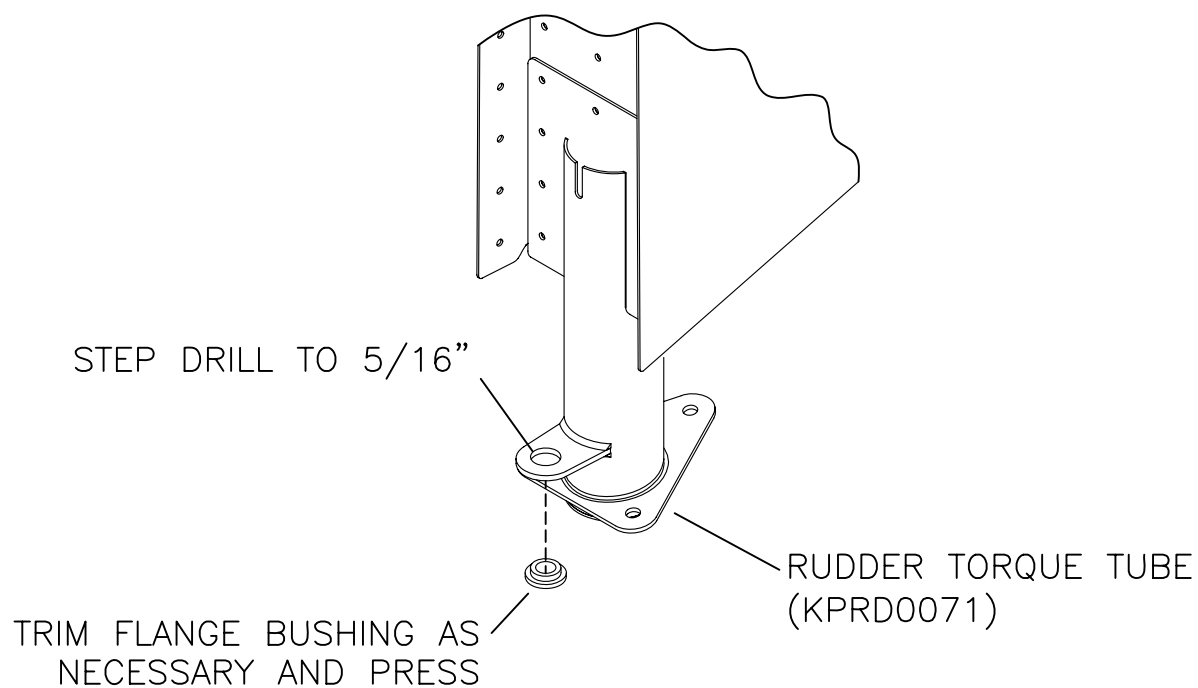
TIGHTEN NUT UNTIL FLANGE BUSHINGS
ARE PRESSED INTO PLACE.



MD4859

RANS S-19 VENTERRA
RUDDER HINGE ASSEMBLY
FIGURE 02A-02

04/01/2011

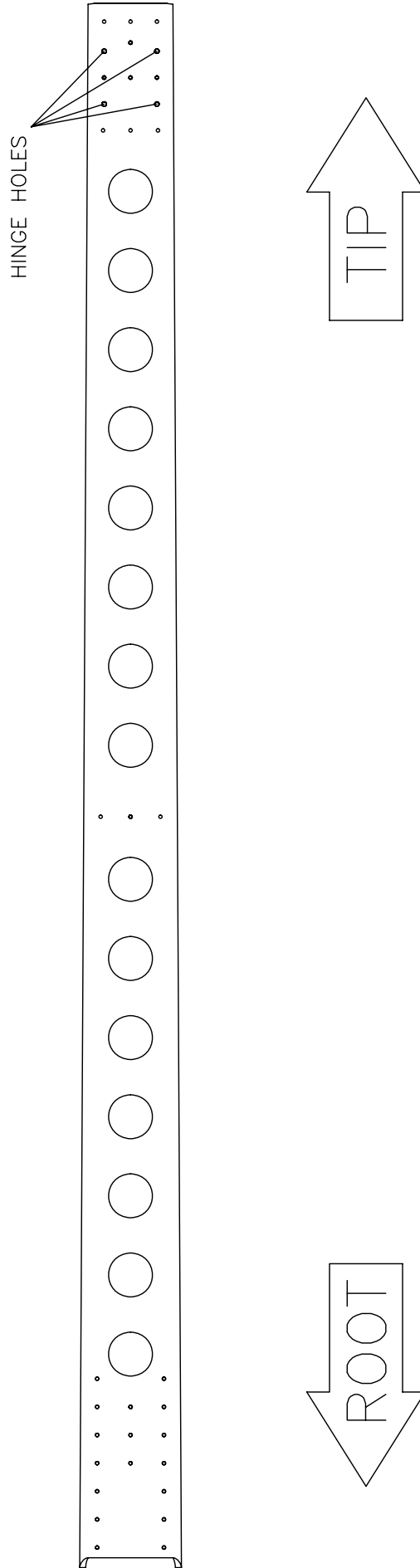


TIGHTEN NUT UNTIL FLANGE
BUSHING IS PRESSED INTO PLACE.

MD5209

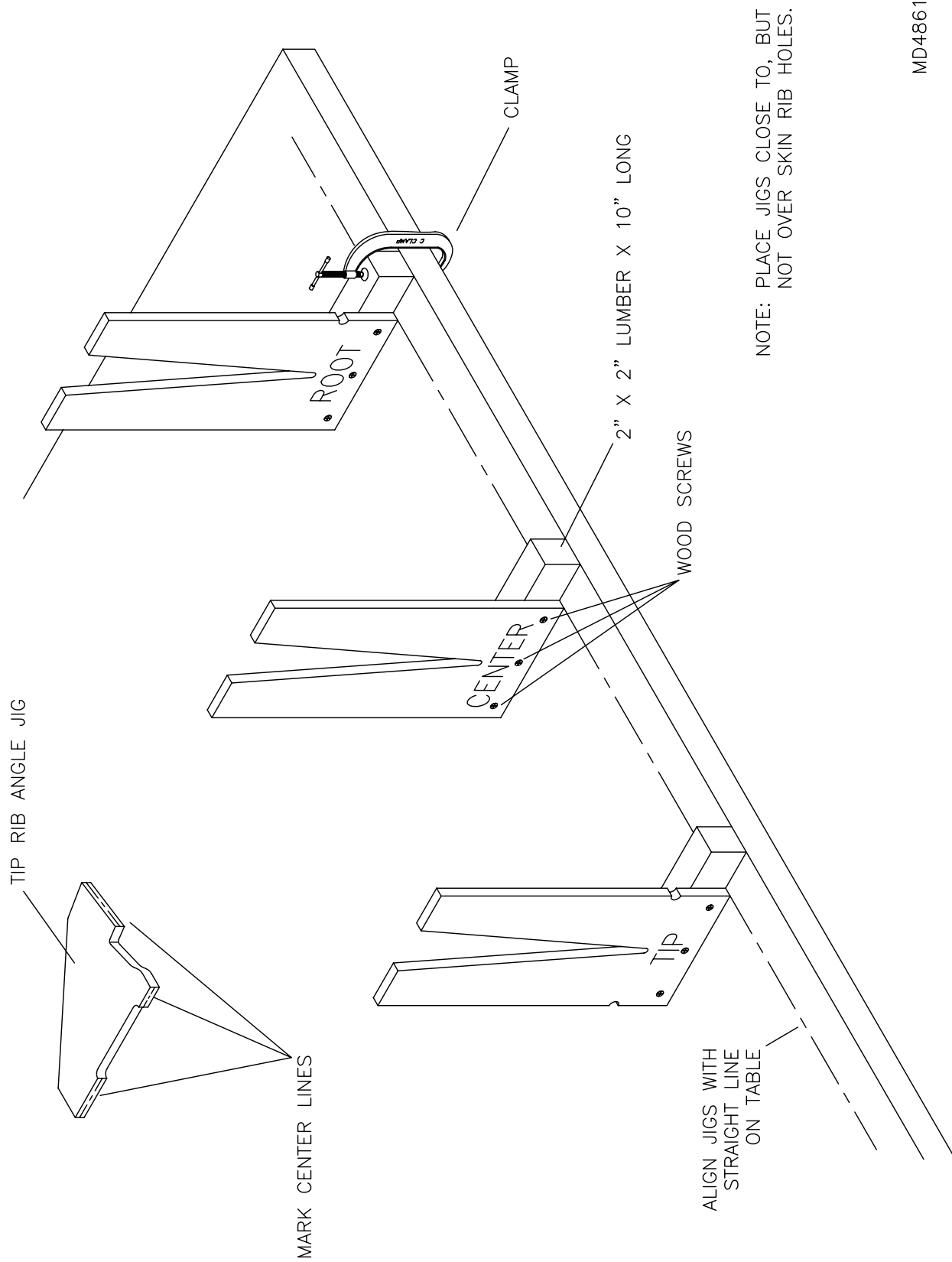
RANS S-19 VENTERRA
RUDDER TANG FLANGE BUSHING INSTALLATION
FIGURE 02A-02A

04/01/2011



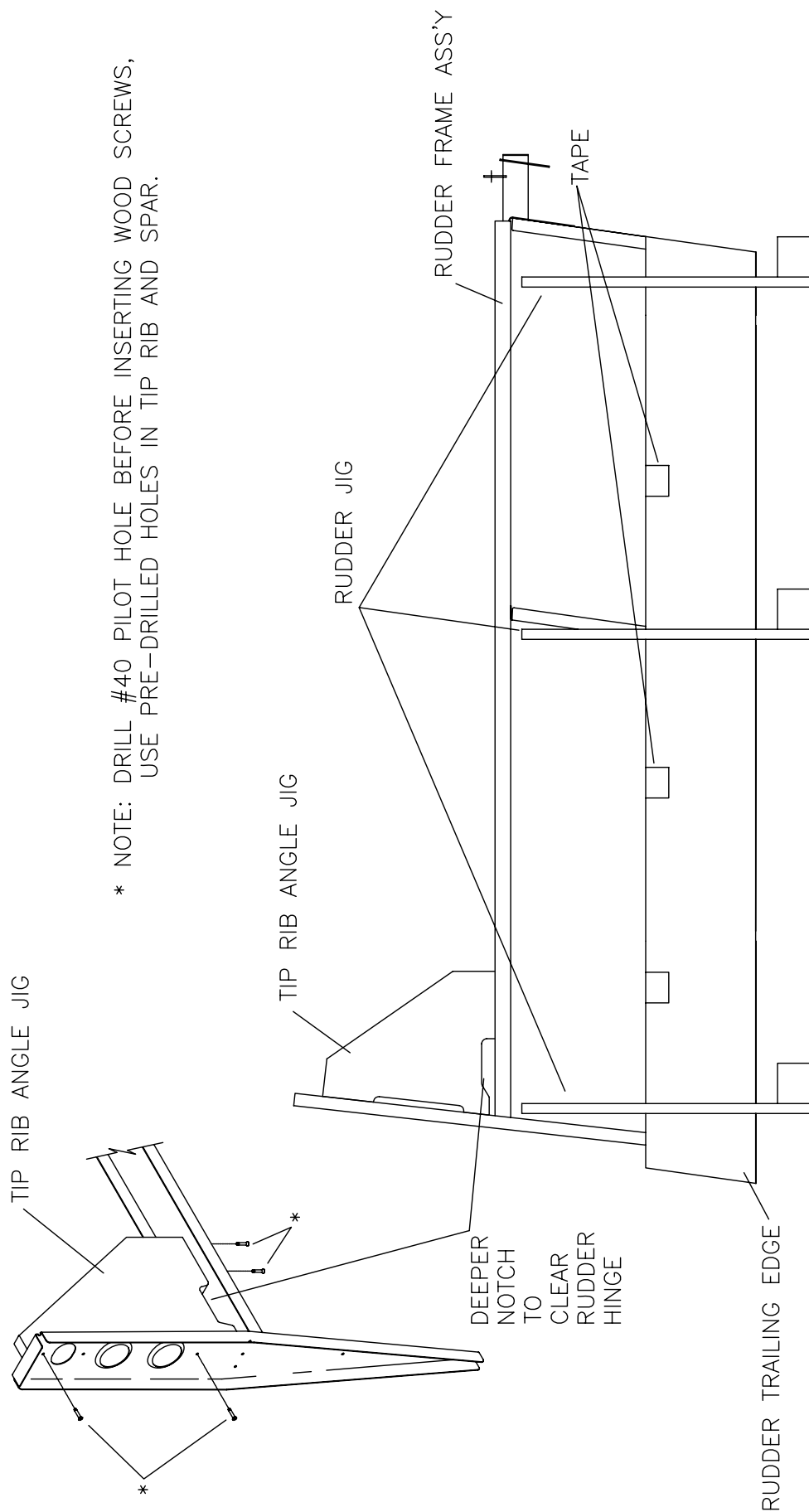
MD5162

RRF S-19 VENTERRA
RUDDER SPAR ORIENTATION
FIGURE 02A-03



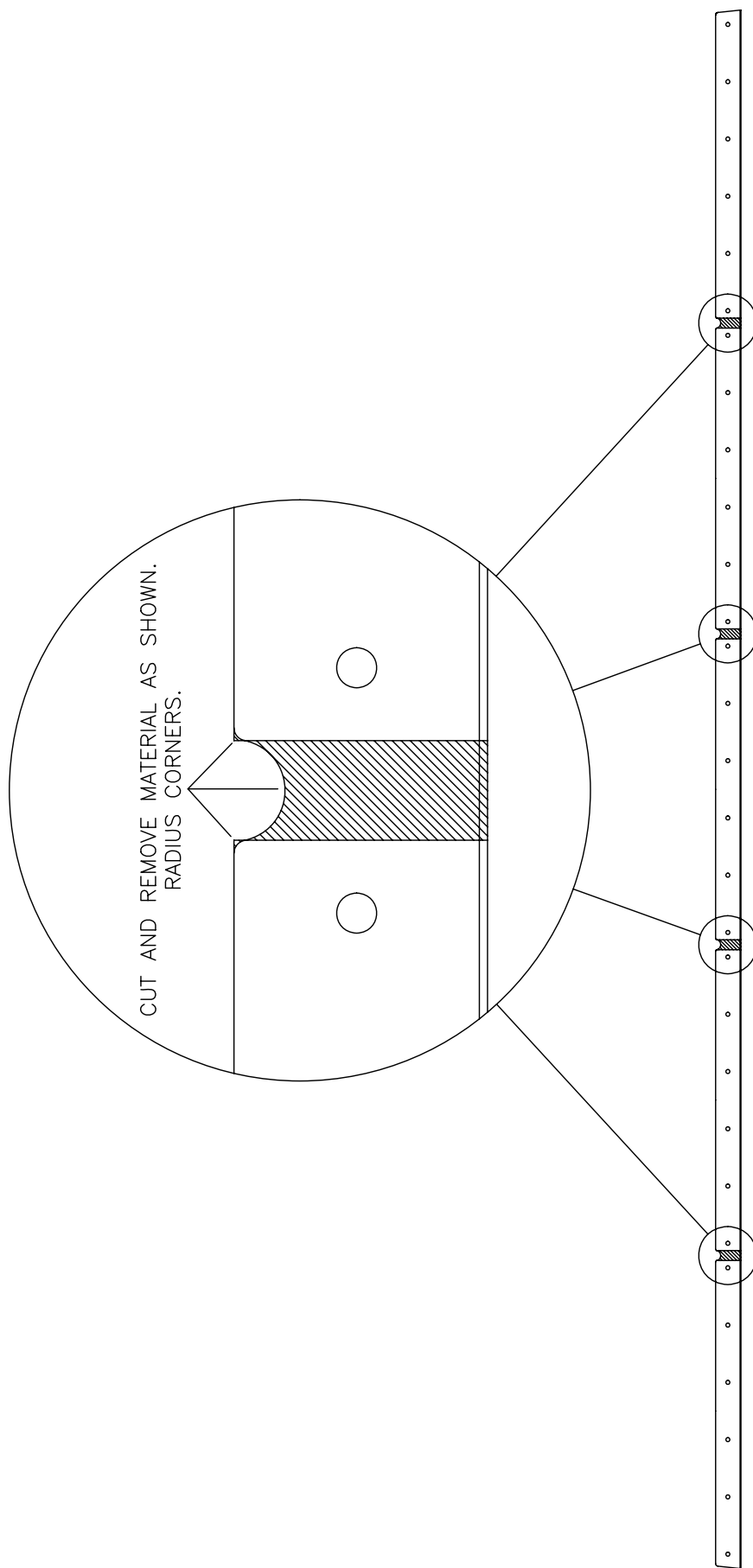
RAMS S-19 VENTERRA
RUDDER JIGS
FIGURE 02A-08

MD4861



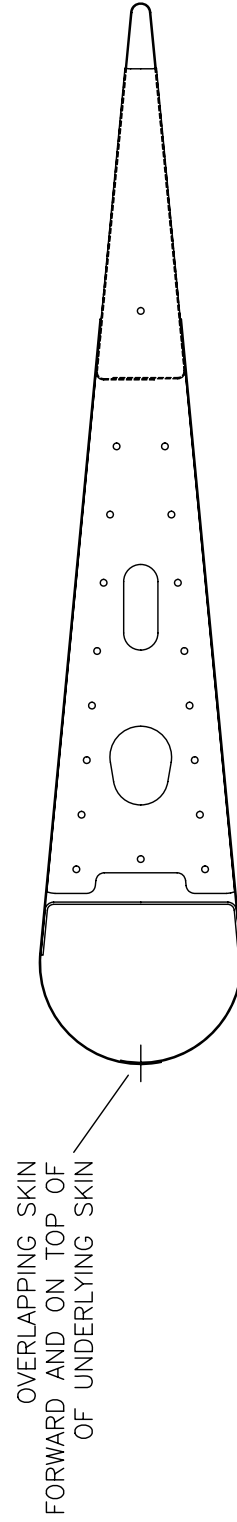
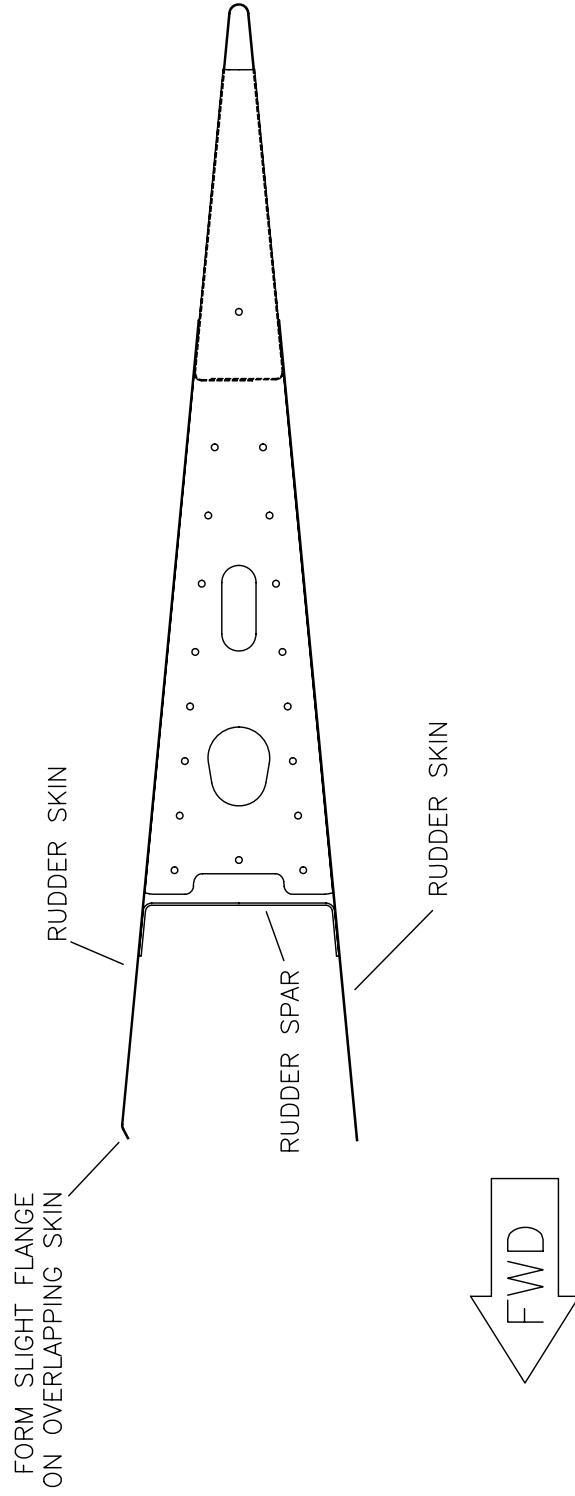
MD4860

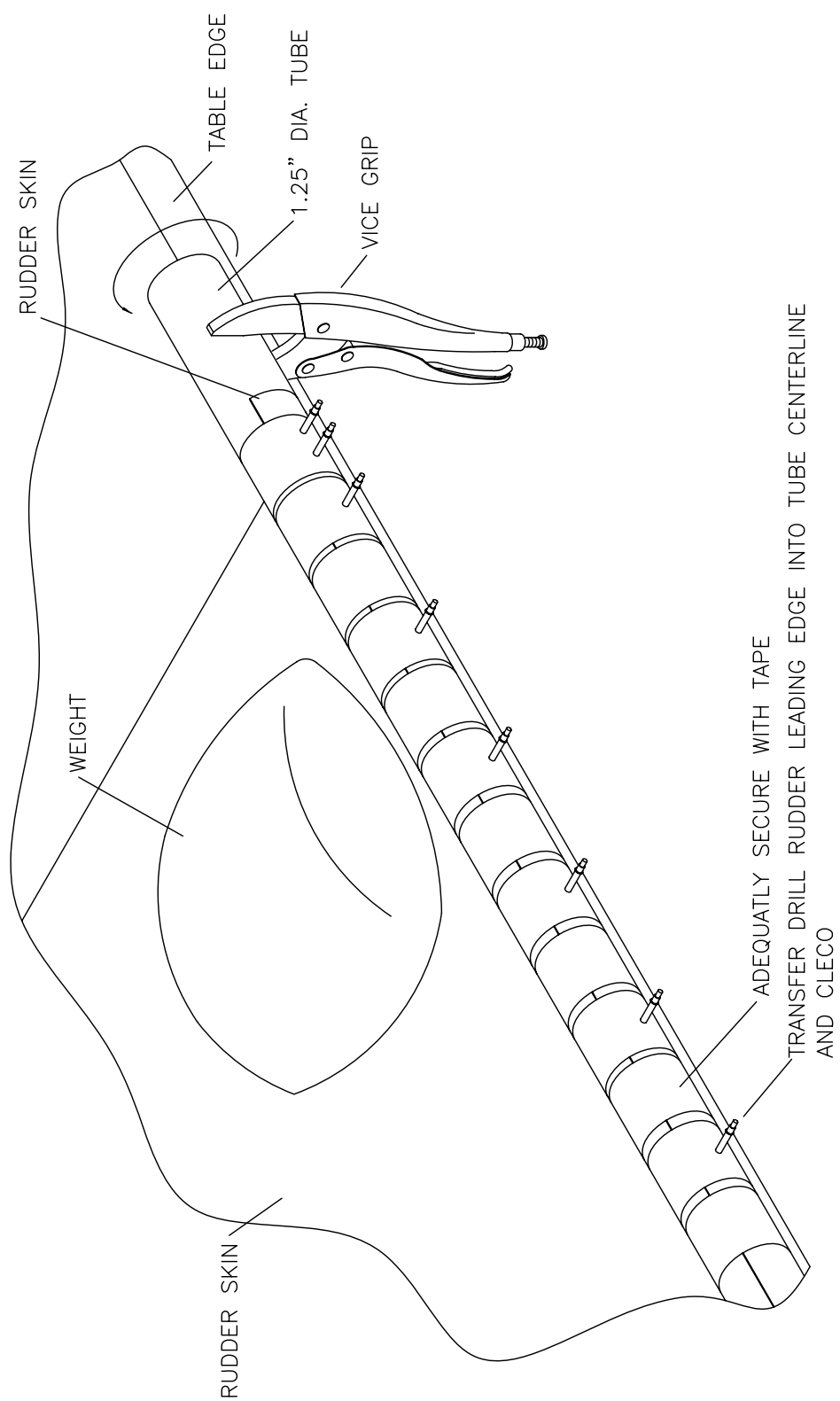
RAM S-19 VENTERRA
RUDDER JIG
FIGURE 02A-10



MD5161

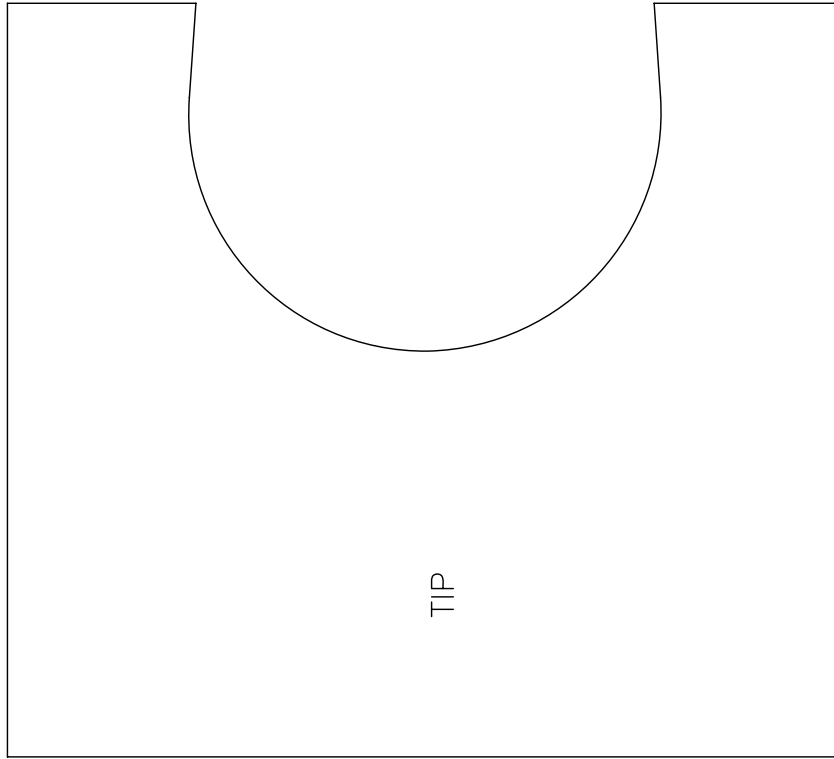
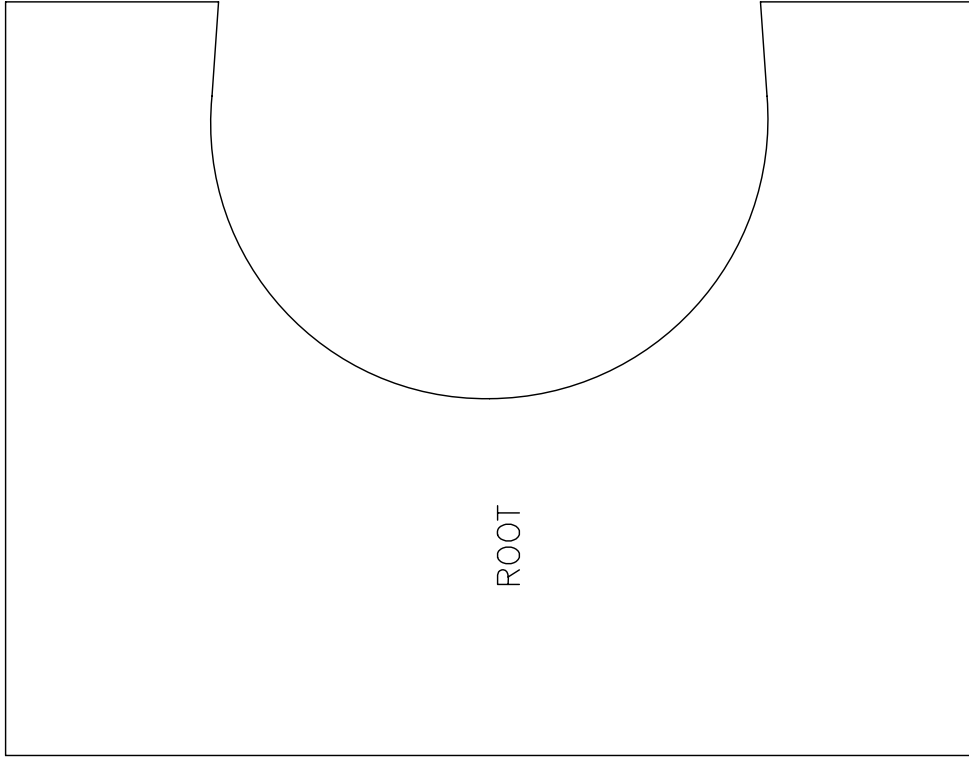
RAM S-19 VENTERRA RUDDER SKIN STIFFENER MODIFICATION FIGURE 02A-13





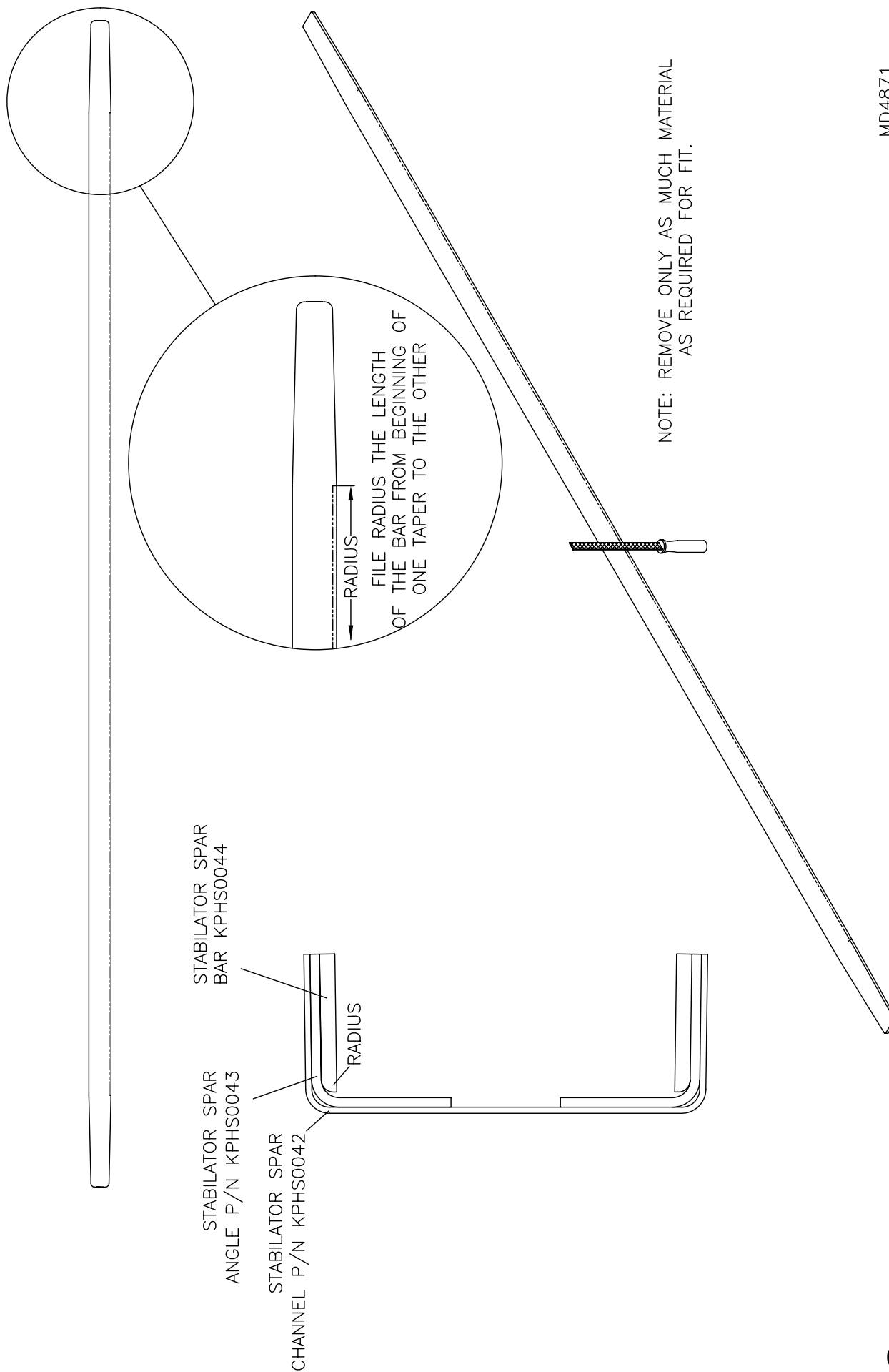
MD4863

RAMS S-19 VENTERRA
RUDDER FORMING JIG
FIGURE 02A-23



MD4862

RRM S-19 VENTERRA
RUDDER LEADING EDGE TEMPLATE
FIGURE 02A-23A

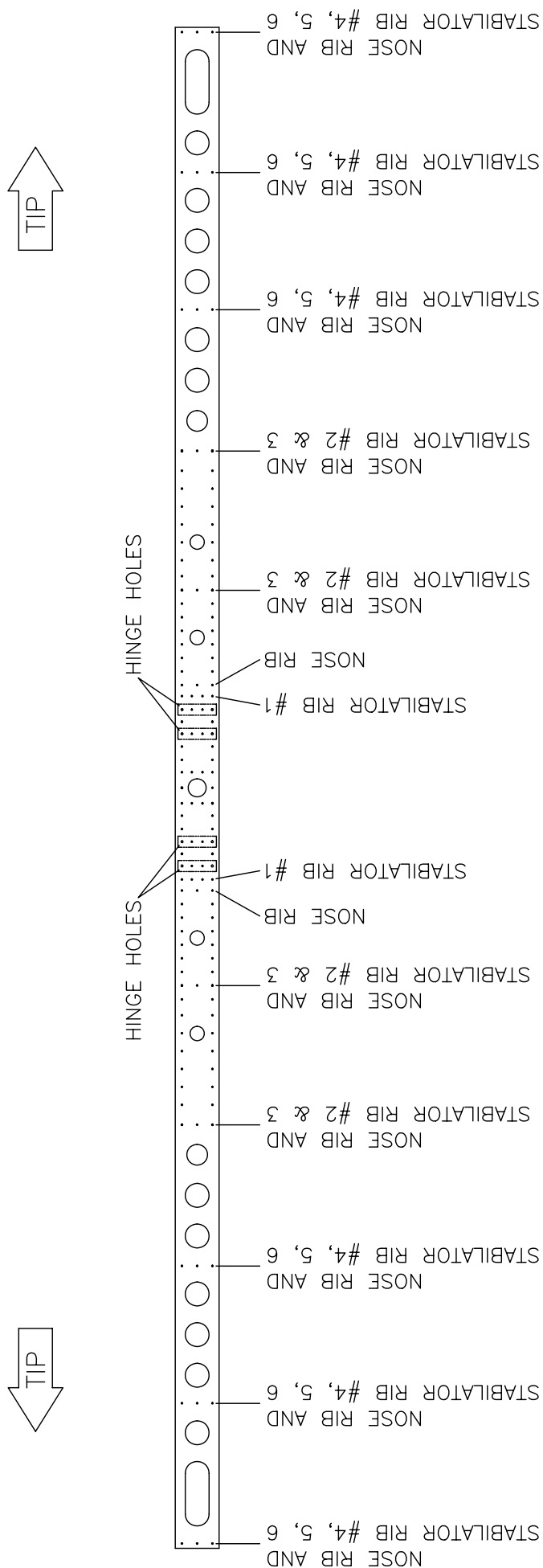


MD4871

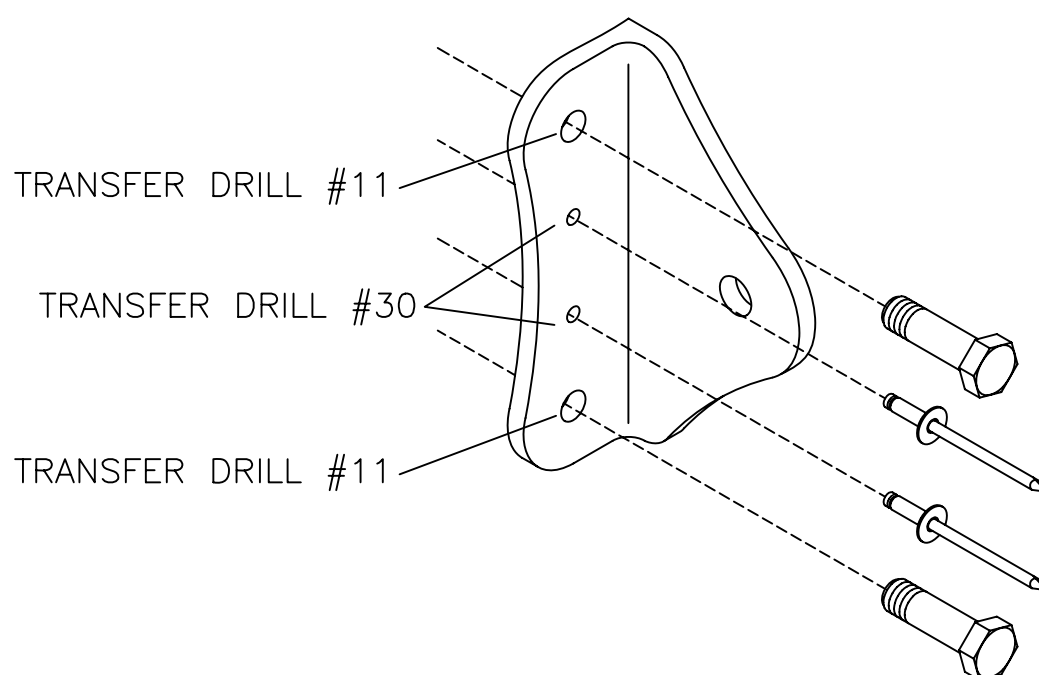
RRM S-19 VENTERRA **STABILATOR SPAR BAR MODIFICATION** **FIGURE 02B-04**

04/01/2011

RRM S-19 VENTERRA STABILATOR SPAR ORIENTATION FIGURE 02B-06



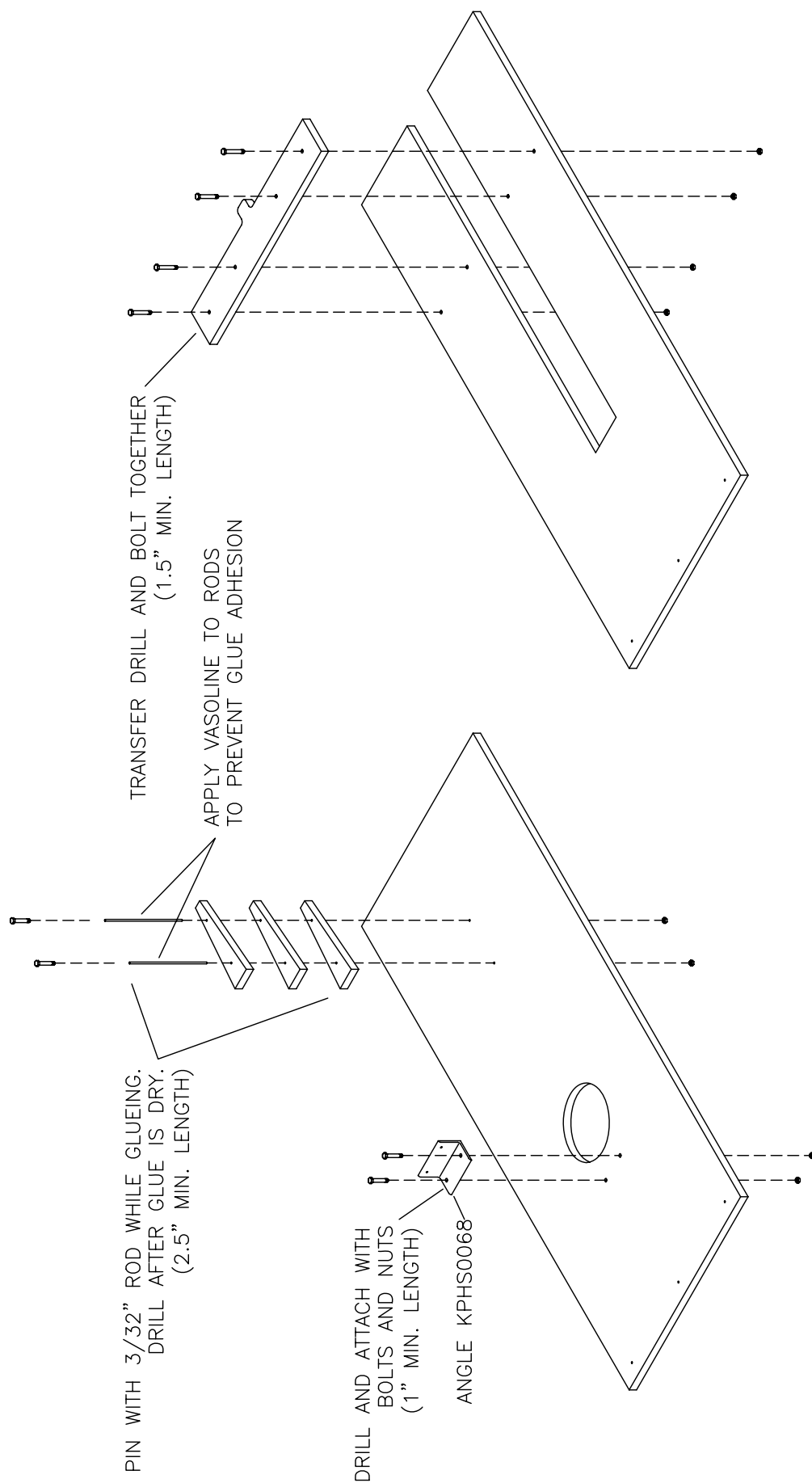
CLECO TO STABILATOR SPAR AND
DRILL PER DIRECTIONS BELOW



MD5232

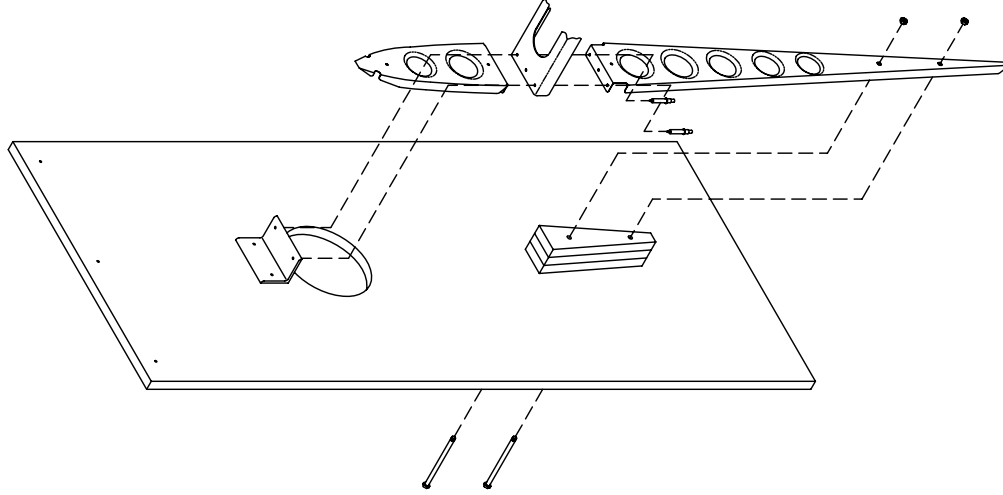
RANS S-19 VENTERRA
STABILATOR HINGE MODIFICATION
FIGURE 02B-07

04/01/2011



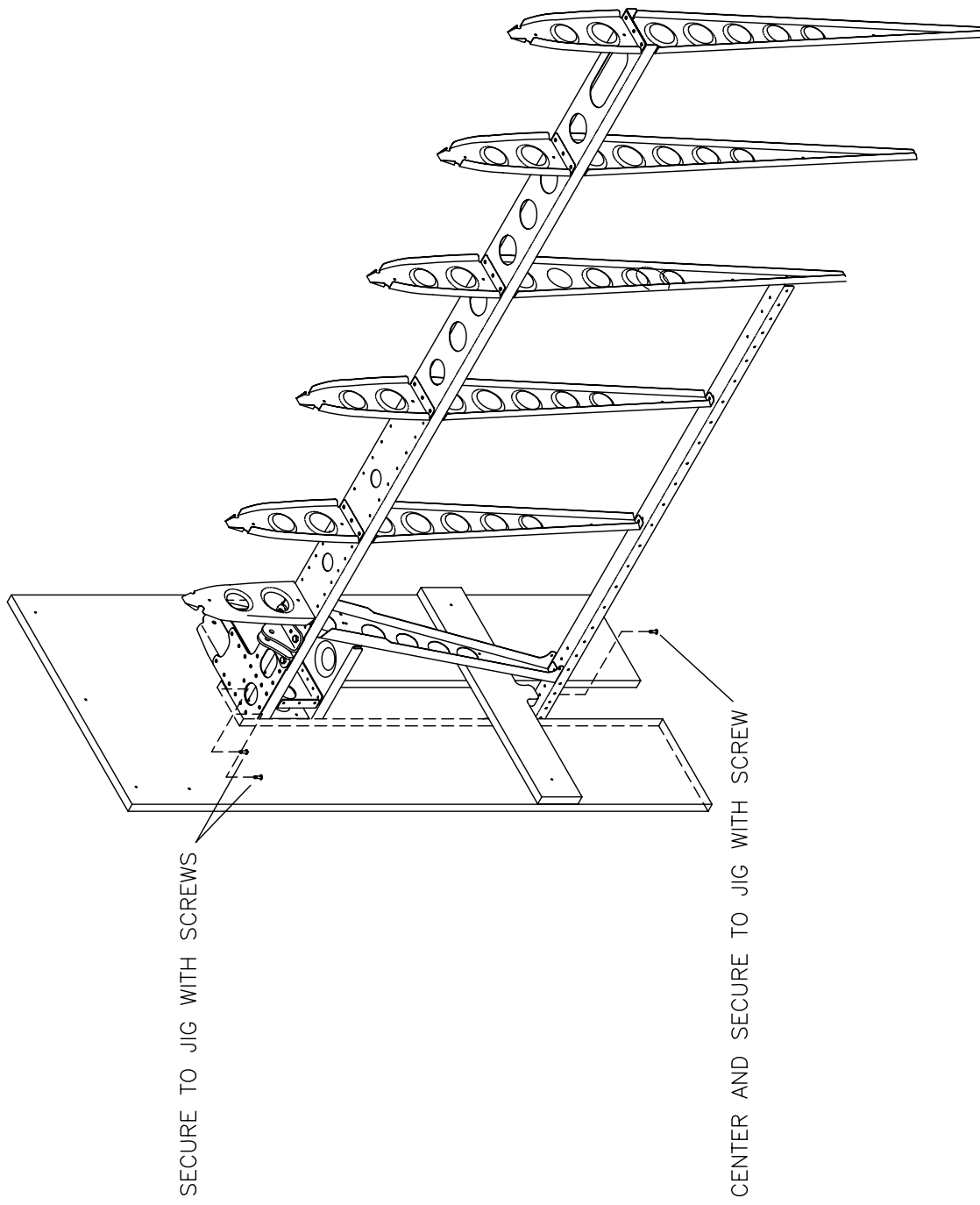
RRR S-19 VENTERRA
STABILATOR JIG ASSEMBLY #1
FIGURE 02B-08

MD4868



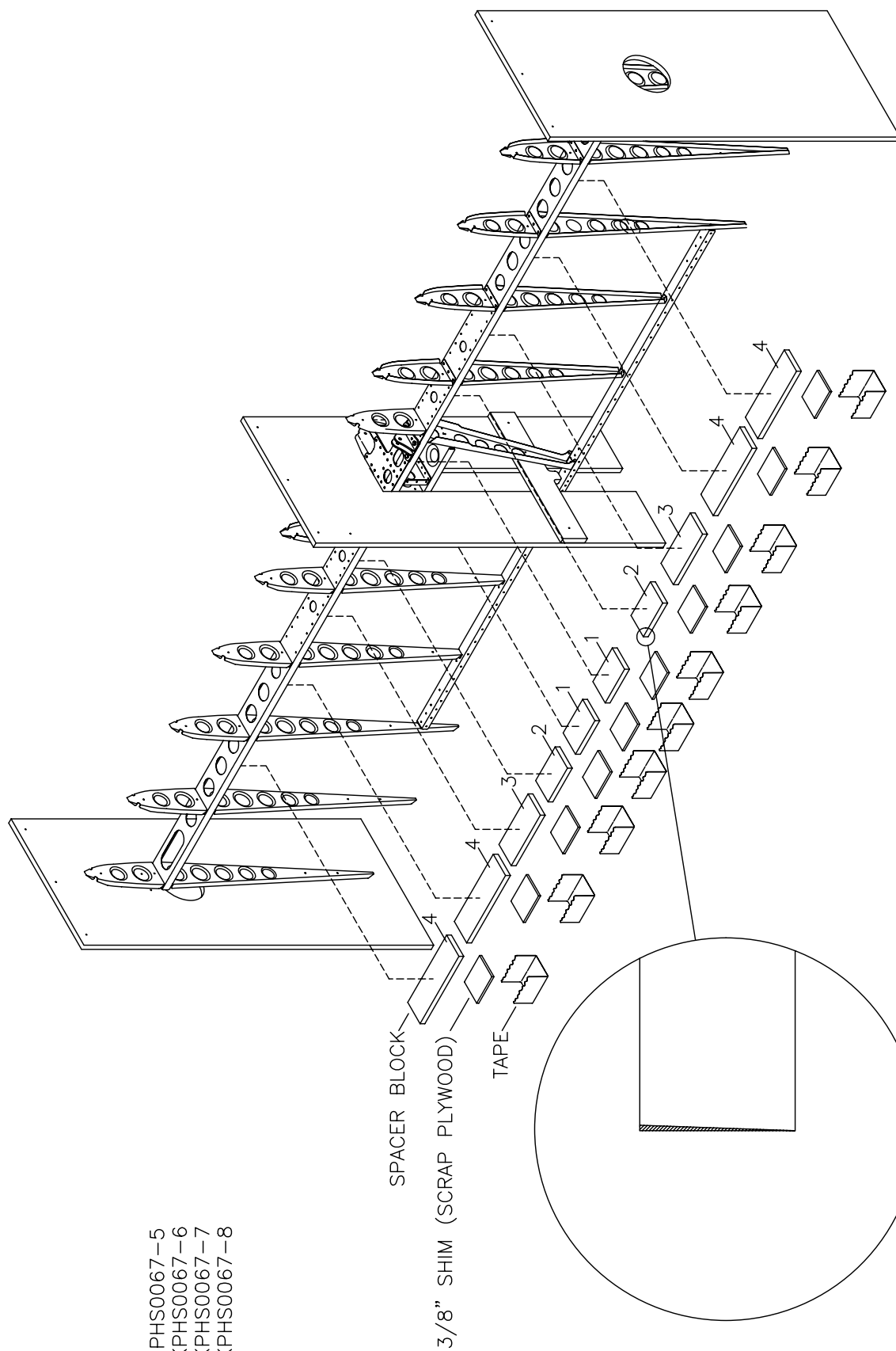
MD4868

RRF S-19 VENTERRA
STABILATOR JIG ASSEMBLY #2
FIGURE 02B-08A



MD4868

**RRF003 S-19 VENTERRA
STABILATOR JIG ASSEMBLY #3
FIGURE 02B-08B**



1. KPHS0067-5
2. KPHS0067-6
3. KPHS0067-7
4. KPHS0067-8

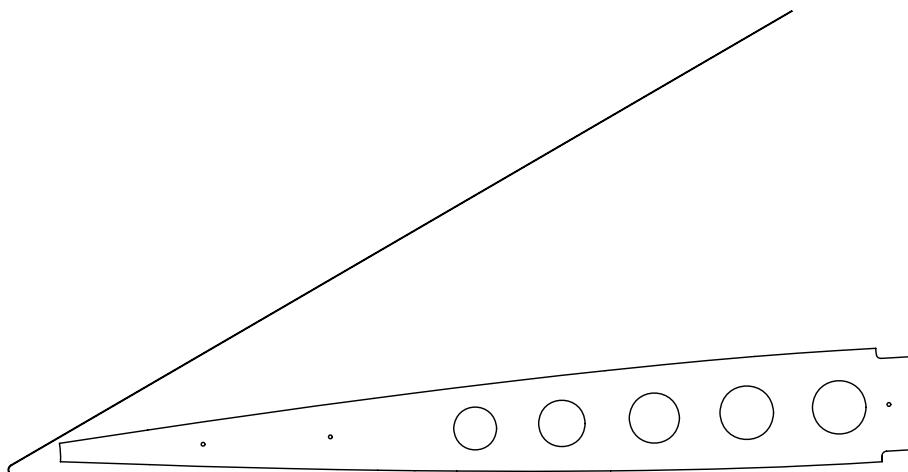
SPACER BLOCK

3/8" SHIM (SCRAP PLYWOOD)

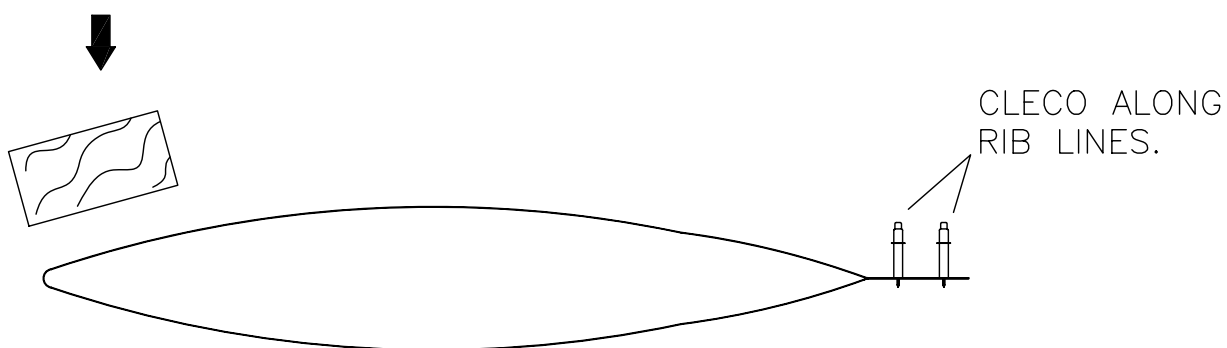
TAPE

BEVEL EDGES OF BLOCKS TO MATCH INNER
SHAPE OF STABILATOR LEADING EDGE SPAR
WITH THE STABILATOR SPAR BAR IN PLACE.

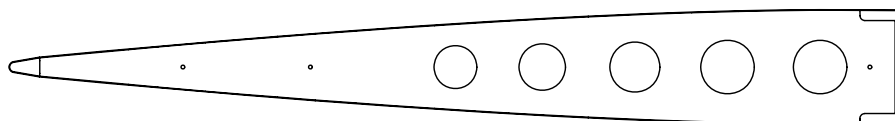
RRF S-19 VENTERRA
STABILATOR JIG ASSEMBLY #4
FIGURE 02B-08C



SKIN AS DELIVERED



LAY SKIN ON FLAT, CLEAN
WORK SURFACE

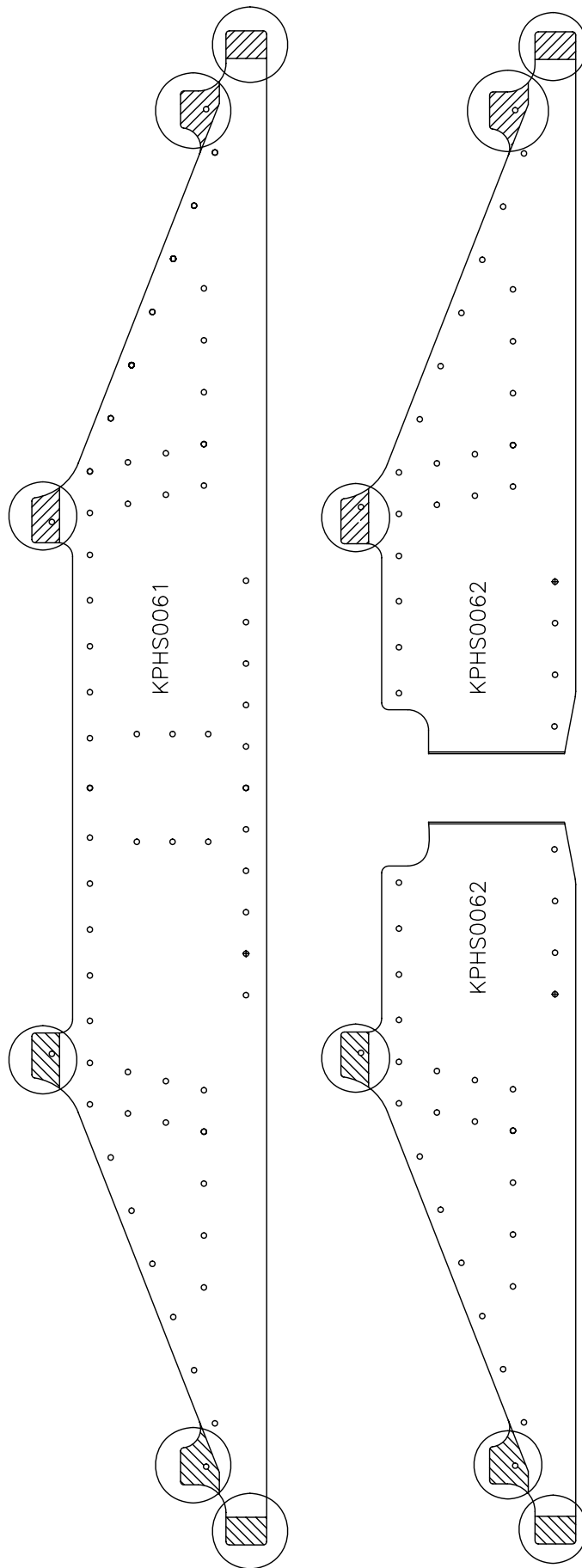


DESIRED SHAPE

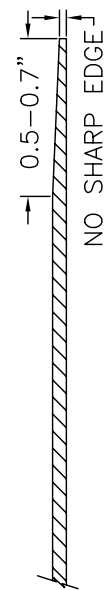
MD4874

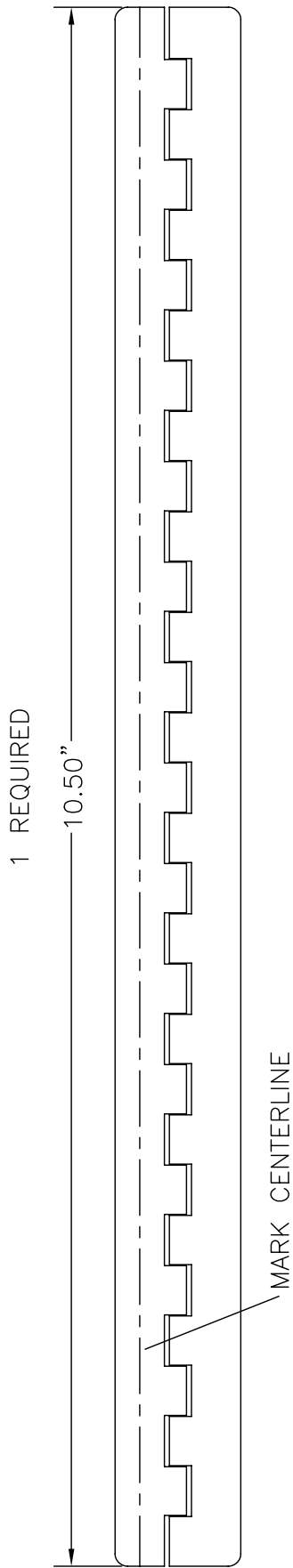
NOTE: IDENTIFY UP AND DOWN ON
KPHS0062 AS PER PARTS MANUAL
BEFORE SANDING.

SKIN DETAIL

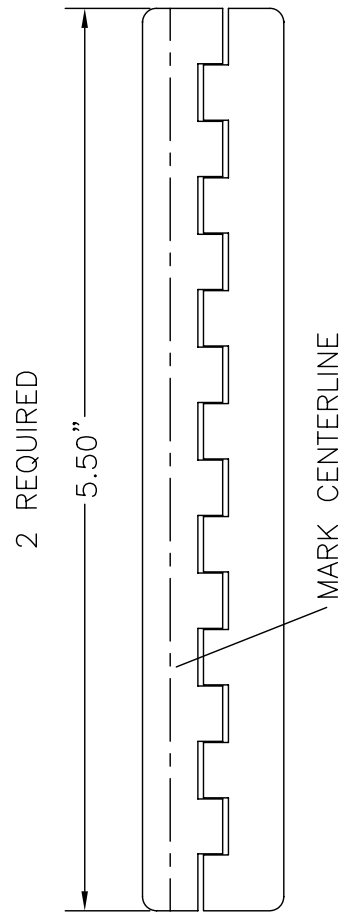


FILE AND SAND TO SHAPE
FOR SMOOTH SKIN
TRANSITION.



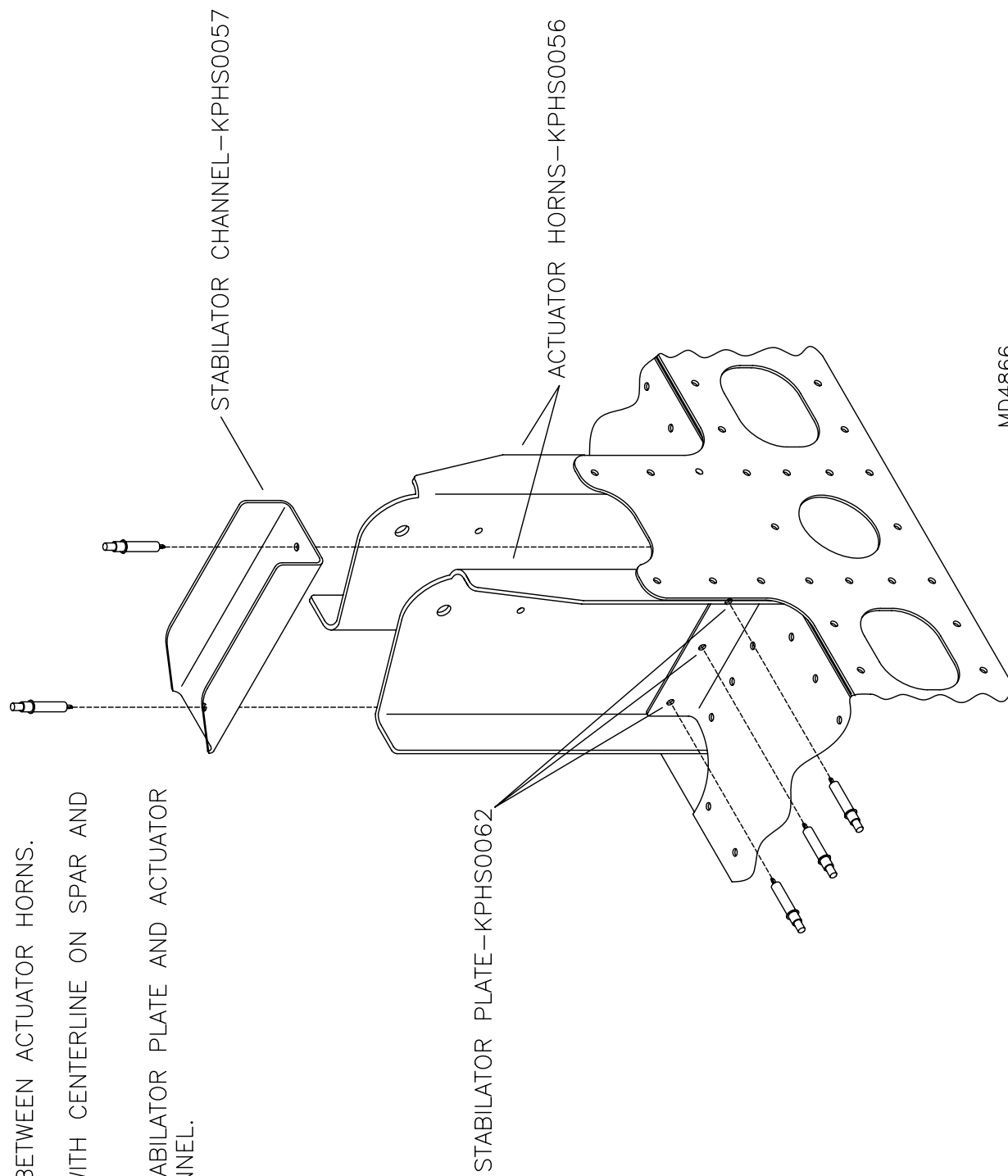


IMPORTANT: REMOVE PIN FROM HINGE BEFORE CUTTING



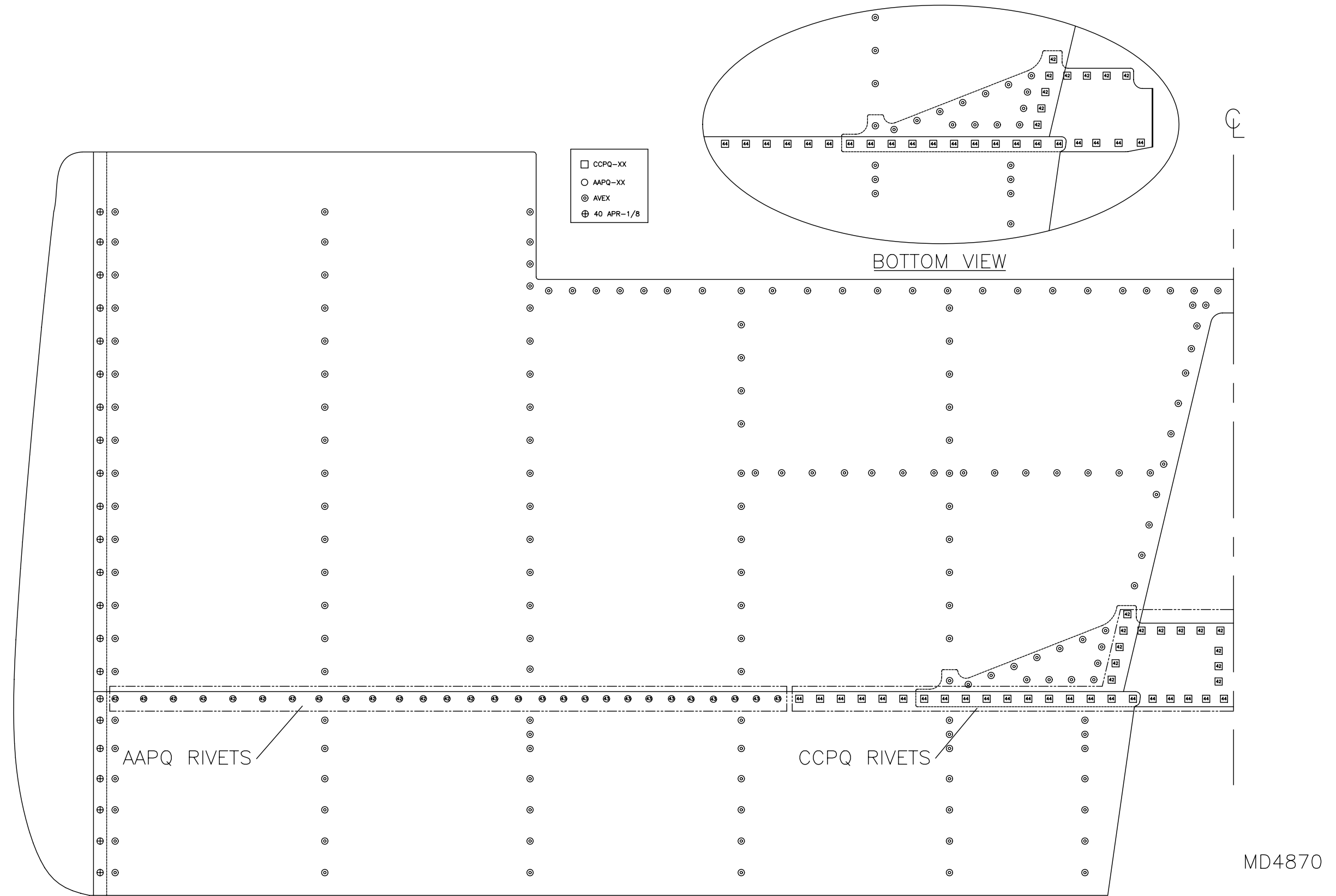
RAMS S-19 VENTERRA
ANTI-SERVO/TRIM TAB HINGE
FIGURE 02B-25

1. PLACE STABILATOR CHANNEL BETWEEN ACTUATOR HORNS.
2. ALIGN STABILATOR CHANNEL WITH CENTERLINE ON SPAR AND TRANSFER DRILL.
3. TRANSFER DRILL THROUGH STABILATOR PLATE AND ACTUATOR HORNS INTO STABILATOR CHANNEL.



MD4866

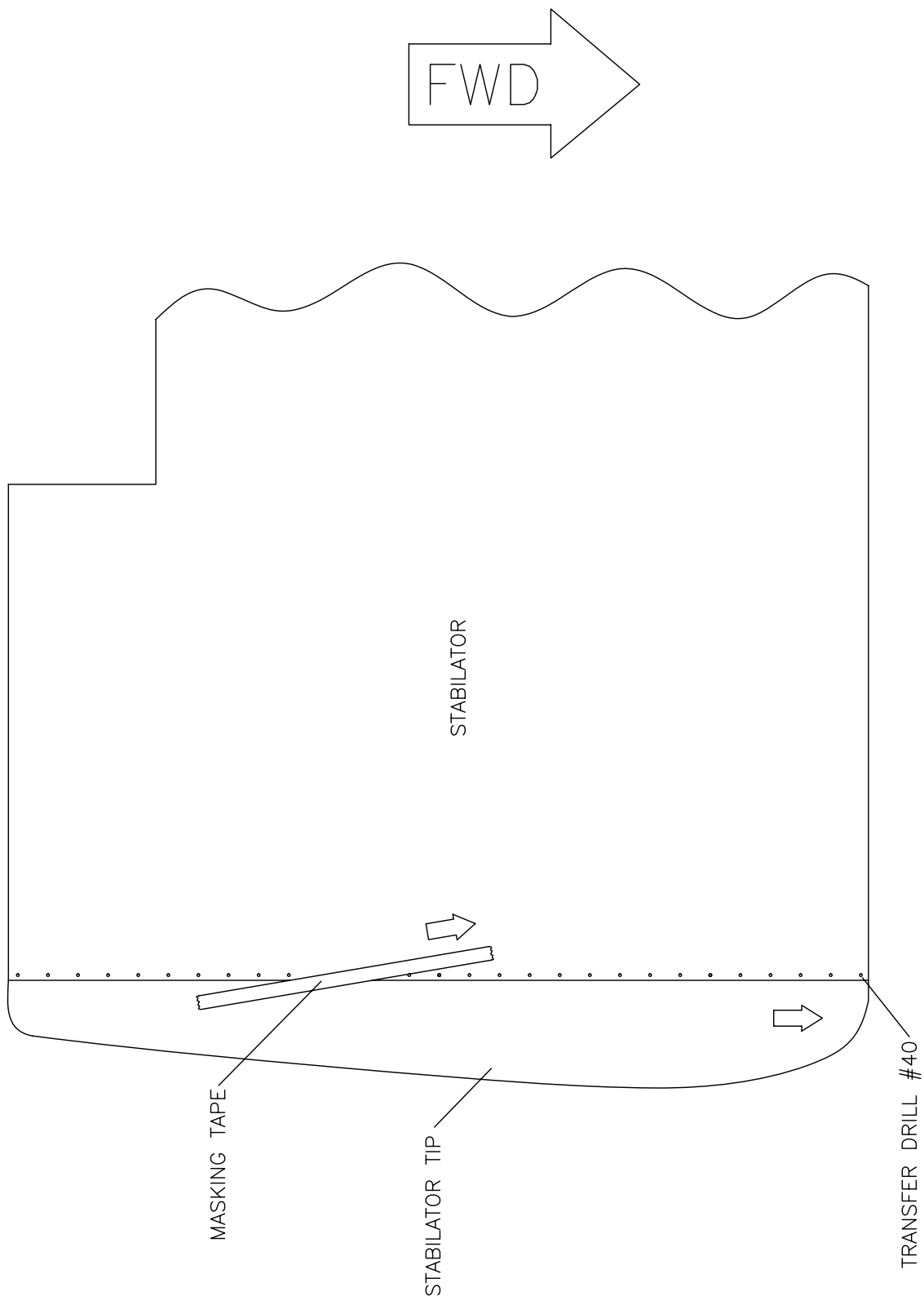
RAMS S-19 VENTERRA
STABILATOR CHANNEL INSTALLATION
FIGURE 02B-26



RANS S-19 VENTERRA
STABILATOR RIVET SCHEDULE
FIGURE 02B-36

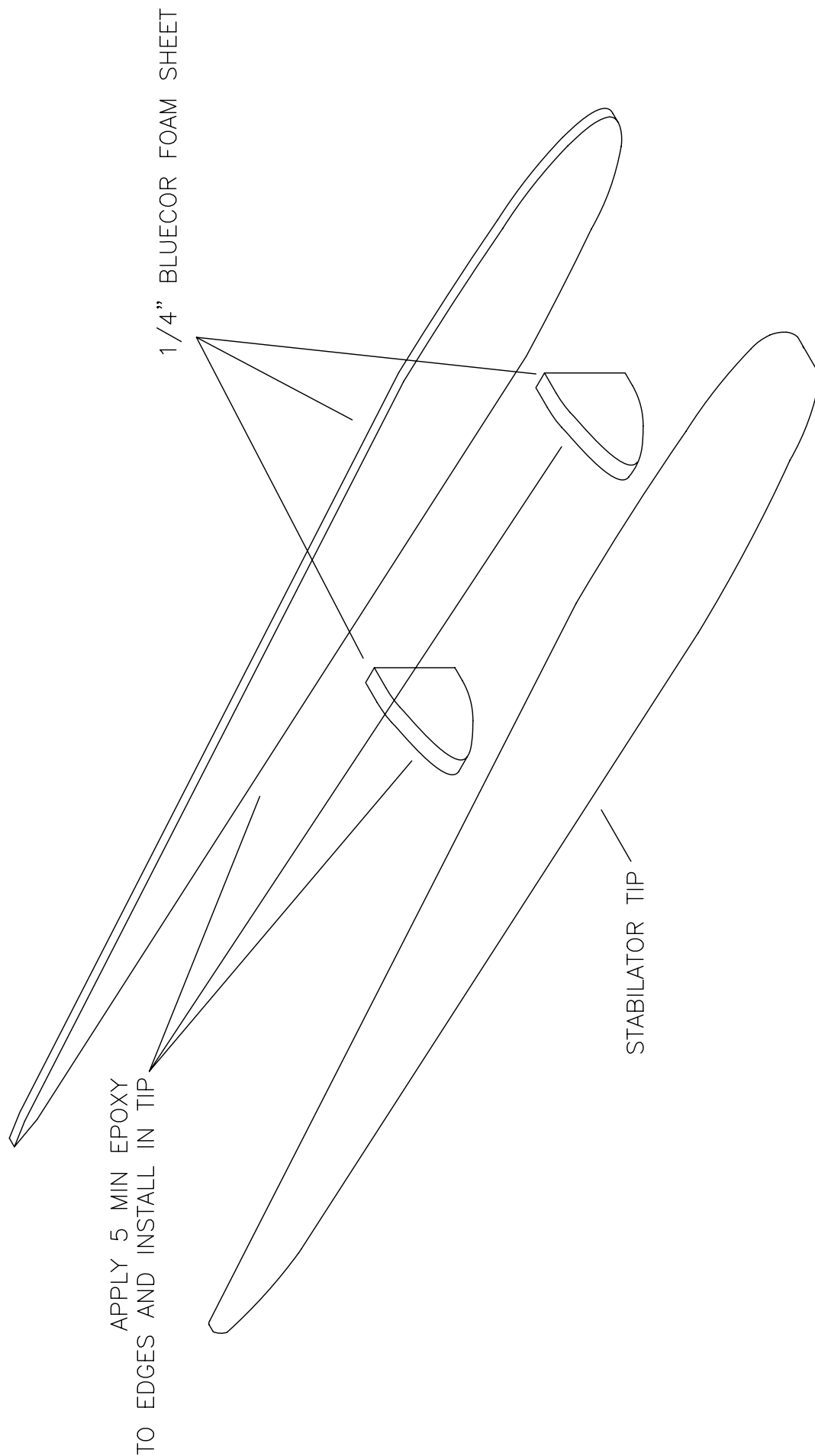
TOP VIEW

04/01/2011



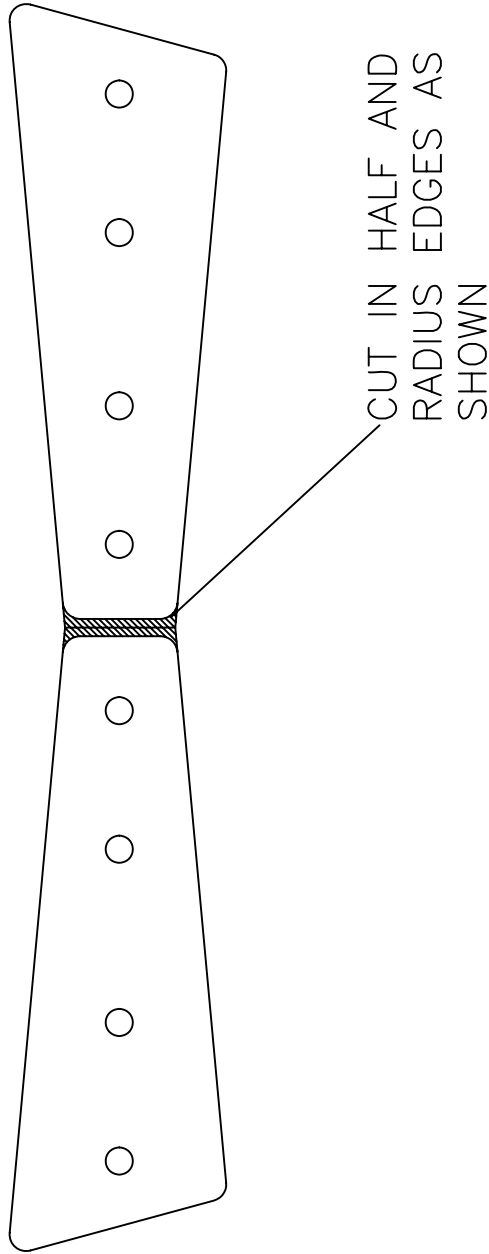
MD4872

RAMS S-19 VENTERRA
STABILATOR TIP FITTING
FIGURE 02B-45



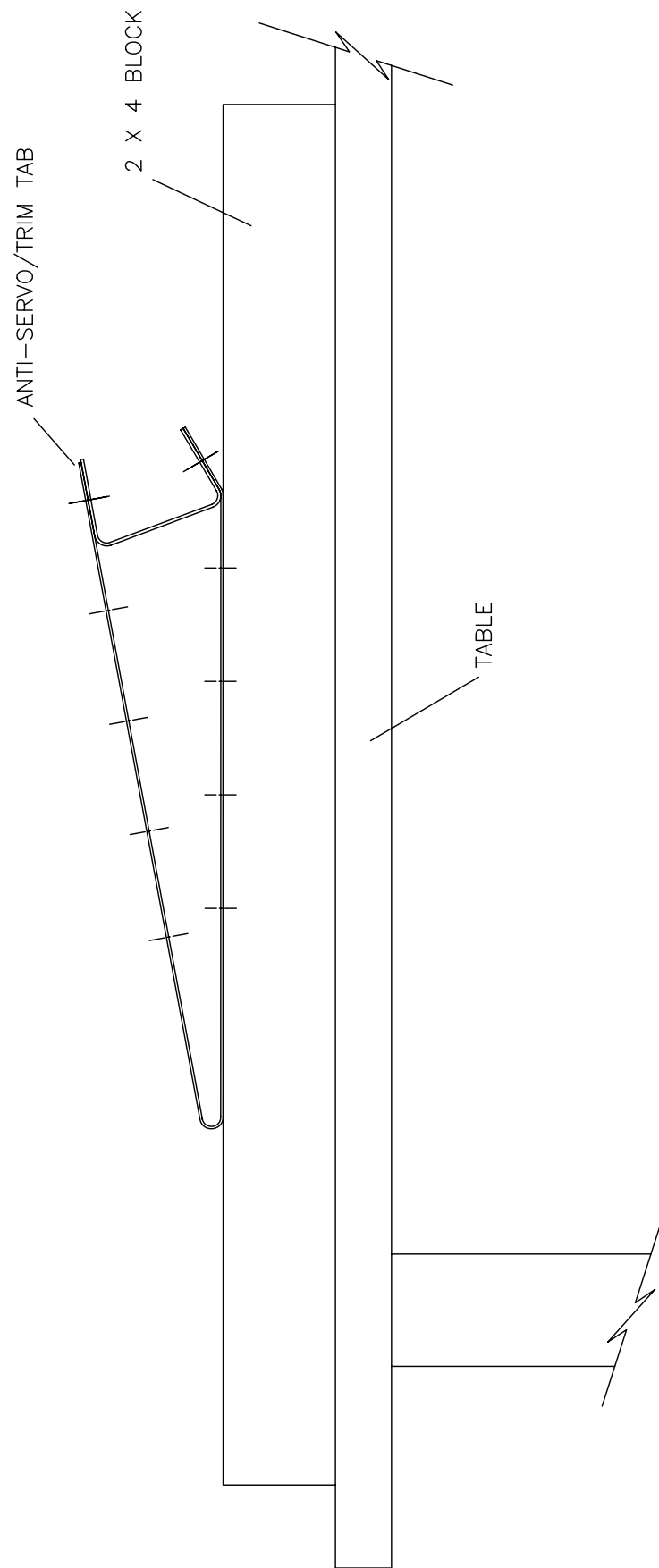
MD4873

RRM S-19 VENTERRA
OPTIONAL STABILATOR TIP REINFORCEMENT
FIGURE 02B-47



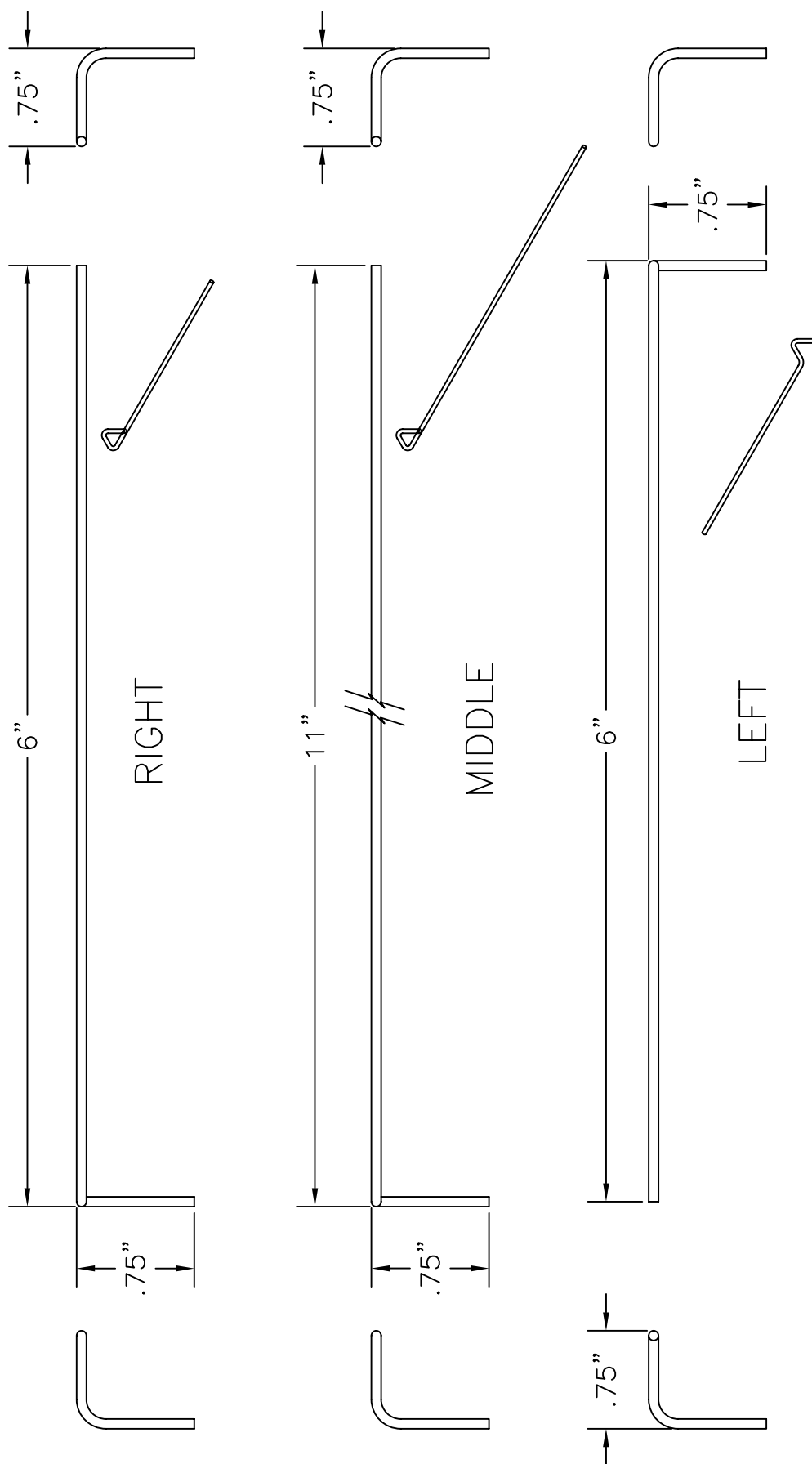
MD5010

RRM S-19 VENTERRA
SPACER PLATE MODIFICATION
FIGURE 02C-03




S-19 VENTERRA
ANTI-SERVO/TRIM TAB SUPPORT
FIGURE 02C-09

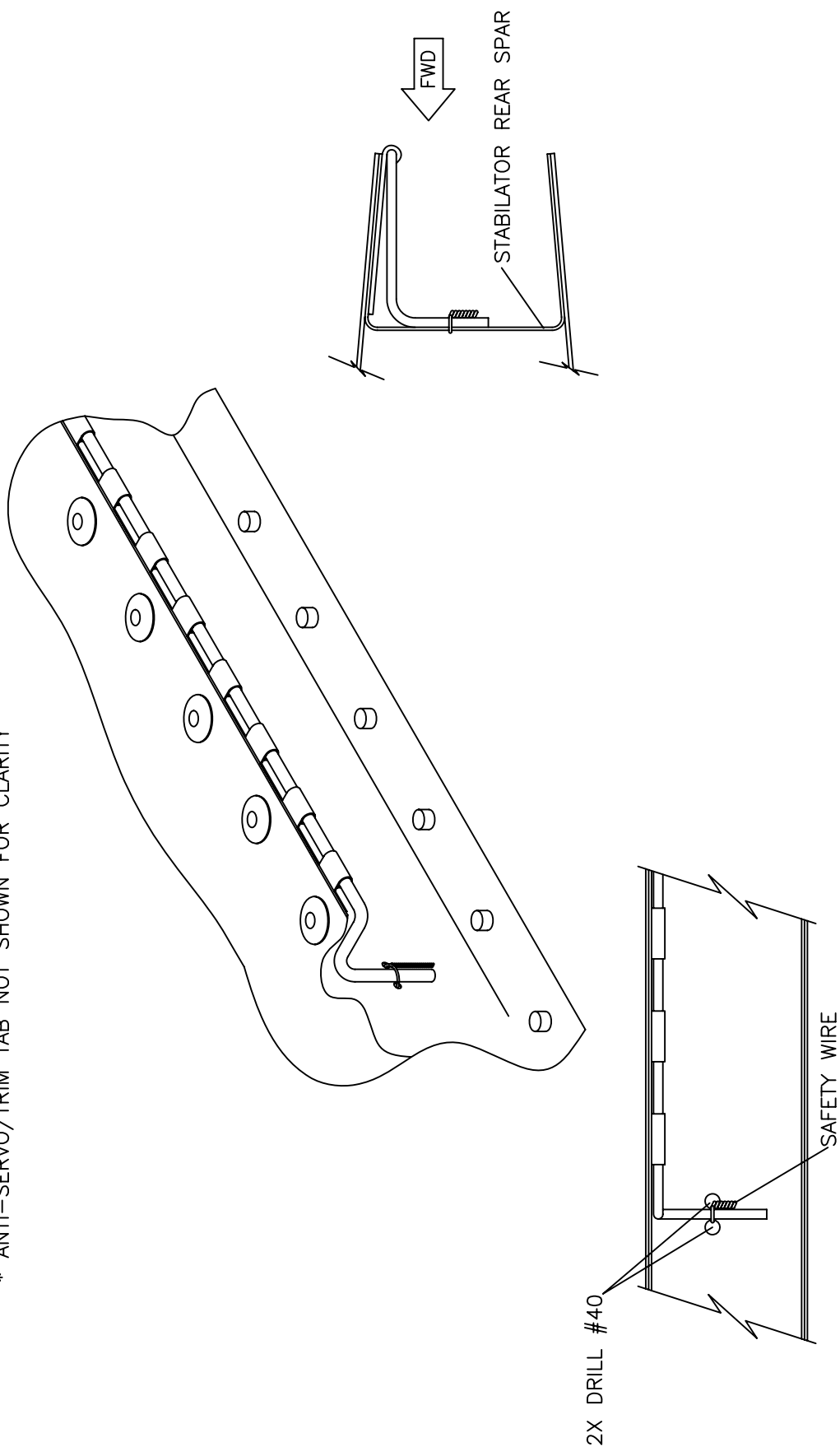
MD4811



MD5019

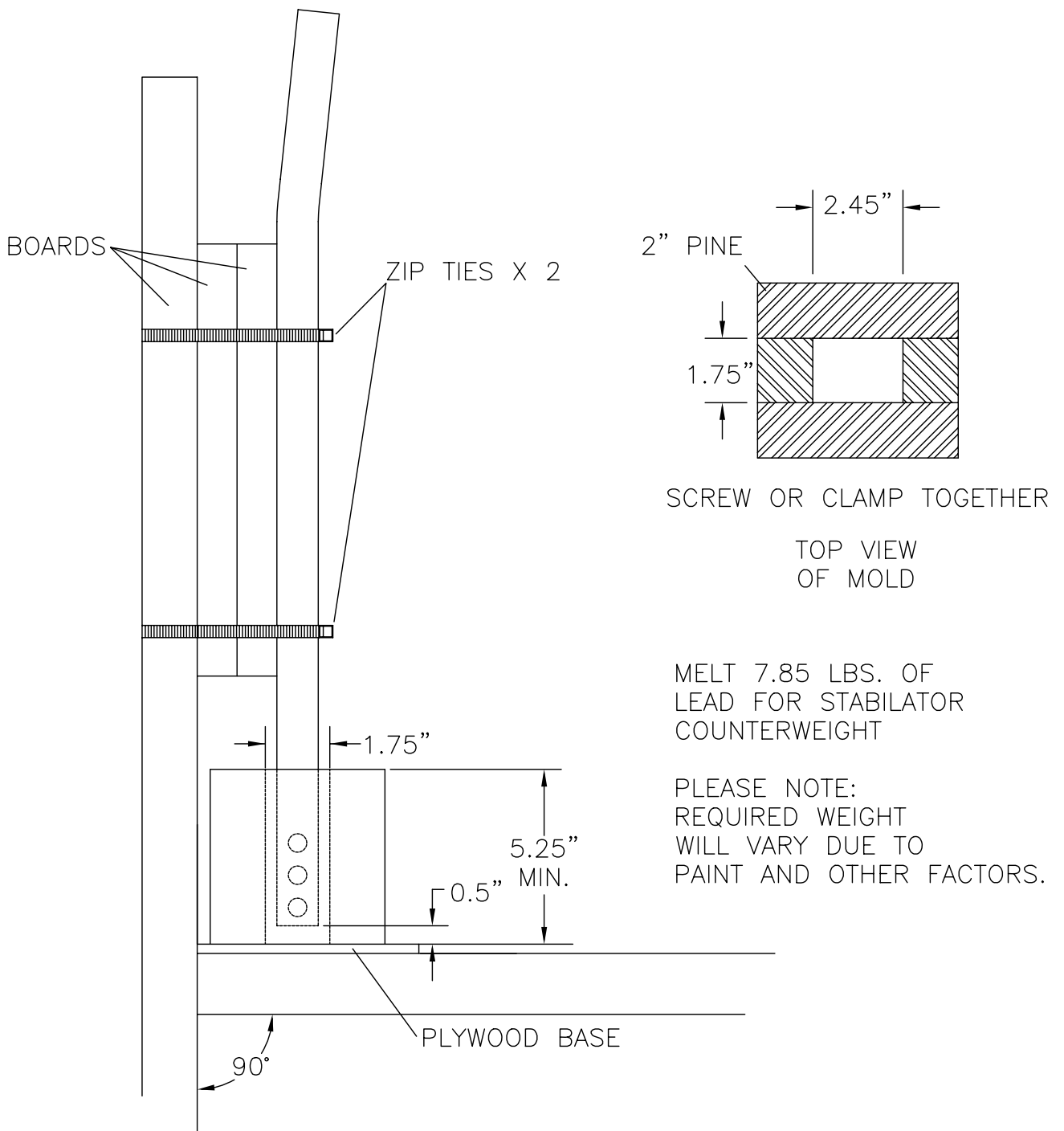
RRR S-19 VENTERRA
ANTI-SERVO/TRIM TAB HINGE PIN MODIFICATION
FIGURE 02C-17

* ANTI-SERVO/TRIM TAB NOT SHOWN FOR CLARITY



MD5018

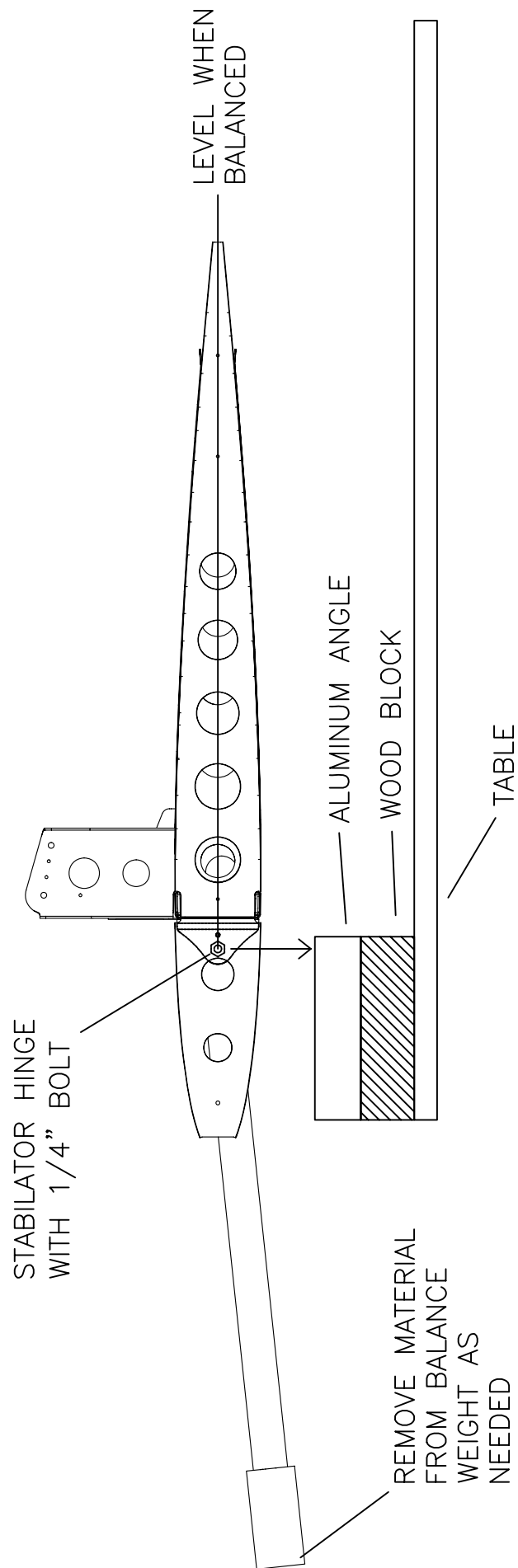
RAMS S-19 VENTERRA
ANTI-SERVO/TRIM TAB HINGE PIN SAFETY WIRE
FIGURE 02C-18



MD4867

RANS S-19 VENTERRA
STABILATOR COUNTERWEIGHT
FIGURE 02D-02

04/01/2011



IMPORTANT: STABILATOR MUST BE 100% STATIC MASS BALANCED
IN REFERENCE TO THE HINGE LINE.

RRM S-19 VENTERRA
STABILATOR BALANCING
FIGURE 02D-12

MD5191