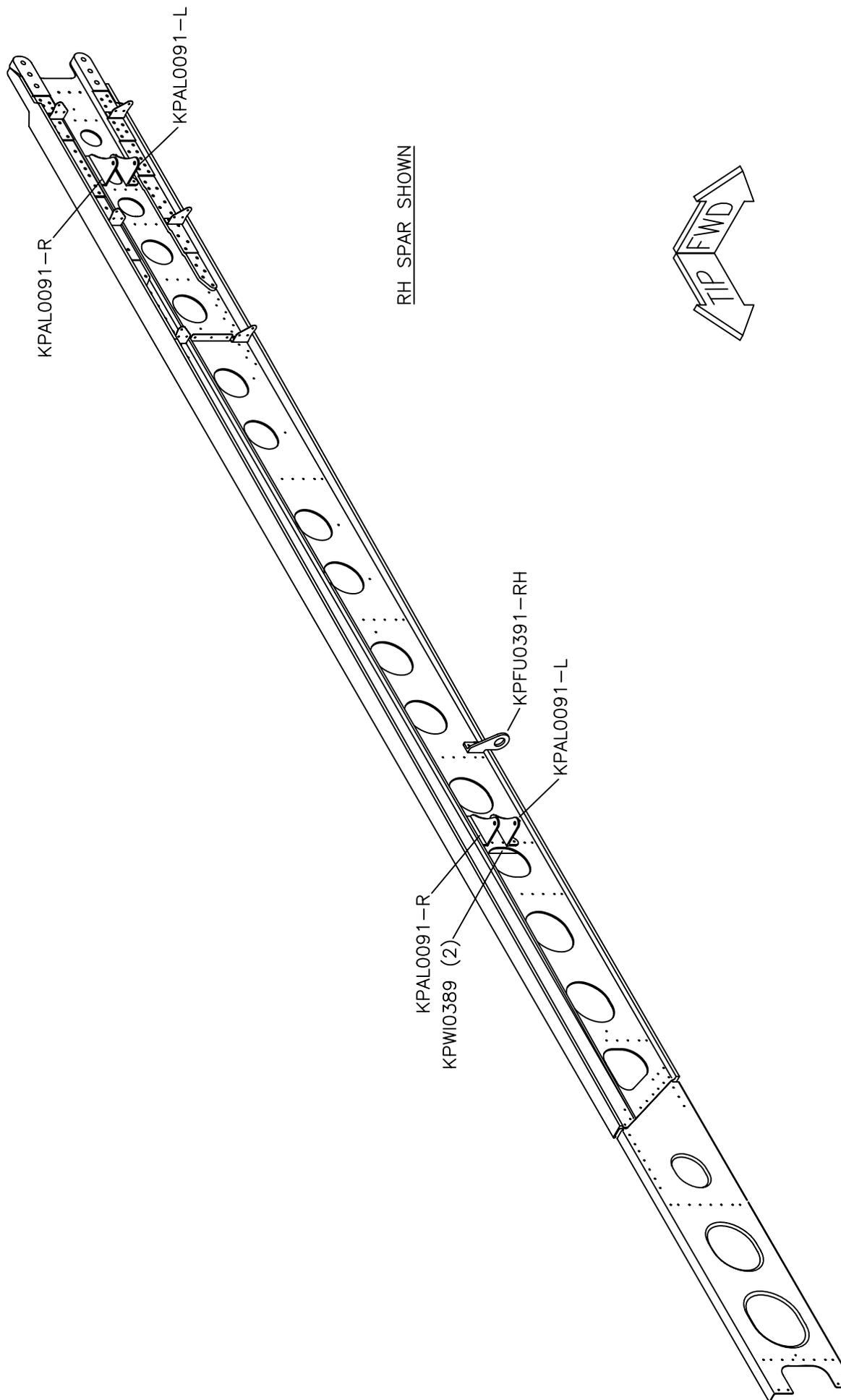


03 – WING ASSEMBLY

WING SPAR ASSEMBLY	03-01
WING SPAR ASSEMBLY – INSTALLTION OF TIE DOWN BRACKET	03-01A
FORWARD WING RIB MODIFICATION.....	03A-04
WING RIB INSTALLATION – NOSE RIBS – STATIONS -1 & -4	03A-05
WING RIB INSTALLATION – REAR RIBS – STATIONS -1 & -4.....	03A-06
WING RIB INSTALLATION – NOSE RIB – STATION -5.....	03A-08
WING RIB INSTALLATION – STATIONS -7 TO -10	03A-10
RIB ATTACH ANGLE MODIFICATION	03A-12
WING RIB INSTALLATION – STATIONS -11 TO -12	03A-12A
WING RIB INSTALLATION – TANK BAY AREA – STATIONS -5 TO -7	03B-04
TRAILING EDGE SPAR.....	03C-01
TRAILING EDGE SPAR.....	03C-03
PLATE SPAR REINFORCEMENT MODIFICATION	03C-04
TRAILING EDGE SPAR.....	03C-05
HINGE SUPPORT MODIFICATION	03C-06
TRAILING EDGE SPAR.....	03C-06A
TRAILING EDGE SPAR – ROOT ATTACH.....	03C-07
TYPICAL BELLCRANK ASSEMBLY	03D-01
AILERON INNER BELLCRANK INSTALLATION	03D-03
AILERON OUTER BELLCRANK INSTALLATION.....	03D-03A
VENT TUBE – TANK HOLE LOCATION	03E-01
DRAIN FITTING – HOLE LOCATION.....	03E-01A
PICK UP TUBE – TANK HOLE LOCATION	03E-01B
TANK SKIN HOLE LOCATION DRILLING	03E-05

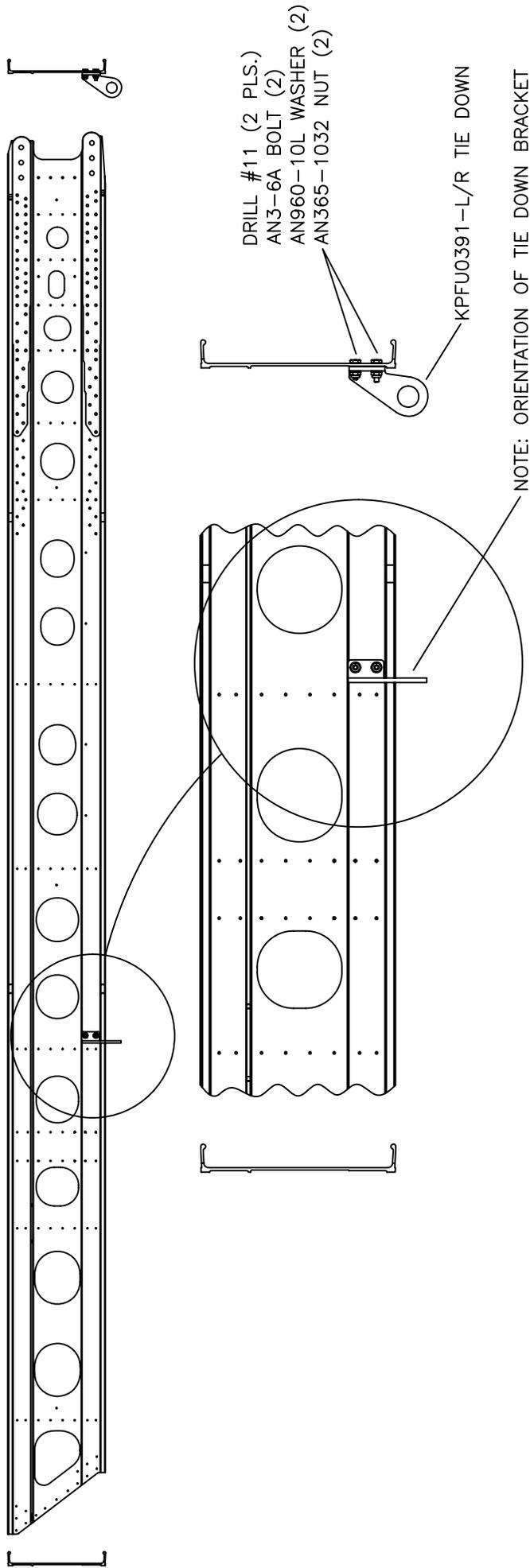
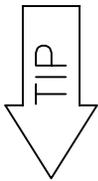
LOCATING TANK SKIN OPENINGS - DRAIN FITTINGS & VENT TUBE	03E-05A
FUEL DRAIN FITTING MODIFICATION.....	03E-06
FUEL PICK UP TUBE MODIFICATION.....	03E-07
FUEL PICK UP TUBE INSTALLATION	03E-08
FUEL TANK FITTING INSTALLATION.....	03E-08A
FUEL PICK UP TUBE INSTALLATION	03E-08B
VENT TUBE MODIFICATION AND INSTALLATION.....	03E-09
FUEL CAP ASSEMBLY	03E-10
SKIN STIFFENER MODIFICATION.....	03F-01
SKIN STIFFENER INSTALLATION	03F-03
WING ALIGNMENT HOLE LOCATIONS.....	03F-10
FLAP HINGE MODIFICATION AND INSTALLATION	03F-20
AILERON HINGE MODIFICATION.....	03F-20A
HINGE DOUBLER INSTALLATION.....	03F-33
WING SUPPORT	03F-50
FWD SKIN TIP FORMING	03F-70
FUEL TANK TORQUE ANGLE MODIFICATION.....	03F-72
TORQUE ANGLE – FWD	03F-74
TORQUE ANGLE – AFT.....	03F-74A
INSPECTION PANEL INSTALLATION.....	03F-78
WING SKIN RIVET SCHEDULE – BOTTOM	03G-06
WING SKIN RIVET SCHEDULE – TOP	03G-11
OPTIONAL PITOT/STATIC - FAIRING MOUNT PLATE MODIFICATION	03H-02
OPTIONAL PITOT/STATIC – FAIRING MODIFICATION.....	03H-03
OPTIONAL PITOT/STATIC – TUBE MOUNT	03H-04
OPTIONAL PITOT/STATIC – FAIRING MOUNT PLATE MODIFICATION	03H-05

OPTIONAL PITOT/STATIC – TUBE MOUNT	03H-06
OPTIONAL PITOT/STATIC – ASSEMBLY INSTALLATION.....	03H-07
OPTIONAL DYNON PROBE ATTACH	03I-02
OPTIONAL DYNON PROBE	03I-03
OPTIONAL DYNON STATIC LINE ROUTING – TAILCONE.....	03I-08
OPTIONAL AVEO STROBES – NOSE RIB MODIFICATION	03J-02
OPTIONAL AVEO STROBES – WING TIP STIFFENER MODIFICATION	03J-03
OPTIONAL AVEO STROBES – WING TIP MODIFICATION	03J-06
WING TRANSPORT #1	03K-02
WING TRANSPORT #2	03K-02A
WING TRANSPORT #3	03K-02B
WING TRANSPORT #4	03K-02C
WING INCIDENCE JIG TEMPLATE	03K-09
WING INCIDENCE JIG TEMPLATE	03K-09A
WING INCIDENCE JIG TEMPLATE	03K-09B
WING INCIDENCE JIG TEMPLATE	03K-09C
WING INCIDENCE JIG LOCATION.....	03K-10



MD4912

RRR S-19 VENTERRA
 WING SPAR ASSEMBLY
 FIGURE 03-01

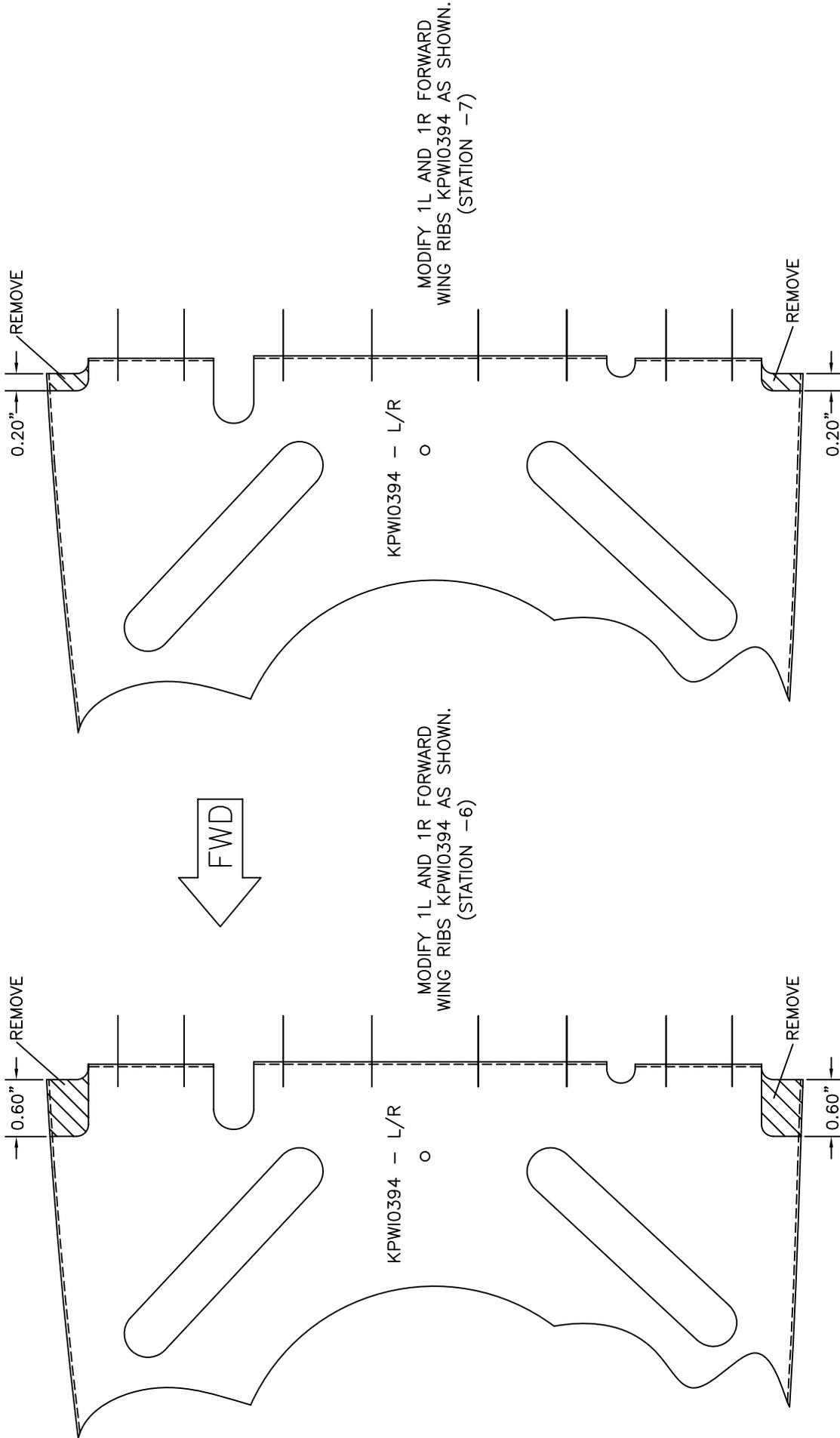


RAMS S-19 VENTERRA
WING SPAR ASSEMBLY

INSTALLATION OF TIE DOWN BRACKET

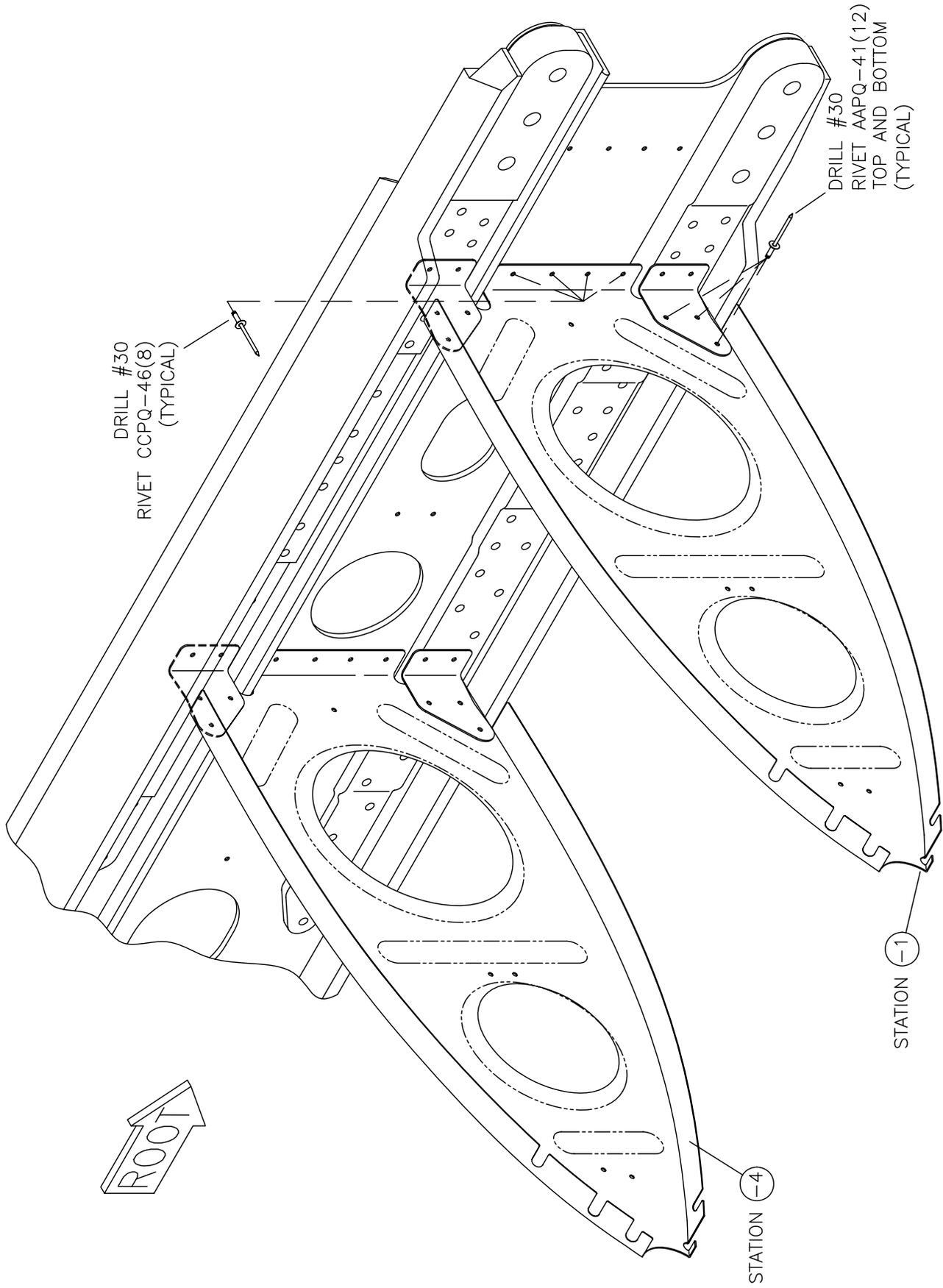
FIGURE 03-01A

MD4910



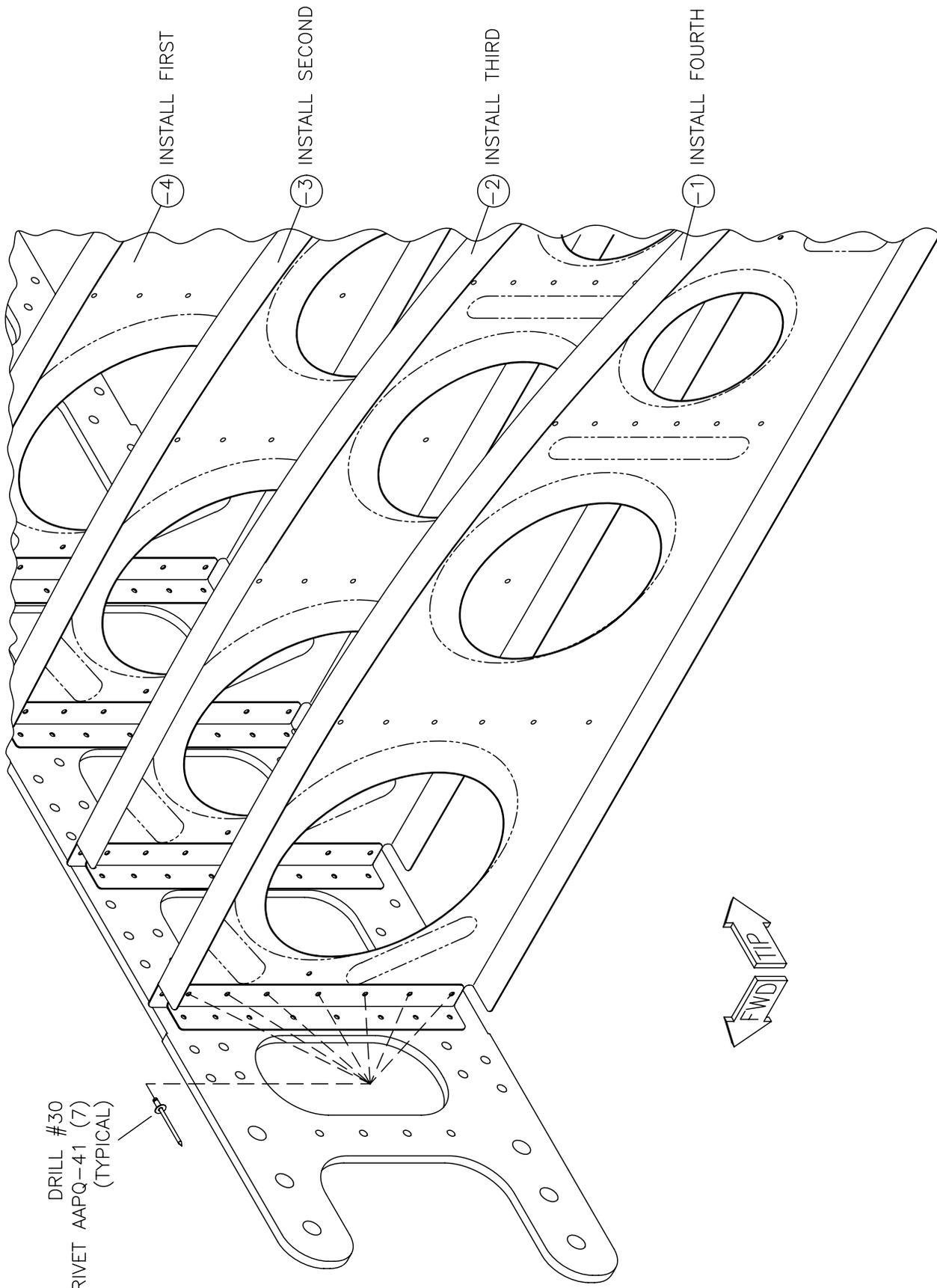
MD4826

RAMS S-19 VENTERRA
FORWARD WING RIB MODIFICATION
FIGURE 03A-04

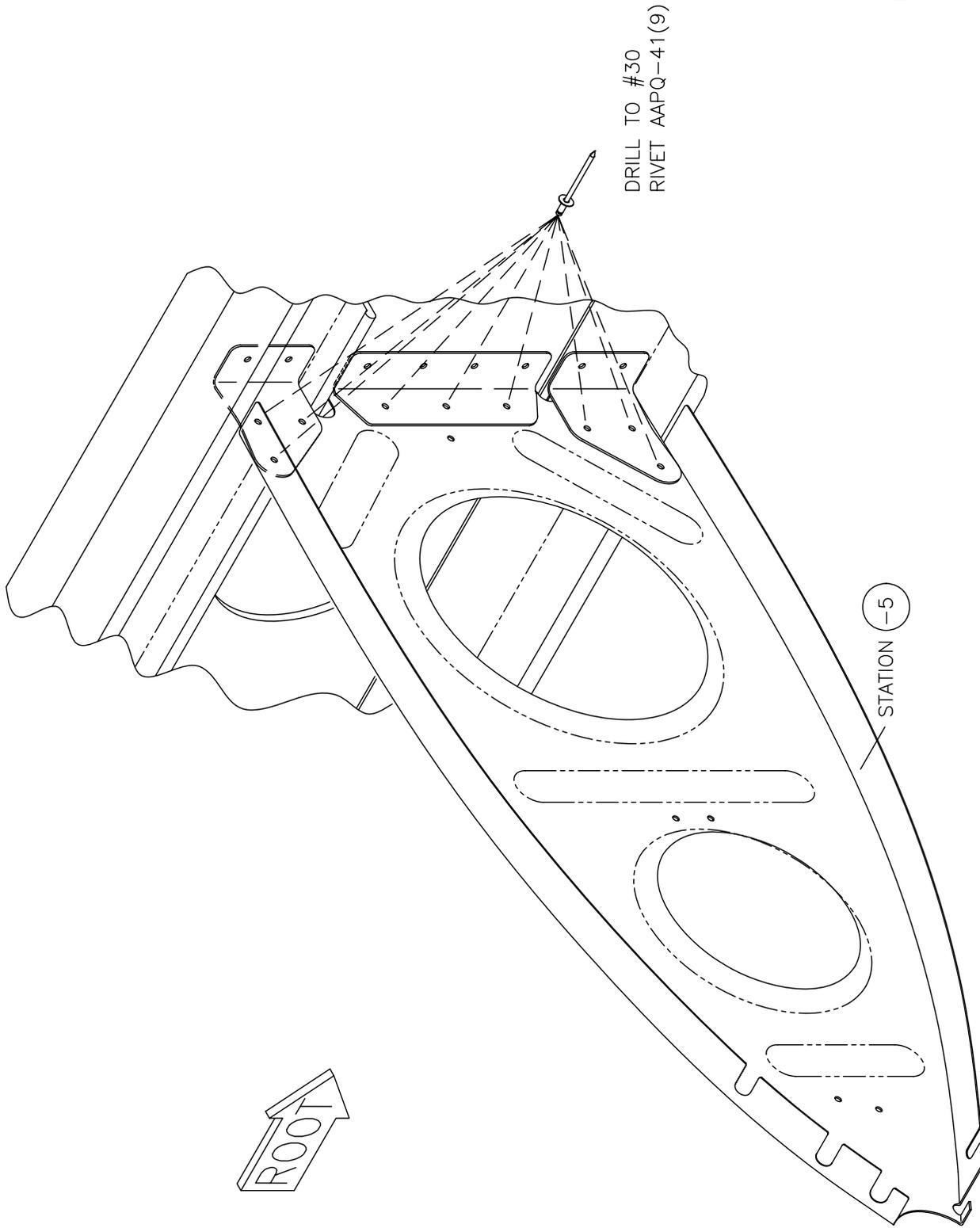


MD4901

RAMS S-19 VENTERRA
WING RIB INSTALLATION-NOSE RIBS - STATIONS -1 & -4
FIGURE 03A-05

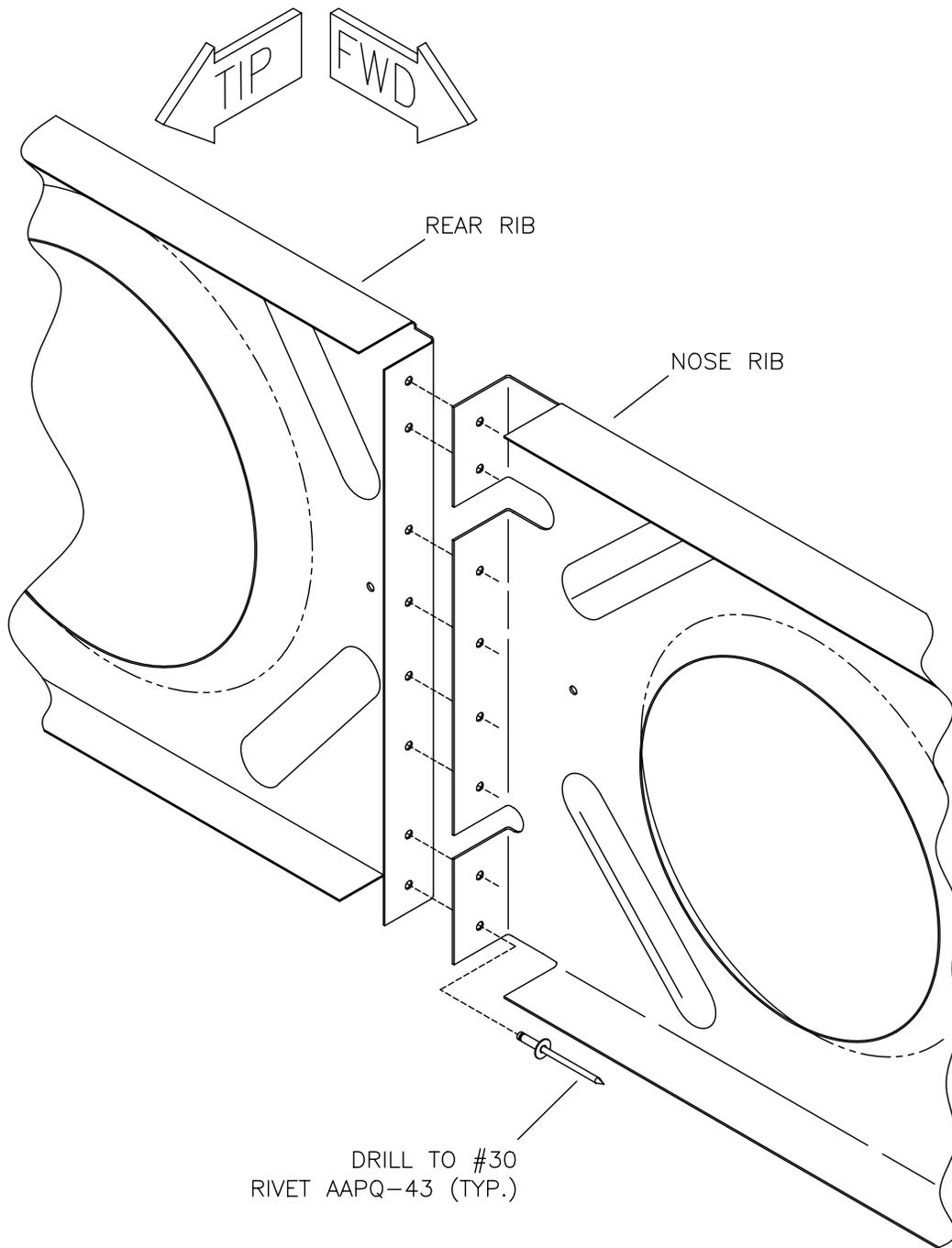


RRR S-19 VENTERRA
WING RIB INSTALLATION - REAR RIBS - STATIONS -1 & -4
FIGURE 03A-06



MD4900

RRM08 S-19 VENTERRA
WING RIB INSTALLATION - NOSE RIB - STATION -5
FIGURE 03A-08

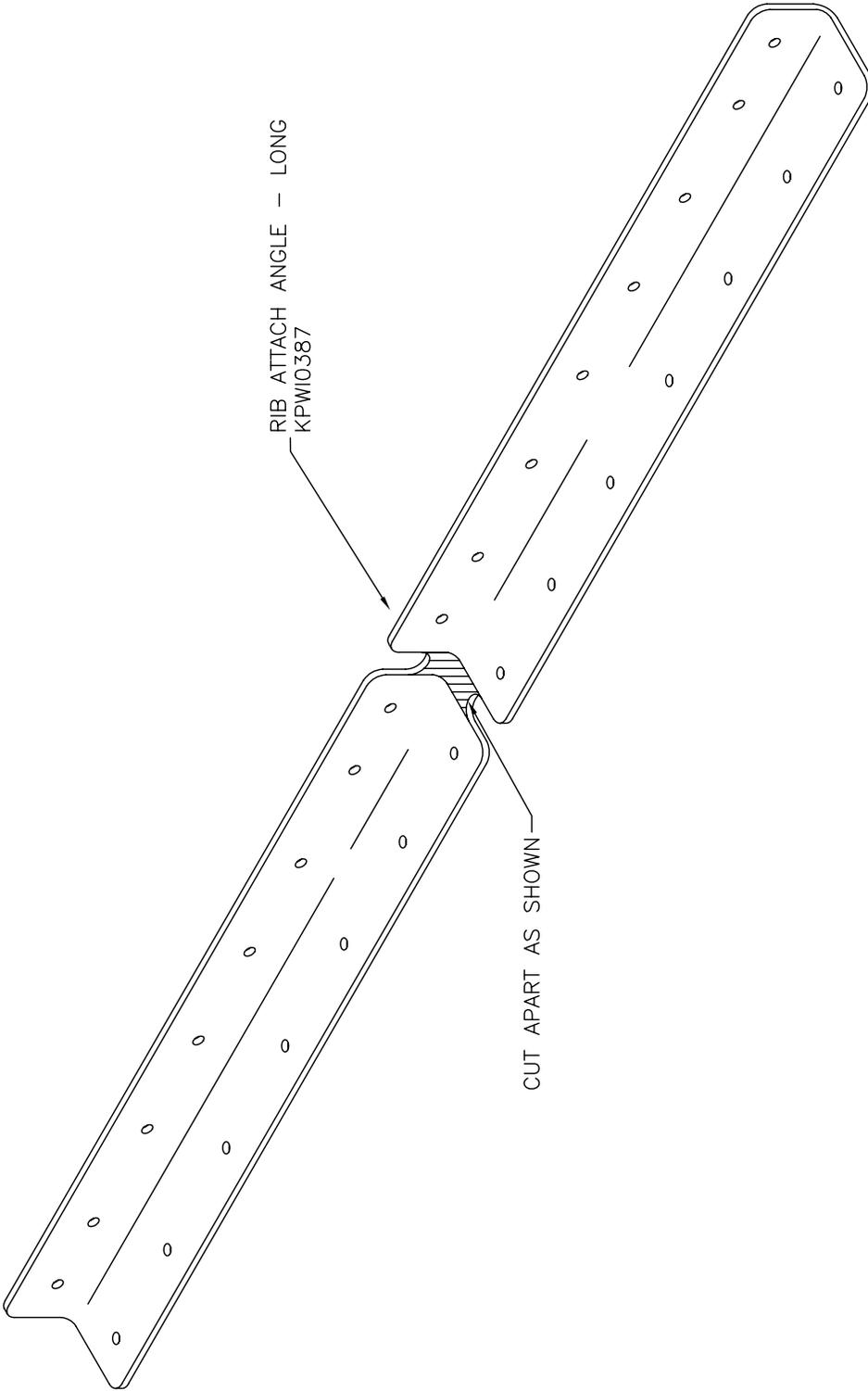


NOTE: WING SPAR IS REMOVED FOR CLARITY

MD4904

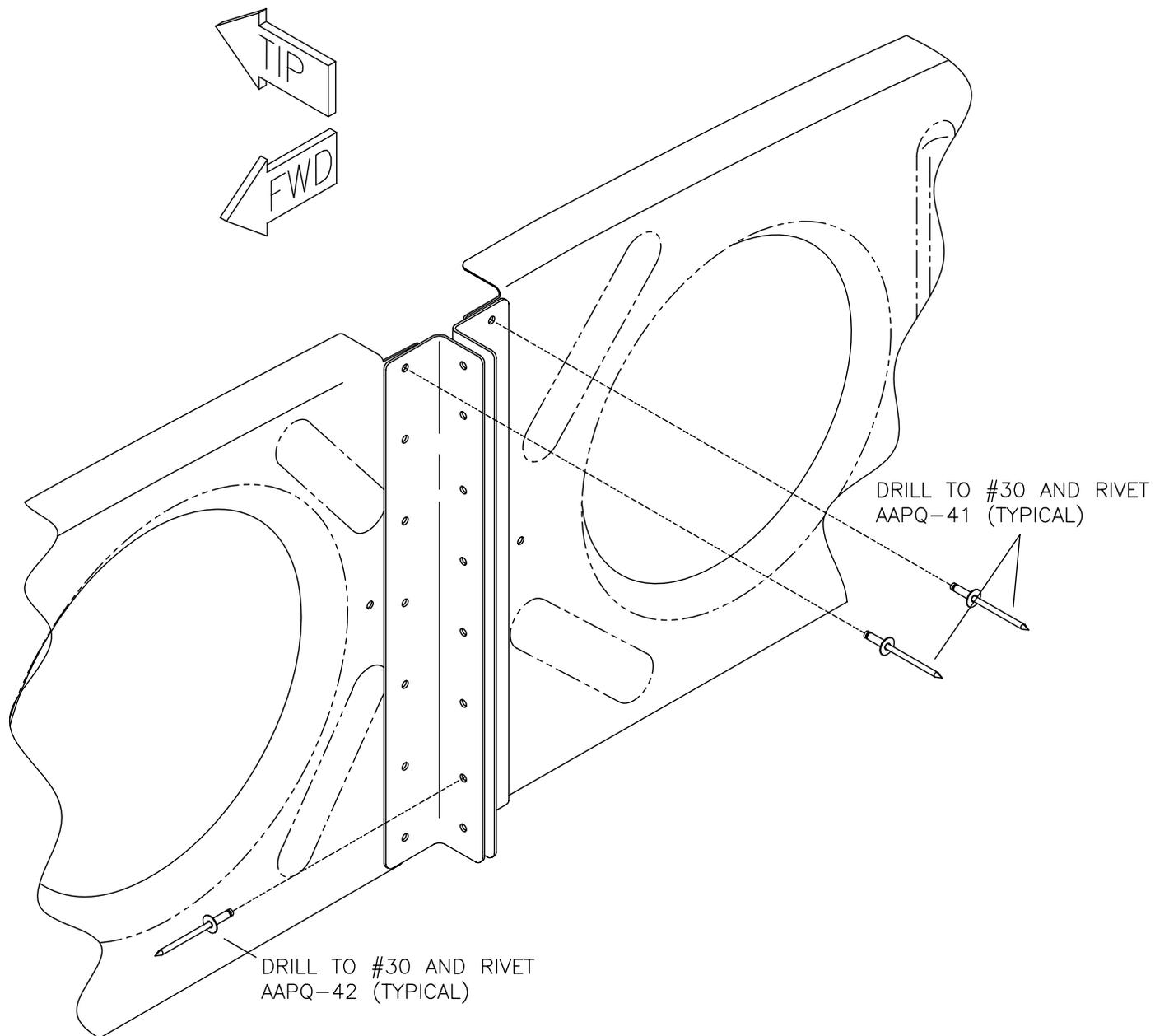
RANS S-19 VENTERRA
WING RIB INSTALLATION - STATIONS -7 TO -10
FIGURE 03A-10

04/01/2011



MD5476

RAMS S-19 VENTERRA
RIB ATTACH ANGLE MODIFICATION
FIGURE 03A-12

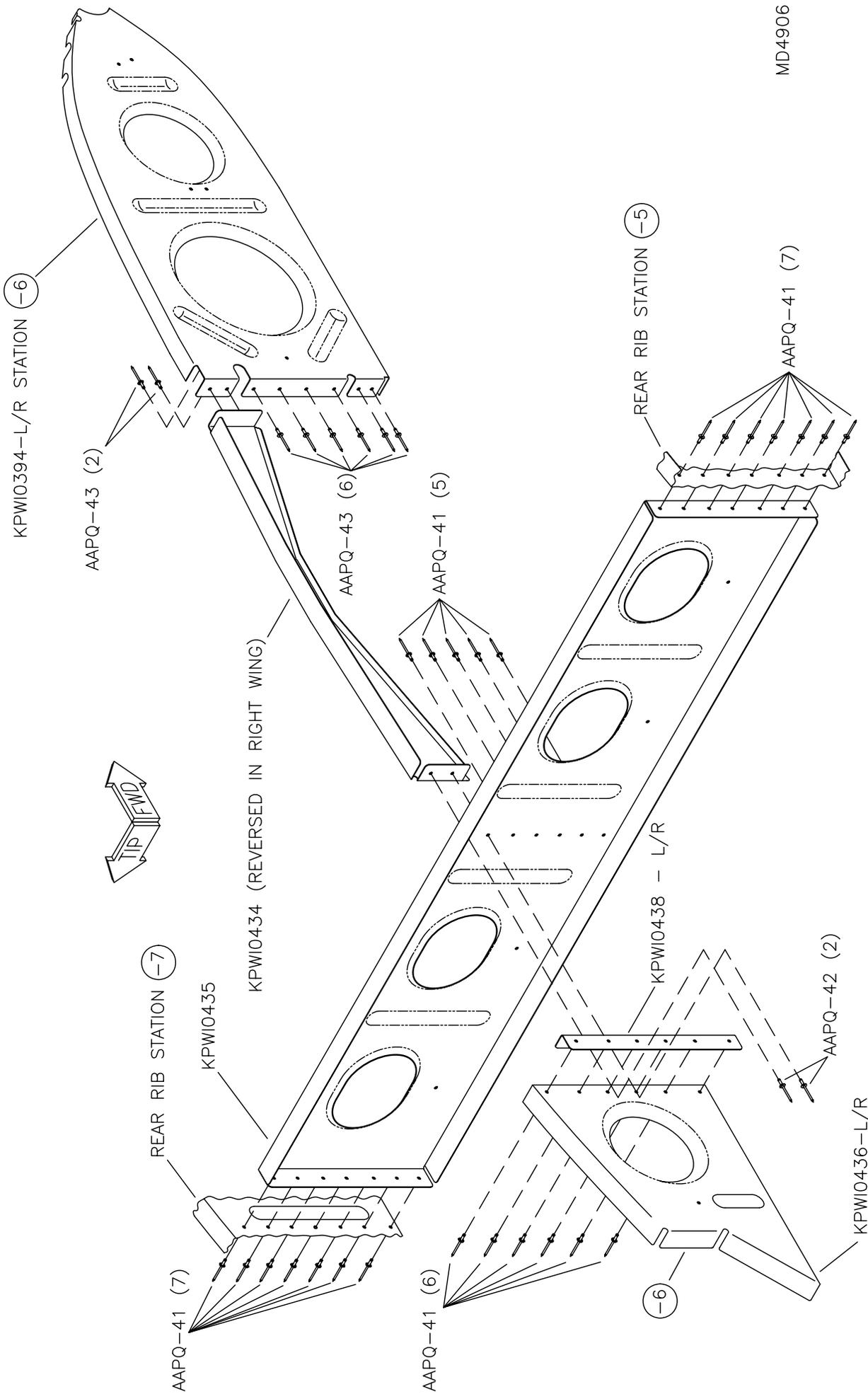


NOTE: TIP SPAR CHANNEL IS REMOVED FOR CLARITY.

MD4905

RANS S-19 VENTERRA
WING RIB INSTALLATION - STATIONS -11 TO -12
FIGURE 03A-12A

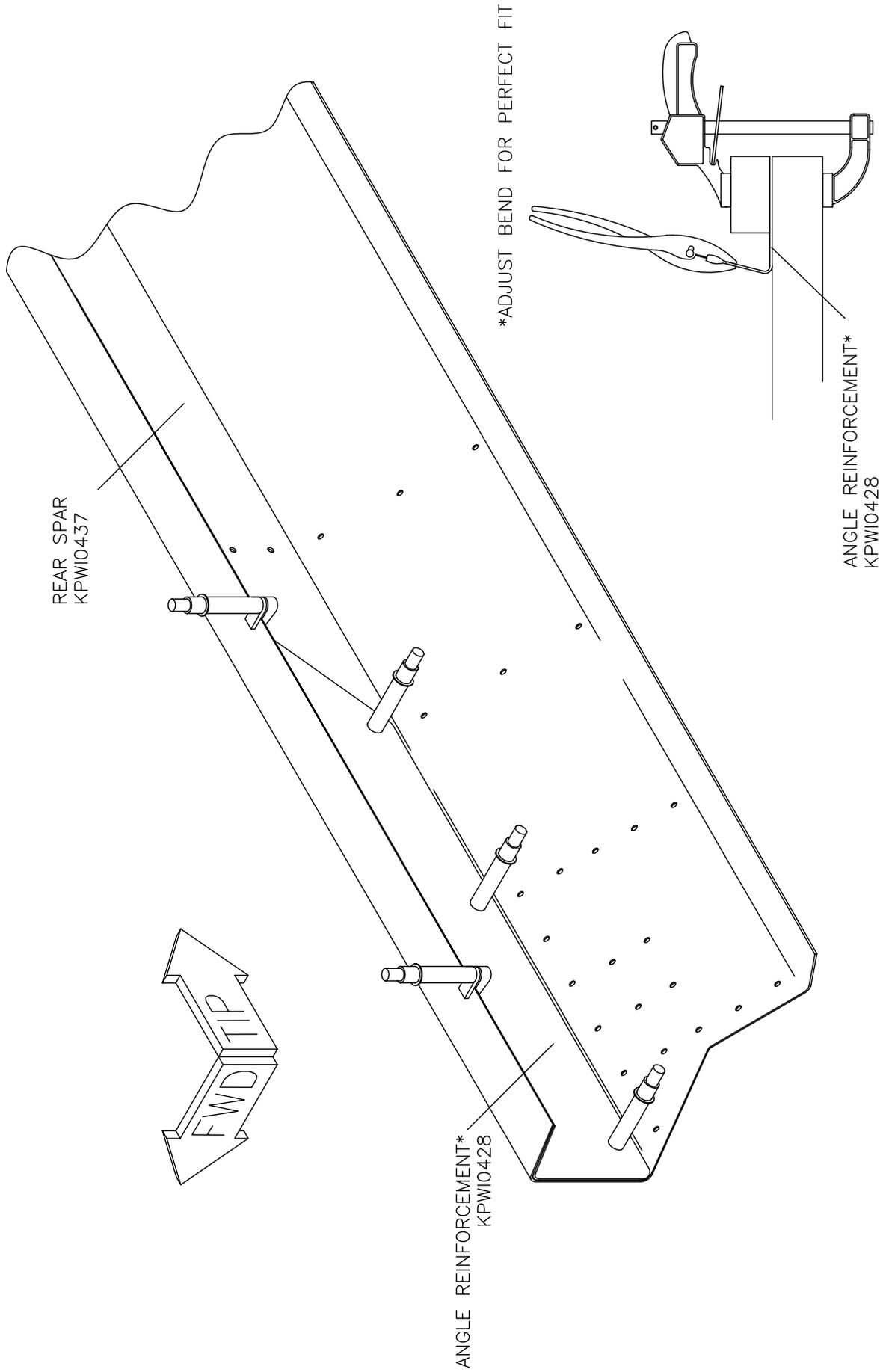
04/01/2011



MD4906

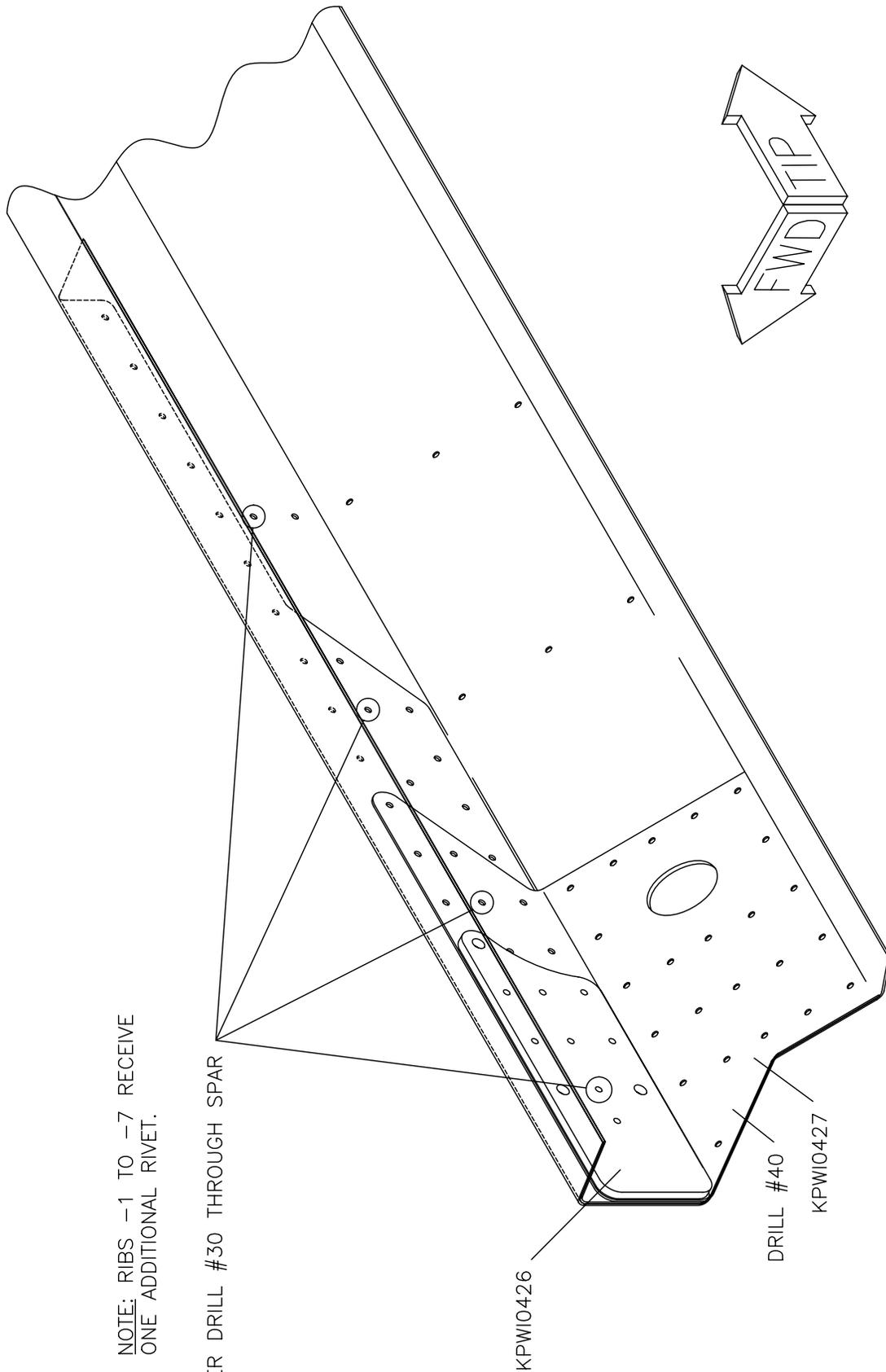
NOTE: WING SPAR REMOVED FOR CLARITY.

RAMS S-19 VENTERRA
WING RIB INSTALLATION-TANK BAY AREA - STATIONS -5 TO -7
FIGURE 03B-04



MD4885

RAMS S-19 VENTERRA
TRAILING EDGE SPAR
FIGURE 03C-01



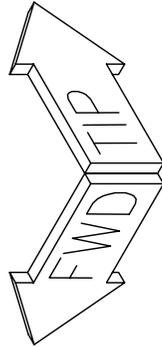
NOTE: RIBS -1 TO -7 RECEIVE
ONE ADDITIONAL RIVET.

TRANSFER DRILL #30 THROUGH SPAR

KPWI0426

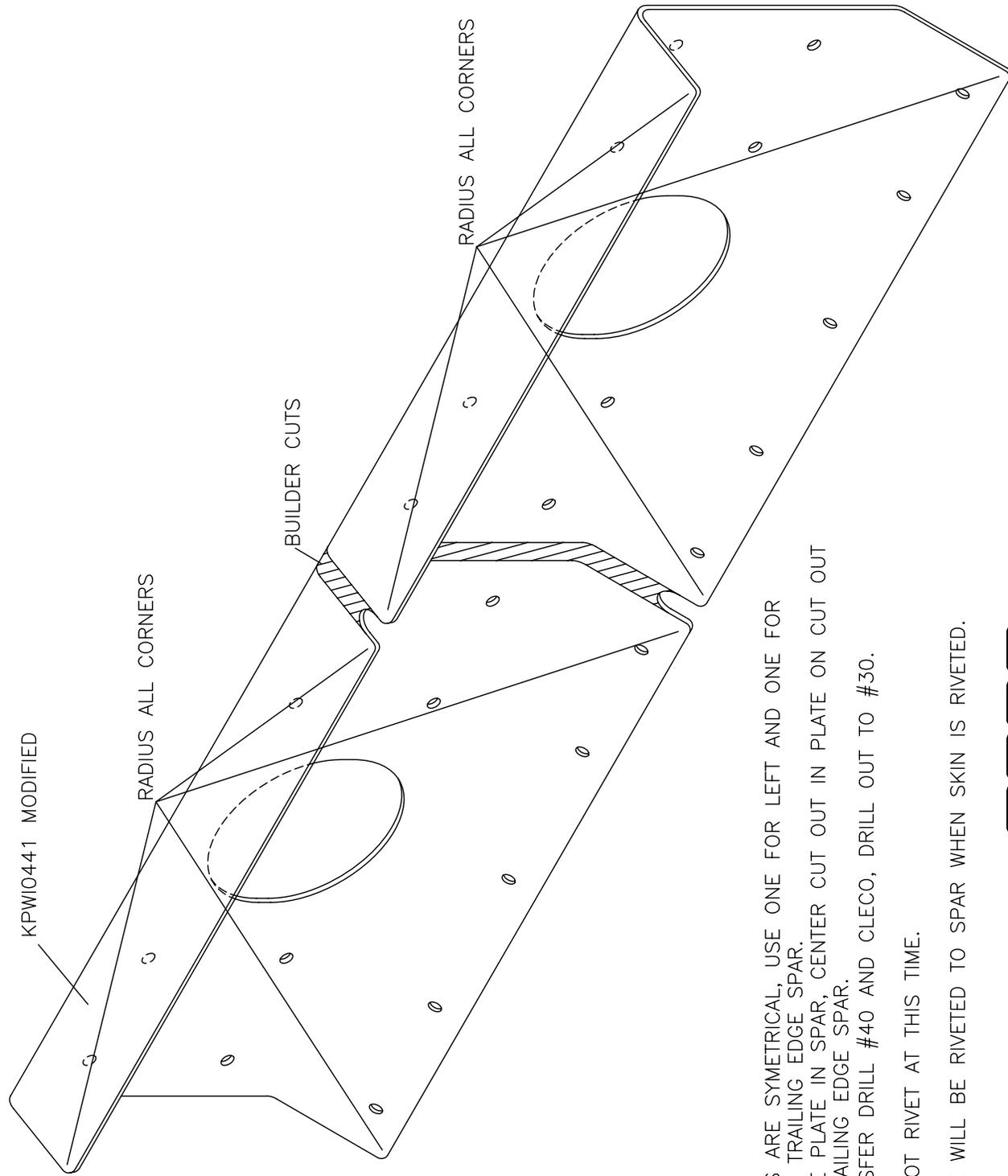
DRILL #40

KPWI0427



MD4885

RAMS S-19 VENTRA
TRAILING EDGE SPAR
FIGURE 03C-03

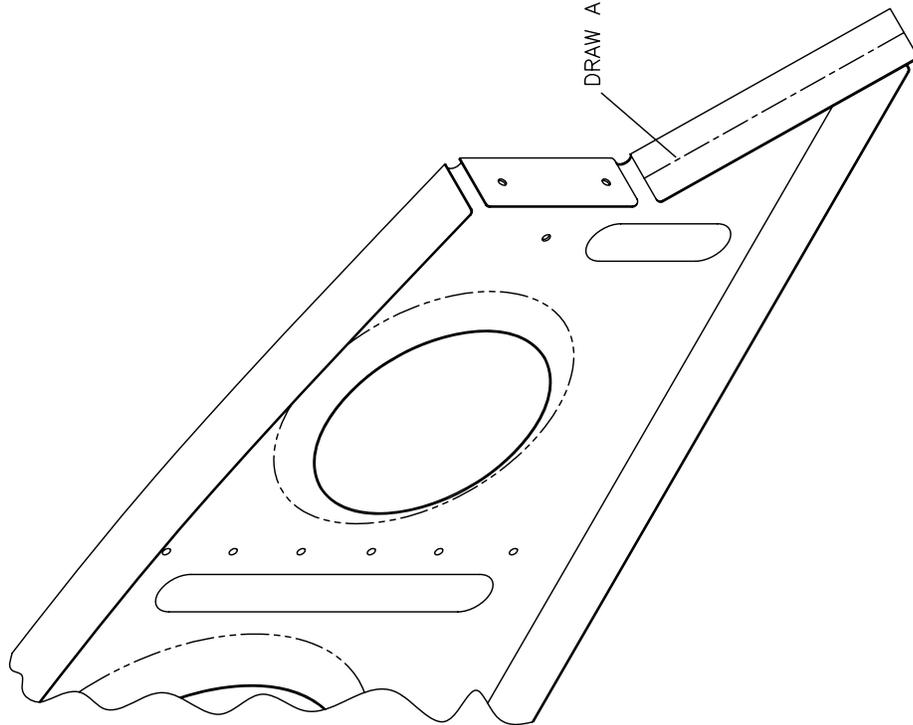


NOTE: PARTS ARE SYMMETRICAL, USE ONE FOR LEFT AND ONE FOR RIGHT TRAILING EDGE SPAR.
 PLACE PLATE IN SPAR, CENTER CUT OUT IN PLATE ON CUT OUT IN TRAILING EDGE SPAR.
 TRANSFER DRILL #40 AND CLECO, DRILL OUT TO #30.

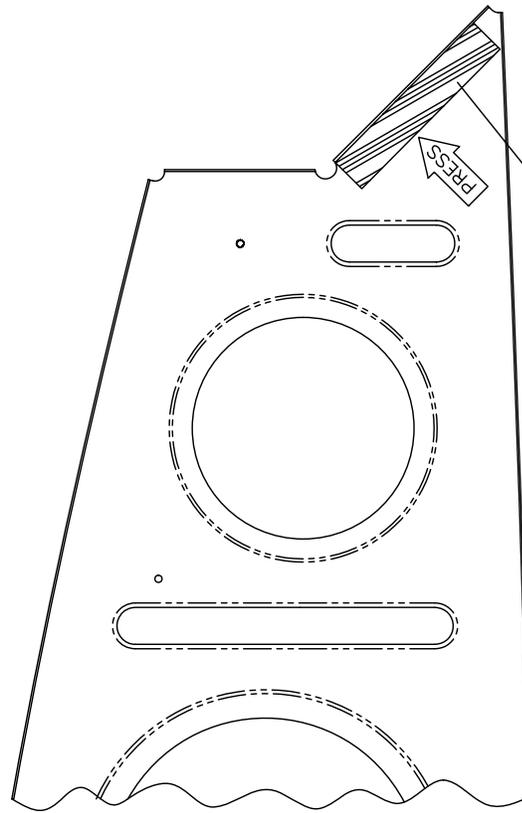
DO NOT RIVET AT THIS TIME.

PLATE WILL BE RIVETED TO SPAR WHEN SKIN IS RIVETED.

RAMS S-19 VENTERRA
PLATE SPAR REINFORCEMENT MODIFICATION
FIGURE 03C-04



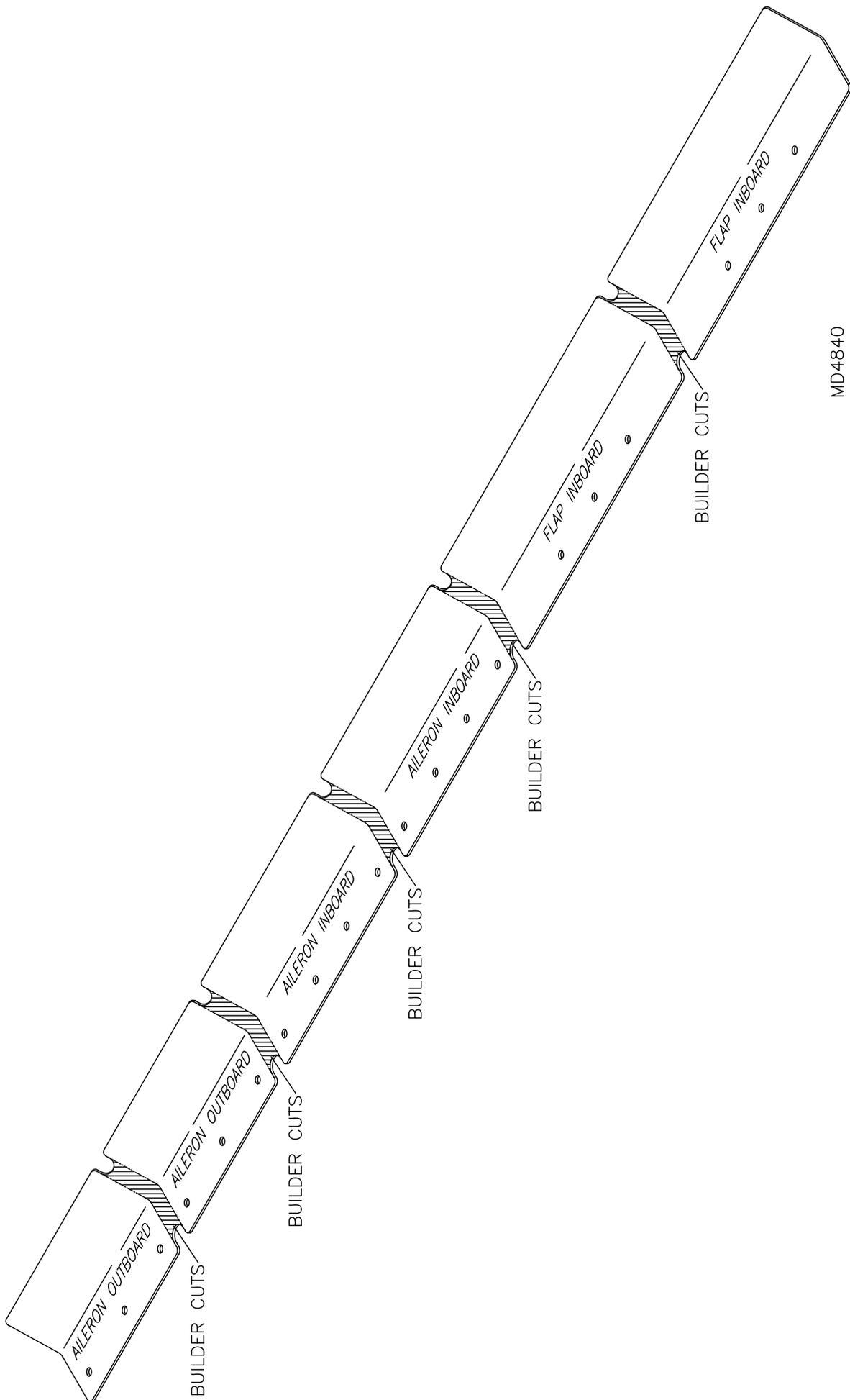
DRAW A CENTERLINE ON RIB FLANGE



USE A WOODED BLOCK TO HOLD THE PARTS
TIGHT TOGETHER WHILE DRILLING.

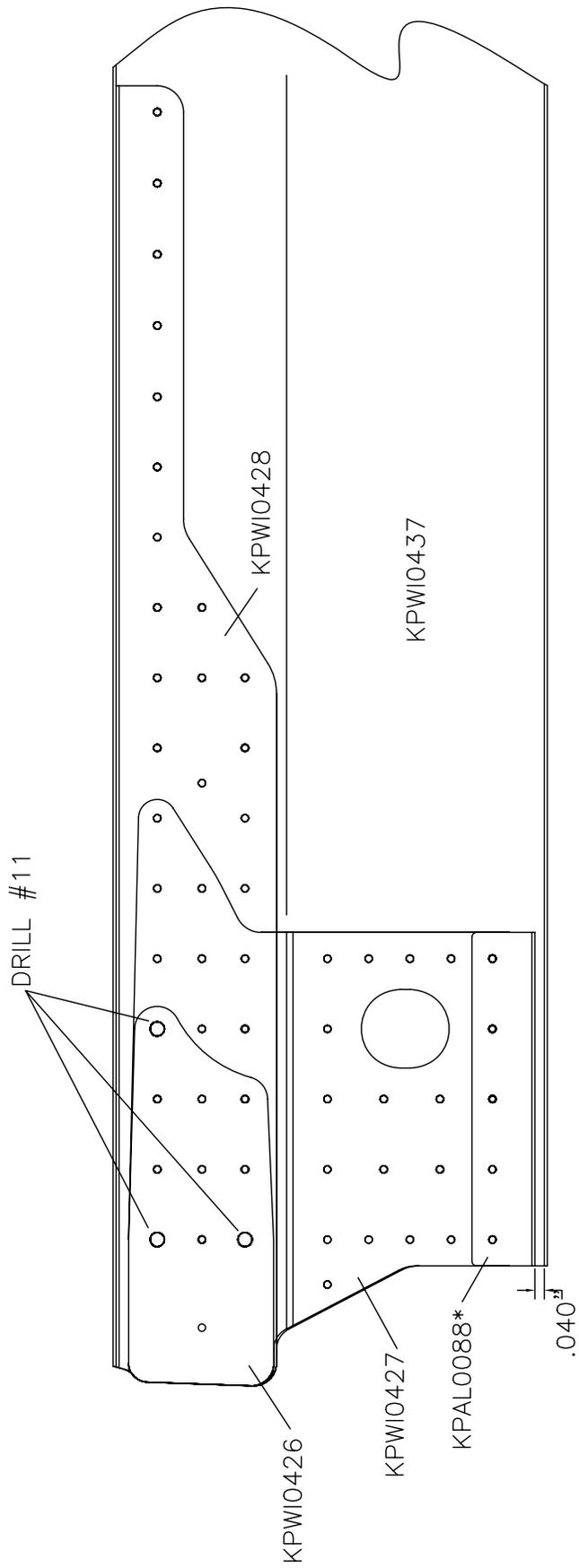
MD4885

RAMS S-19 VENTERRA
TRAILING EDGE SPAR
FIGURE 03C-05



MD4840

RRR S-19 VENTERRA
HINGE SUPPORT MODIFICATION
FIGURE 03C-06



*NOTE: USE A PIECE OF HINGE TO SPACE THIS PART.

MD4885

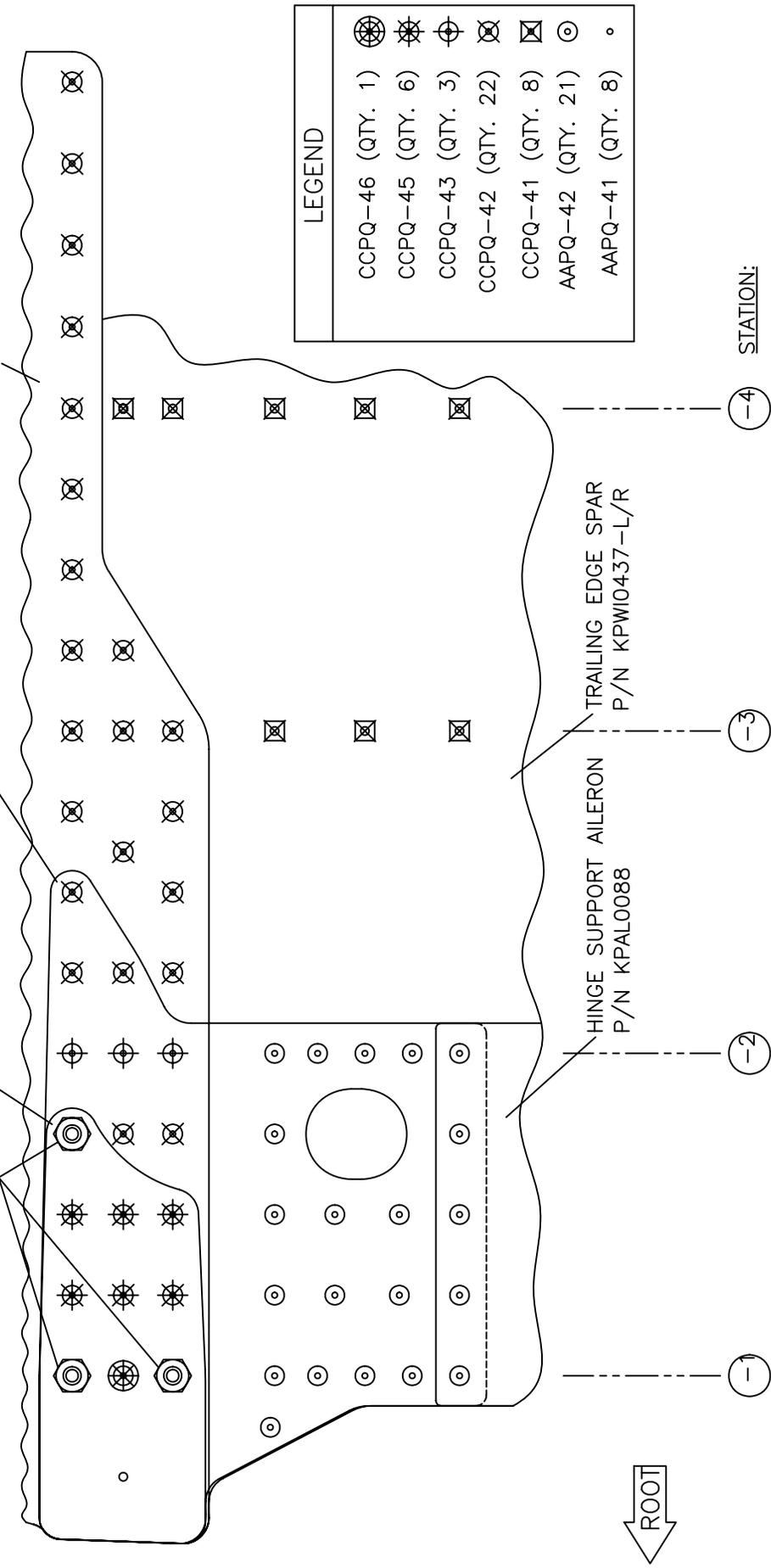
RAMS S-19 VENTERRA
TRAILING EDGE SPAR
FIGURE 03C-06A

3/16" BOLT AN3-5A (QTY. 3)
 3/16" WASHER AN960-10L (QTY.3)
 3/16" NUT AN365-1032 (QTY. 3)

REAR SPAR ATTACH PLATE
 P/N KPWI0426

PLATE SPAR REINFORCEMENT
 P/N KPWI0427-L/R

ANGLE SPAR REINFORCEMENT
 P/N KPWI0428-L/R



LEGEND	
	CCPQ-46 (QTY. 1)
	CCPQ-45 (QTY. 6)
	CCPQ-43 (QTY. 3)
	CCPQ-42 (QTY. 22)
	CCPQ-41 (QTY. 8)
	AAPQ-42 (QTY. 21)
	AAPQ-41 (QTY. 8)

HINGE SUPPORT AILERON
 P/N KPAL0088

TRAILING EDGE SPAR
 P/N KPWI0437-L/R

STATION:

-1

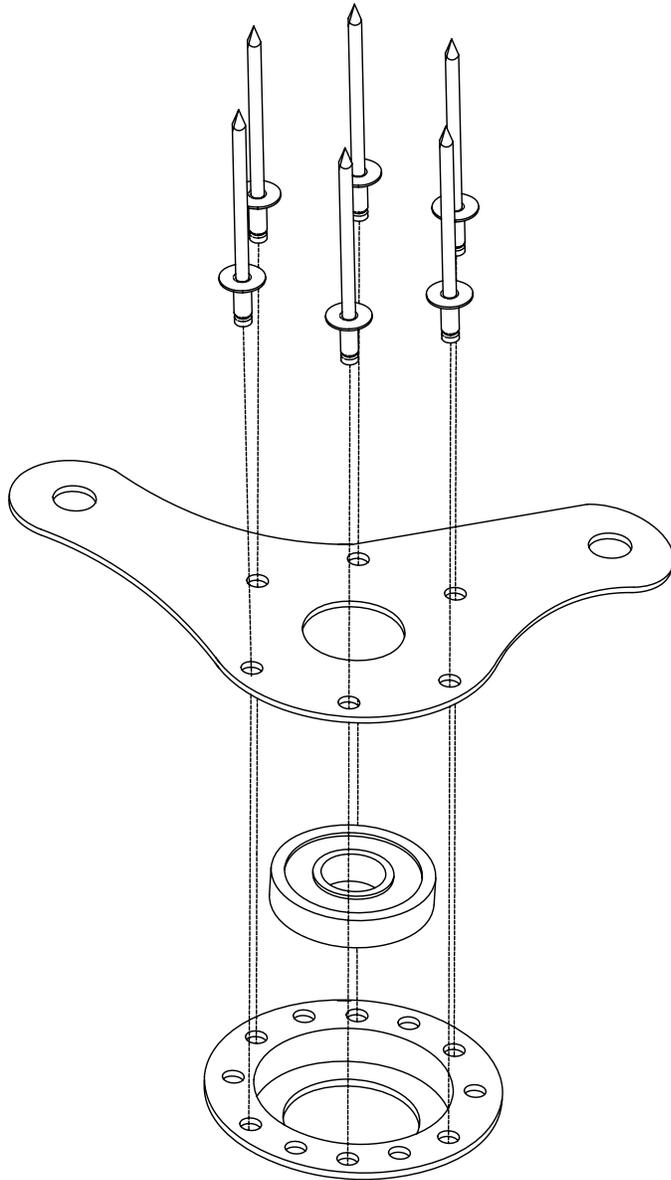
-2

-3

-4

ROOT

RAMS S-19 VENTERRA
 TRAILING EDGE SPAR-ROOT ATTACH
 FIGURE 03C-07

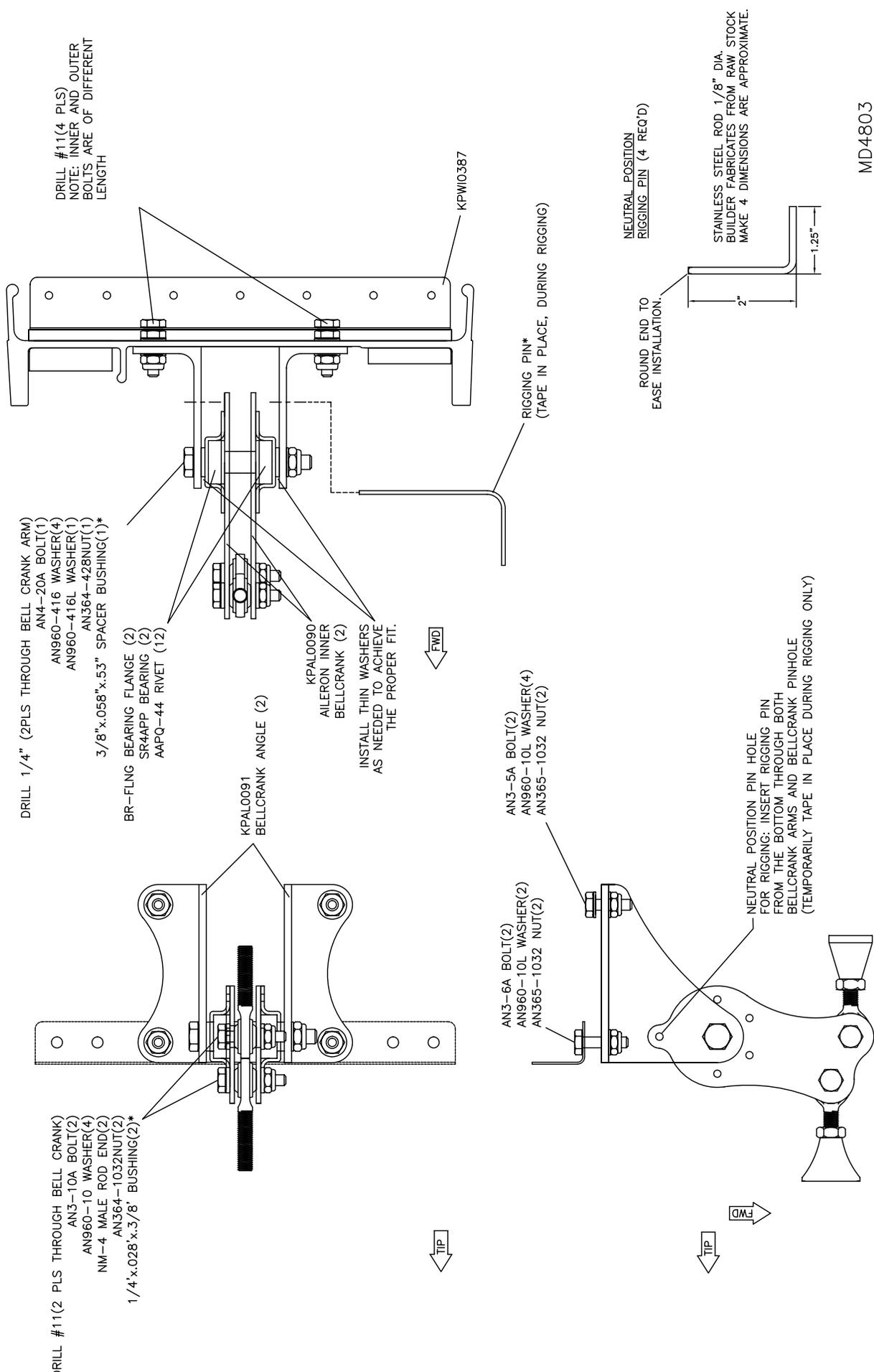


TYPICAL FOR ALL BELLCRANK ASSEMBLIES

RANS S-19 VENTERRA
TYPICAL BELLCRANK ASSEMBLY
FIGURE 03D-01

MD4886

04/01/2011



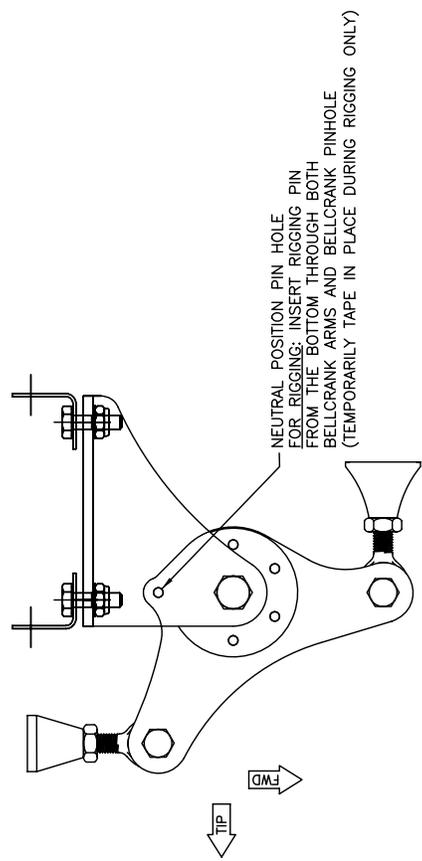
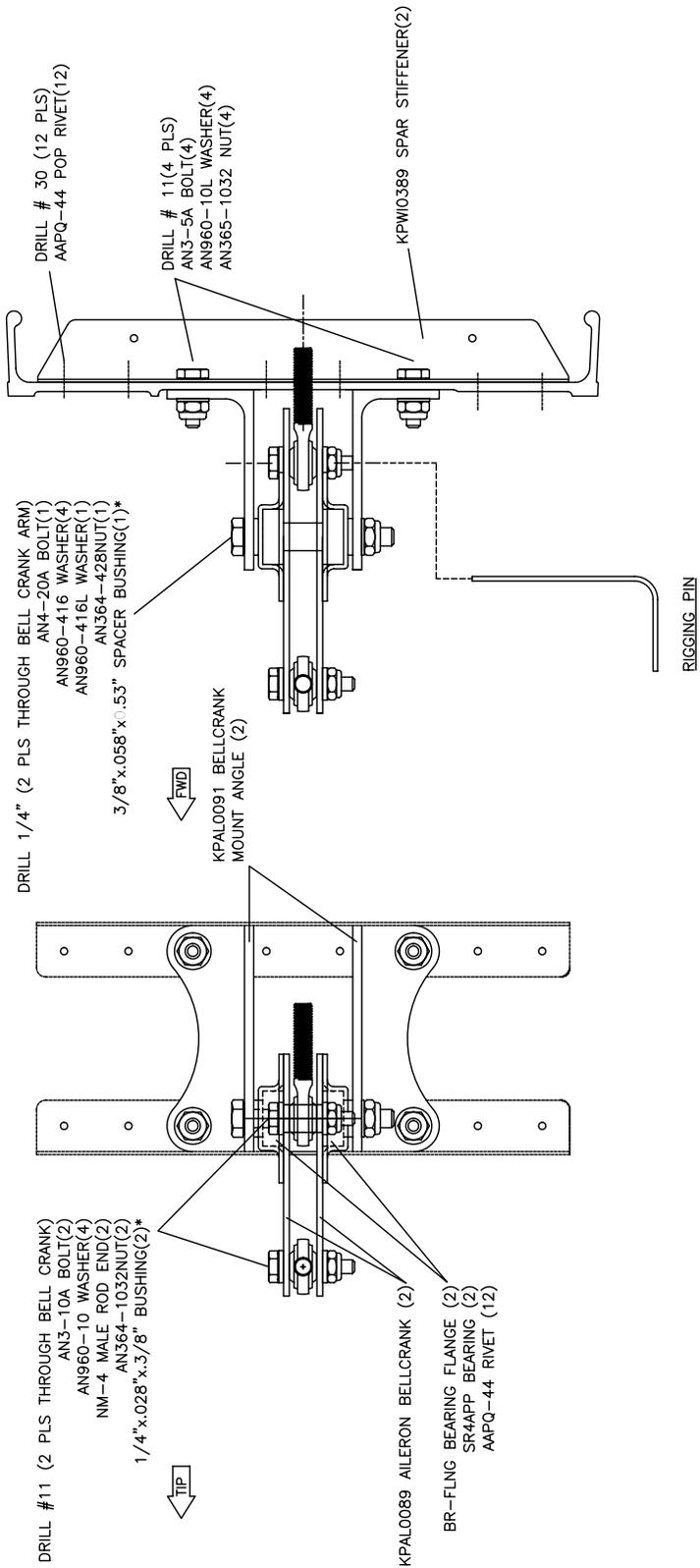
MD4803

* BUILDER FABRICATES FROM RAW STOCK

RAMS S-19 VENTERRA

AILERON INNER BELLCRANK INSTALLATION

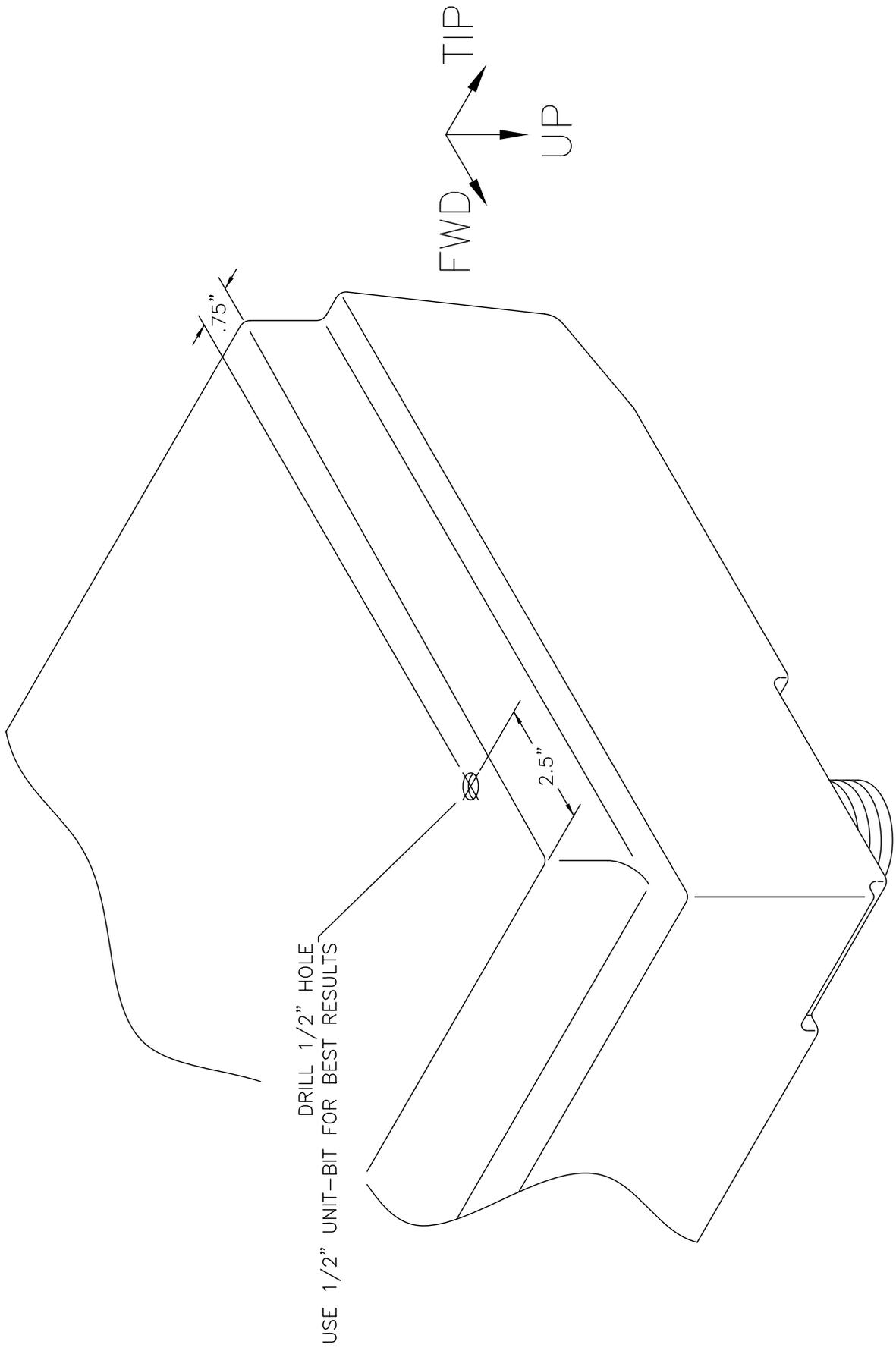
FIGURE 03D-03



* BUILDER FABRICATES FROM RAW STOCK

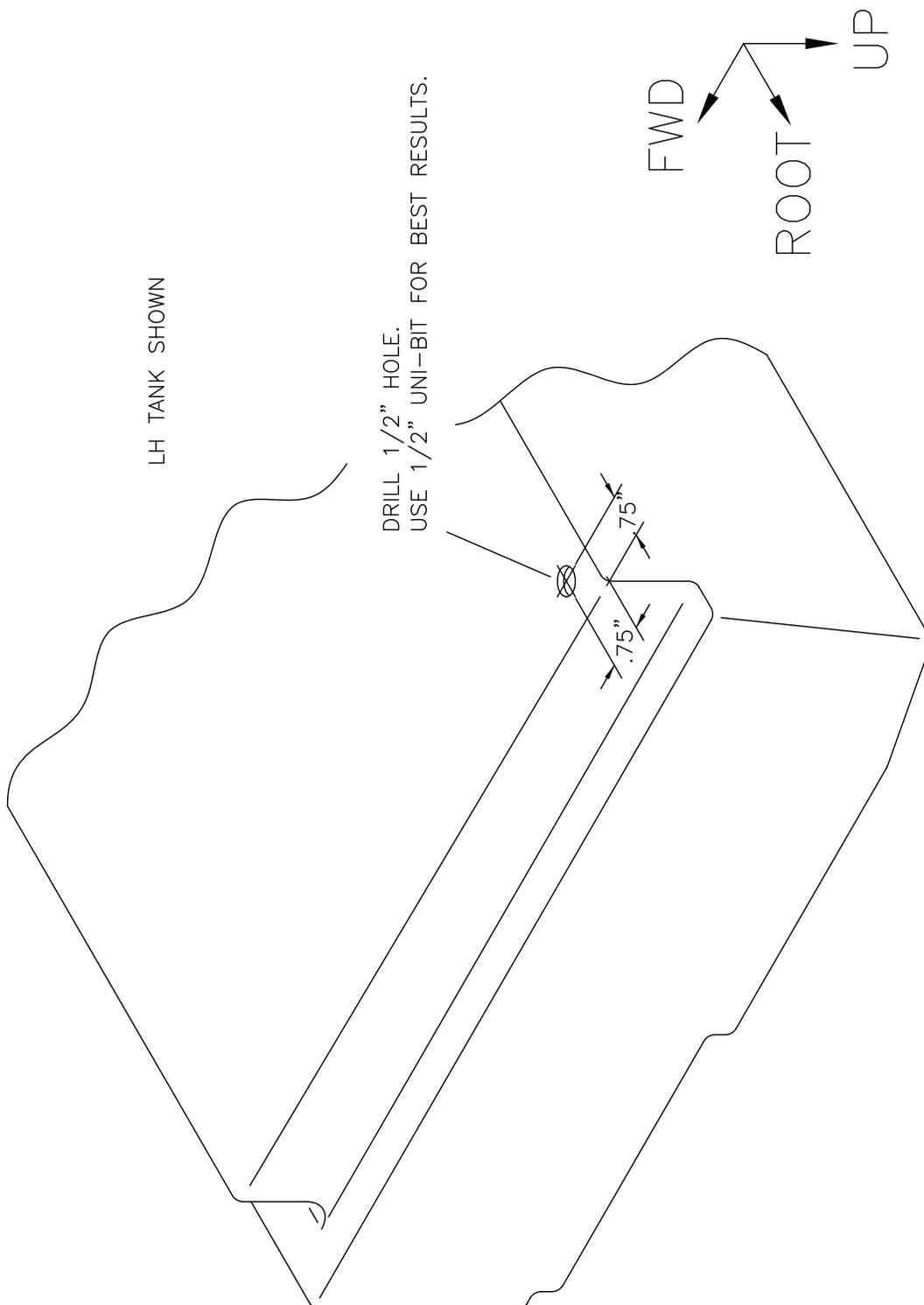
MD4803

RRR S-19 VENTERRA
AILERON OUTER BELLCRANK INSTALLATION
FIGURE 03D-03A



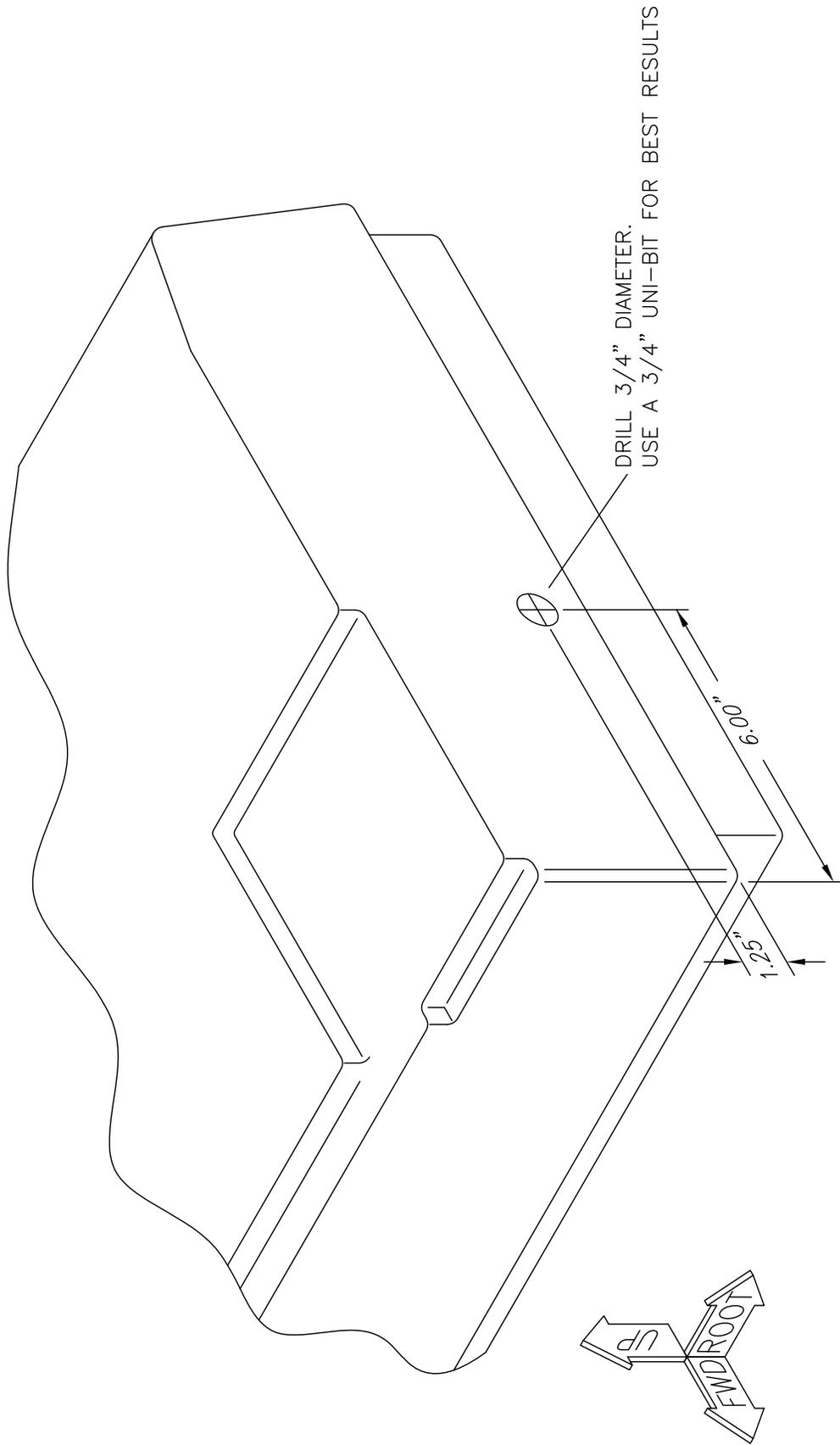
MD4889

RAMS S-19 VENTERRA
VENT TUBE - TANK HOLE LOCATION
FIGURE 03E-01



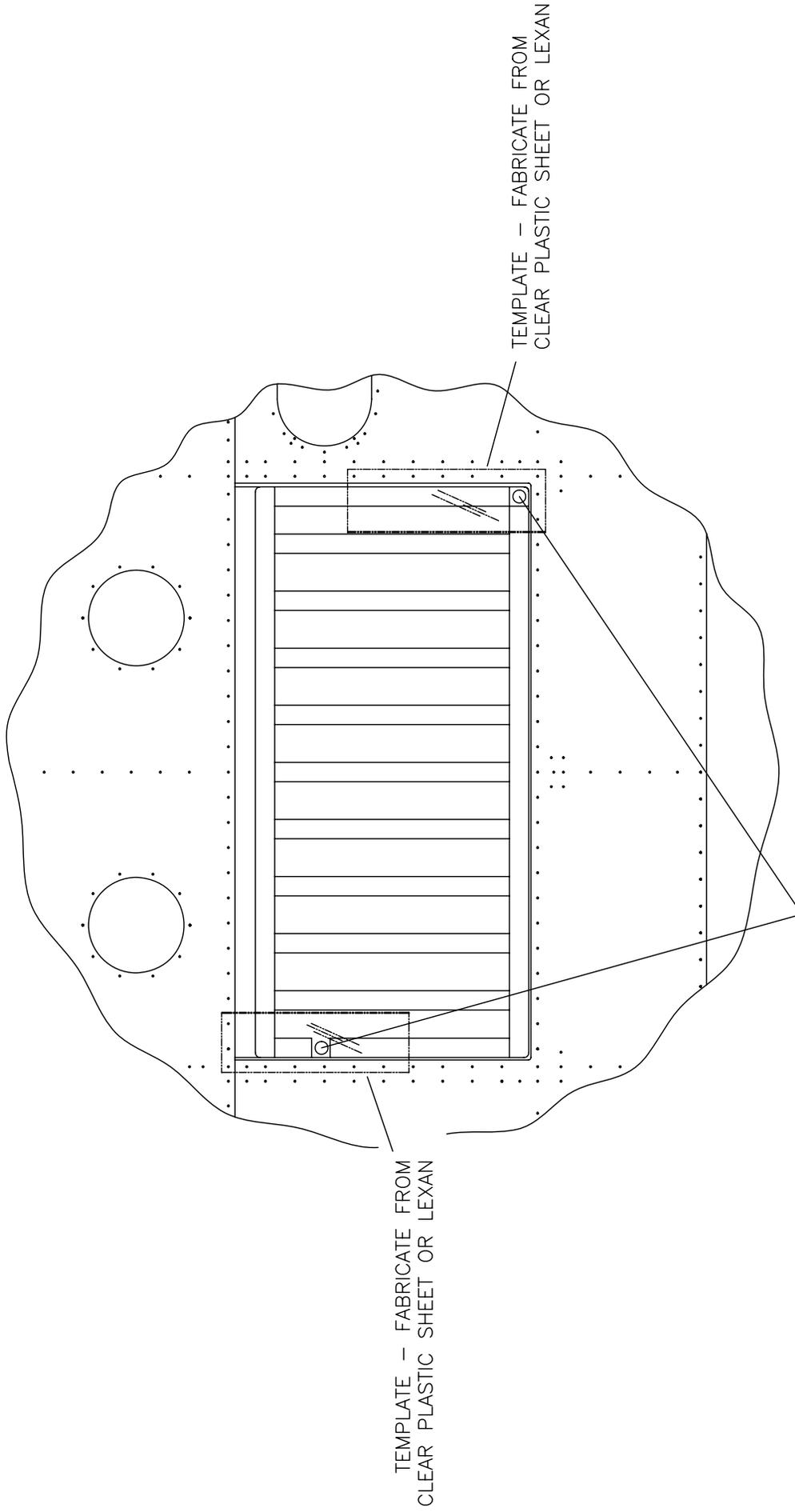
MD4819

RRR S-19 VENTERRA
DRAIN FITTING - HOLE LOCATION
FIGURE 03E-01A



MD5156

RRR S-19 VENTERRA
PICK UP TUBE - TANK HOLE LOCATION
FIGURE 03E-01B



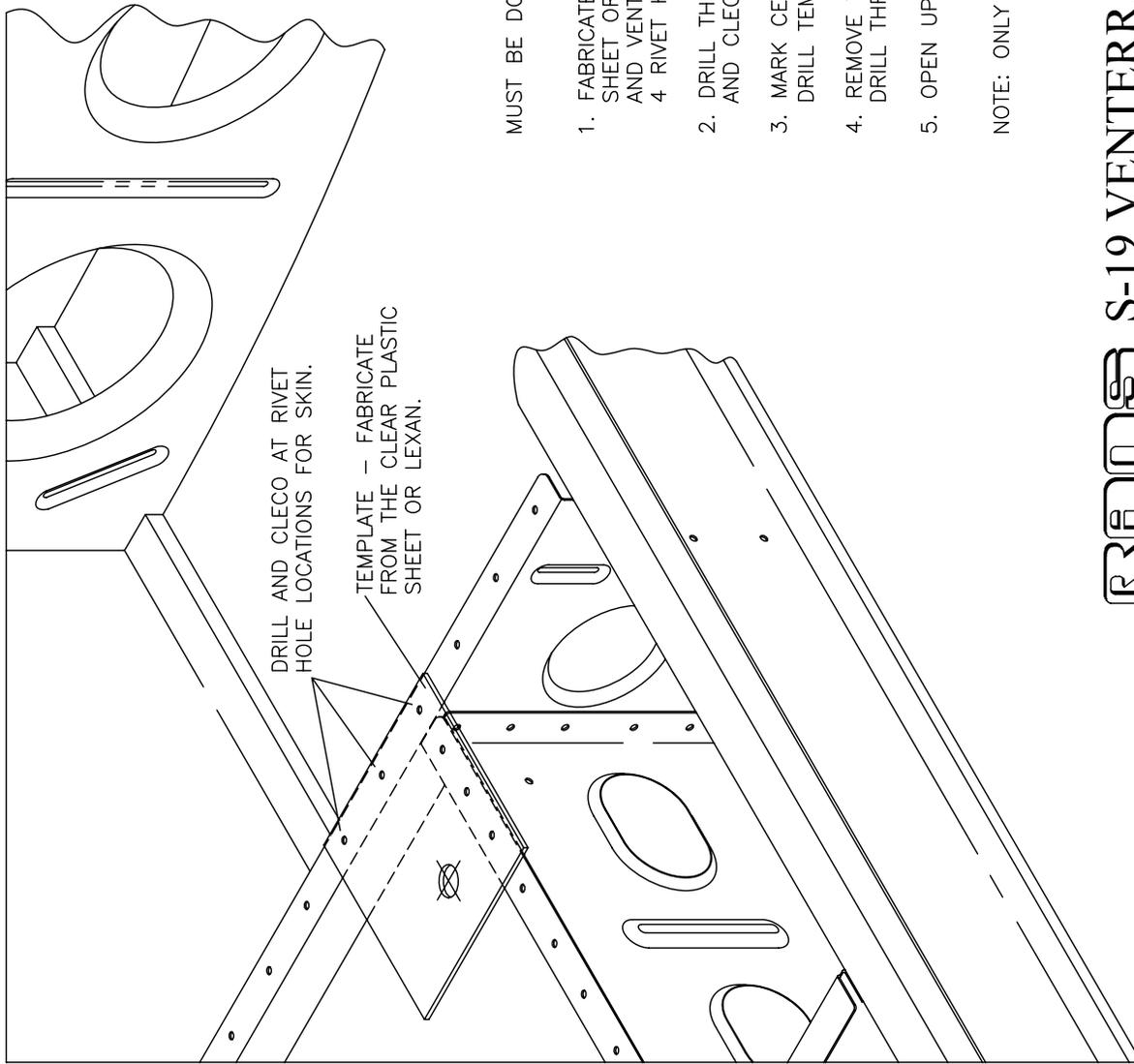
TEMPLATE - FABRICATE FROM
CLEAR PLASTIC SHEET OR LEXAN

TEMPLATE - FABRICATE FROM
CLEAR PLASTIC SHEET OR LEXAN

MARK HOLE LOCATION AND TRANSFER TO TANK SKIN
FINAL DRILL TANK SKIN HOLES TO 1-1/8".

MD4879

RRR S-19 VENTERRA
TANK SKIN HOLE LOCATION DRILLING
FIGURE 03E-05



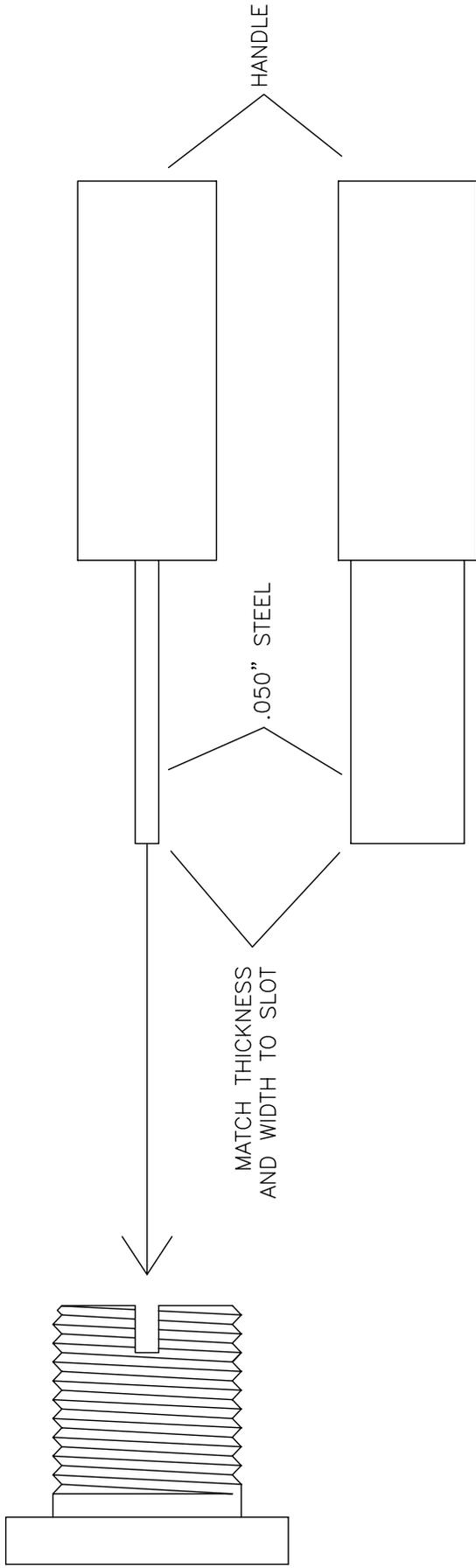
MUST BE DONE AFTER SKIN IS FIT

1. FABRICATE TEMPLATE FROM CLEAR PLASTIC SHEET OR LEXAN AS SHOWN FOR LOCATIONS OF DRAIN FITTING AND VENT TUBE. MAKE BIG ENOUGH TO COVER 3 TO 4 RIVET HOLES IN EACH DIRECTION.
2. DRILL THROUGH TEMPLATE ON SKIN RIVET LOCATIONS AND CLECO TEMPLATE IN PLACE AS SHOWN.
3. MARK CENTER OF CUTOUT IN FUEL TANK ON TEMPLATE. DRILL TEMPLATE #30 AT CENTER MARKS.
4. REMOVE TEMPLATE AND CLECO TO LOWER SKIN. TRANSFER DRILL THROUGH TEMPLATE IN SKIN.
5. OPEN UP SKIN HOLES TO A MIN. OF 1.125" DIAMETER.

NOTE: ONLY THE DRAIN FITTING LOCATION IS SHOWN.

MD4818

RRR S-19 VENTERRA
LOCATING TANK SKIN OPENINGS
DRAIN FITTING & VENT TUBE
FIGURE 03E-05A

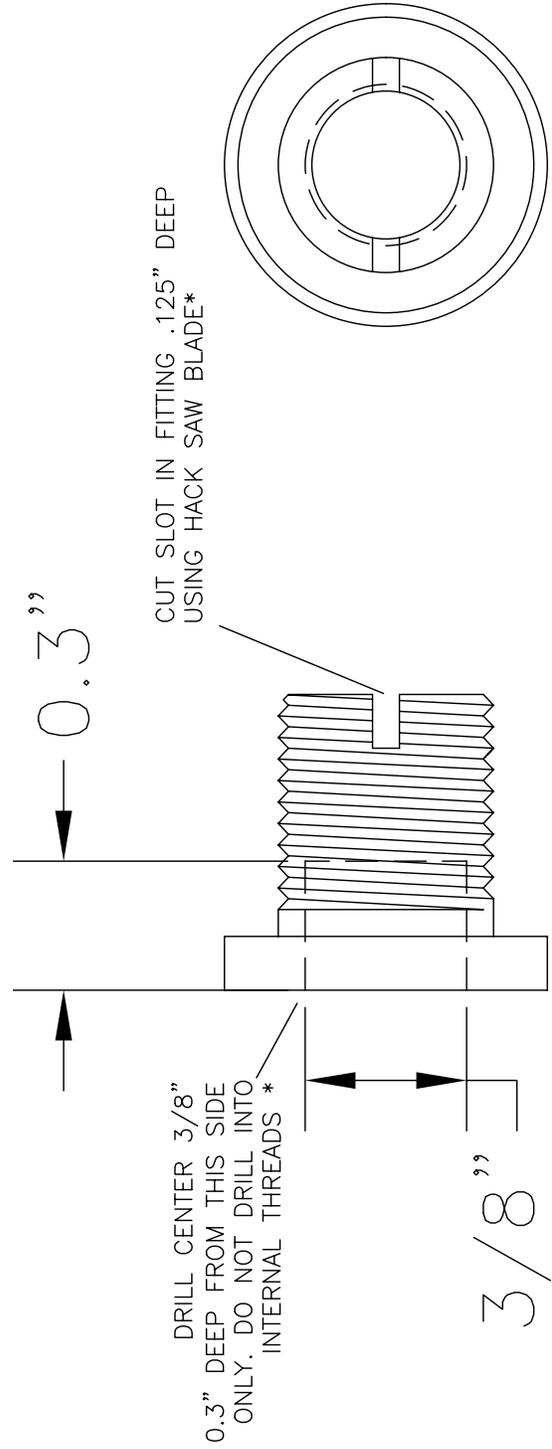


HANDLE

.050" STEEL

MATCH THICKNESS AND WIDTH TO SLOT

* MODIFY 2 FITTINGS

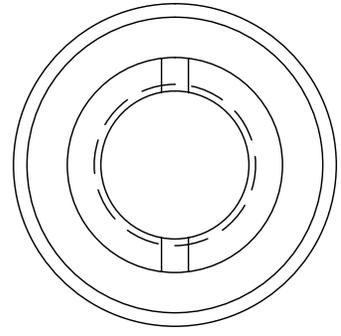


0.3"

CUT SLOT IN FITTING .125" DEEP USING HACK SAW BLADE*

DRILL CENTER 3/8" 0.3" DEEP FROM THIS SIDE ONLY. DO NOT DRILL INTO INTERNAL THREADS *

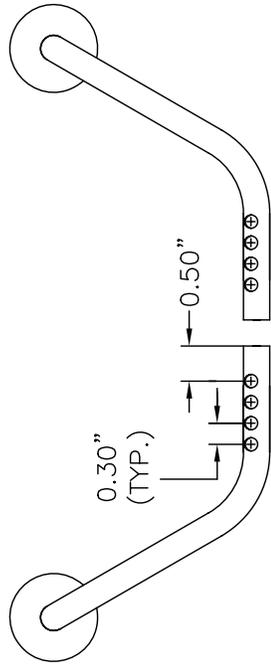
3/8"



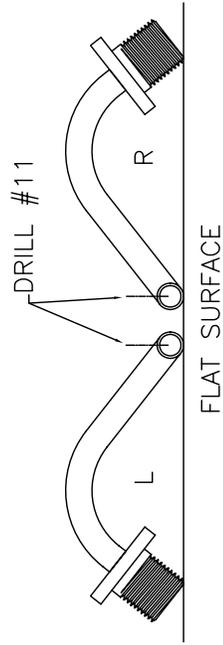
MD4823

RAMS S-19 VENTERRA
 FUEL DRAIN FITTING MODIFICATION
 FIGURE 03E-06

STEP 1

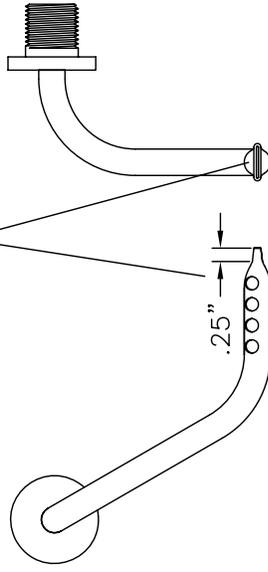


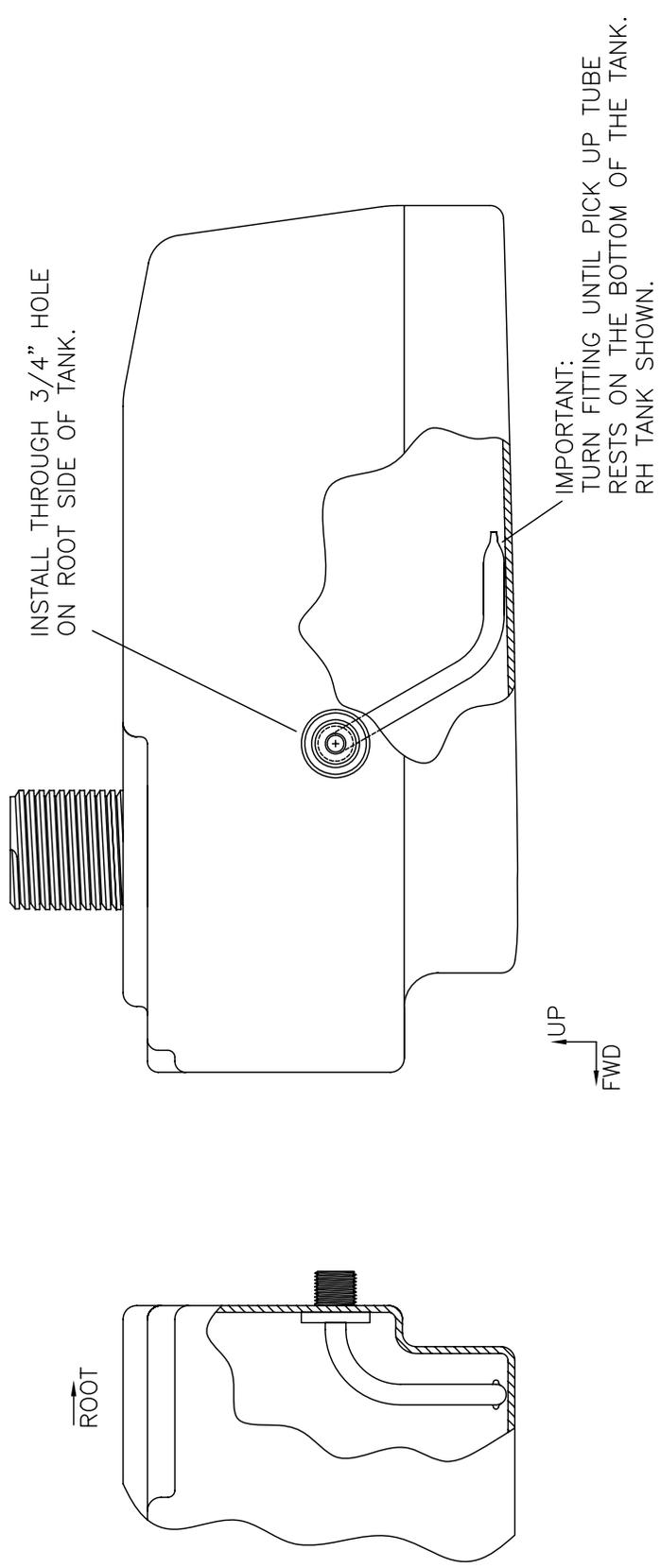
PLACE FUEL PICK UP TUBES ON FLAT WORK SURFACE AS SHOWN
MARK AND DRILL #11 AS SHOWN (4 HOLES EACH)
DRILL ONLY ONE SIDE, DO NOT DRILL THROUGH



STEP 2

FLATTEN END OF TUBE AS SHOWN
USE VICE - NOTE ORIENTATION

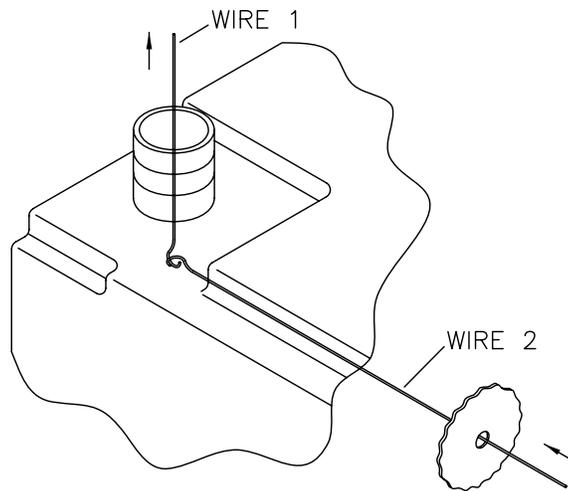




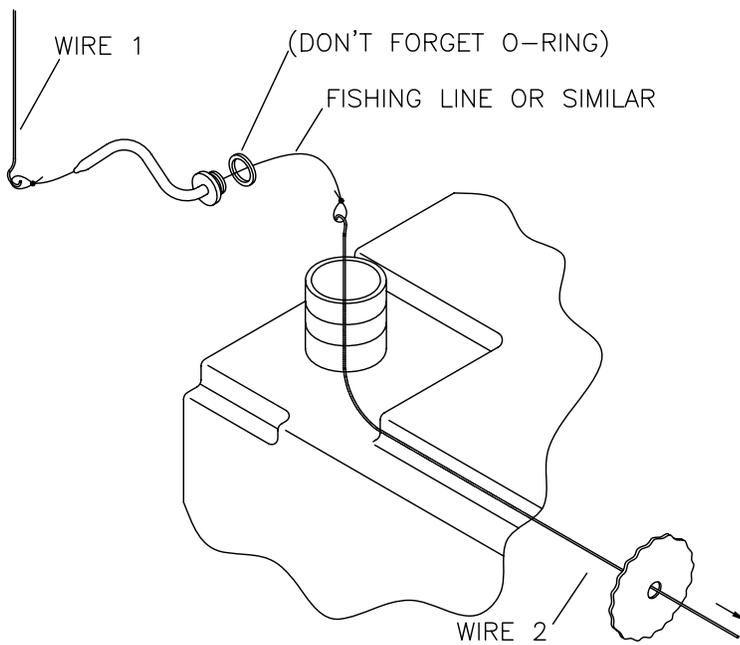
MD4827

RRANES S-19 VENTERRA
FUEL PICK UP TUBE INSTALLATION
FIGURE 03E-08

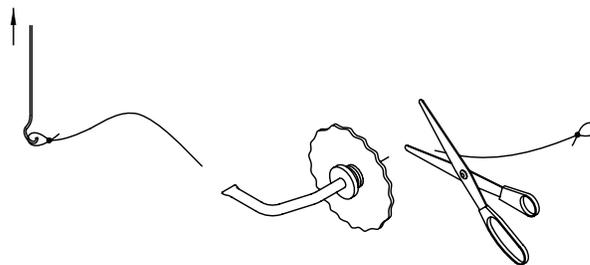
①



②



③



④

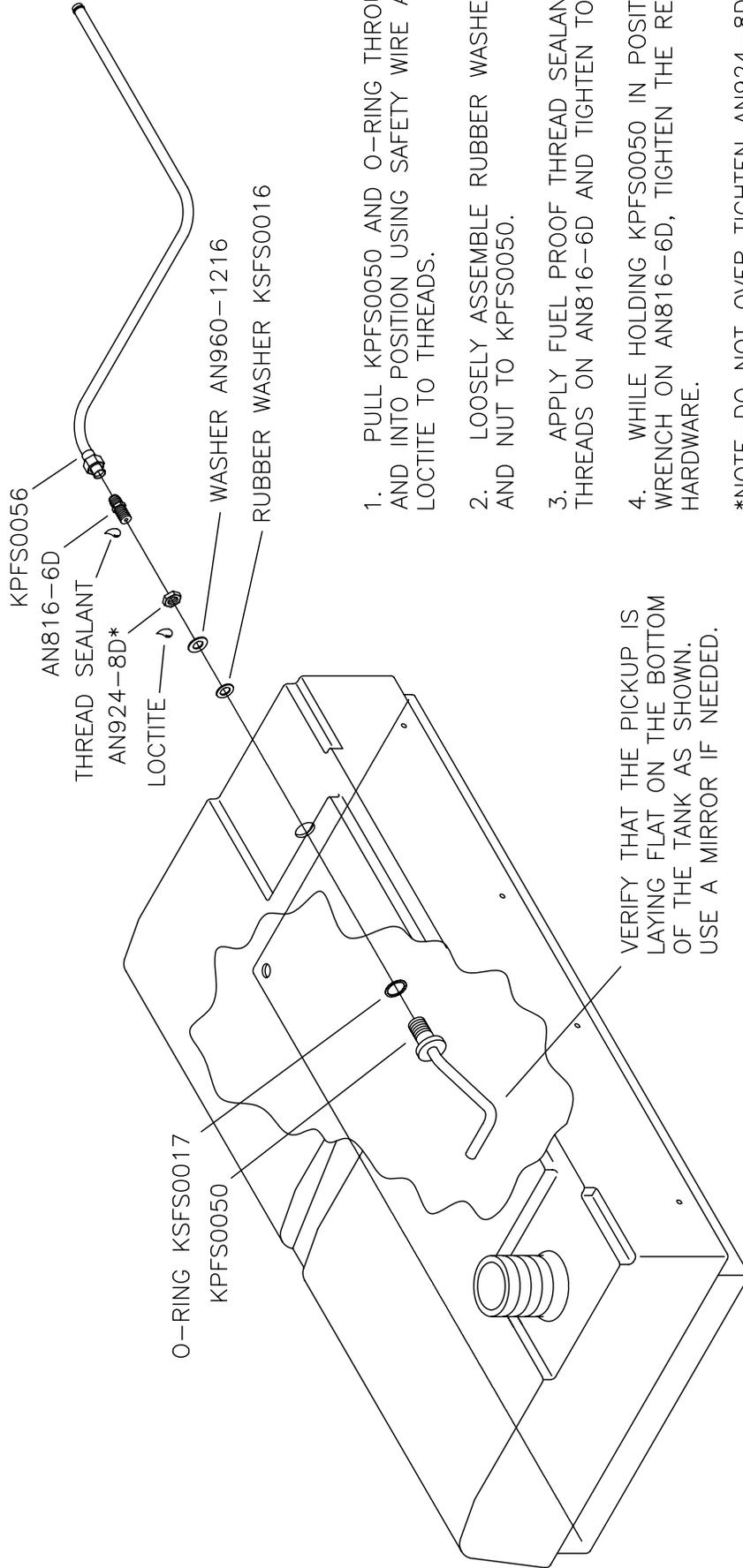
INSTALL RUBBER WASHER, STEEL WASHER AND NUT –
ROTATE FITTING UNTIL PICK UP TUBE IS FLAT ON TANK
BOTTOM FACING AFT.

(USE SIMILAR PROCEDURE FOR DRAIN FITTING)

MD4832

RANDS S-19 VENTERRA FUEL TANK FITTING INSTALLATION FIGURE 03E-08A

04/01/2011



1. PULL KPFS0050 AND O-RING THROUGH TANK AND INTO POSITION USING SAFETY WIRE AND APPLY LOCTITE TO THREADS.
2. LOOSELY ASSEMBLE RUBBER WASHER, WASHER AND NUT TO KPFS0050.
3. APPLY FUEL PROOF THREAD SEALANT TO PIPE THREADS ON AN816-6D AND TIGHTEN TO KPFS0050
4. WHILE HOLDING KPFS0050 IN POSITION WITH A WRENCH ON AN816-6D, TIGHTEN THE REST OF THE HARDWARE.

*NOTE-DO NOT OVER TIGHTEN AN924-8D, THIS WILL DISTORT THE WASHER AND CAUSE LEAKAGE.

HINT: HOLD AN960-1216 WITH NEEDLE-NOSE VISE GRIP PLIERS TO PREVENT THE WASHER FROM TURNING AND DISTORTING THE RUBBER WASHER.

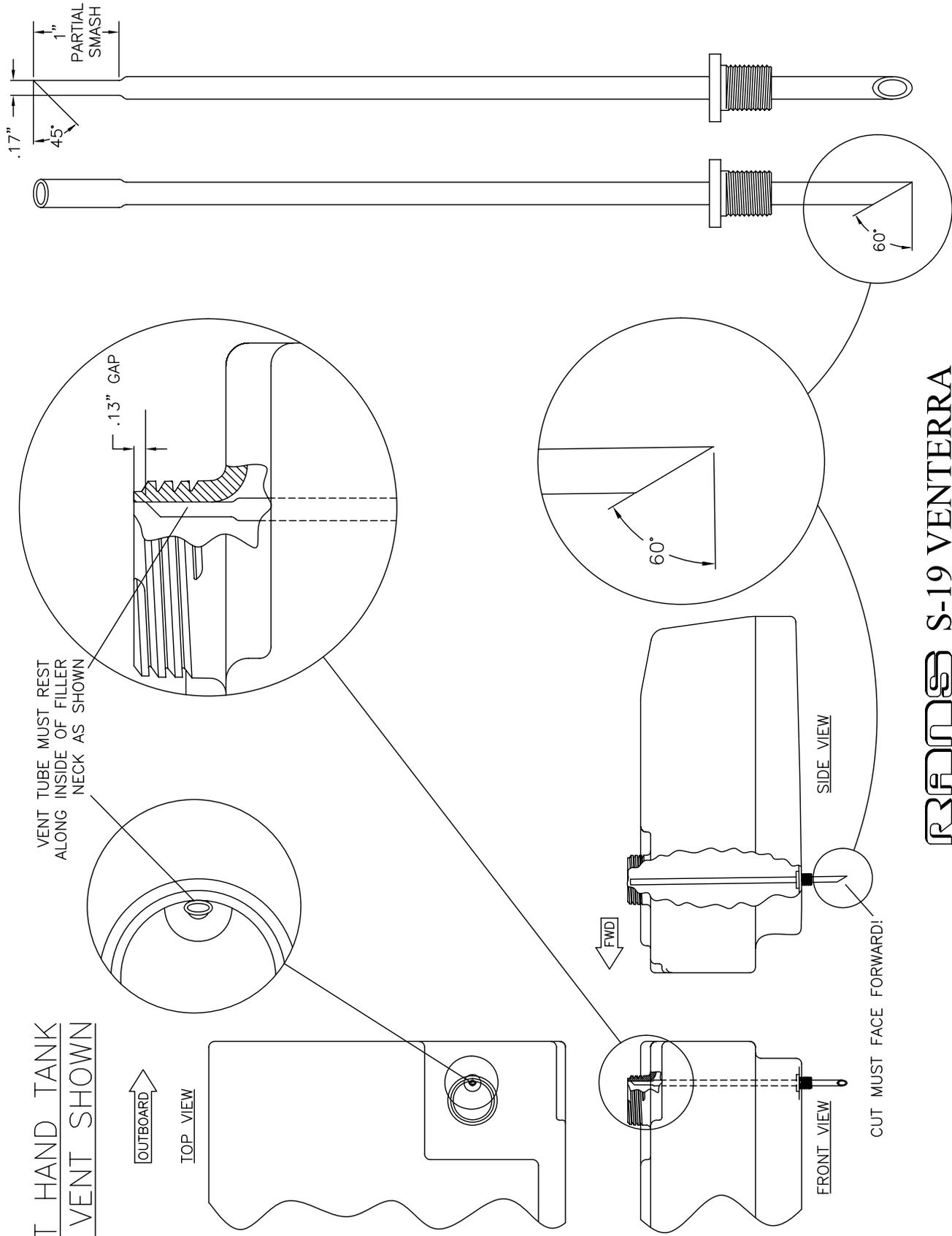
RRR S-19 VENTERRA

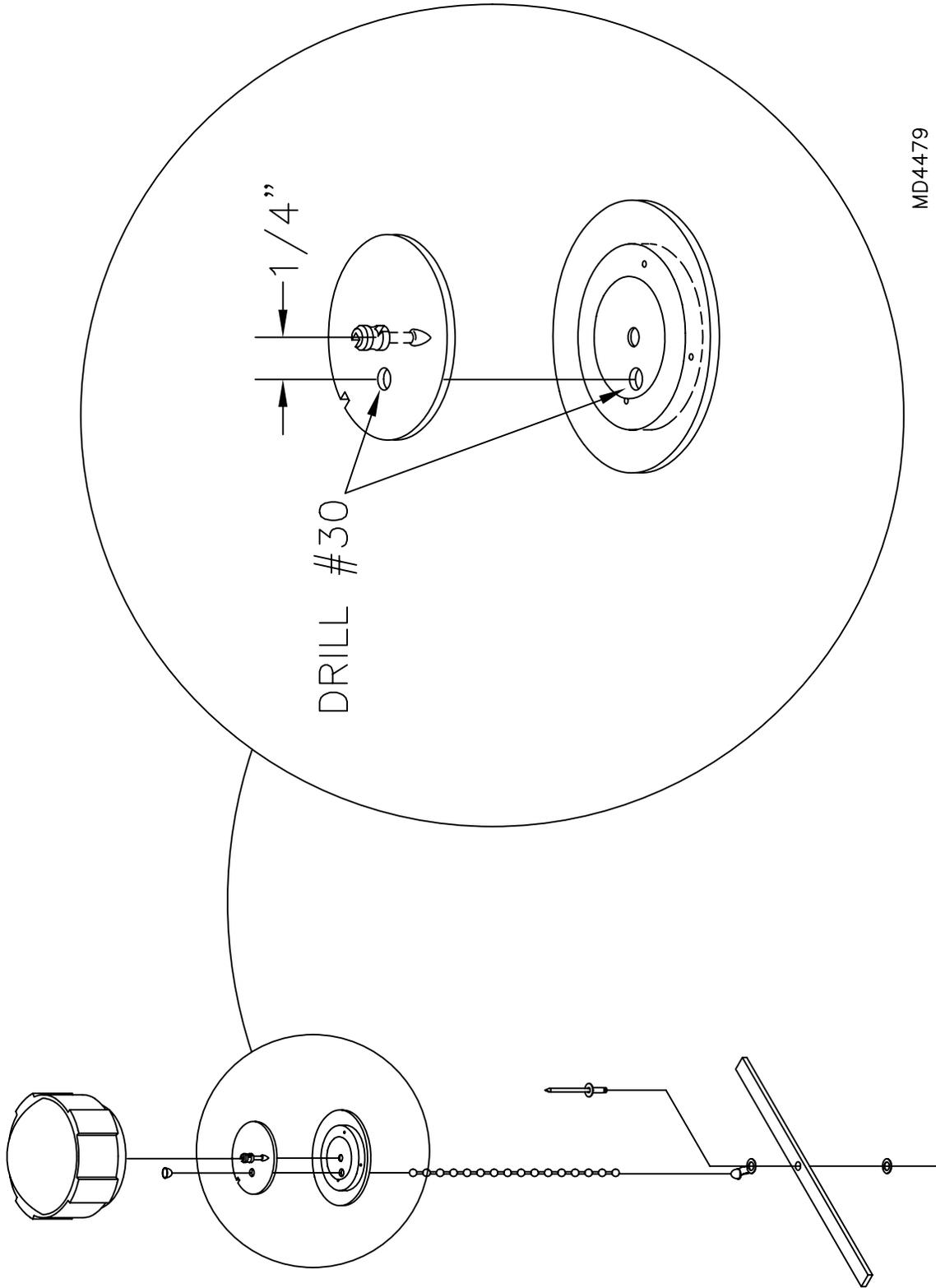
FUEL PICKUP TUBE INSTALLATION

FIGURE 03E-08B

MD4827

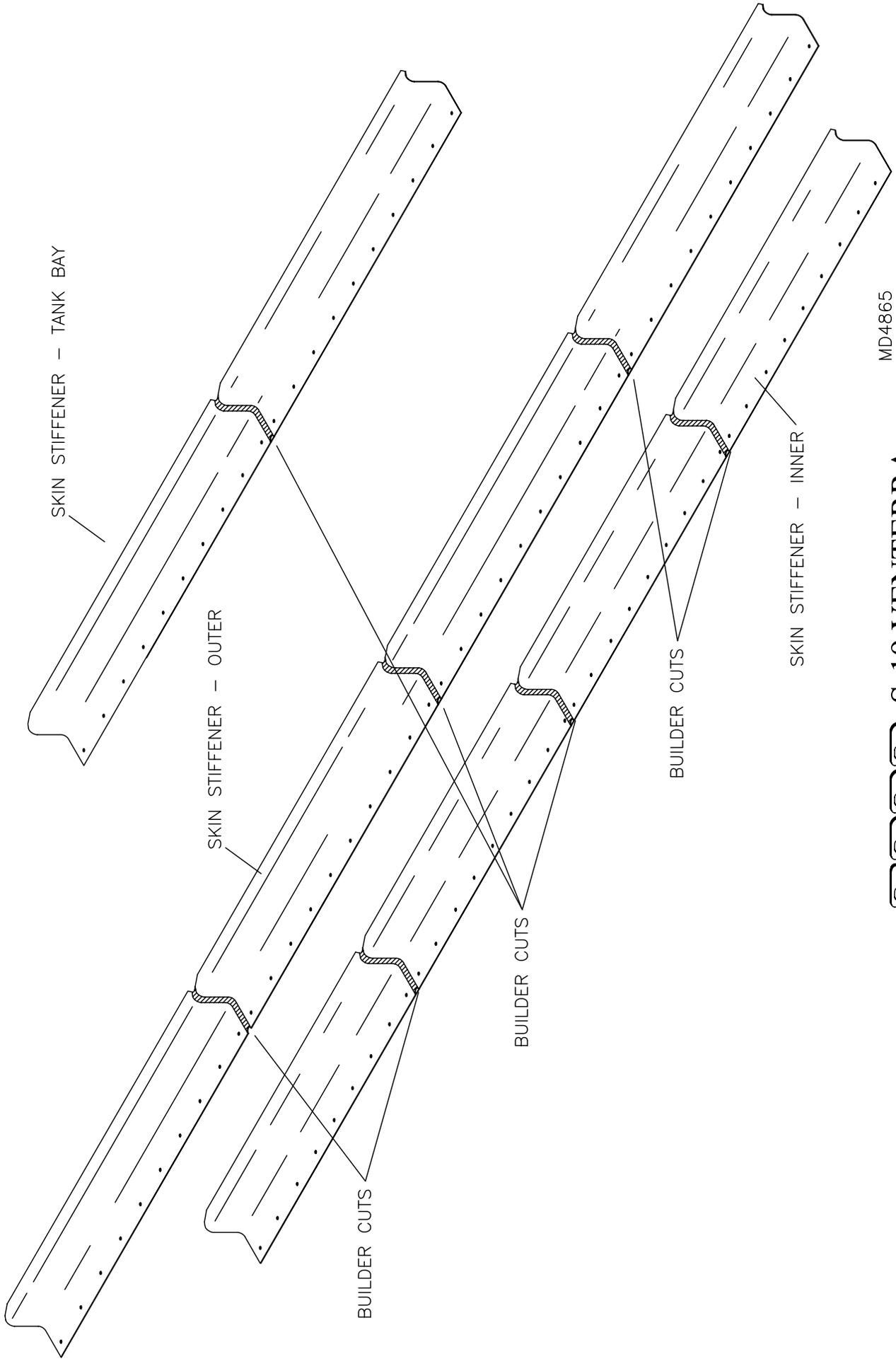
RRAMES S-19 VENTERRA VENT TUBE MODIFICATION AND INSTALLATION FIGURE 03E-09





MD4479

RAMSES S-19 VENTERRA
 FUEL CAP ASSEMBLY
 FIGURE 03E-10

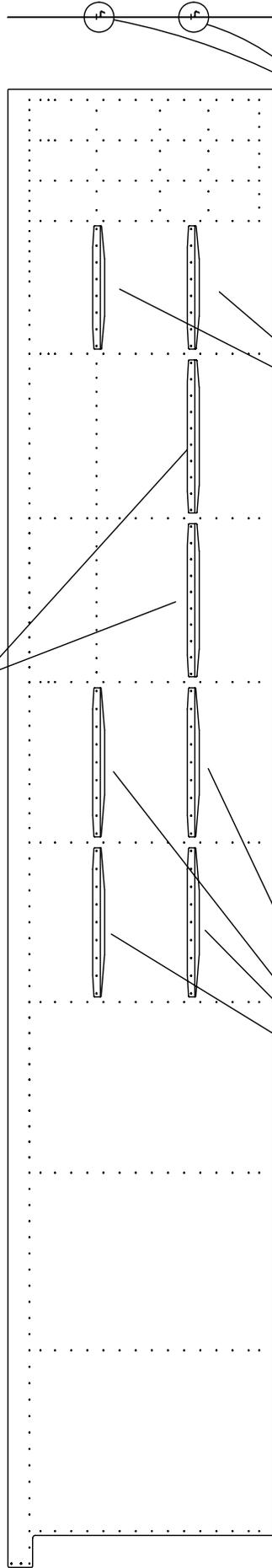


MD4865

RAMS S-19 VENTERRA
SKIN STIFFENER MODIFICATION
FIGURE 03F-01

TOP SKIN

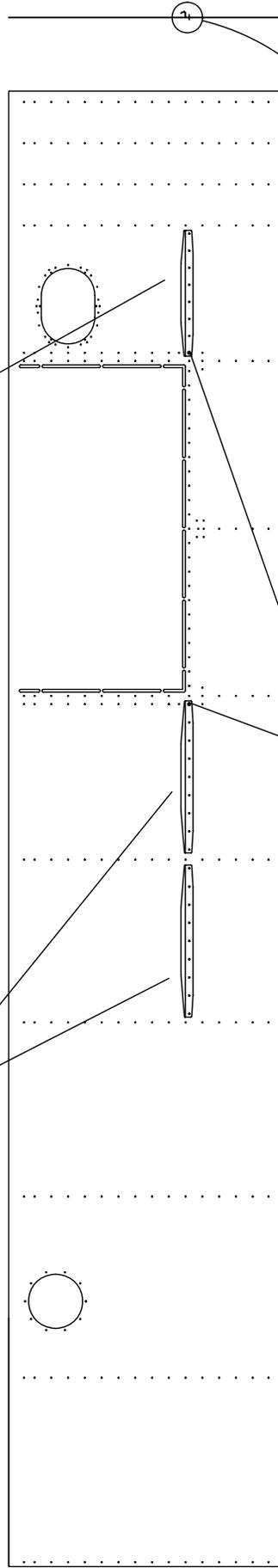
SKIN STIFFENER - TANK BAY KPWI0452



SKIN STIFFENER - OUTER KPWI0440

SKIN STIFFENER - INNER KPWI0439

BOTTOM SKIN



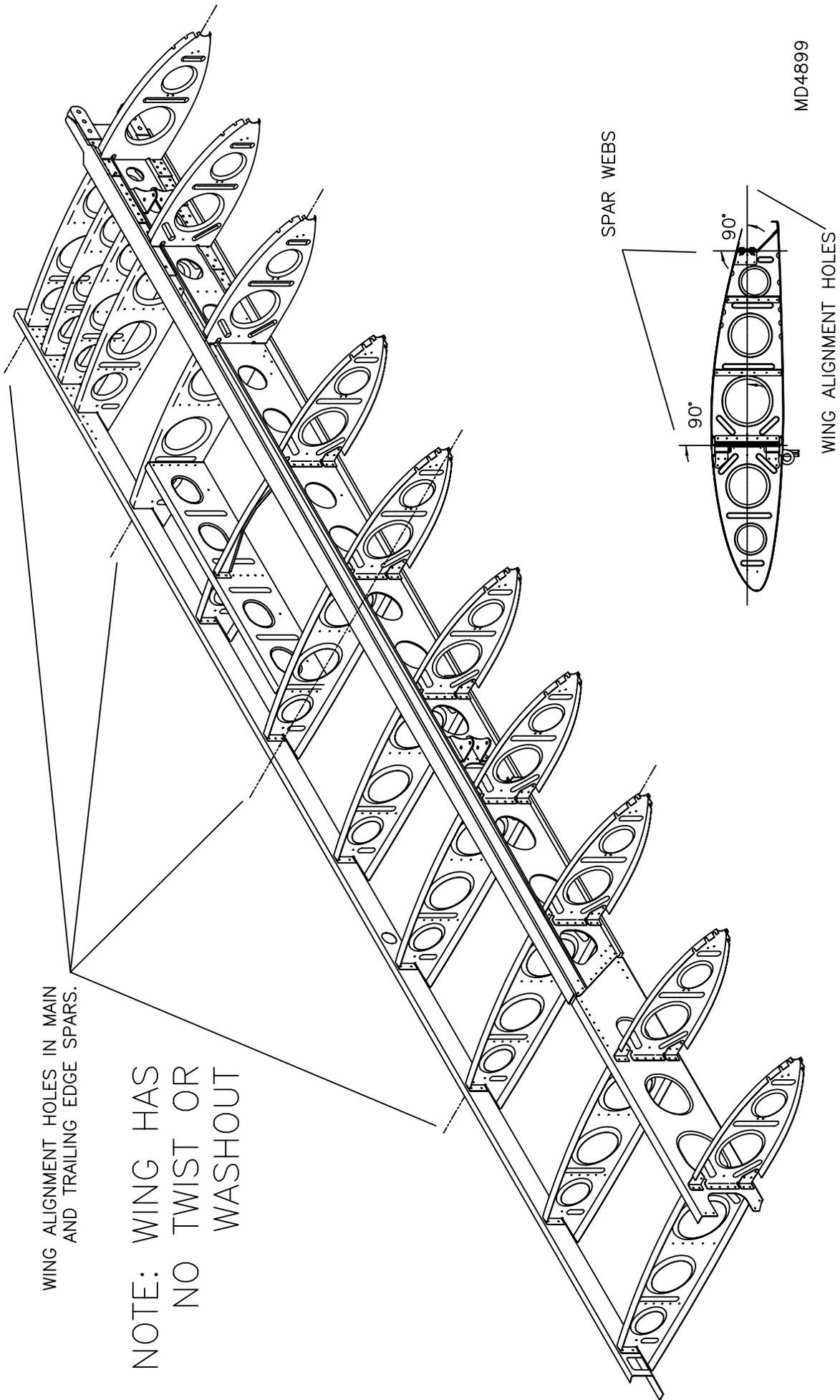
DO NOT RIVET UNTIL SKIN IS INSTALLED

LEFT HAND SKINS SHOWN

MD4864

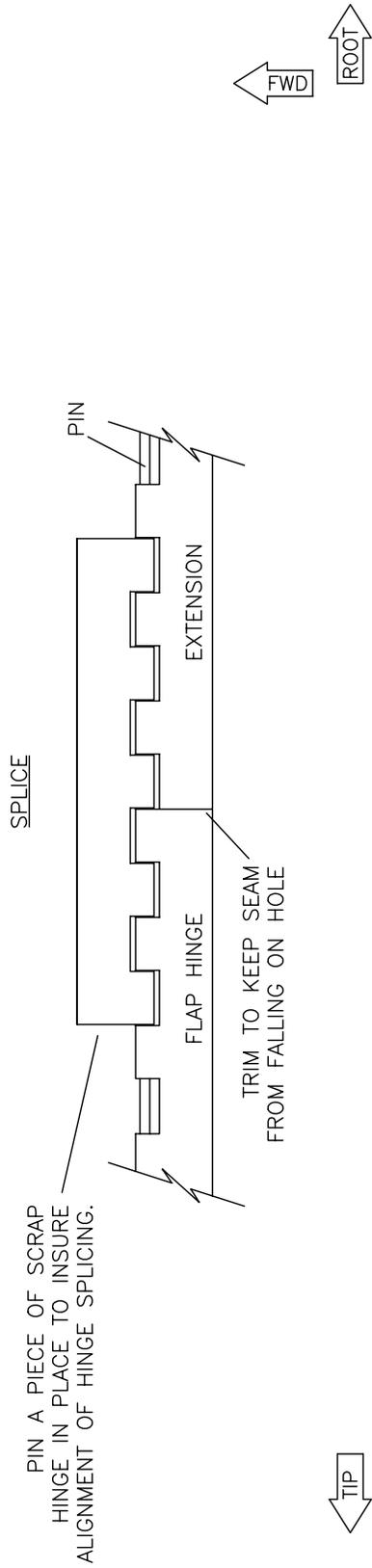
BENT FLANGE FACES
FWD AS SHOWN, TYPICAL
FOR ALL SKIN STIFFENERS

RRADON S-19 VENTERRA
SKIN STIFFENER INSTALLATION
FIGURE 03F-03

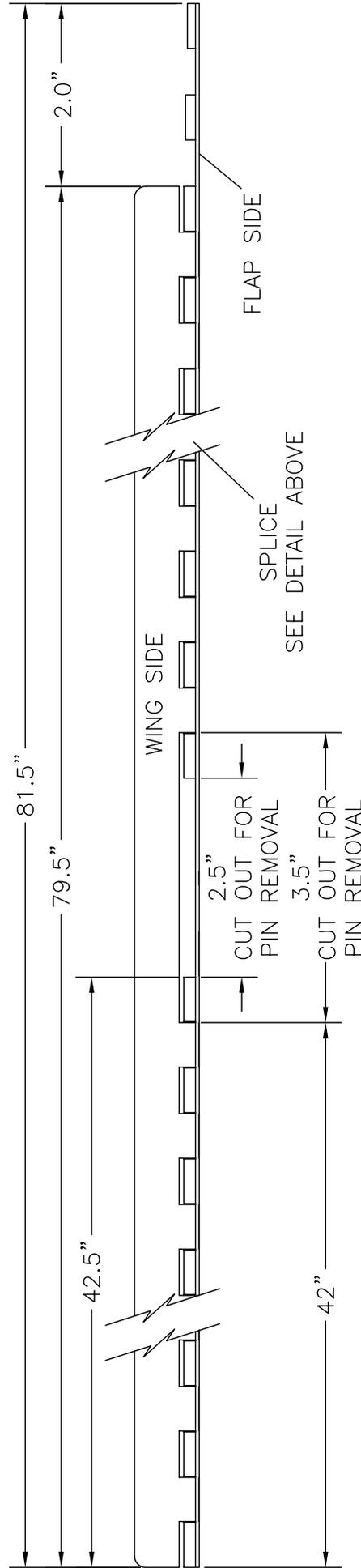


RAMS S-19 VENTERRA
WING ALIGNMENT HOLE LOCATIONS
FIGURE 03F-10

IMPORTANT: REMOVE PIN FROM HINGE BEFORE CUTTING

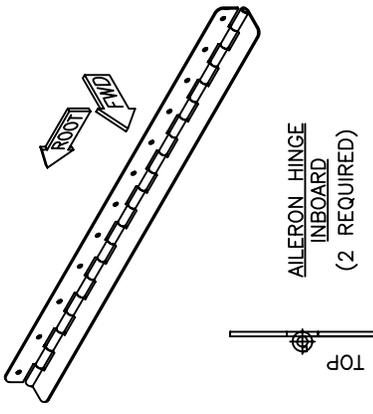


AN EXTENSION SPLICING IS NEEDED TO ACHIEVE 79.5" LENGTH



MD4825

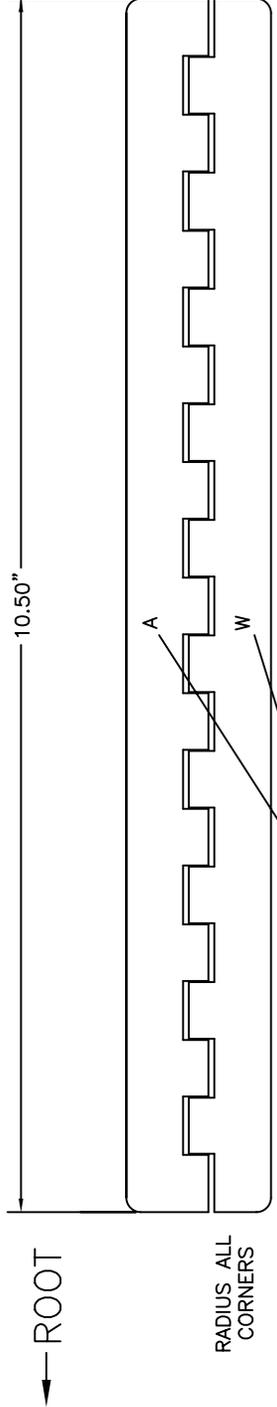
RAMS S-19 VENTERRA
FLAP HINGE MODIFICATION AND INSTALLATION
FIGURE 03F-20



AILERON HINGE
INBOARD
(2 REQUIRED)

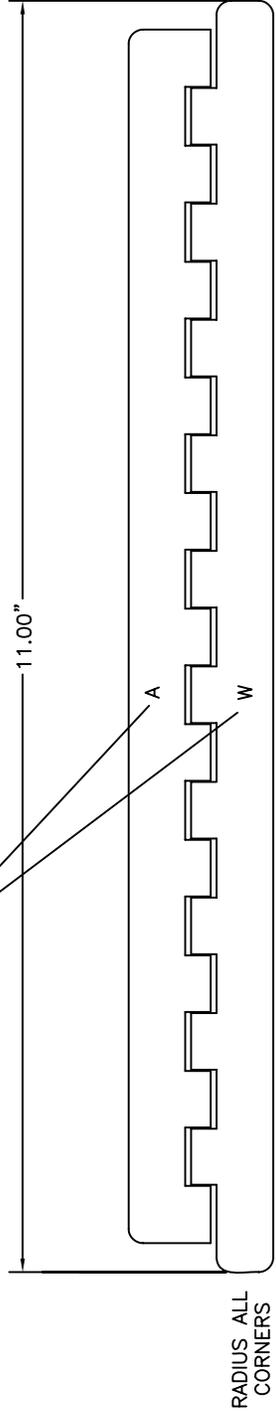
AILERON HINGE
OUTBOARD
(2 REQUIRED)

HINGES VIEWED AS PLACED ON AILERON



MARK WITH AILERON AND WING
FOR LATER IDENTIFICATION OF ORIENTATION.

IMPORTANT: REMOVE PIN FROM HINGE BEFORE CUTTING

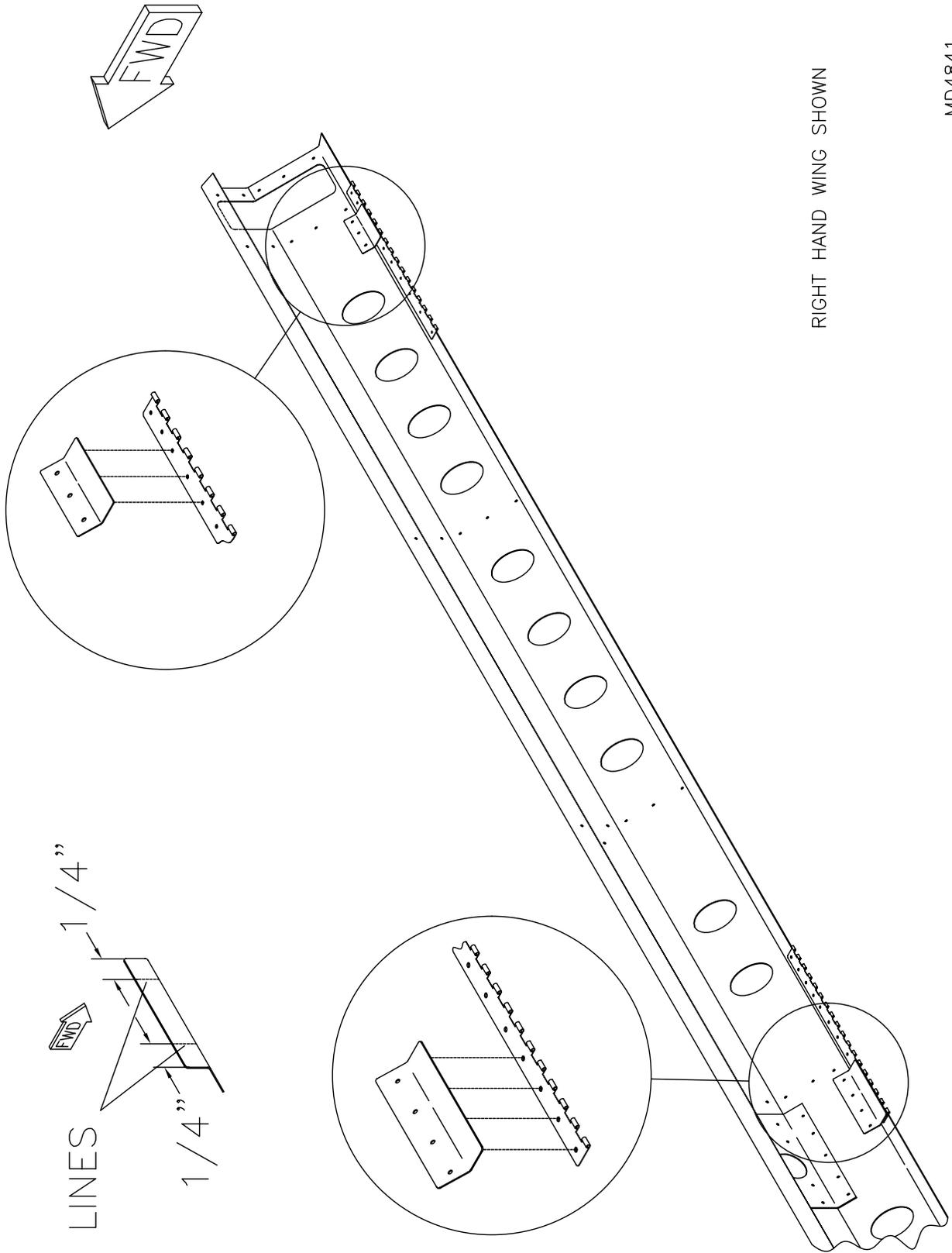


AILERON HINGE INBOARD AND OUTBOARD
MS20257-3 (1.25"WIDTH) MODIFIED
BUILDER CUTS AND DRILLS AS SHOWN (ALL HOLES #40)
S-19, QTY - 2 EACH

NOTE: AILERON HINGE RIVET LOCATIONS WILL BE
COMPETED IN THE AILERON ASSEMBLY SECTION

MD4806

RAMS S-19 VENTERRA
AILERON HINGE MODIFICATION
FIGURE 03F-20A



DRAW LINES

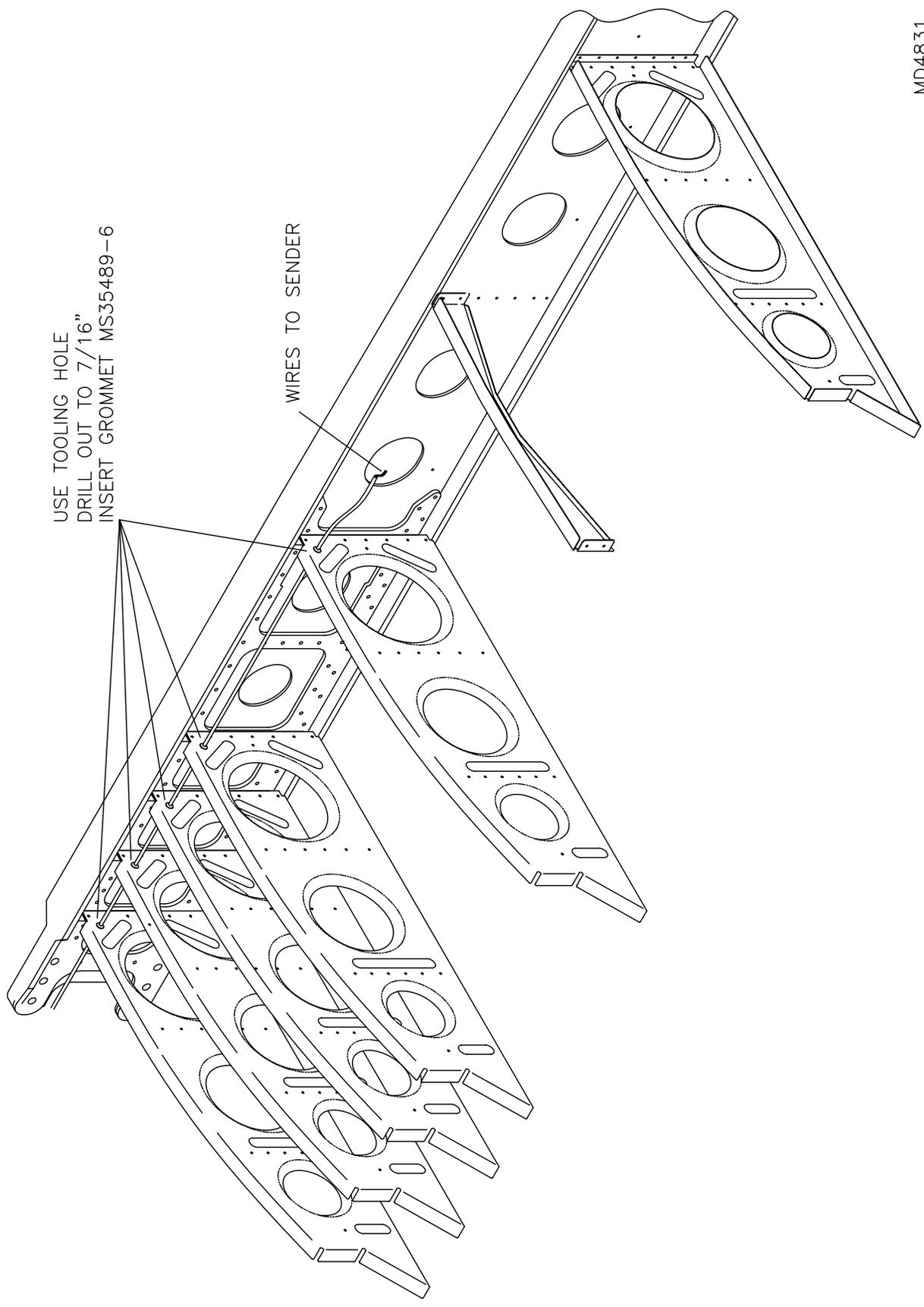
1/4" 1/4" FWD

RIGHT HAND WING SHOWN

MD4841

RAMBER S-19 VENTERRA
HINGE DOUBLER INSTALLATION

FIGURE 03F-33

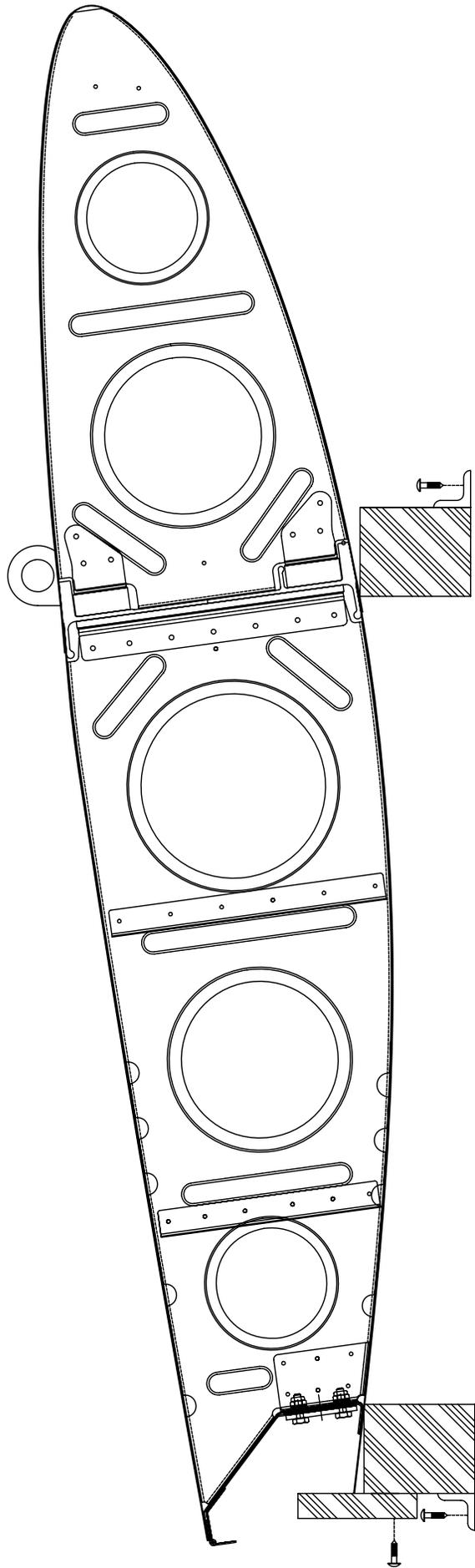


USE TOOLING HOLE
DRILL OUT TO 7/16"
INSERT GROMMET MS35489-6

WIRES TO SENDER

MD4831

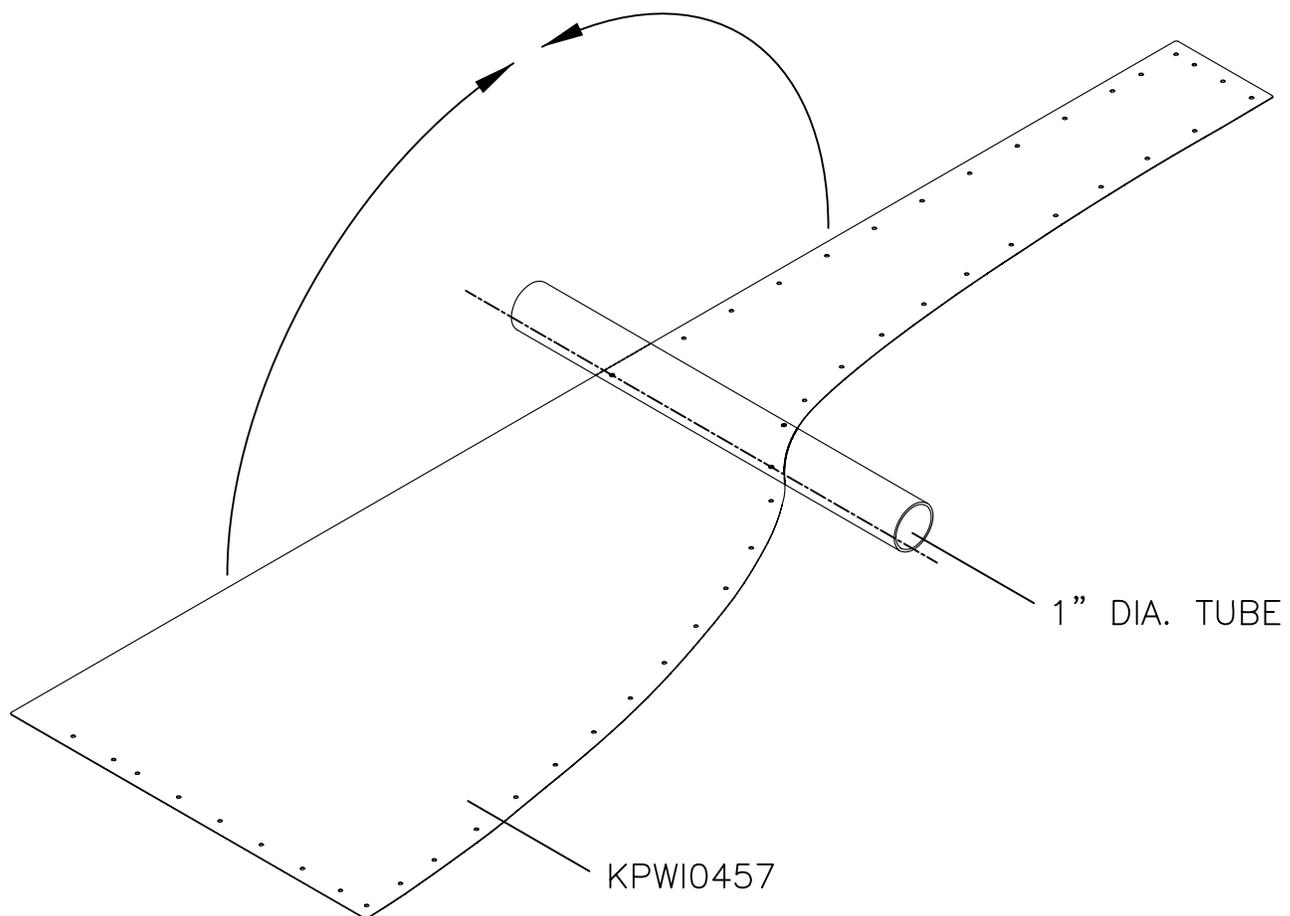
RRR S-19 VENTERRA
FUEL SENDER WIRE INSTALLATION
FIGURE 03F-40



MD4911

RAMOS S-19 VENTERRA
WING SUPPORT
FIGURE 03F-50

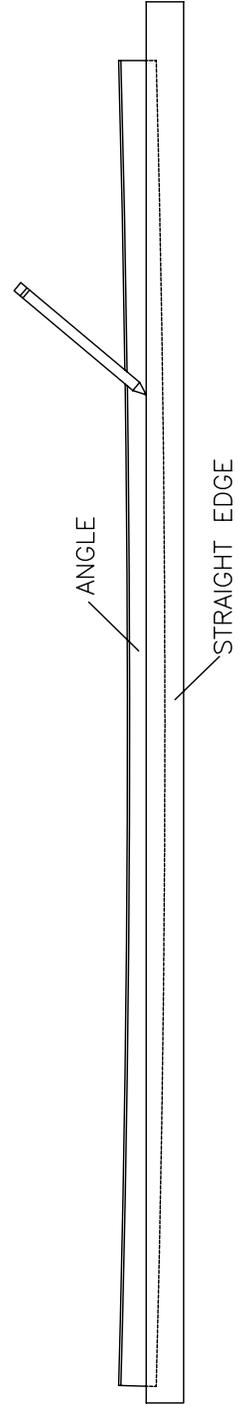
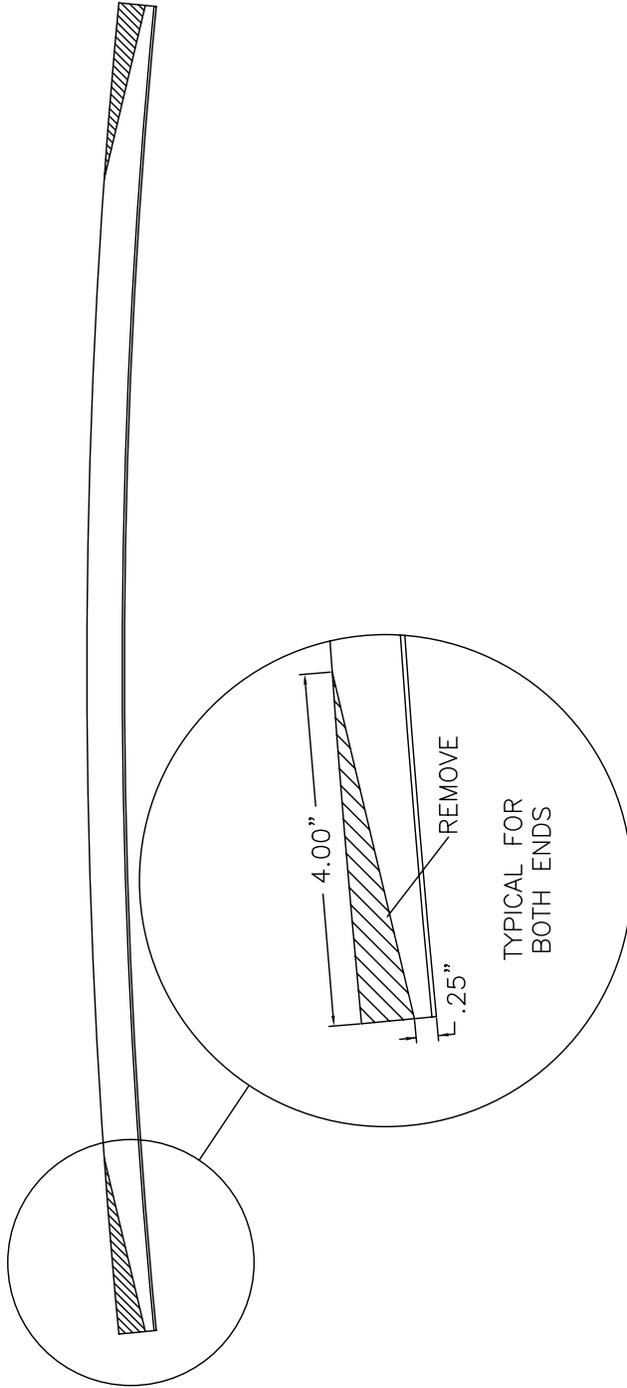
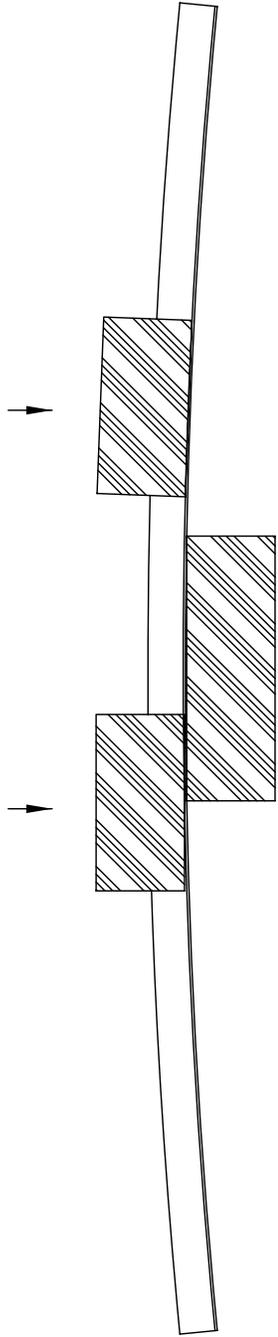
CENTER TUBE ON HOLES
AND FORM SKIN AS SHOWN.
LEFT AND RIGHT REQ'D
(LH SHOWN)



MD5235

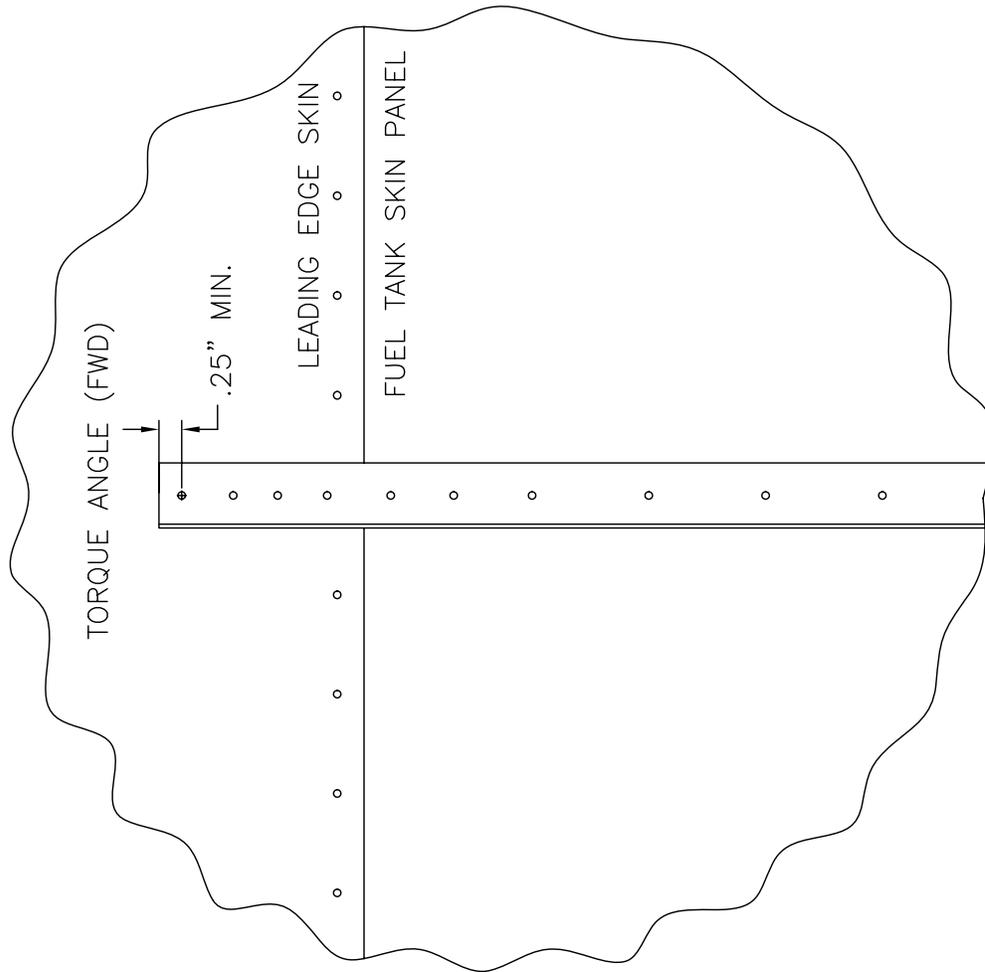
RANS S-19 VENTERRA
FWD SKIN TIP FORMING
FIGURE 03F-70

04/01/2011



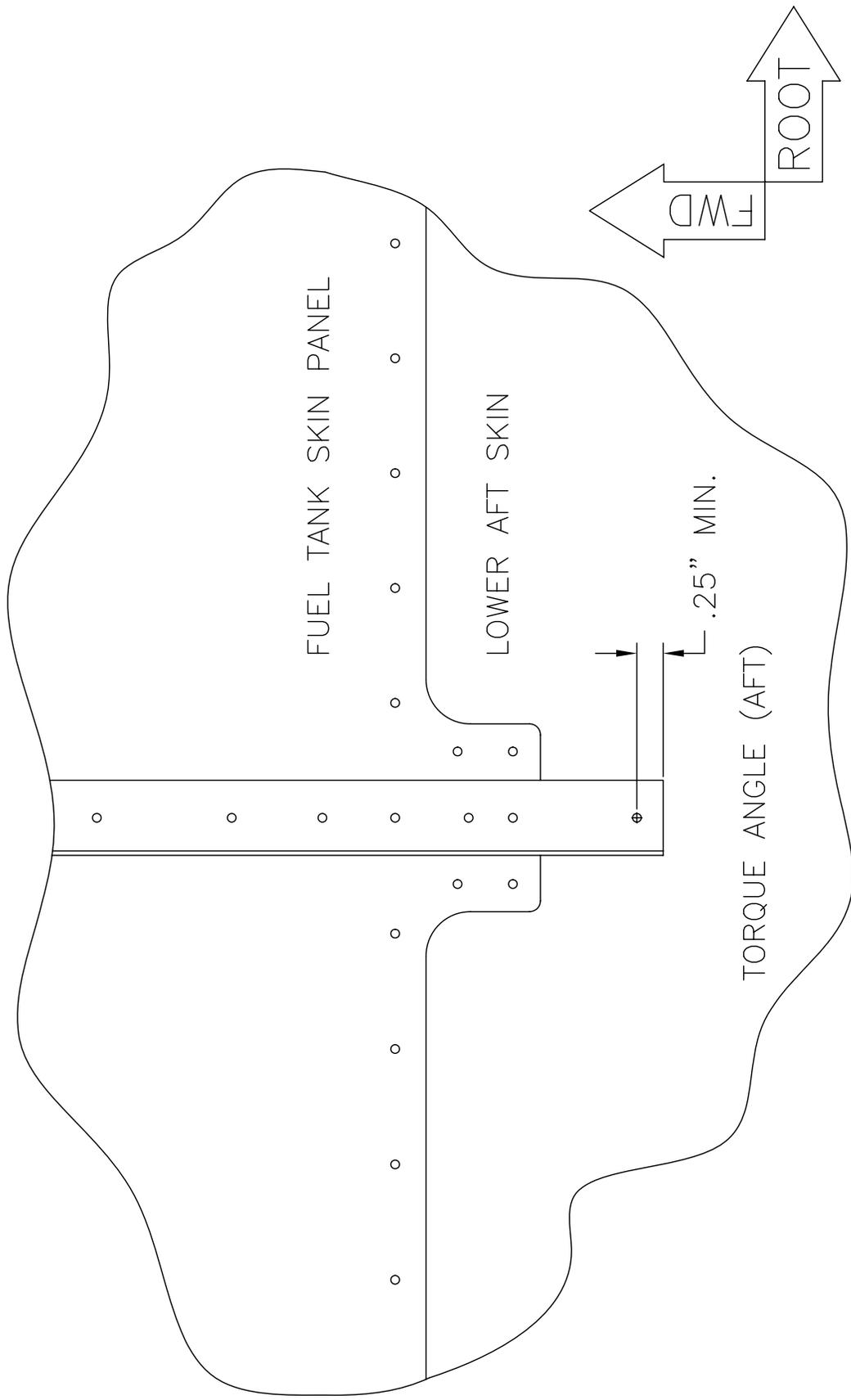
MD4833

RAMS S-19 VENTERRA
FUEL TANK TORQUE ANGLE MODIFICATION
FIGURE 03F-72



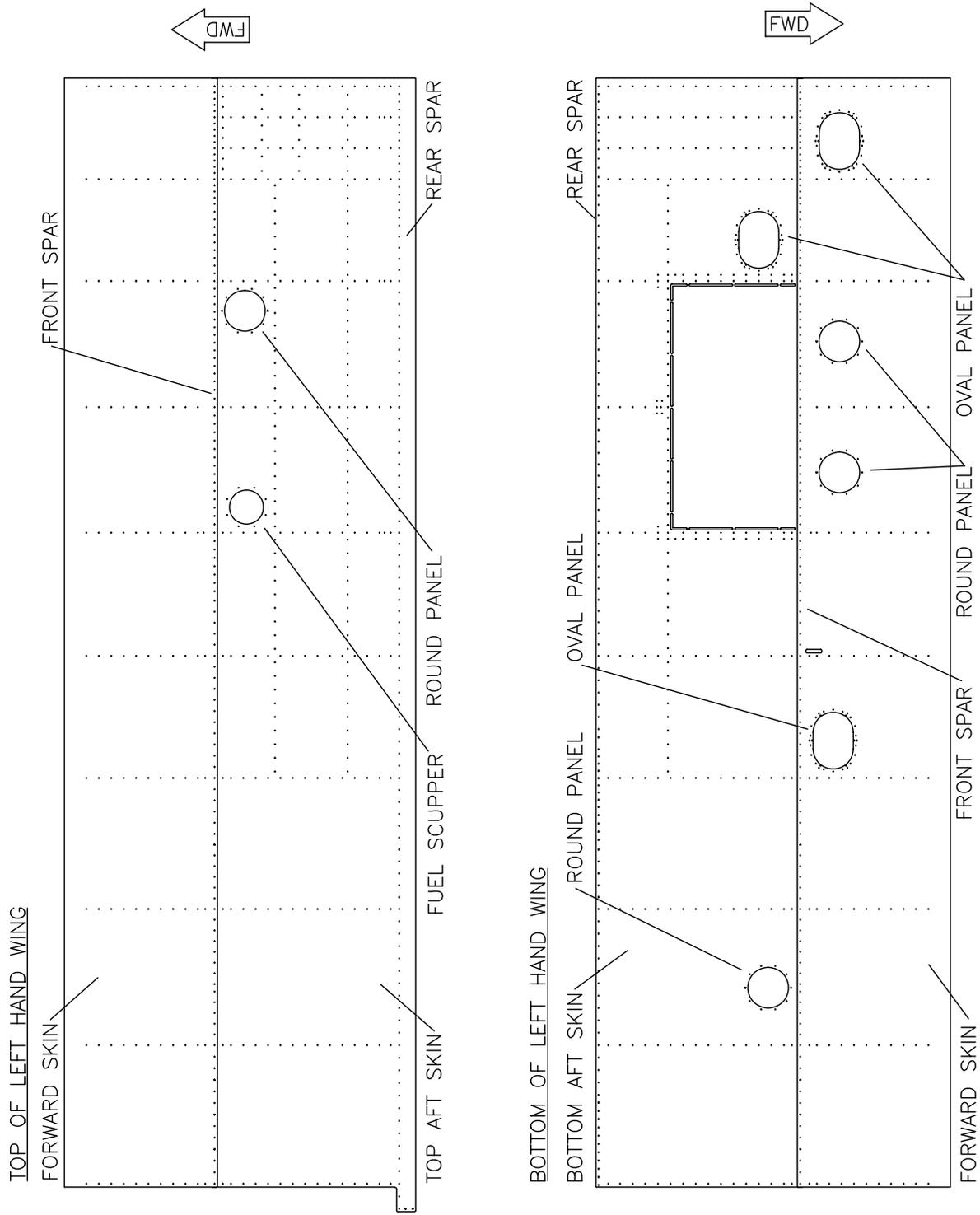
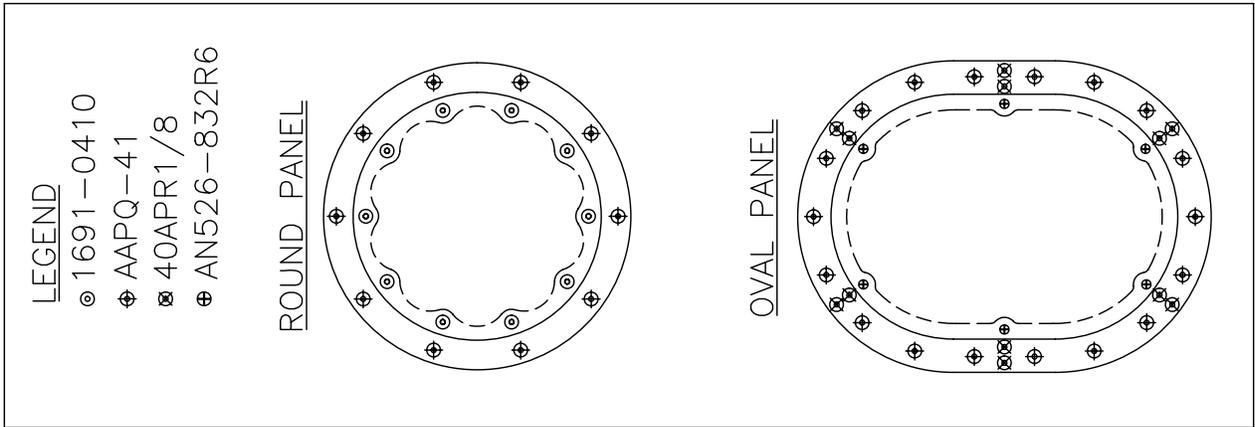
RRR S-19 VENTERRA
 TORQUE ANGLE - FWD
 FIGURE 03F-74

MD4882



MD4881

RAMB S-19 VENTERRA
TORQUE ANGLE - AFT
FIGURE 03F-74A



MD4842

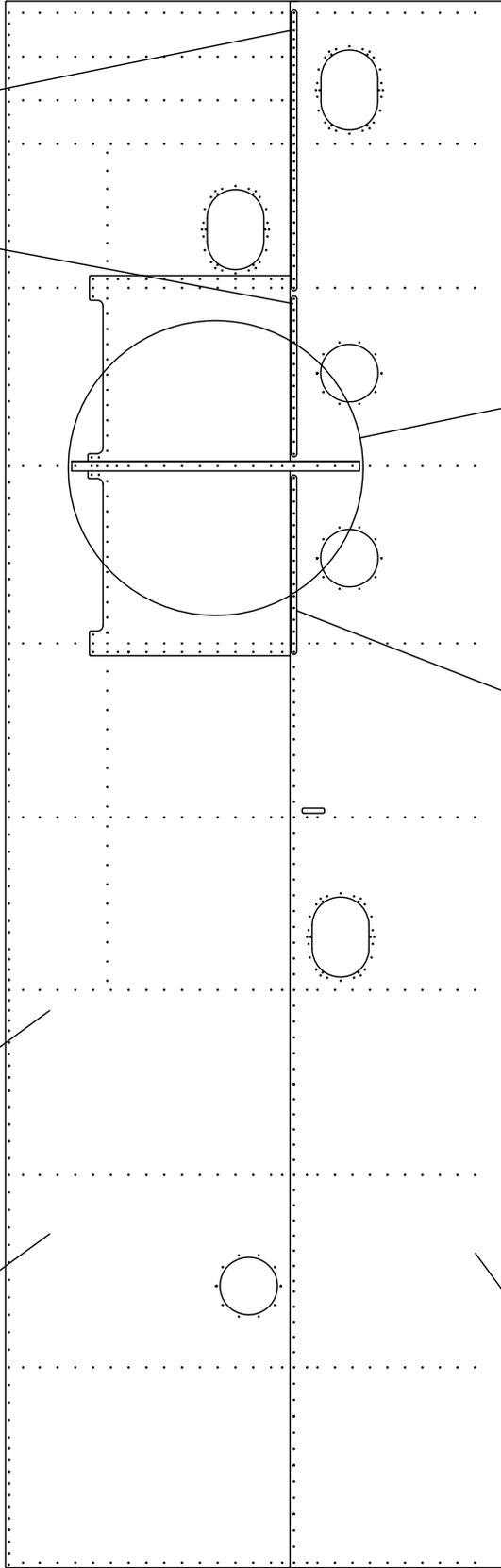
RAMB S-19
INSPECTION PANEL INSTALLATION
FIGURE 03F-78

BOTTOM OF LEFT HAND WING

BOTTOM AFT SKIN REAR SPAR

CCPQ-43 (QTY. 30)

AA PQ-43 (QTY. 15)



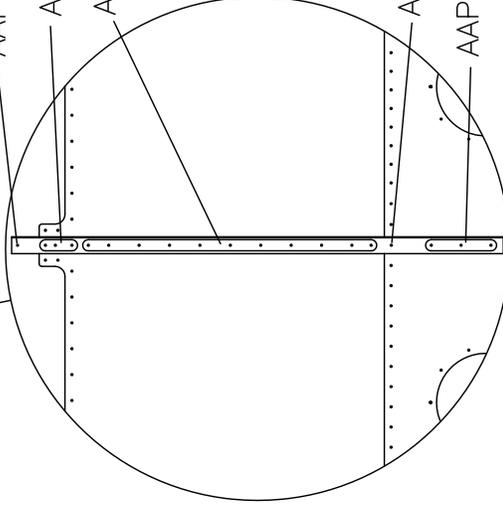
FORWARD SKIN AAPQ-43 (QTY. 16)

USE AVE X RIVETS 1691-0410 UNLESS OTHERWISE SPECIFIED

AA PQ-42 (QTY. 1)

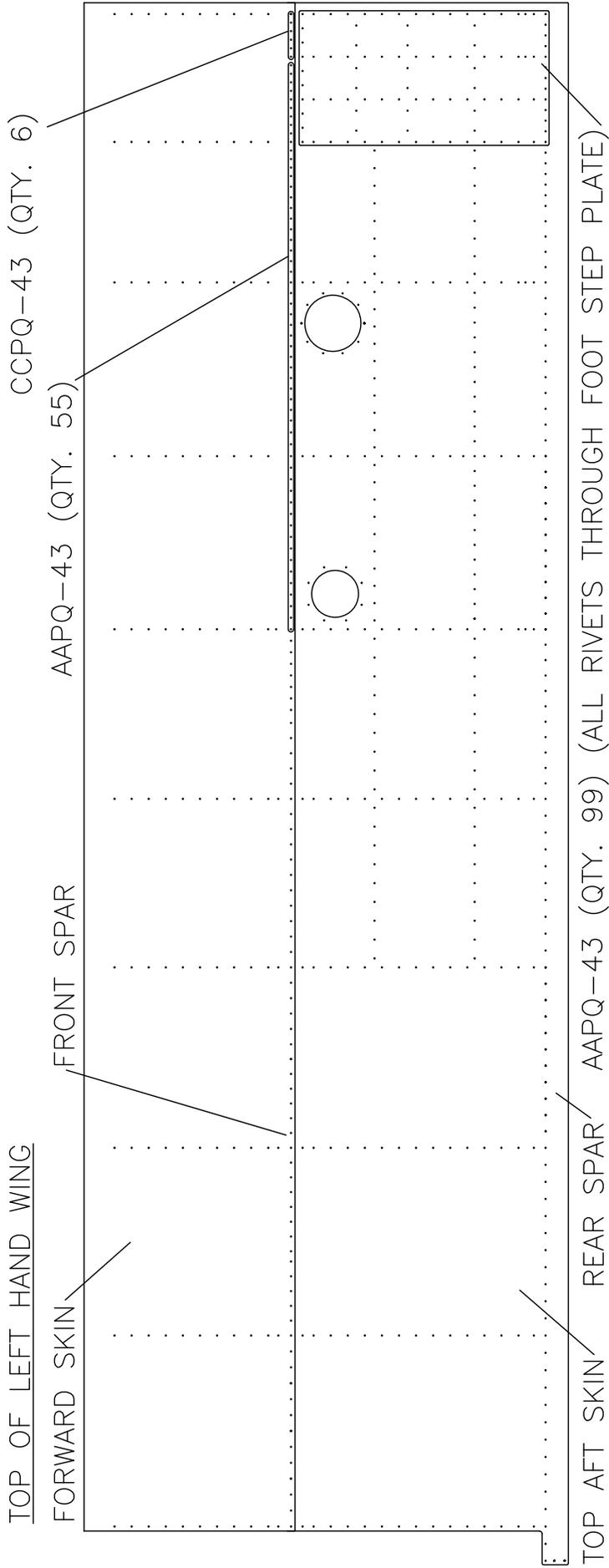
AA PQ-43 (QTY. 3)

AA PQ-41 (QTY. 11)



MD4907

RRR S-19 VENTERRA
WING SKIN RIVET SCHEDULE - BOTTOM
FIGURE 03G-06



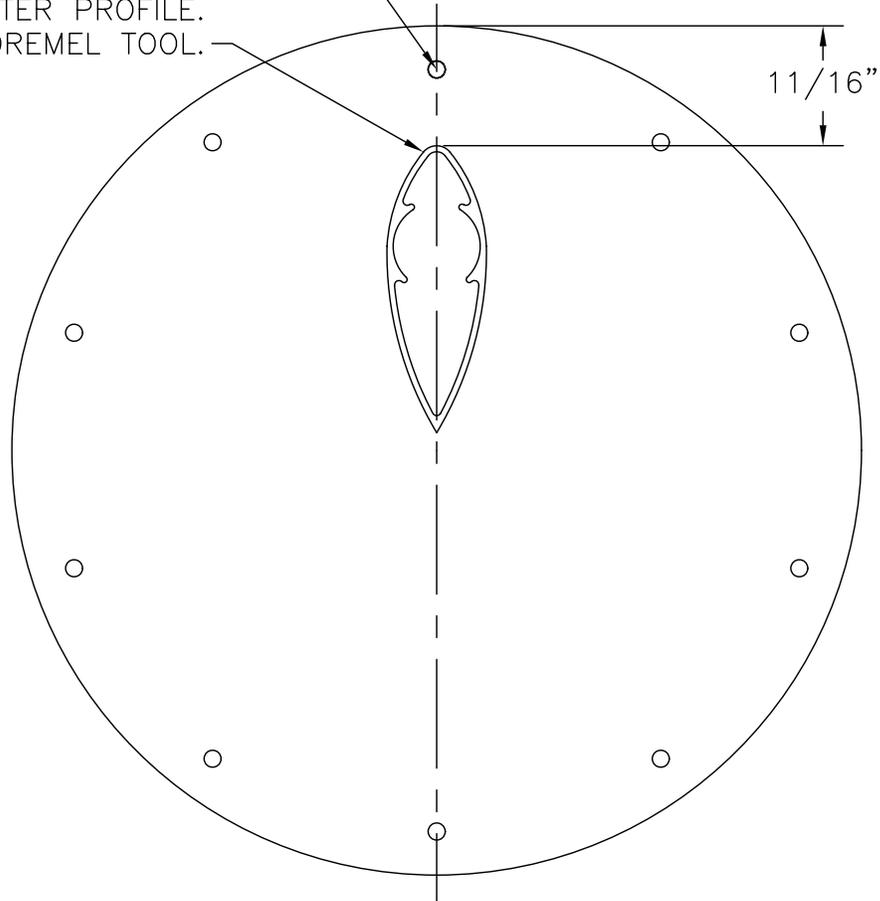
USE AVEX RIVETS 1691-0410 UNLESS OTHERWISE SPECIFIED

MD4907

RRR S-19 VENTERRA
 WING SKIN RIVET SCHEDULE - TOP
 FIGURE 03G-11

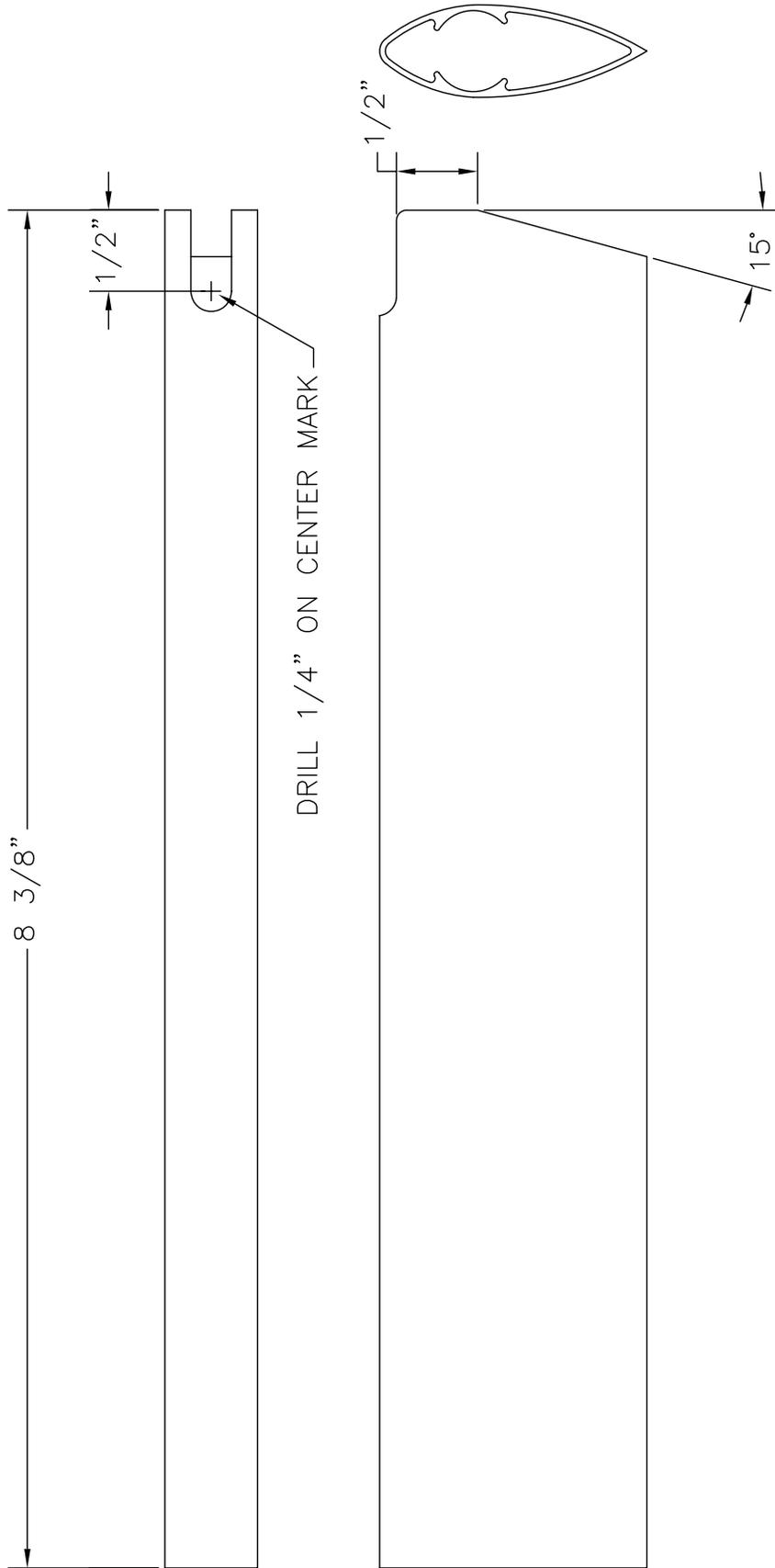
NOTE ORIENTATION OF HOLES

PLACE FAIRING AS SHOWN
AND USE AS TEMPLATE TO
TRACE OUTER PROFILE.
CUT OUT WITH DREMEL TOOL.



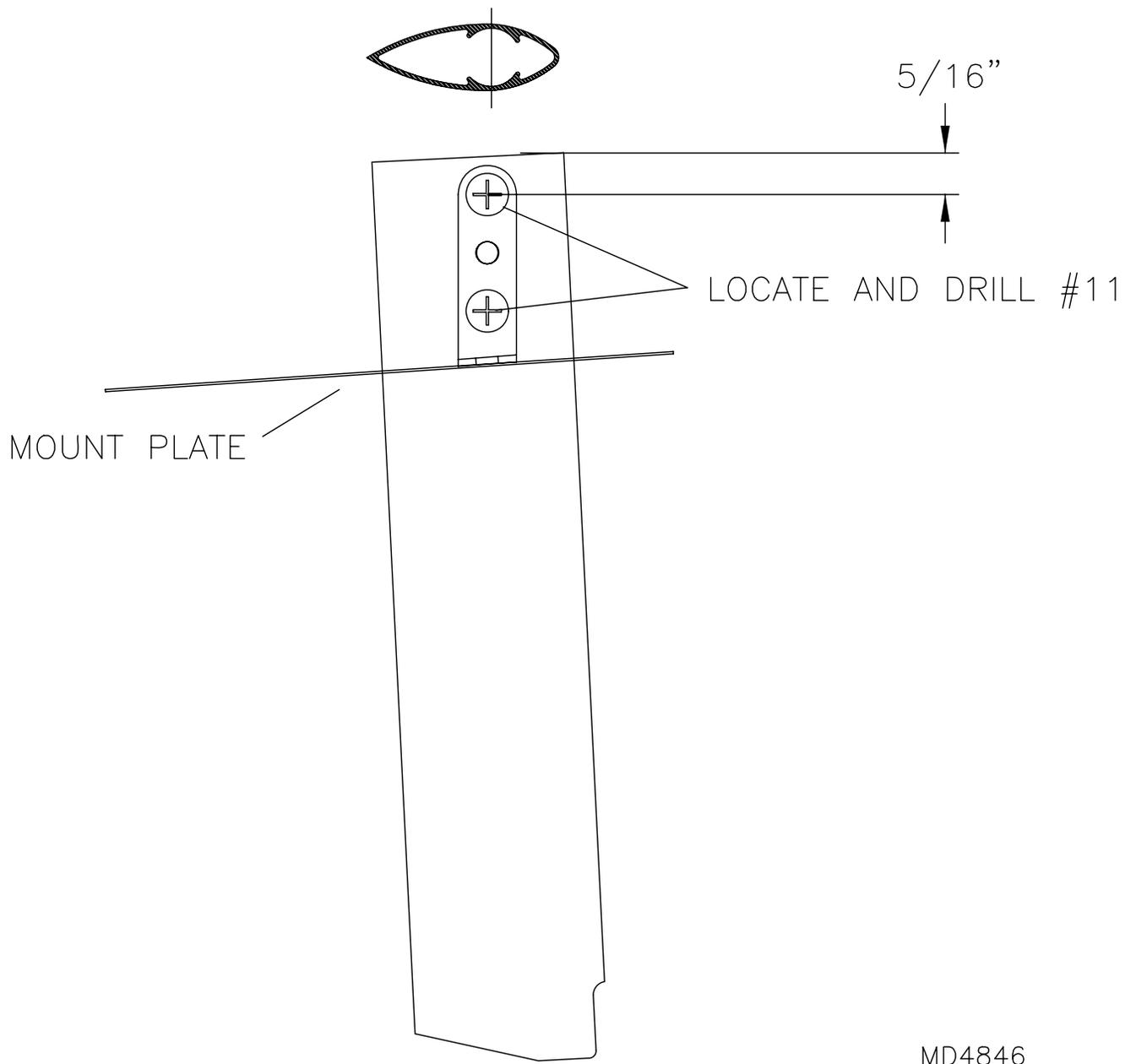
**RAMS S-19 VENTERRA
OPTIONAL PITOT/STATIC
FAIRING MOUNT PLATE MODIFICATION
FIGURE 03H-02**

MD5483



MD4847

RRF S-19 VENTERRA
 OPTIONAL PITOT/STATIC
 FAIRING MODIFICATION
 FIGURE 03H-03

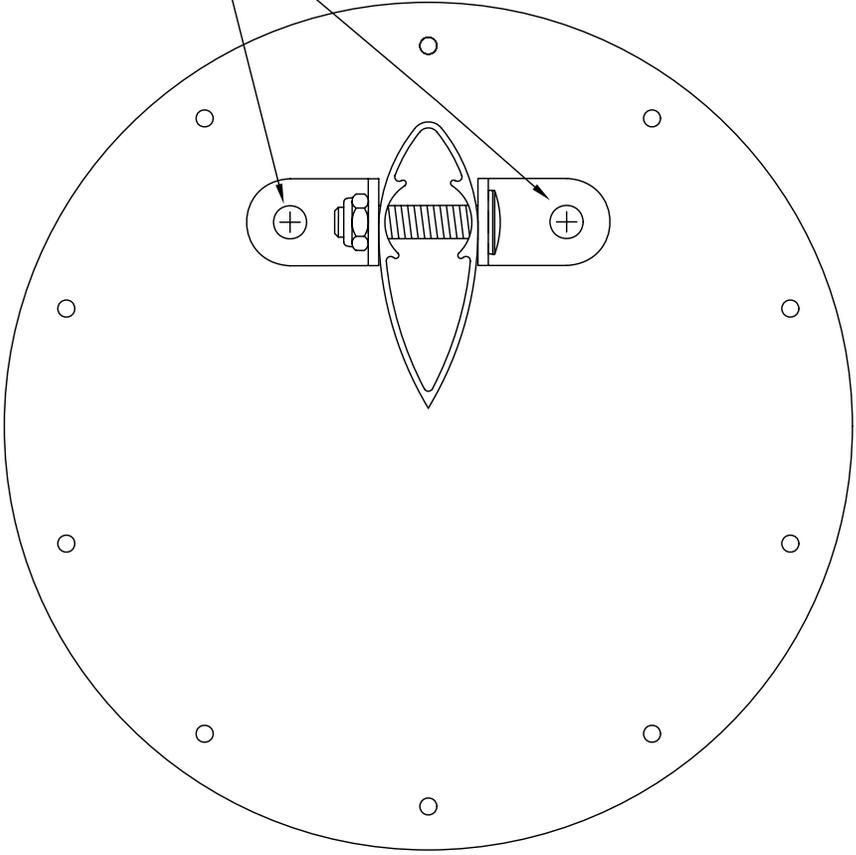


MD4846

RANS S-19 VENTERRA
OPTIONAL PITOT/STATIC
TUBE MOUNT
FIGURE 03H-04

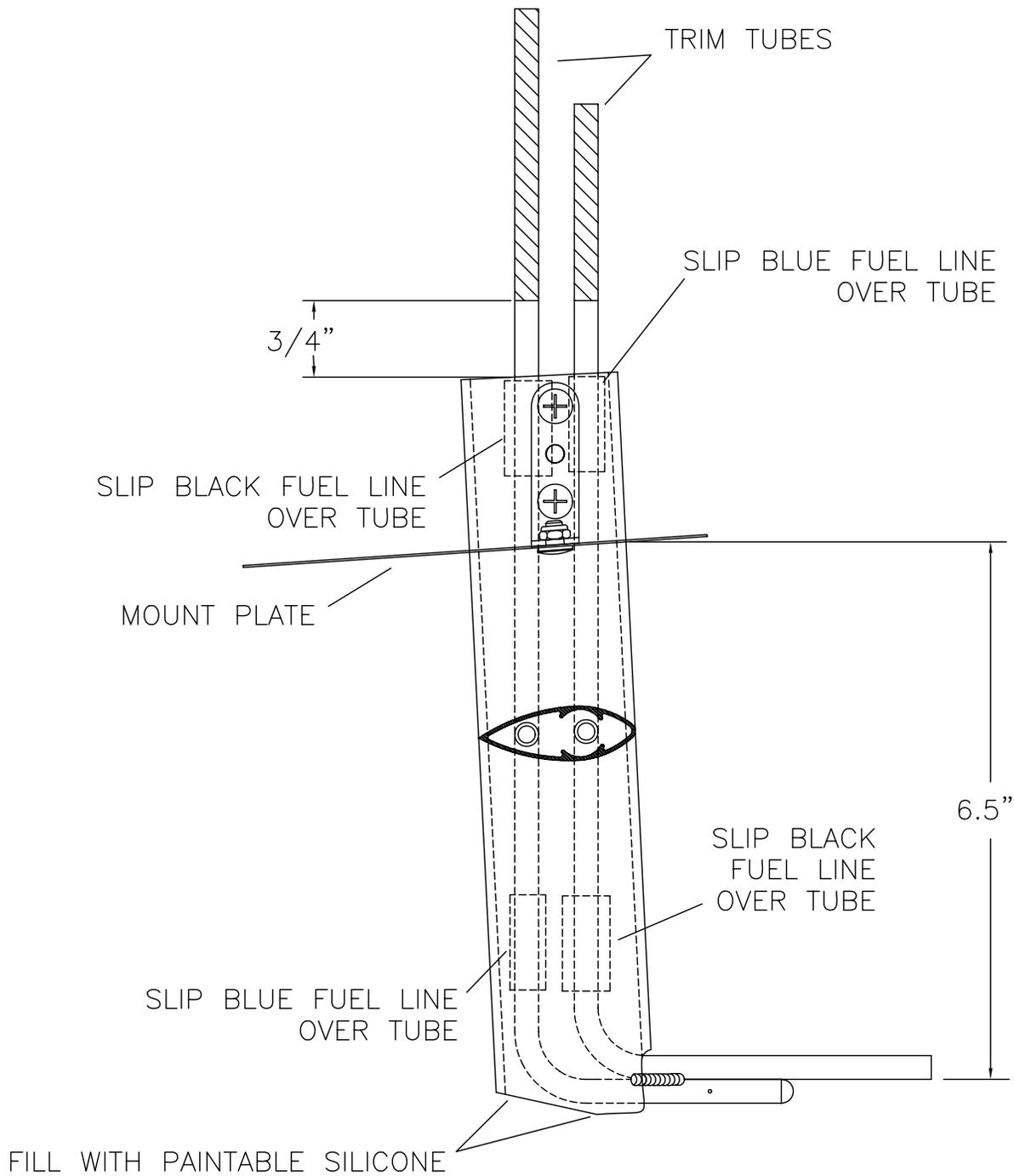
04/01/2011

BOLT BRACKETS TO FAIRING
AND TRANSFER DRILL #11



RANS S-19 VENTERRA
OPTIONAL PITOT/STATIC
FAIRING MOUNT PLATE MODIFICATION
FIGURE 03H-05

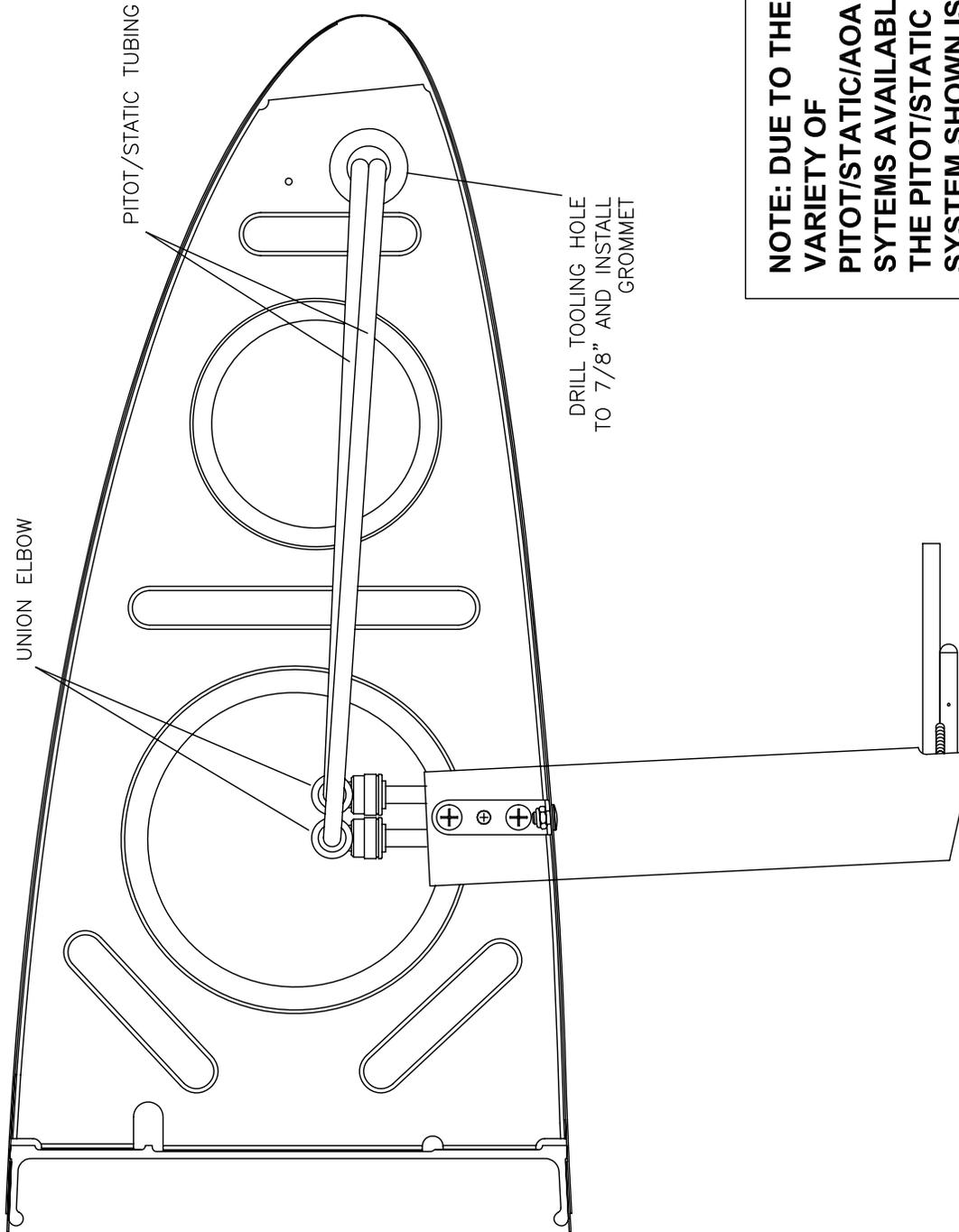
MD5483



MD4846

RANS S-19 VENTERRA
OPTIONAL PITOT/STATIC
TUBE MOUNT
FIGURE 03H-06

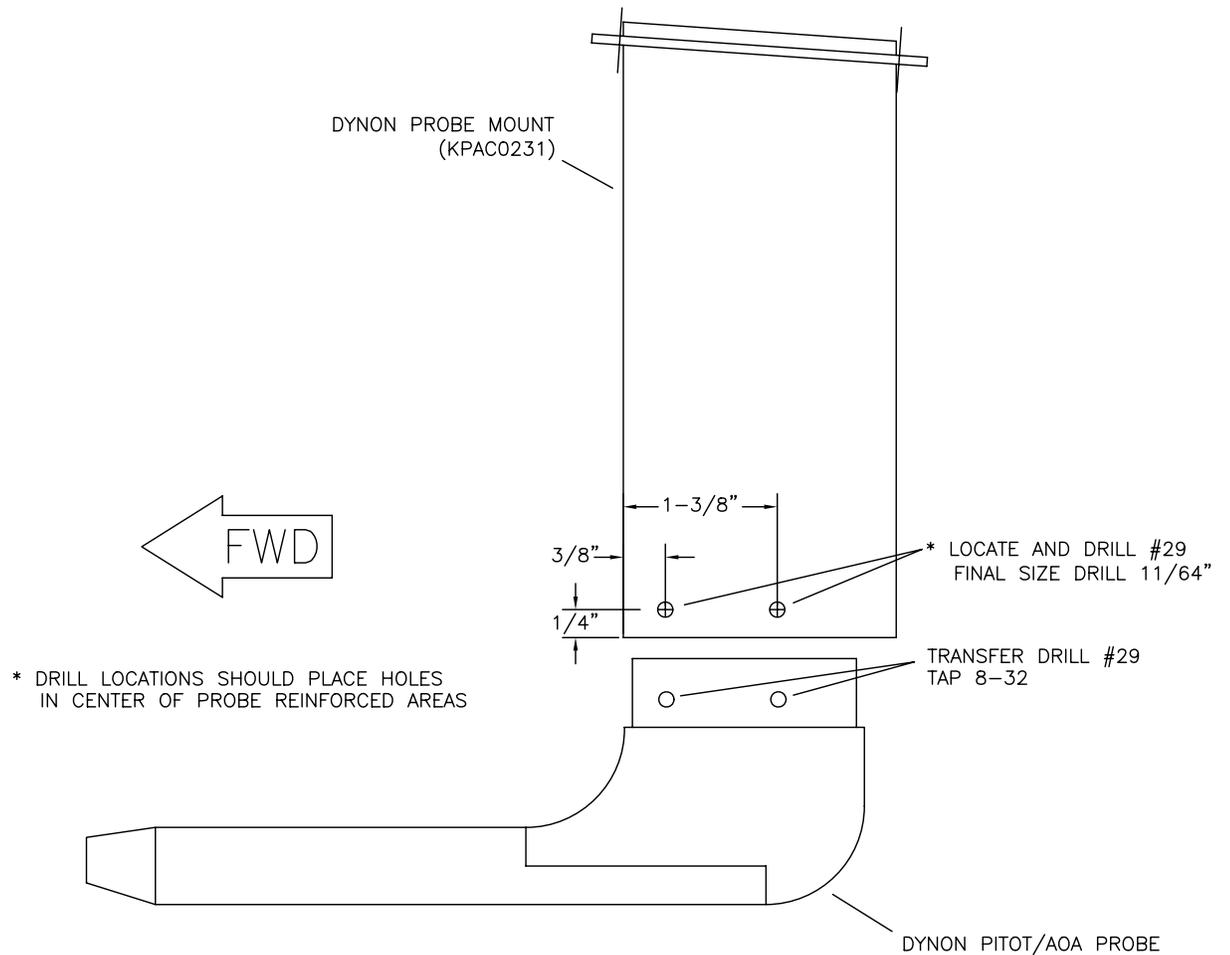
04/01/2011



NOTE: DUE TO THE VARIETY OF PITOT/STATIC/AOA SYTEMS AVAILABLE, THE PITOT/STATIC SYSTEM SHOWN IS OPTIONAL.

MD4846

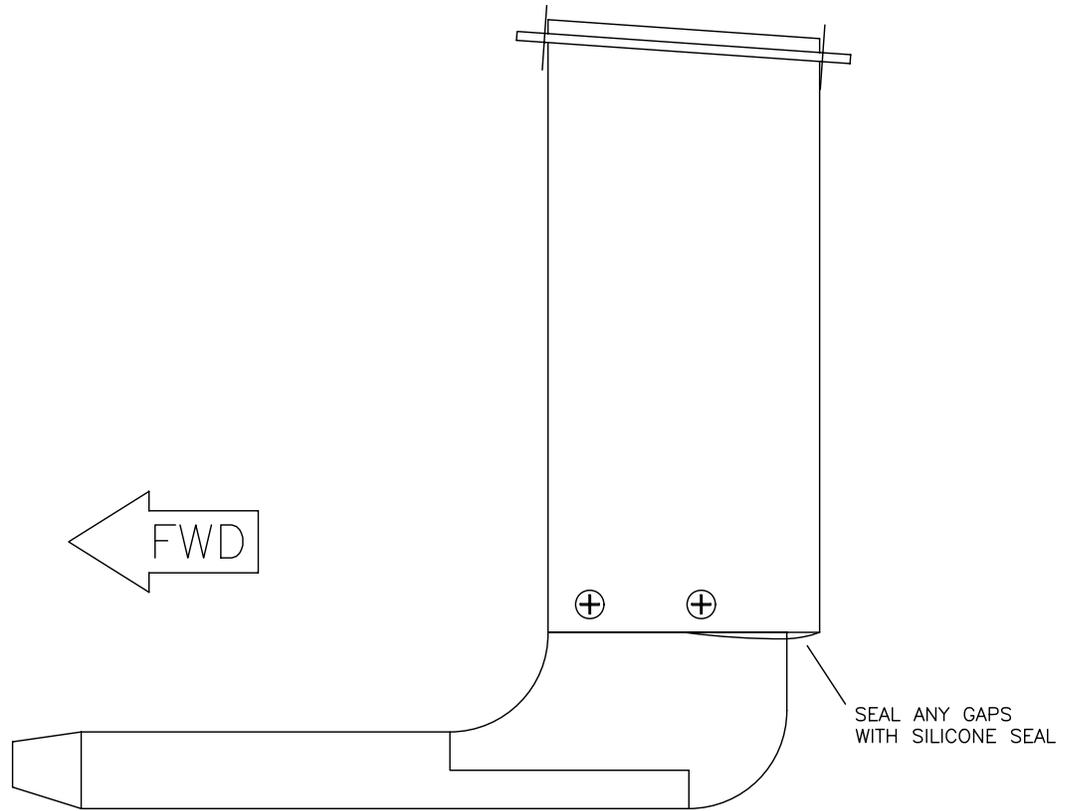
**RRR S-19 VENTERRA
OPTIONAL PITOT/STATIC
ASSEMBLY INSTALLATION
FIGURE 03H-07**



MD5537

RANS S-19 VENTERRA
OPTIONAL DYNON PROBE ATTACH
FIGURE 03I-02

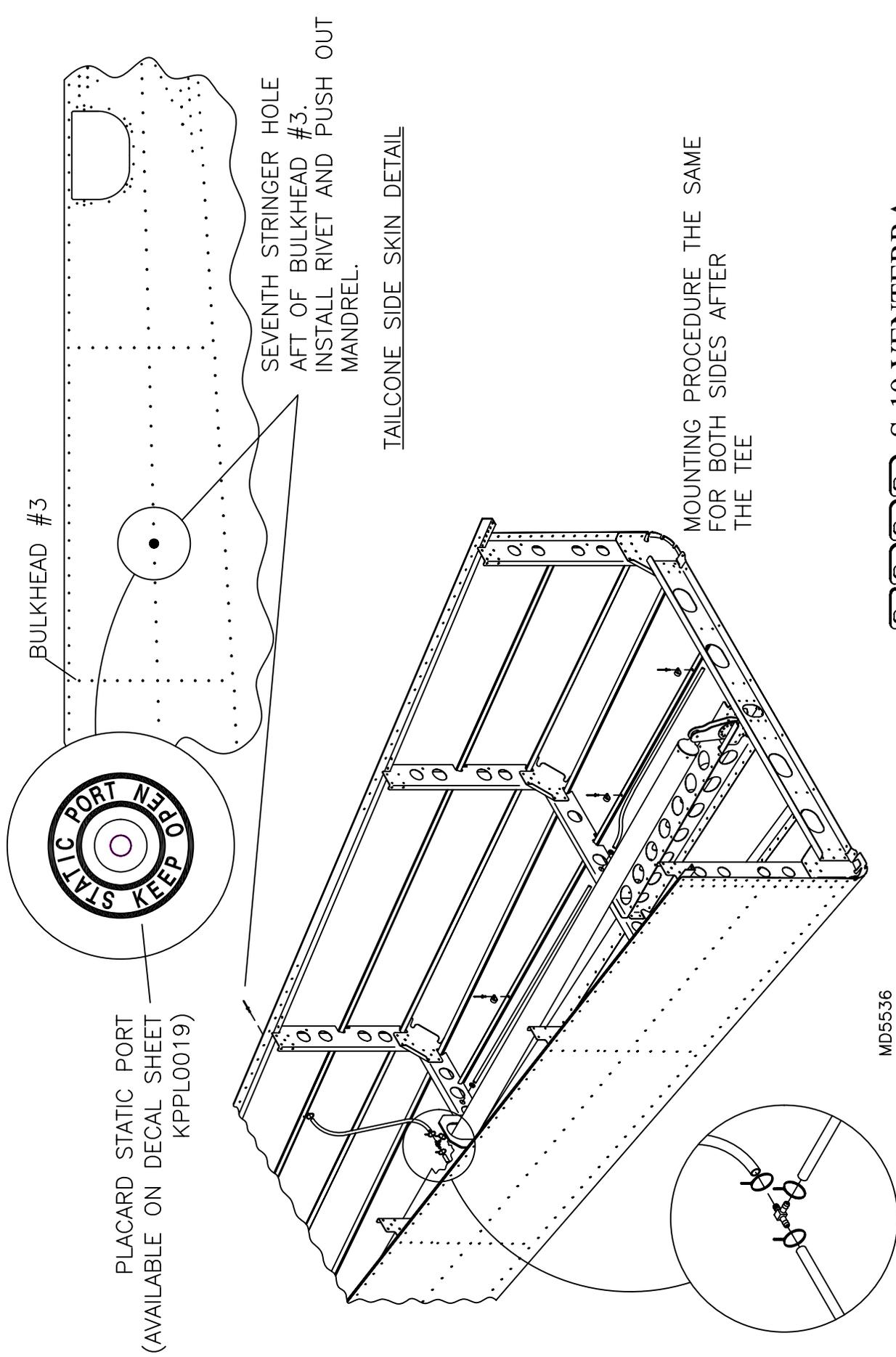
04/01/2011



MD5537

RANS S-19 VENTERRA
OPTIONAL DYNON PROBE
FIGURE 03I-03

04/01/2011



PLACARD STATIC PORT
(AVAILABLE ON DECAL SHEET
KPPL0019)

BULKHEAD #3

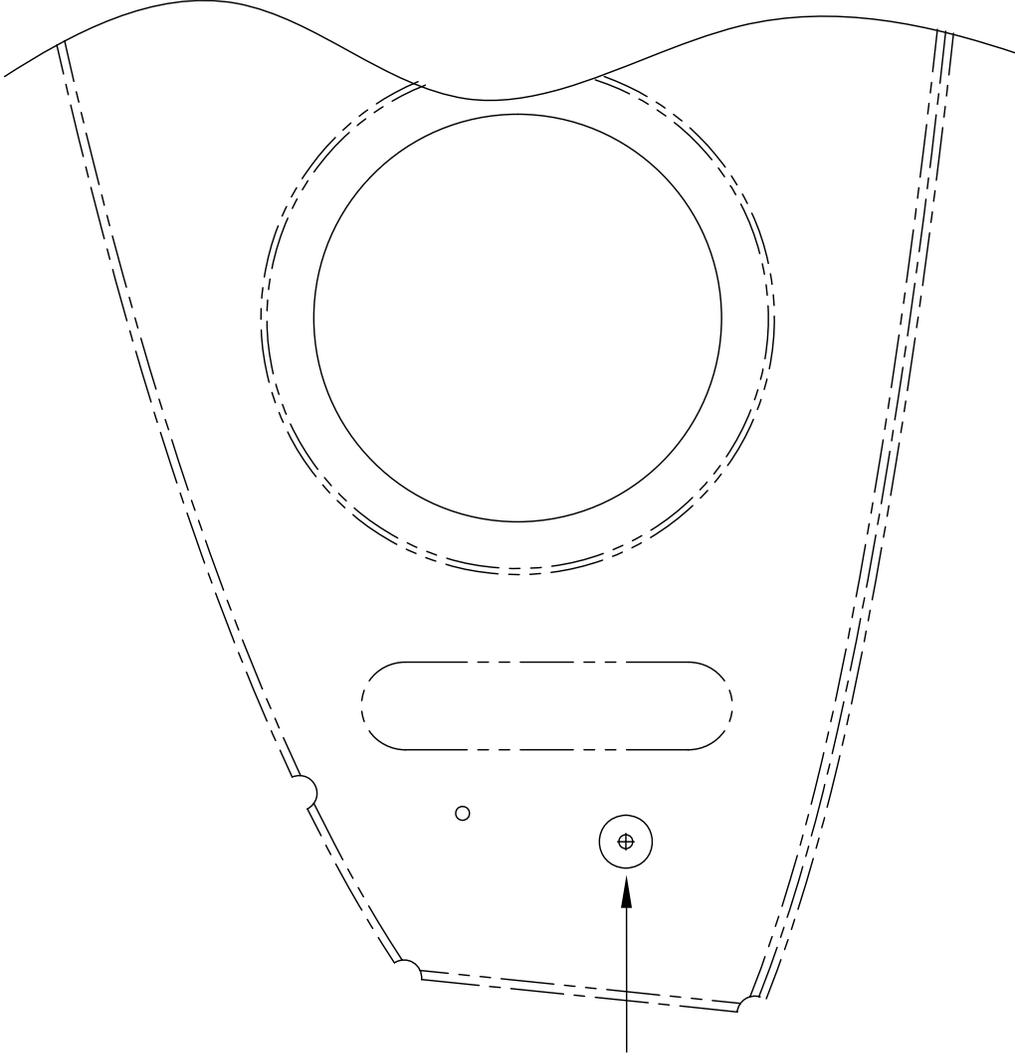
SEVENTH STRINGER HOLE
AFT OF BULKHEAD #3.
INSTALL RIVET AND PUSH OUT
MANDREL.

TAILCONE SIDE SKIN DETAIL

MOUNTING PROCEDURE THE SAME
FOR BOTH SIDES AFTER
THE TEE

MD5536

RRM S-19 VENTERRA
OPTIONAL DYNON STATIC LINE ROUTING - TAILCONE
FIGURE 03I-08



DRILL TOOLING HOLE
TO 5/8" AND
INSTALL GROMMET

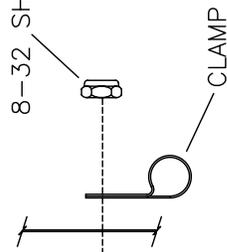
MD4877

04/01/2011

RAMS S-19
OPTIONAL AVEO STROBES - NOSE RIB MODIFICATION
FIGURE 03J-02

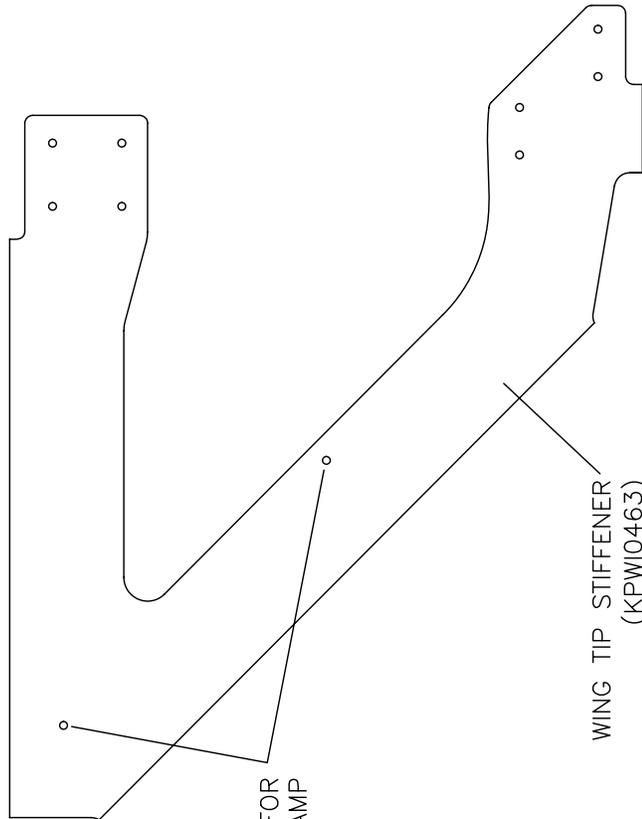
#8 TRUSSHEAD SCREW

8-32 SHEAR NUT

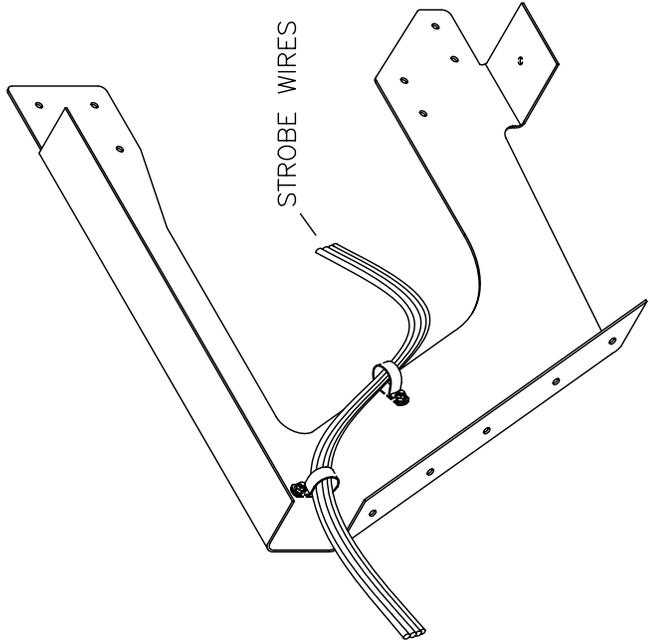


CLAMP

DRILL #11 FOR
ATTACHING CLAMP



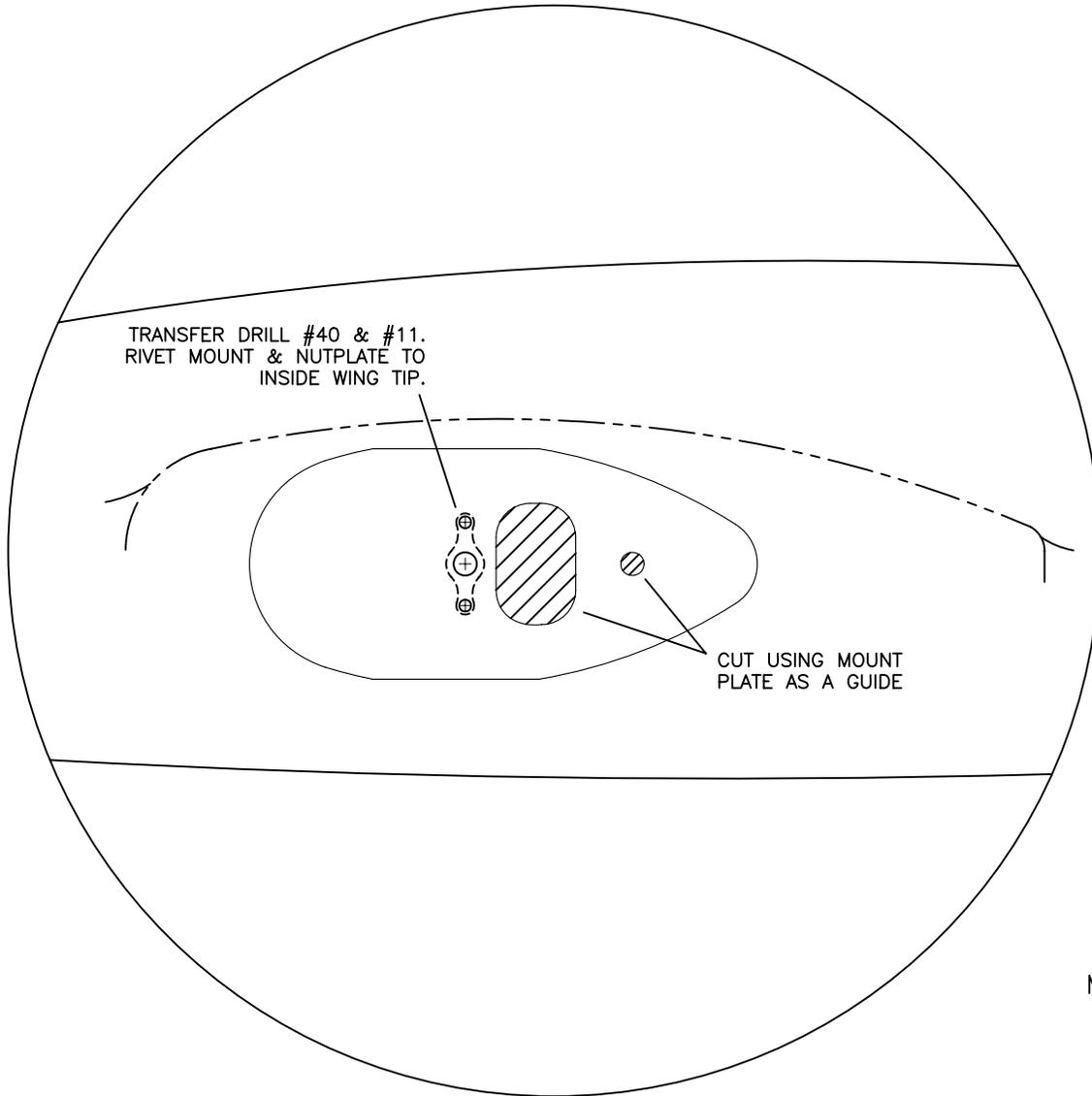
WING TIP STIFFENER
(KPWI0463)



STROBE WIRES

MD5448

RAMS S-19 VENTERRA
OPTIONAL AVEO STROBES - WING TIP STIFFENER MODIFICATION
FIGURE 03J-03

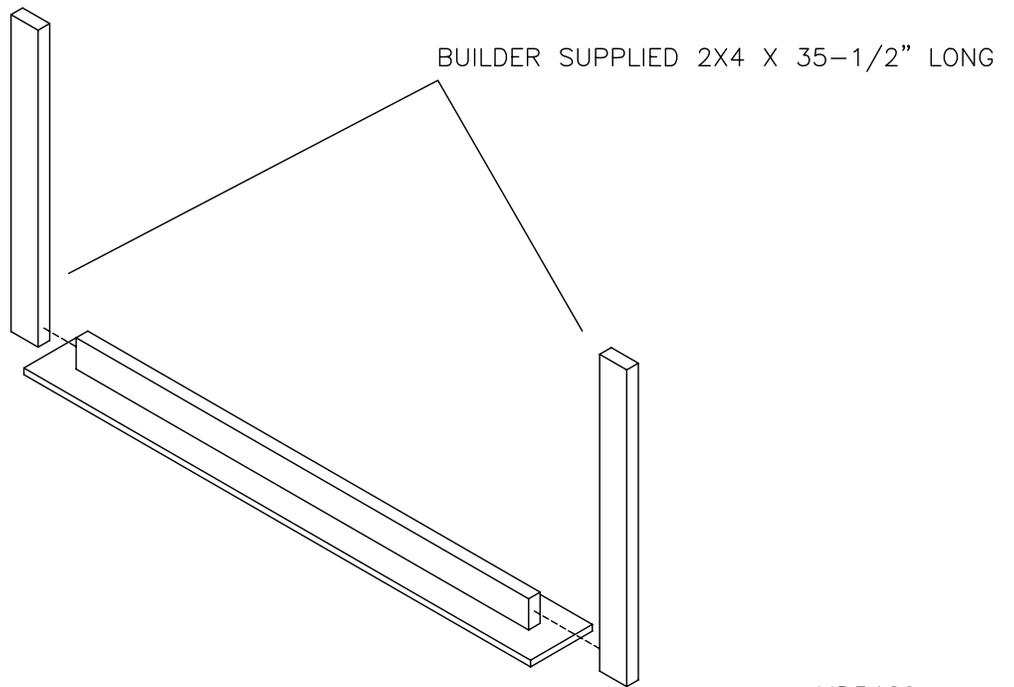
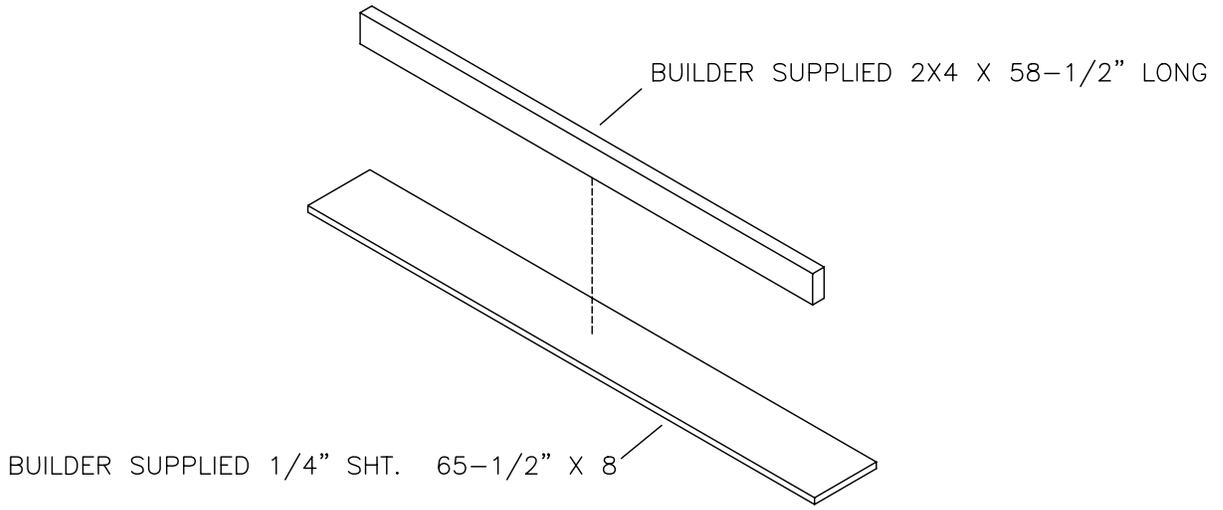


MD4483

RANS S-19 VENTERRA
OPTIONAL AVEO STROBES - WING TIP MODIFICATION

FIGURE 03J-06

04/01/2011

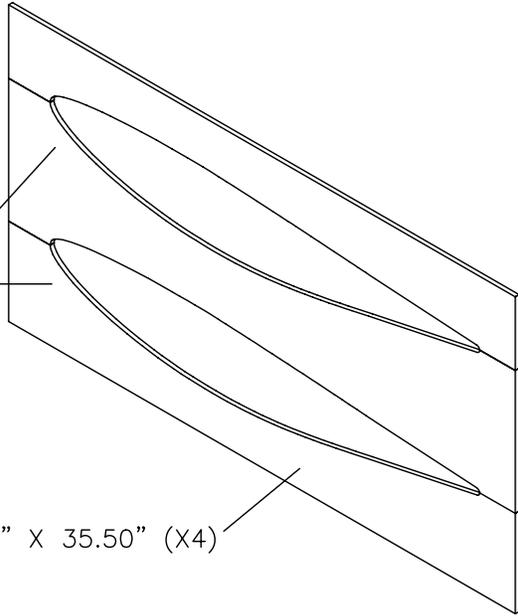


MD5469

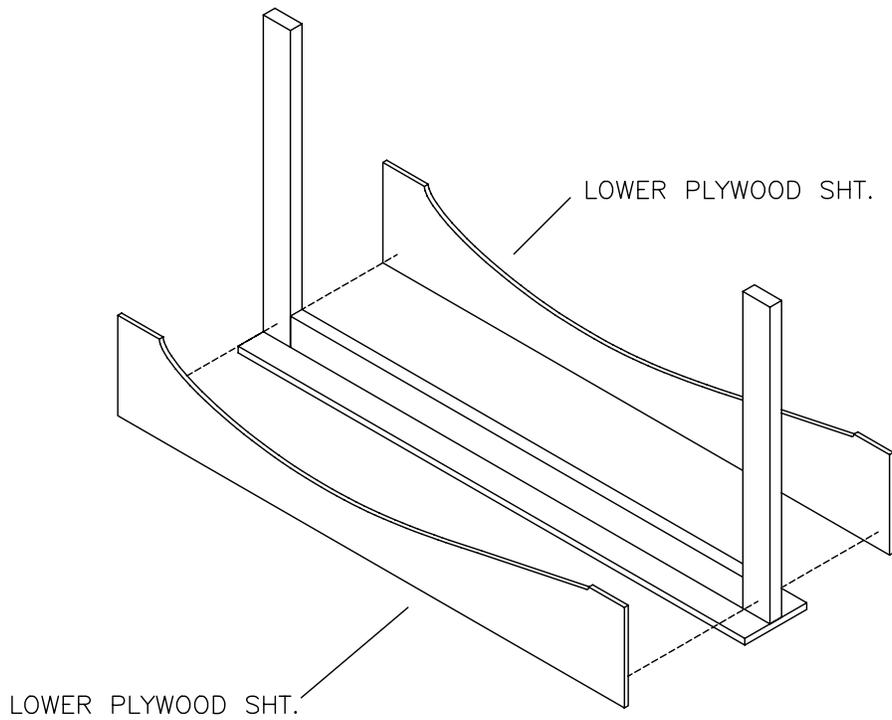
RANS S-19 VENTERRA
WING TRANSPORT #1
FIGURE 03K-02

04/01/2011

BUILDER TRACES WING PROFILE AND CUTS INTO (3) PIECES AS SHOWN. USE THESE AS TEMPLATES FOR THE REMAINING (3) BLANKS.



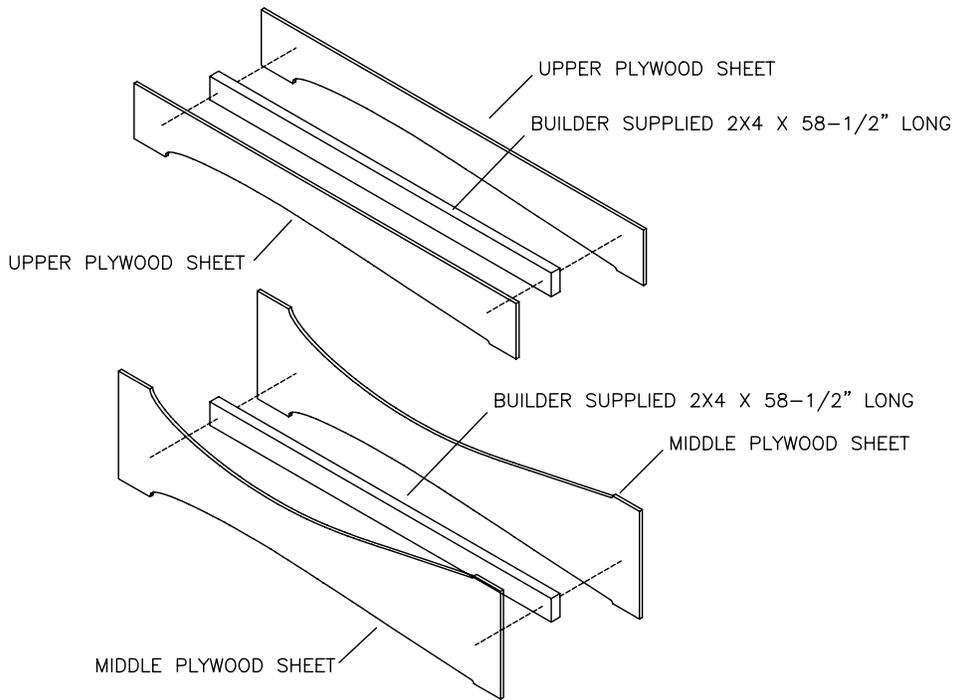
BUILDER SUPPLIED 1/4" PLYWOOD 65.50" X 35.50" (X4)



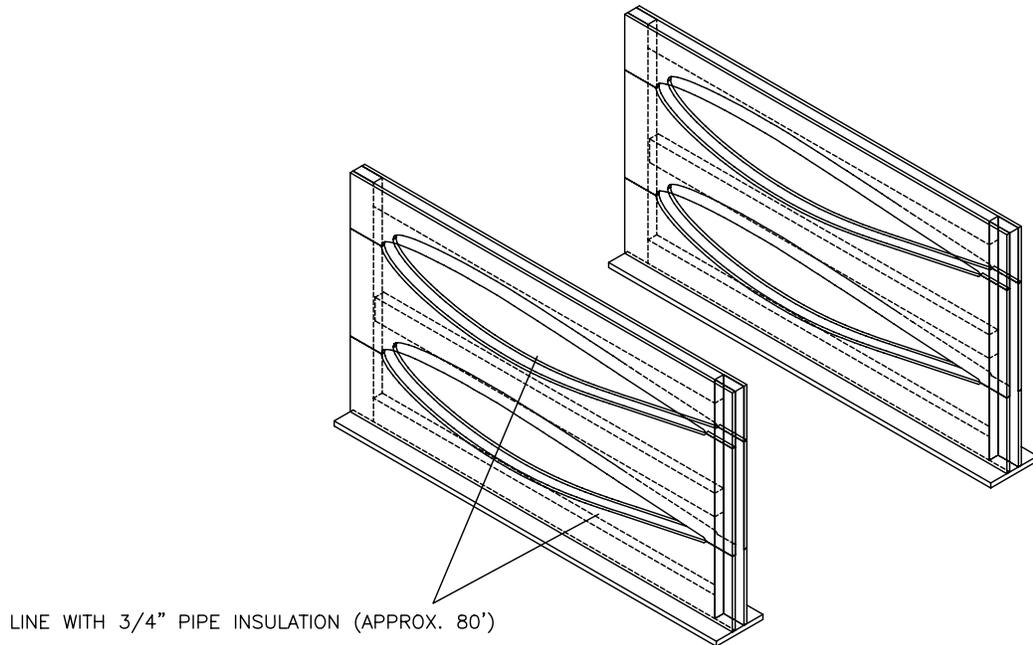
MD5469

RANS S-19 VENTERRA
WING TRANSPORT #2
FIGURE 03K-02A

04/01/2011



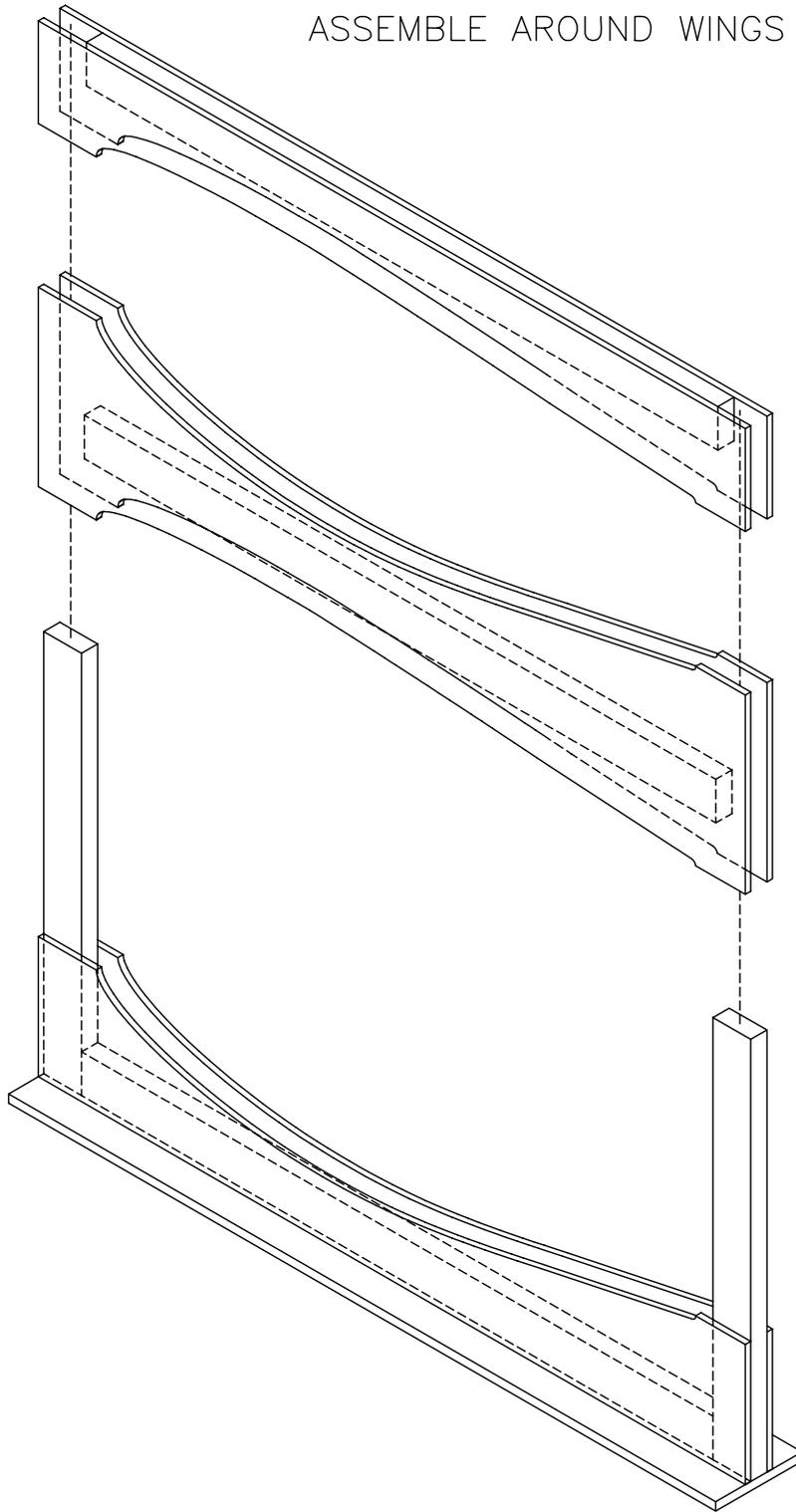
TWO FINISHED WING TRANSPORTS



MD5469

RANS S-19 VENTERRA
WING TRANSPORT #3
FIGURE 03K-02B

ASSEMBLE AROUND WINGS AS SHOWN

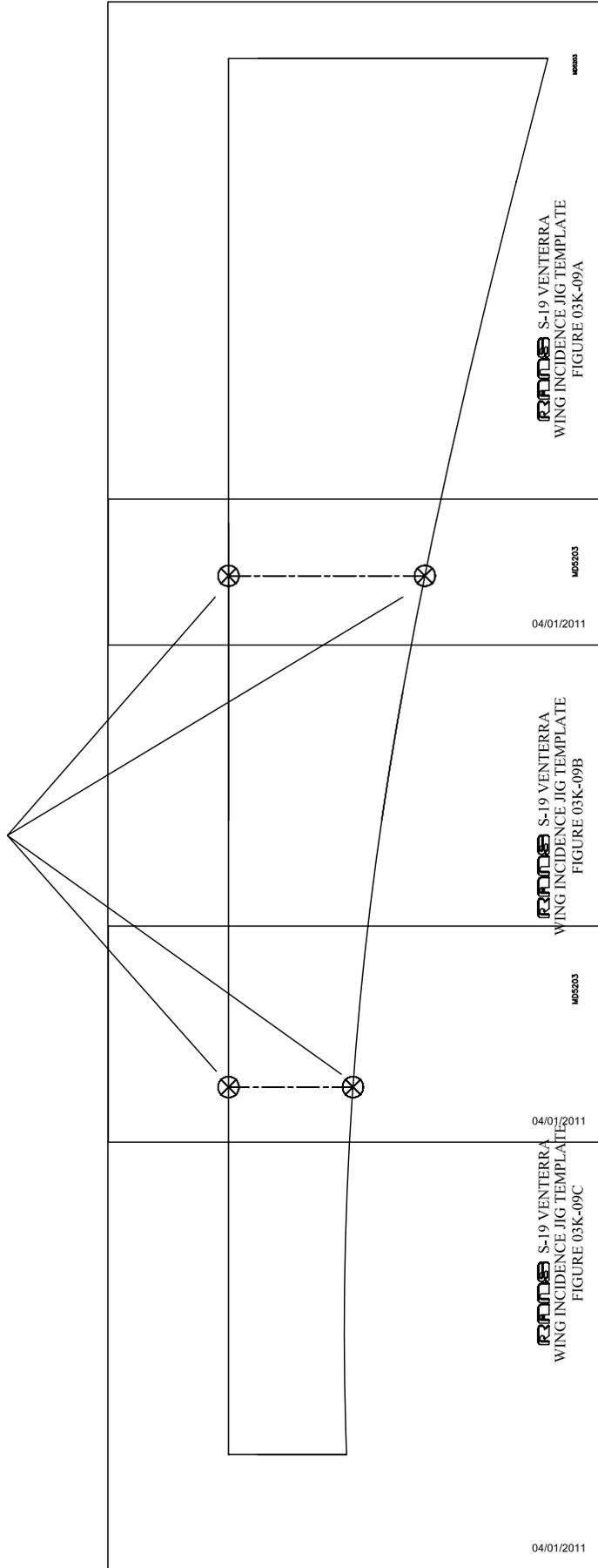


MD5469

RANS S-19 VENTERRA
WING TRANSPORT #4
FIGURE 03K-02C

04/01/2011

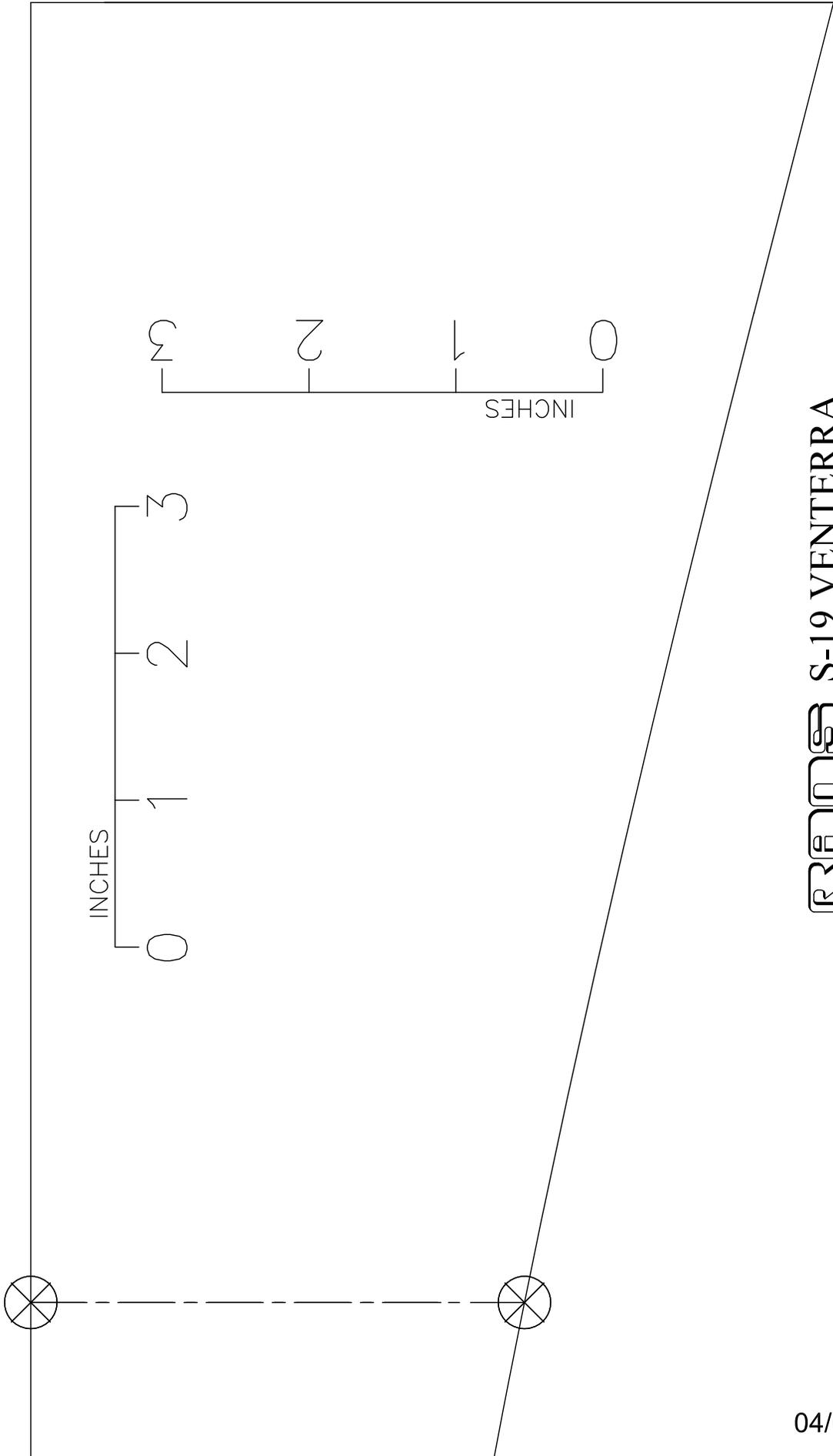
LINE PAGES UP ON CROSS HAIRS
(TOP AND BOTTOM)



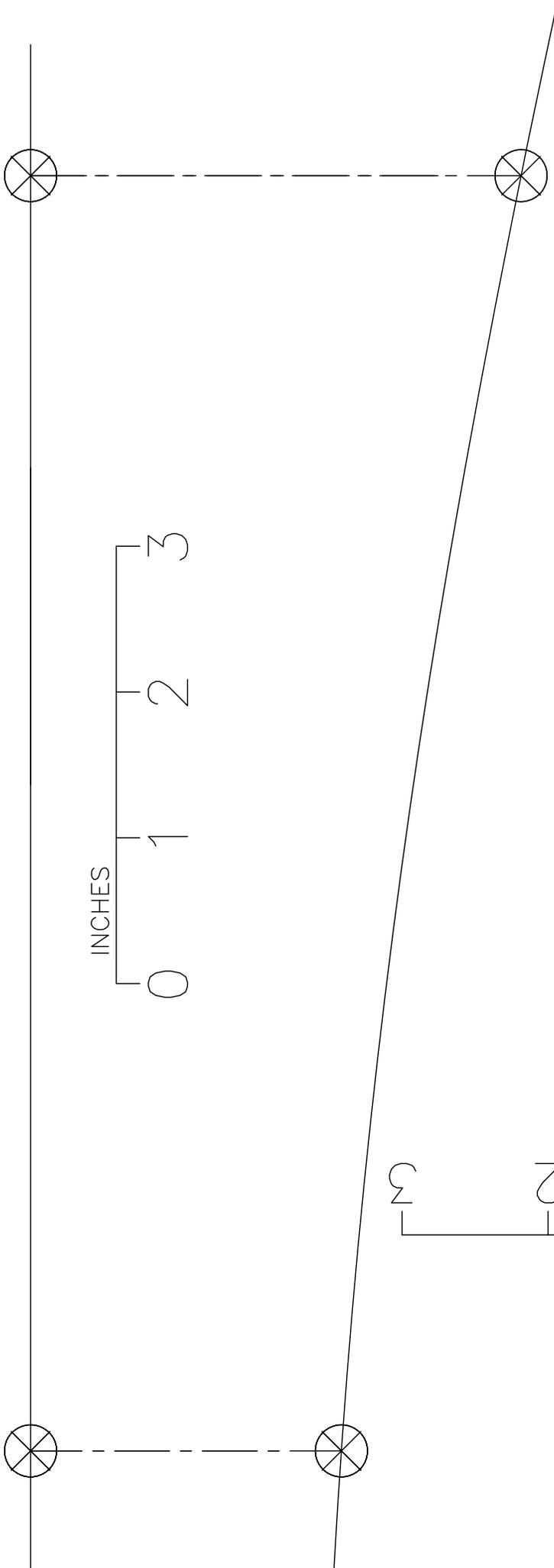
FABRICATE FROM PLY-WOOD OR SIMILAR MATERIAL
REFER TO FIGURES 03K-09A THRU 03K-09C

MD5203

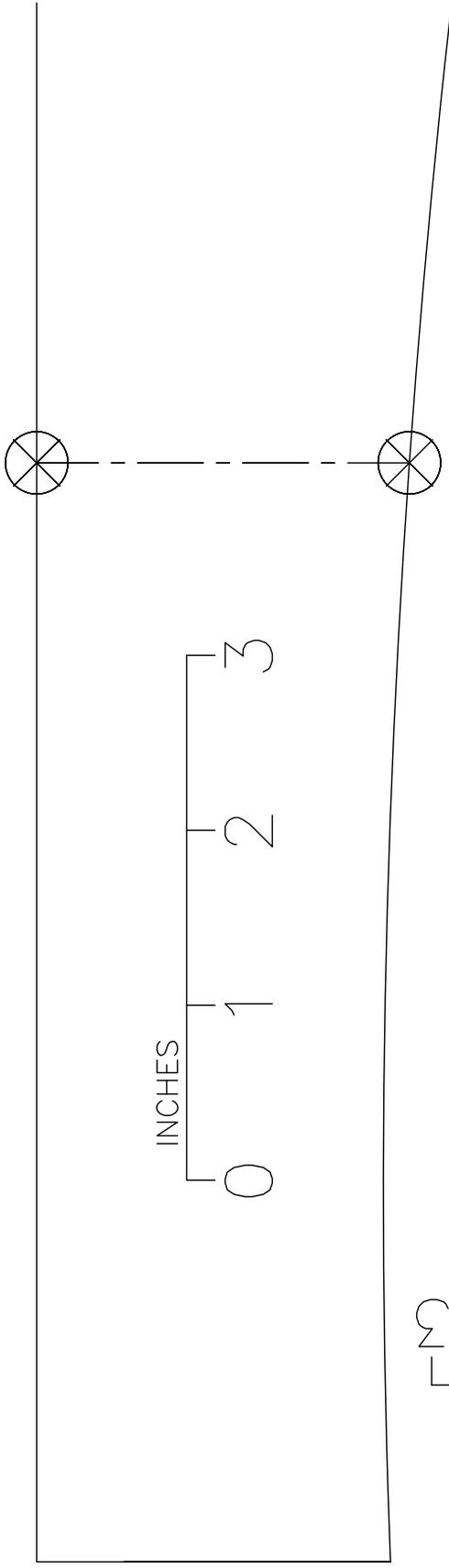
RAMS S-19 VENTERRA
WING INCIDENCE JIG TEMPLATE
FIGURE 03K-09



RRP S-19 VENTERRA
 WING INCIDENCE JIG TEMPLATE
 FIGURE 03K-09A

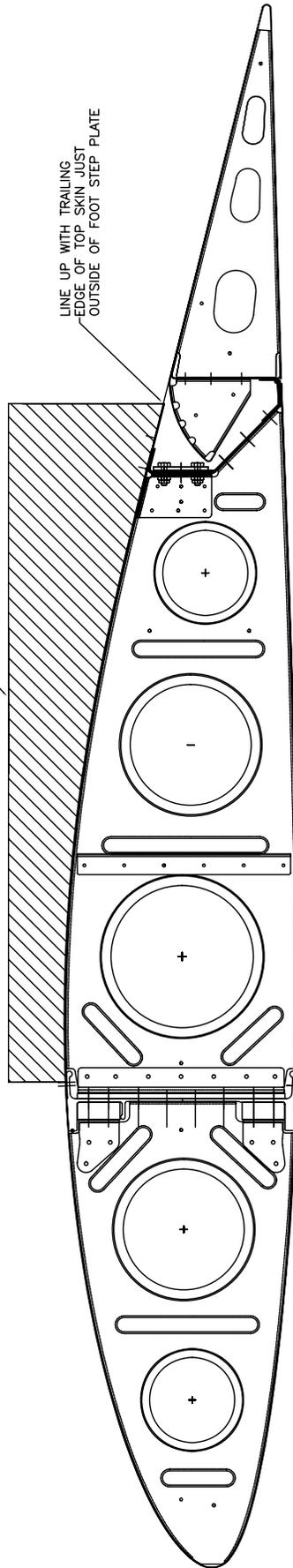


RRF S-19 VENTERRA
WING INCIDENCE JIG TEMPLATE
FIGURE 03K-09B



**RRF008 S-19 VENTERRA
WING INCIDENCE JIG TEMPLATE
FIGURE 03K-09C**

WING INCIDENCE JIG:
TAKE READING ON THIS SURFACE.
REFERENCE IS TOP LONGERON FUSELAGE
IN CABIN AREA.
READING SHOULD BE 0°



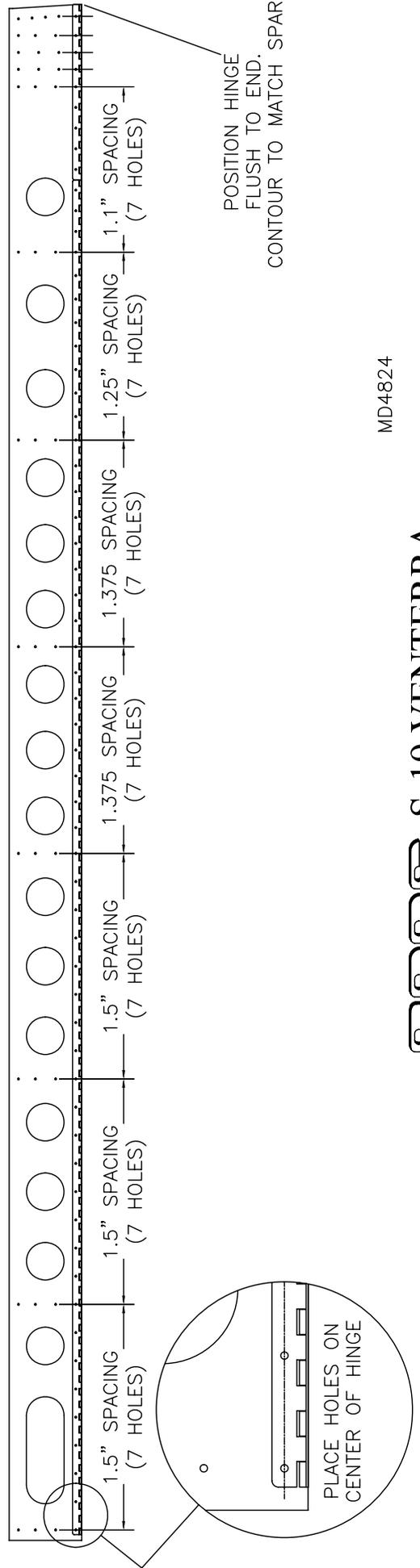
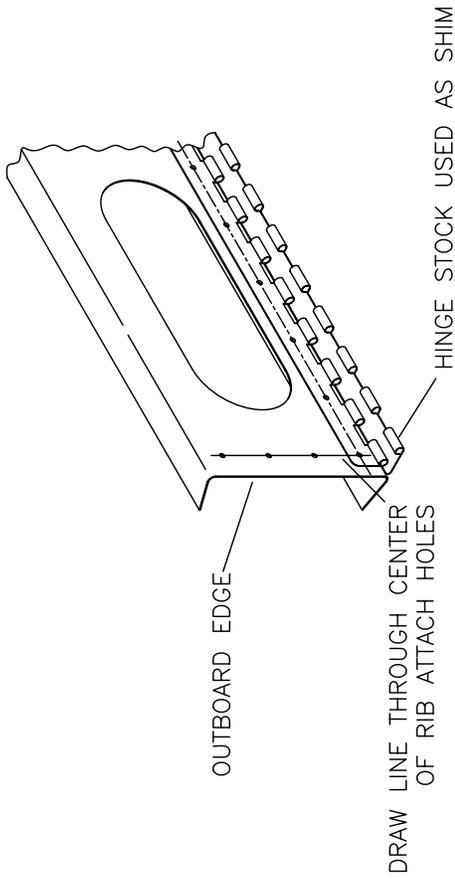
LINE UP WITH TRAILING
EDGE OF TOP SKIN JUST
OUTSIDE OF FOOT STEP PLATE

MD5203

RRANOS S-19 VENTERRA
WING INCIDENCE JIG LOCATION
FIGURE 03K-10

04 – FLAP AND AILERON ASSEMBLY

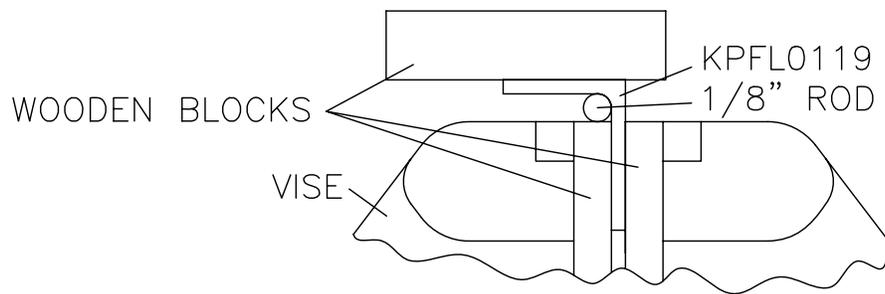
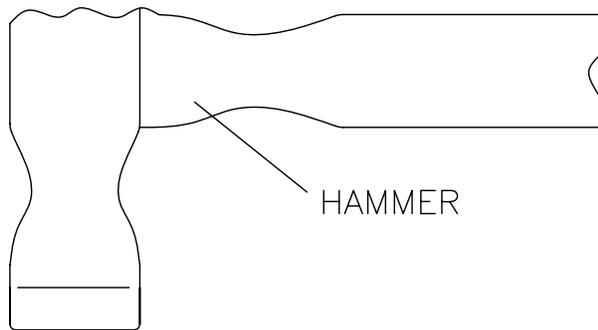
FLAP SPAR HINGE LOCATION.....	04-03
ROOT RIB SUPPORT ANGLE MODIFICATION.....	04-05
PLATE SPAR REINFORCEMENT (FLAP) MODIFICATION.....	04-06
DRILLING OF HINGES TO FLAP SPAR.....	04-09
FLAP & AILERON SKIN BENDING.....	04-12
FLAP & AILERON SUPPORT.....	04-15
FLAP HINGE PIN MODIFICATION.....	04-17
FLAP HINGE PIN SAFETY WIRE.....	04-18
AILERON HINGE ALIGNMENT.....	04A-03
AILERON HINGE MODIFICATION.....	04A-04
AILERON HINGE MODIFICATION.....	04A-04A
AILERON BALANCE ARM SHIM MODIFICATION.....	04A-05
DRILLING OF HINGES TO AILERON SPAR.....	04A-07
AILERON RIVET DETAIL.....	04A-08
BALANCE ARM – RIVET SCHEDULE.....	04A-09
AILERON HINGE PIN MODIFICATION.....	04A-18
AILERON HINGE PIN SAFETY WIRE.....	04A-19
AILERON MASS BALANCE.....	04B-03
AILERON MASS BALANCE.....	04B-04
AILERON MASS BALANCE.....	04B-05



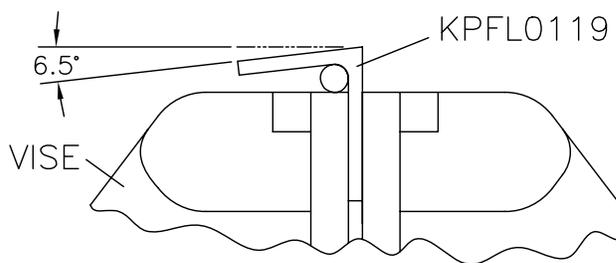
POSITION HINGE
FLUSH TO END.
CONTOUR TO MATCH SPAR.

MD4824

RAMS S-19 VENTERRA
FLAP SPAR HINGE LOCATION
FIGURE 04-03



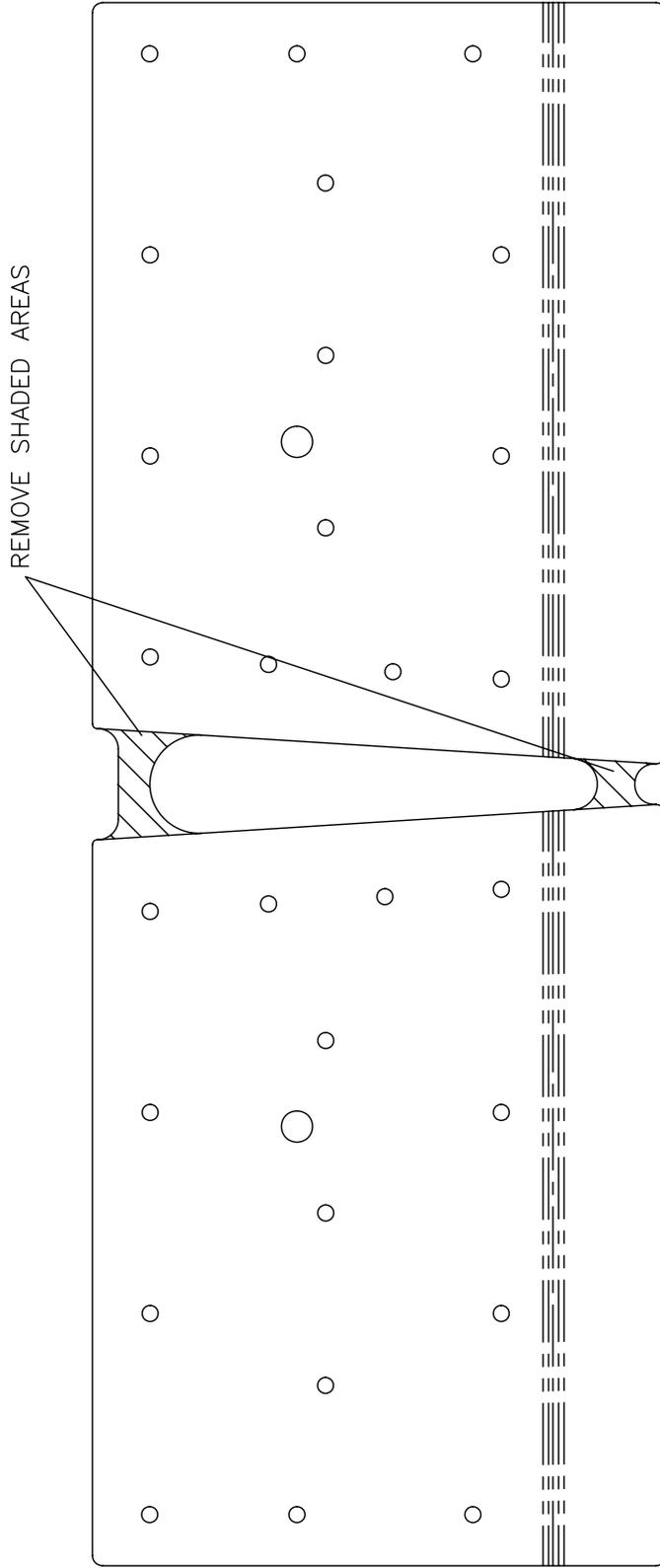
BEND DOWN 6.5°



MD4858

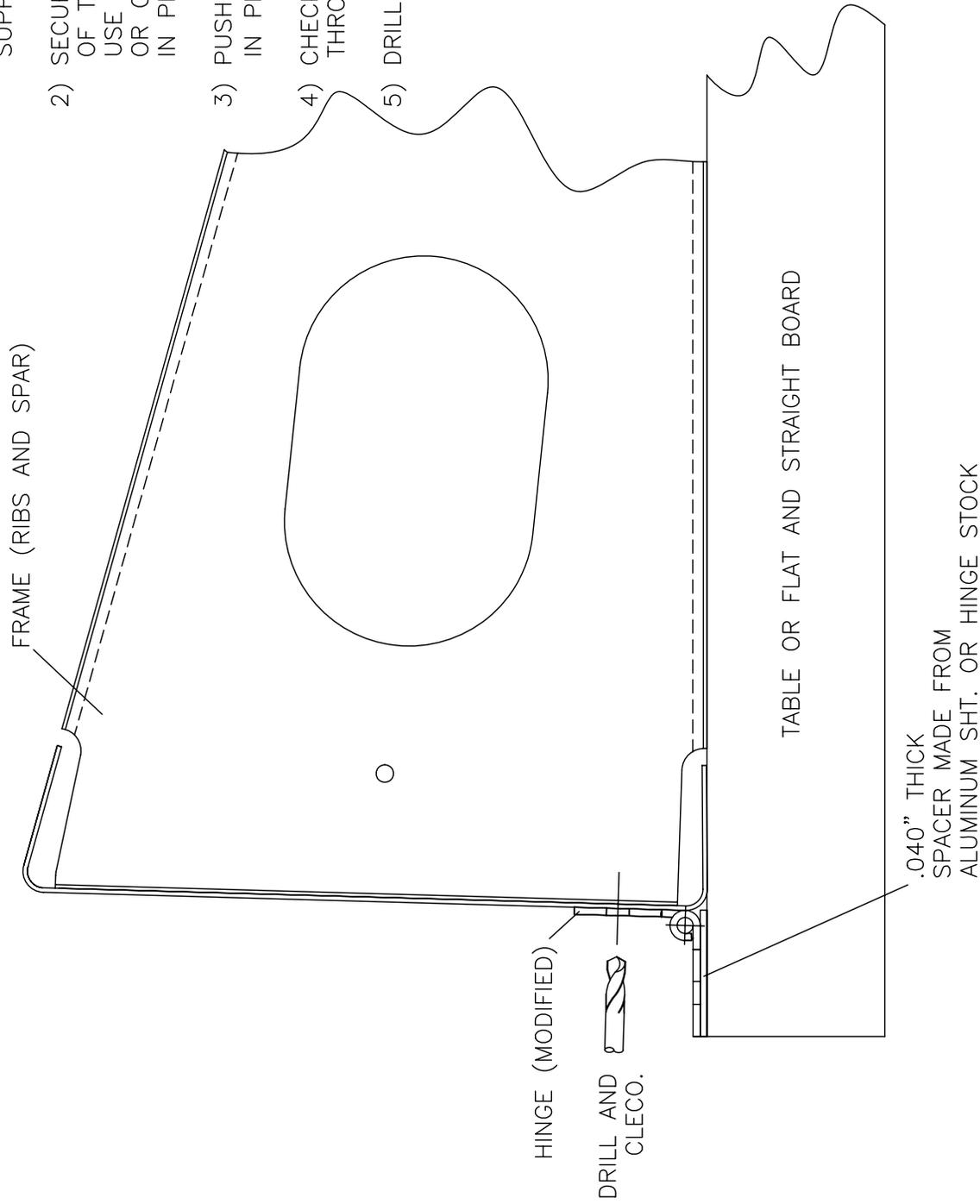
RANS S-19 VENTERRA
ROOT RIB SUPPORT ANGLE MODIFICATION
FIGURE 04-05

04/01/2011



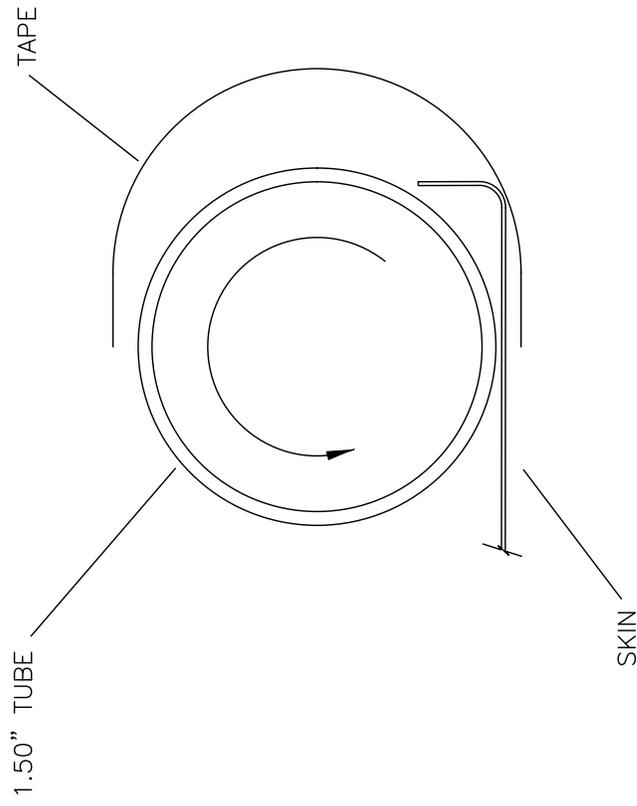
RRF S-19 VENTERRA
PLATE SPAR REINFORCEMENT (FLAP) MODIFICATION
FIGURE 04-06

- 1) FABRICATE .040 THICK SPACER FROM SUPPLIED RAW STOCK OR HINGE STOCK.
- 2) SECURE SPACER AND HINGE TO EDGE OF TABLE OR FLAT AND STRAIGHT BOARD. USE CORRECT SPACING AND TAPE, SCREW OR CLAMP HINGE AND SPACER SECURELY IN PLACE.
- 3) PUSH FRAME AGAINST HINGE AND SECURE IN PLACE (USE WEIGHTS OR SIMILAR)
- 4) CHECK ALIGNMENT AND DRILL SPAR #40 THROUGH PRE-DRILLED HOLES IN HINGE.
- 5) DRILL OUT TO #30.



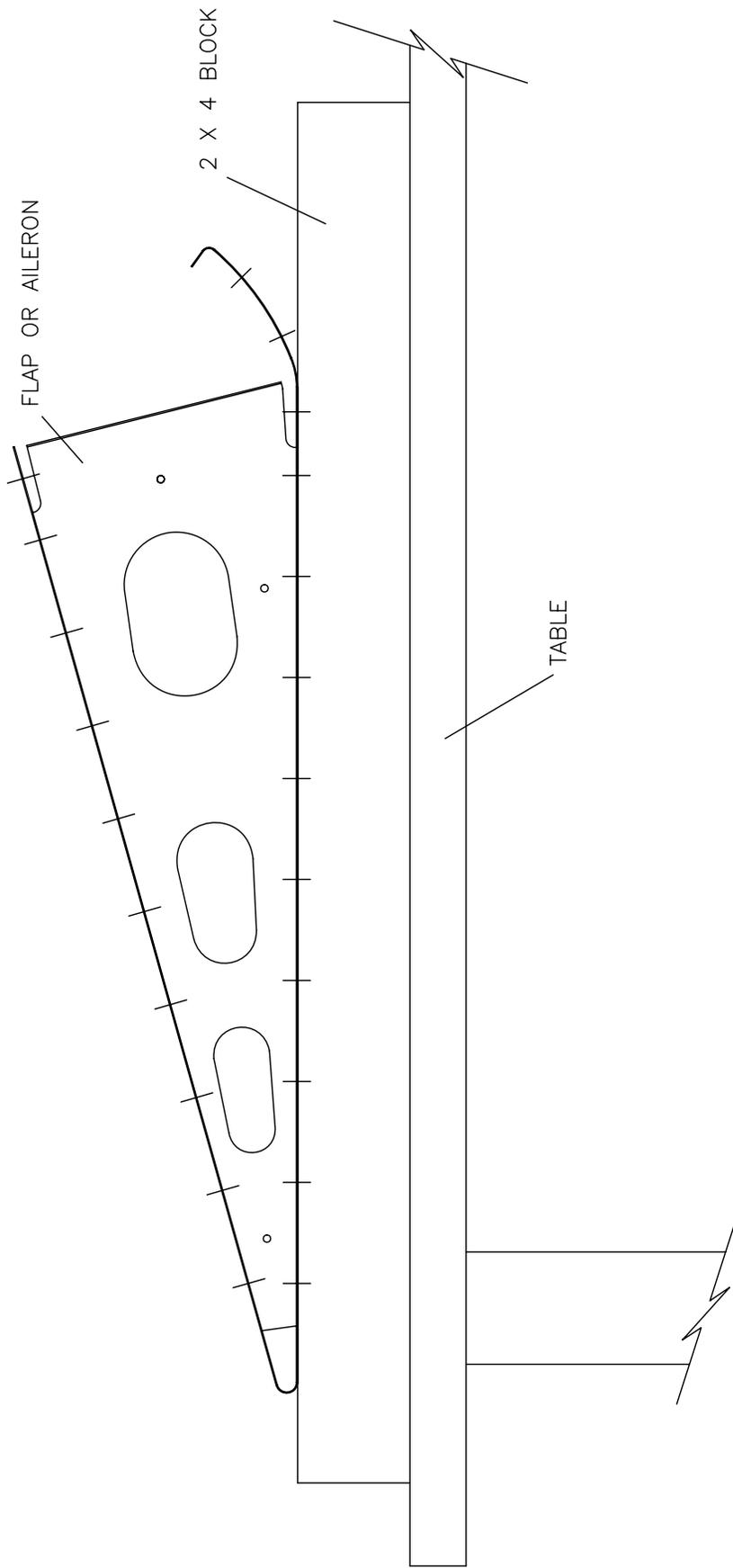
MD4822

RAMS S-19 VENTERRA
DRILLING OF HINGES TO FLAP SPAR
FIGURE 04-09

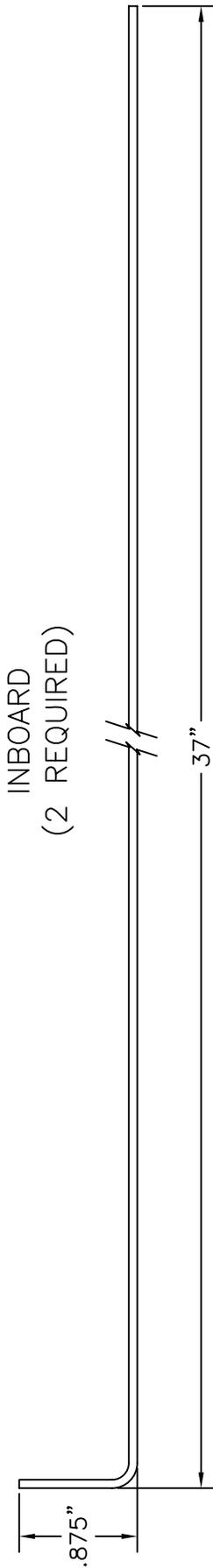
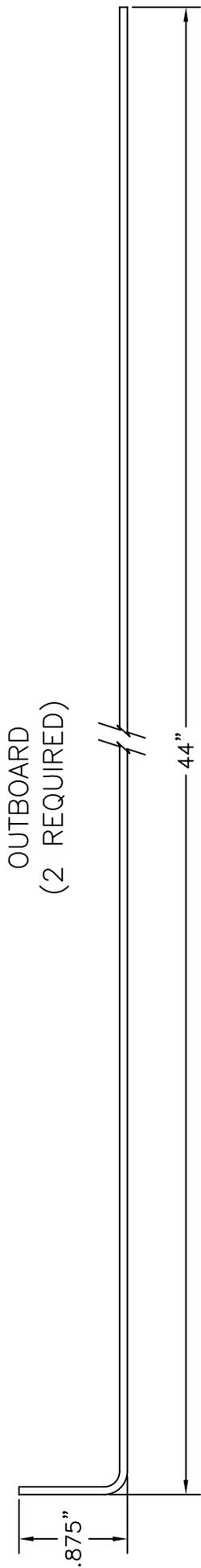


RRR S-19 VENTERRA
FLAP & AILERON SKIN BENDING
FIGURE 04-12

MD4810



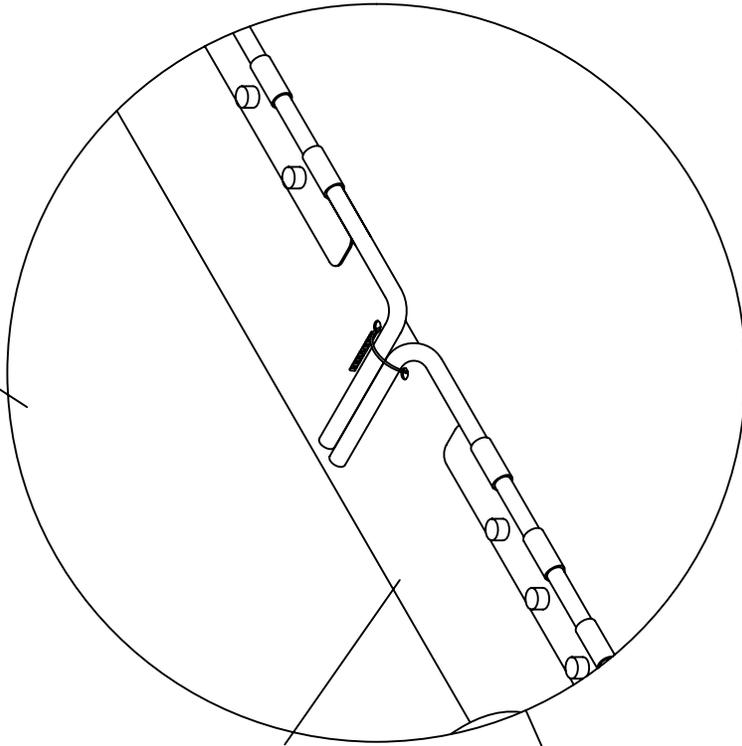
RRR S-19 VENTERRA
 FLAP & AILERON SUPPORT
 FIGURE 04-15



MD5023

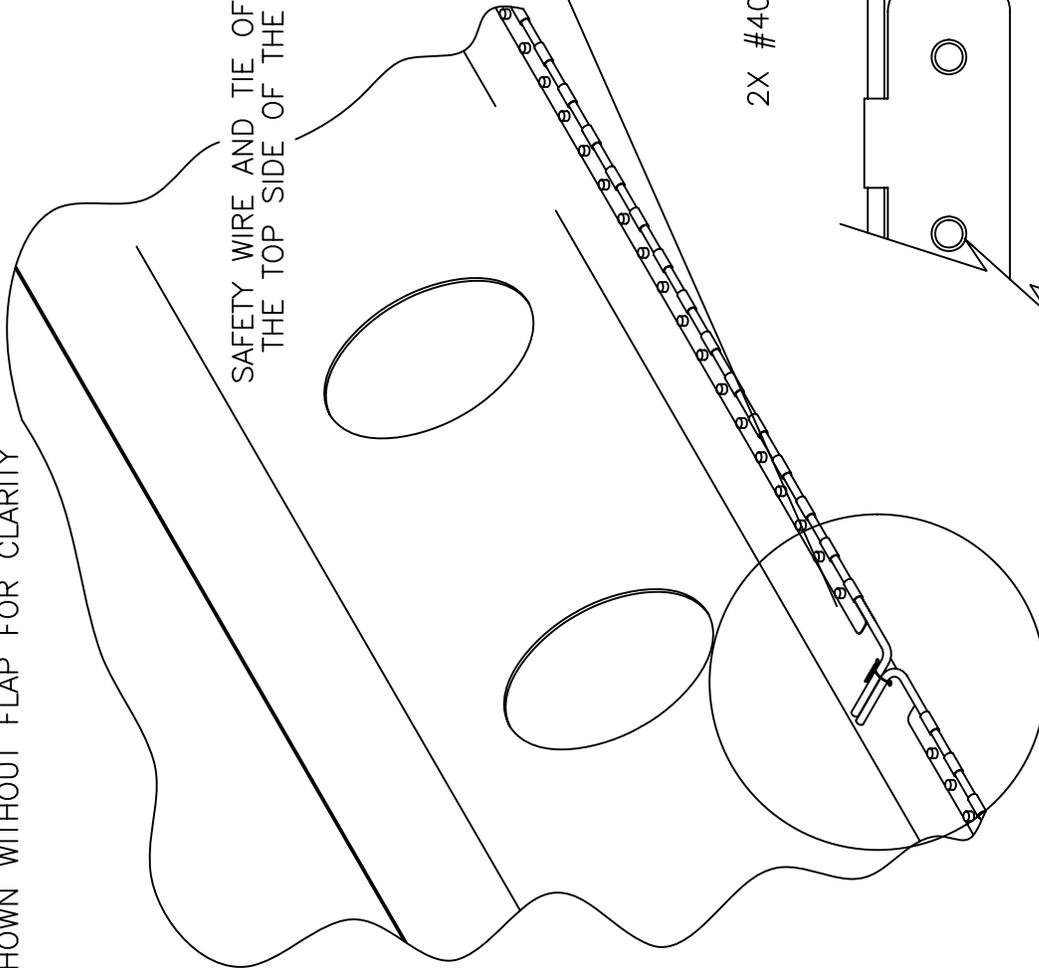
RAMS S-19 VENTERRA
FLAP HINGE PIN MODIFICATION
FIGURE 04-17

WING TRAILING EDGE SPAR



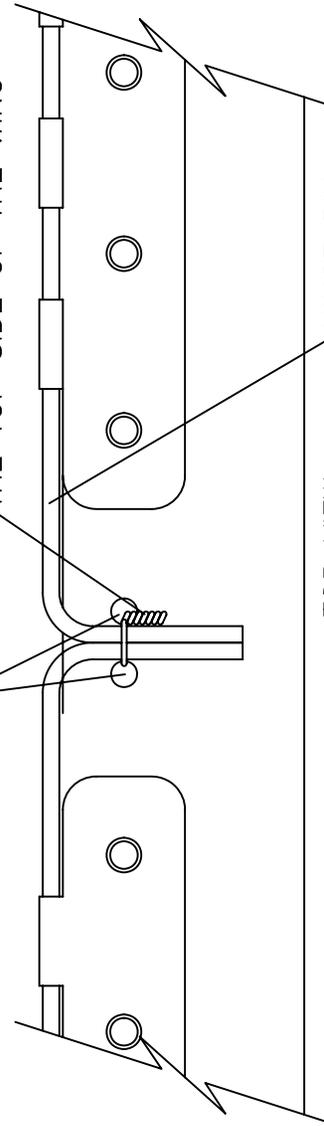
SAFETY WIRE AND TIE OFF ON THE TOP SIDE OF THE WING

*SHOWN WITHOUT FLAP FOR CLARITY



2X #40 DRILL

SAFETY WIRE AND TIE OFF ON THE TOP SIDE OF THE WING



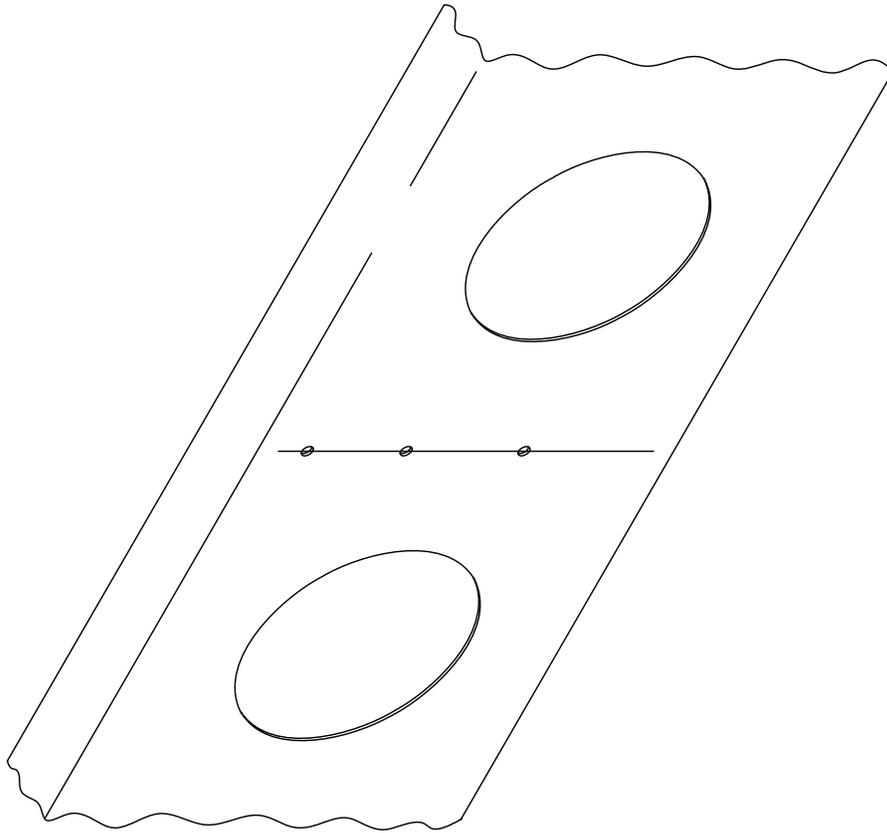
TOP VIEW

HINGE PIN

MD5024

RRADONS S-19 VENTERRA
FLAP HINGE PIN SAFETY WIRE

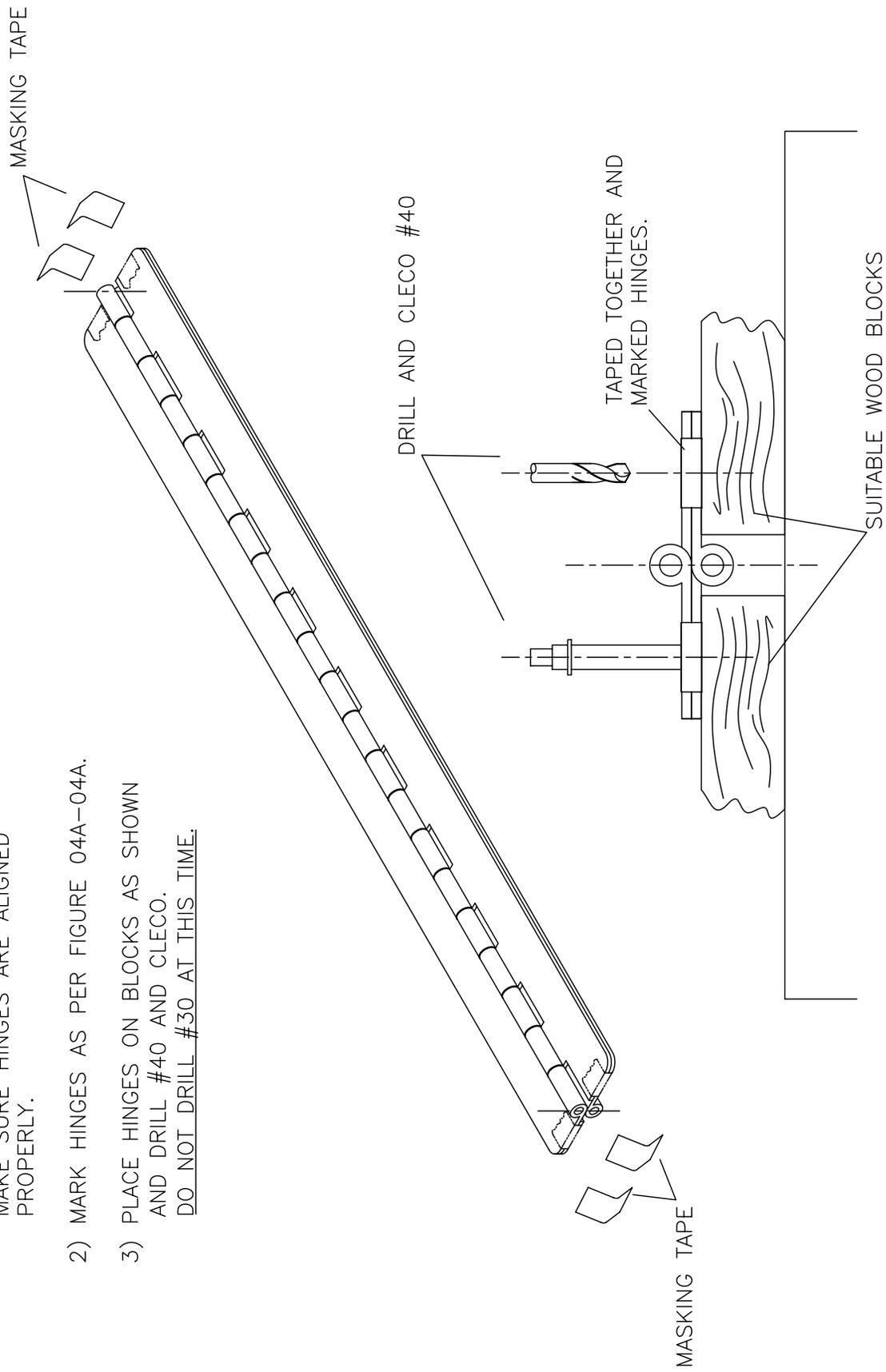
FIGURE 04-18



MD4805

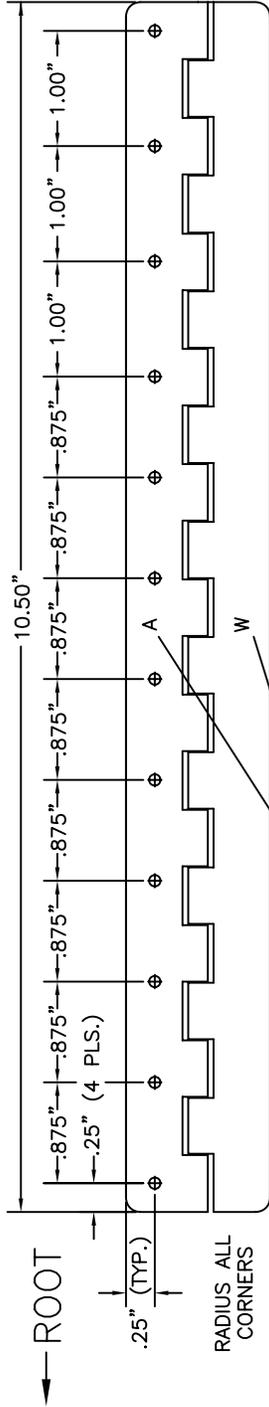
RRR S-19 VENTERRA
AILERON HINGE ALIGNMENT
FIGURE 04A-03

- 1) TAPE HINGES TOGETHER AS SHOWN, MAKE SURE HINGES ARE ALIGNED PROPERLY.
- 2) MARK HINGES AS PER FIGURE 04A-04A.
- 3) PLACE HINGES ON BLOCKS AS SHOWN AND DRILL #40 AND CLECO. DO NOT DRILL #30 AT THIS TIME.



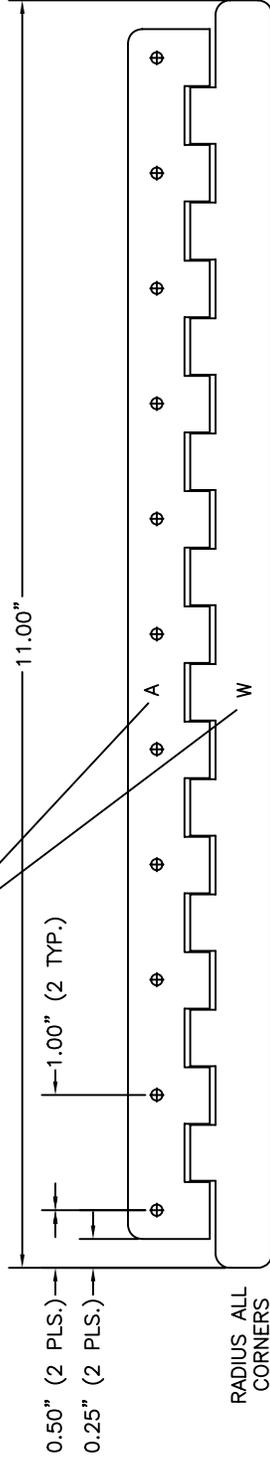
RAMS S-19 VENTERRA
AILERON HINGE MODIFICATION
FIGURE 04A-04

HINGES VIEWED AS PLACED ONAILERON

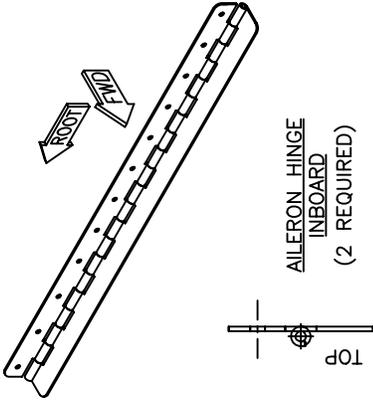


MARK WITHAILERON AND WING
FOR LATER IDENTIFICATION OF ORIENTATION.

IMPORTANT: REMOVE PIN FROM HINGE BEFORE CUTTING



AILERON HINGE INBOARD AND OUTBOARD
MS20257-3 (1.25"WIDTH) MODIFIED
BUILDER CUTS AND DRILLS AS SHOWN (ALL HOLES #40)
S-19, QTY - 2 EACH

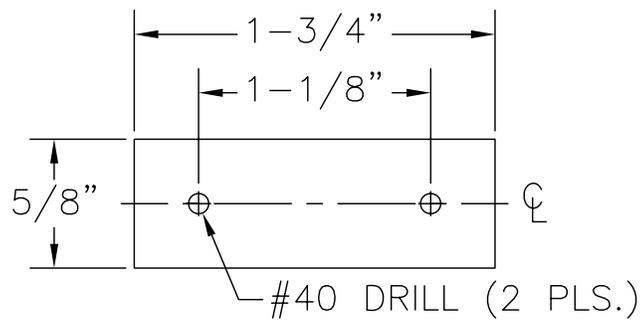


AILERON HINGE
INBOARD
(2 REQUIRED)

AILERON HINGE
OUTBOARD
(2 REQUIRED)

MD4806

RAMS S-19 VENTERRA
AILERON HINGE MODIFICATION
FIGURE 04A-04A

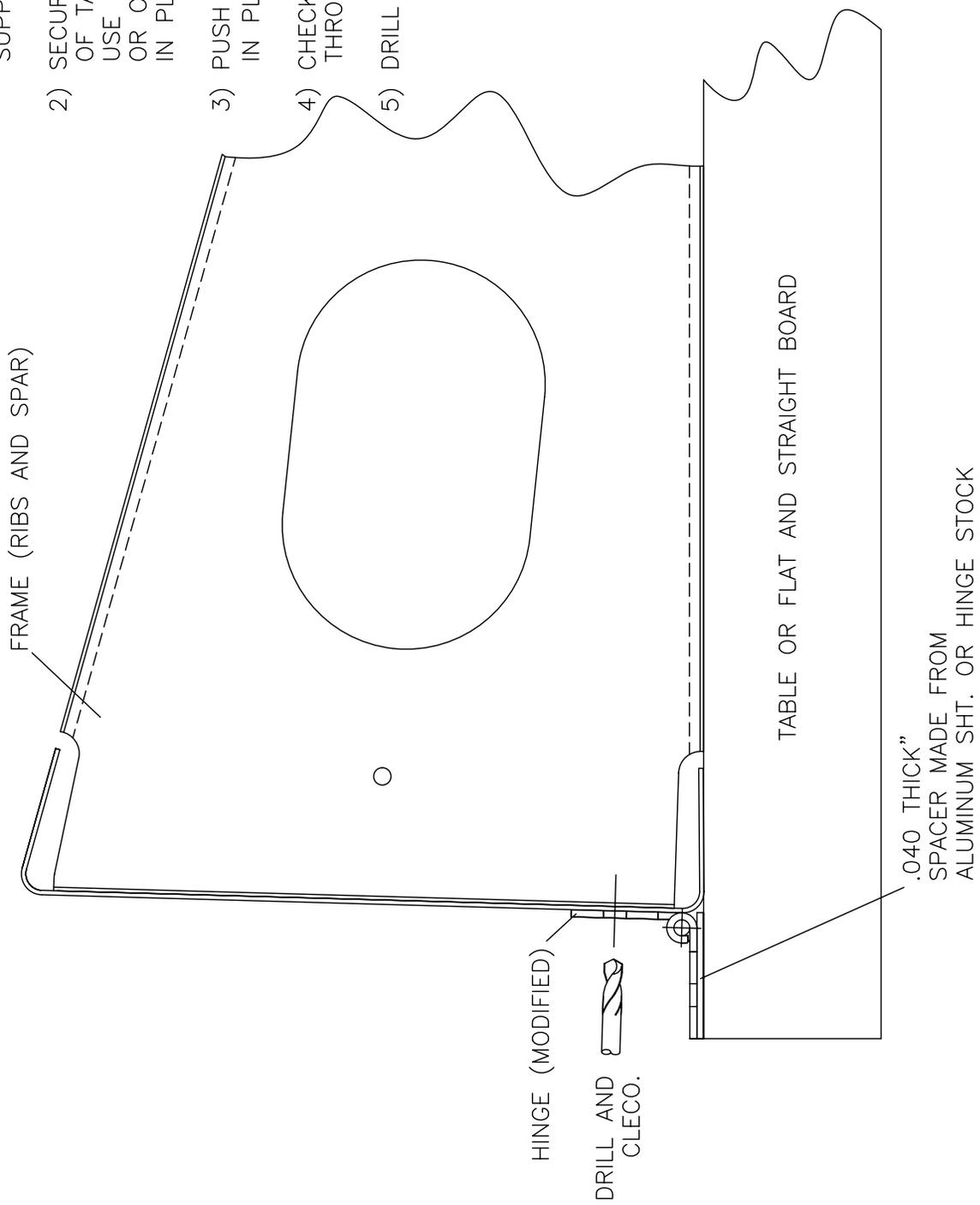


MD4801

RANDS S-19 VENTERRA
AILERON BALANCE ARM SHIM MODIFICATION
FIGURE 04A-05

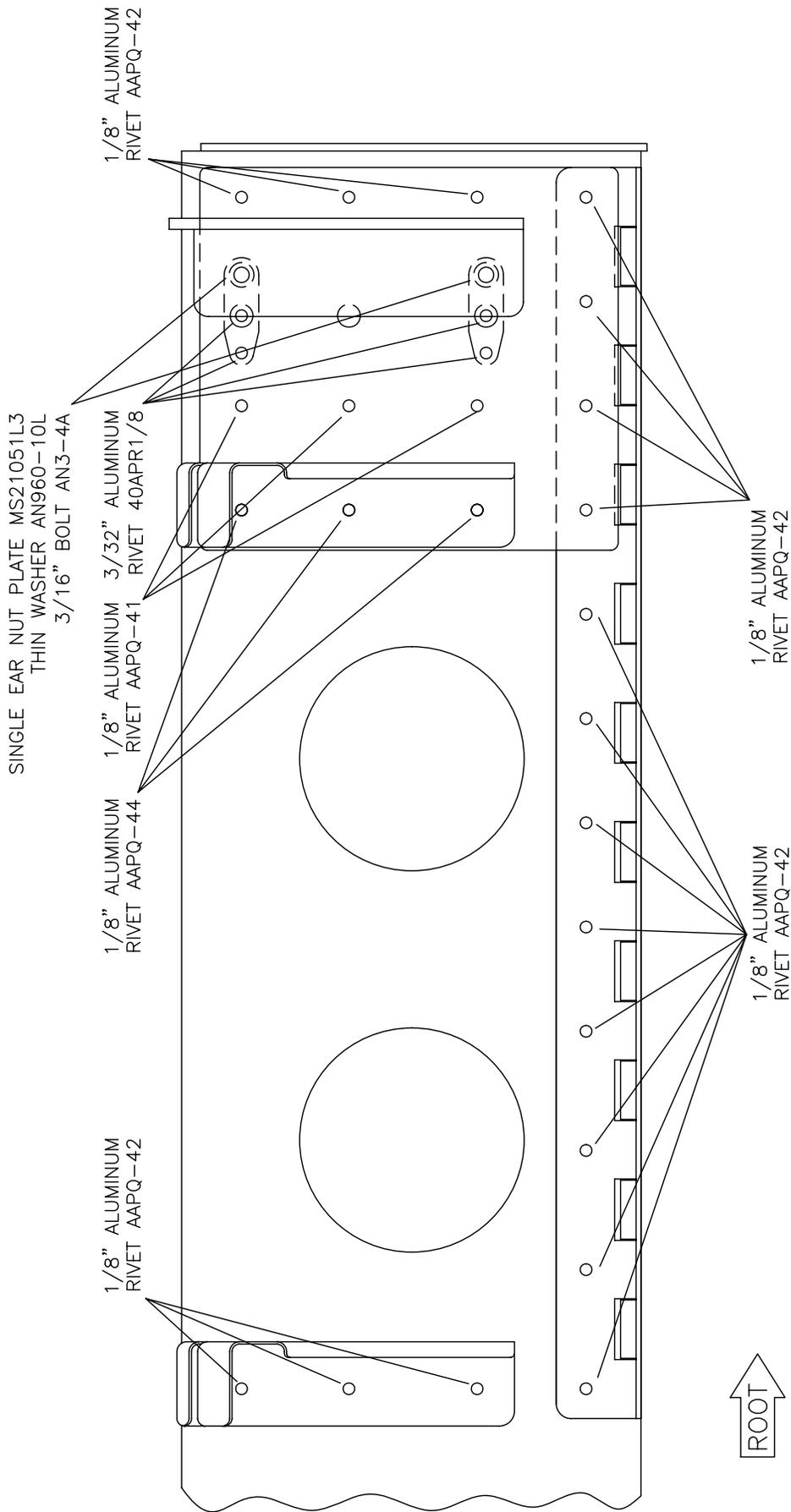
04/01/2011

- 1) FABRICATE .040 THICK SPACER FROM SUPPLIED RAW STOCK OR HINGE STOCK.
- 2) SECURE SPACER AND HINGE TO EDGE OF TABLE OR FLAT AND STRAIGHT BOARD. USE CORRECT SPACING AND TAPE, SCREW OR CLAMP HINGE AND SPACER SECURELY IN PLACE.
- 3) PUSH FRAME AGAINST HINGE AND SECURE IN PLACE (USE WEIGHTS OR SIMILAR)
- 4) CHECK ALIGNMENT AND DRILL SPAR #40 THROUGH PRE-DRILLED HOLES IN HINGE.
- 5) DRILL OUT TO #30.



MD4822

RAMS S-19 VENTERRA
DRILLING OF HINGES TO AILERON SPAR
FIGURE 04A-07



MD4809

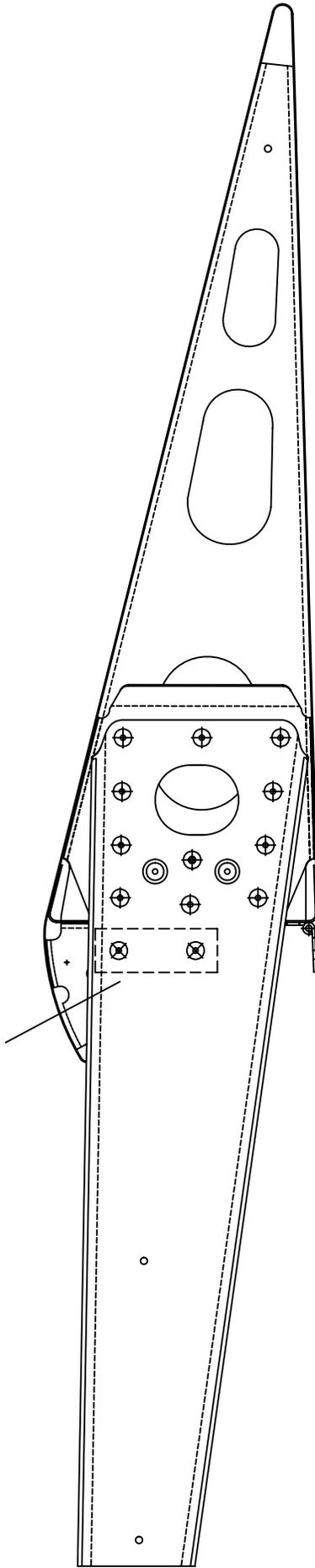
RAMS S-19 VENTERRA
 AILERON RIVET DETAIL
 FIGURE 04A-08

0.025" SHIM BETWEEN
BALANCE ARM AND NOSE RIB.

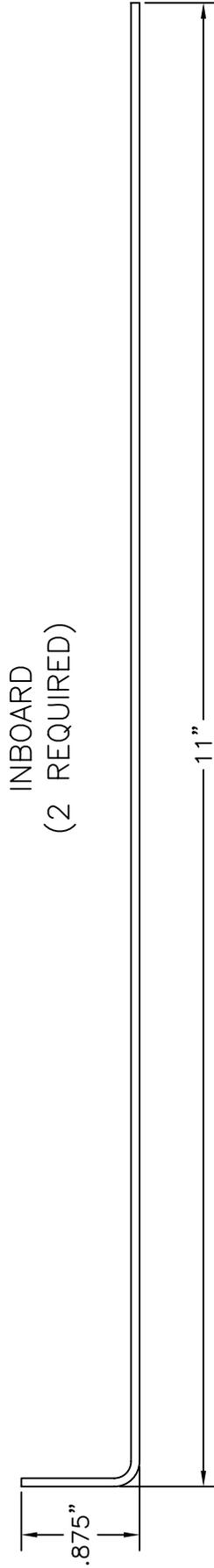
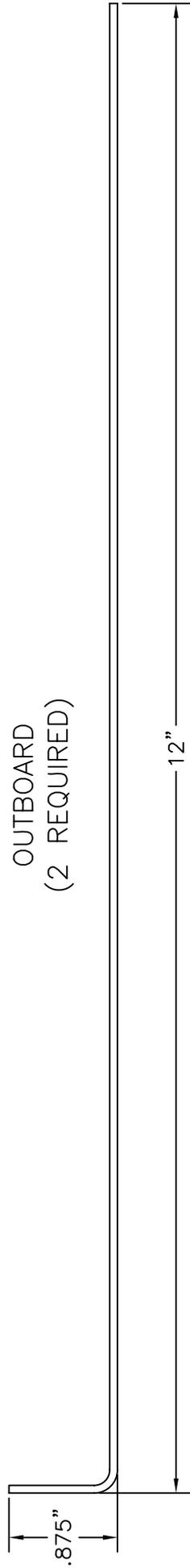
TRANSFER DRILL #40 THROUGH LOWER TOOLING
HOLE IN NOSE RIB.

CLECO SHIM, ALIGN AND TRANSFER DRILL #40
THROUGH UPPER SHIM HOLE.

FINAL SIZE DRILL #30



- ⊙ AAPQ-41 (2)
- ⊗ AAPQ-42 (2)
- ⊕ AAPQ-43 (12)



MD5020

RAMS S-19 VENTERRA
AILERON HINGE PIN MODIFICATION
FIGURE 04A-18

*SHOWN WITHOUT AILERON FOR CLARITY

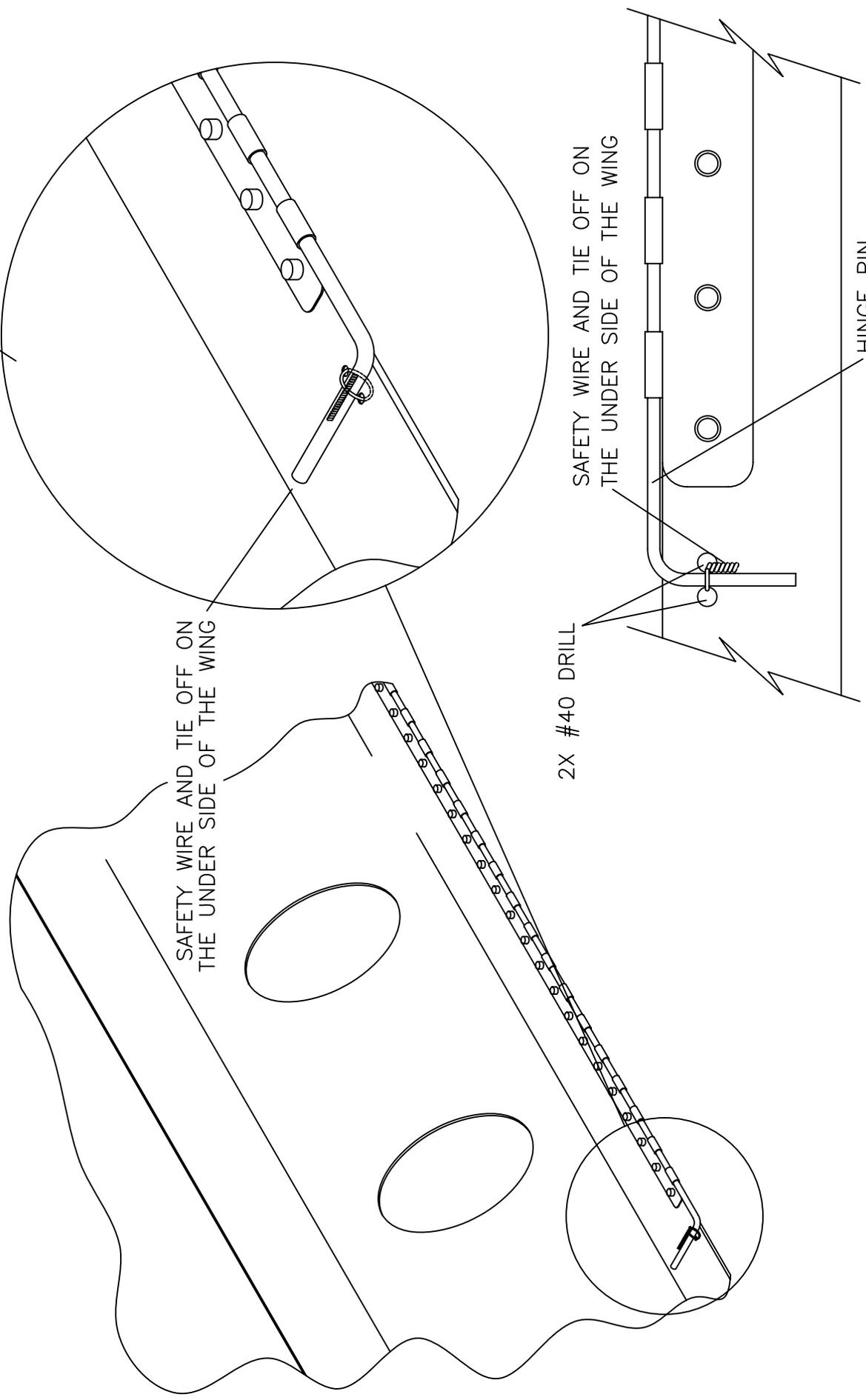
WING TRAILING EDGE SPAR

SAFETY WIRE AND TIE OFF ON THE UNDER SIDE OF THE WING

2X #40 DRILL

SAFETY WIRE AND TIE OFF ON THE UNDER SIDE OF THE WING

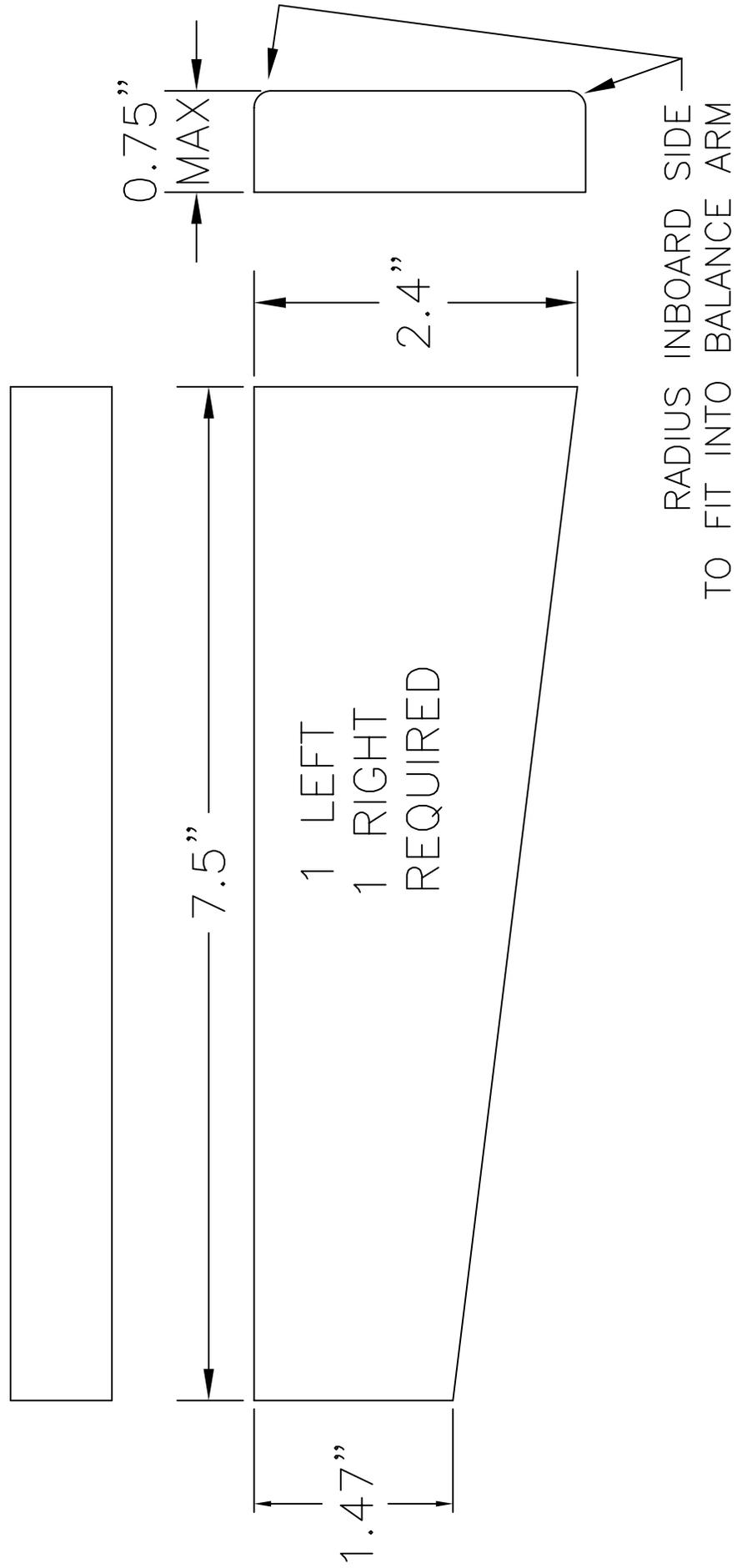
HINGE PIN
TOP VIEW



RAMS S-19 VENTERRA
AILERON HINGE PIN SAFETY WIRE
FIGURE 04A-19

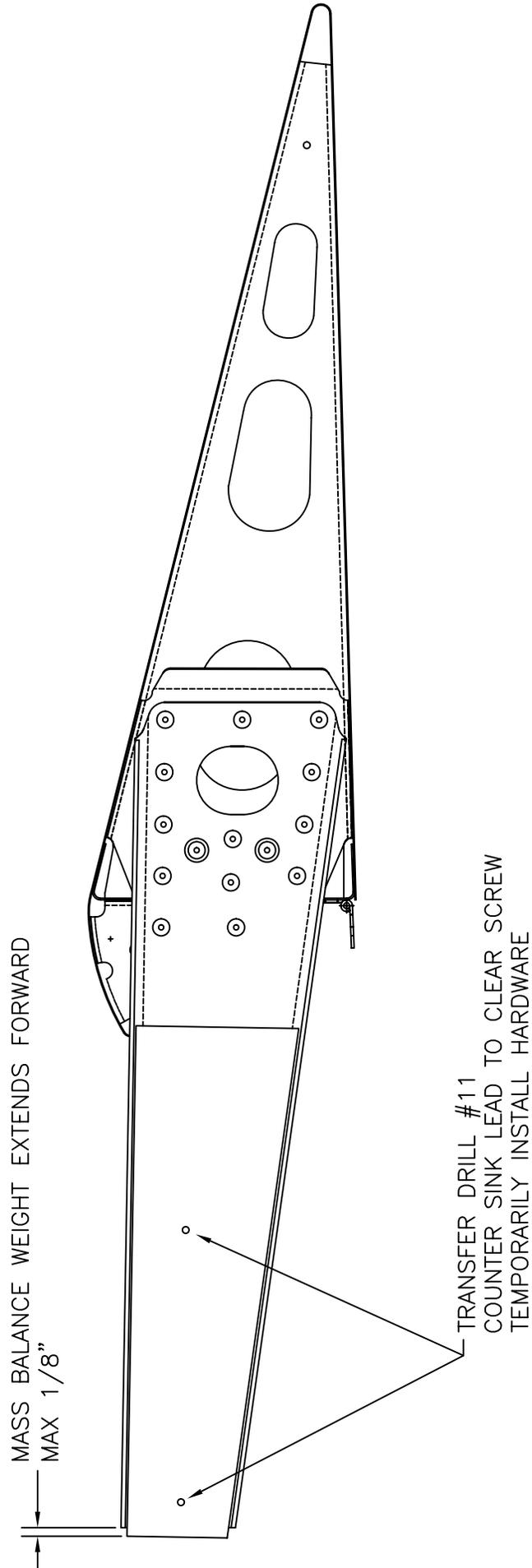
MD5022

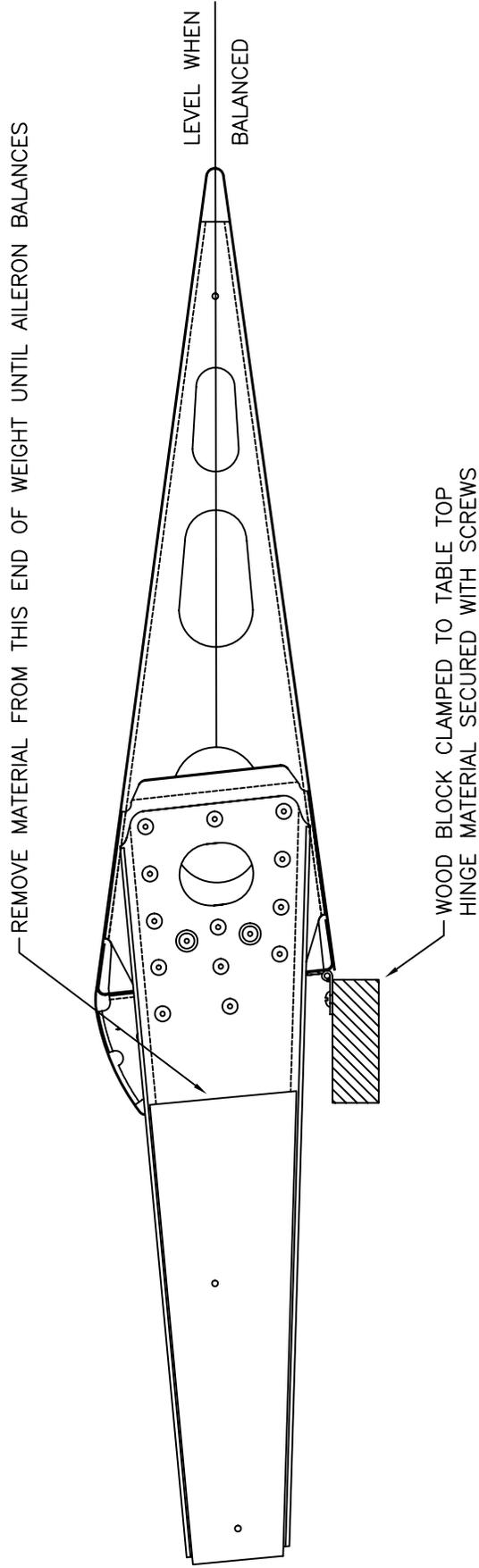
MAY BE CAST OR MADE FROM LAYERED LEAD.
APPROXIMATE WEIGHT 4 POUNDS.



RAMS S-19
AILERON MASS BALANCE
FIGURE 04B-03

MD5443





MD5443

RRR S-19 VENTERRA
AILERON MASS BALANCE
FIGURE 04B-05