

Standard Wing Configuration

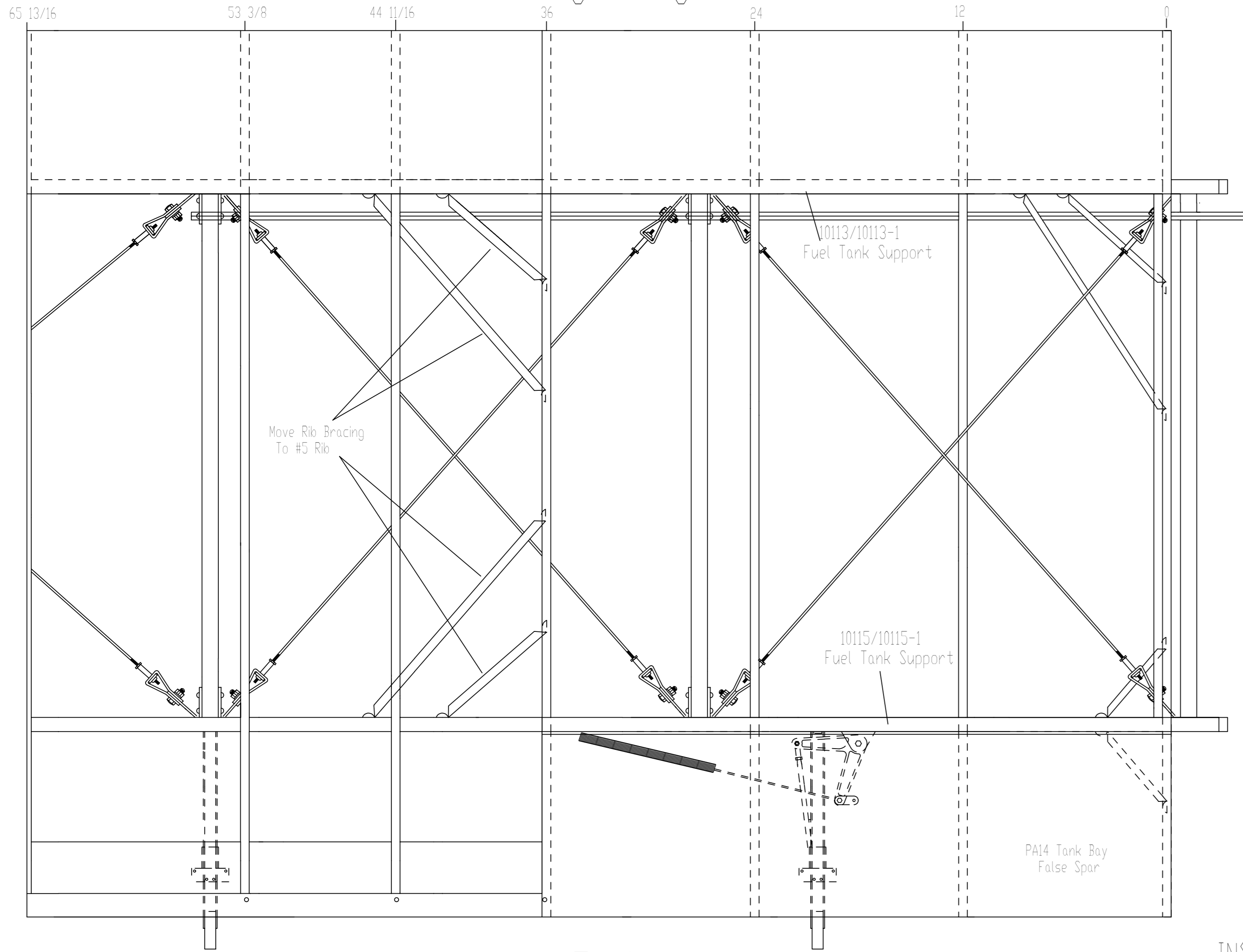


Fig.1

Relocation Of Components For 23 Gallon Tank Installation

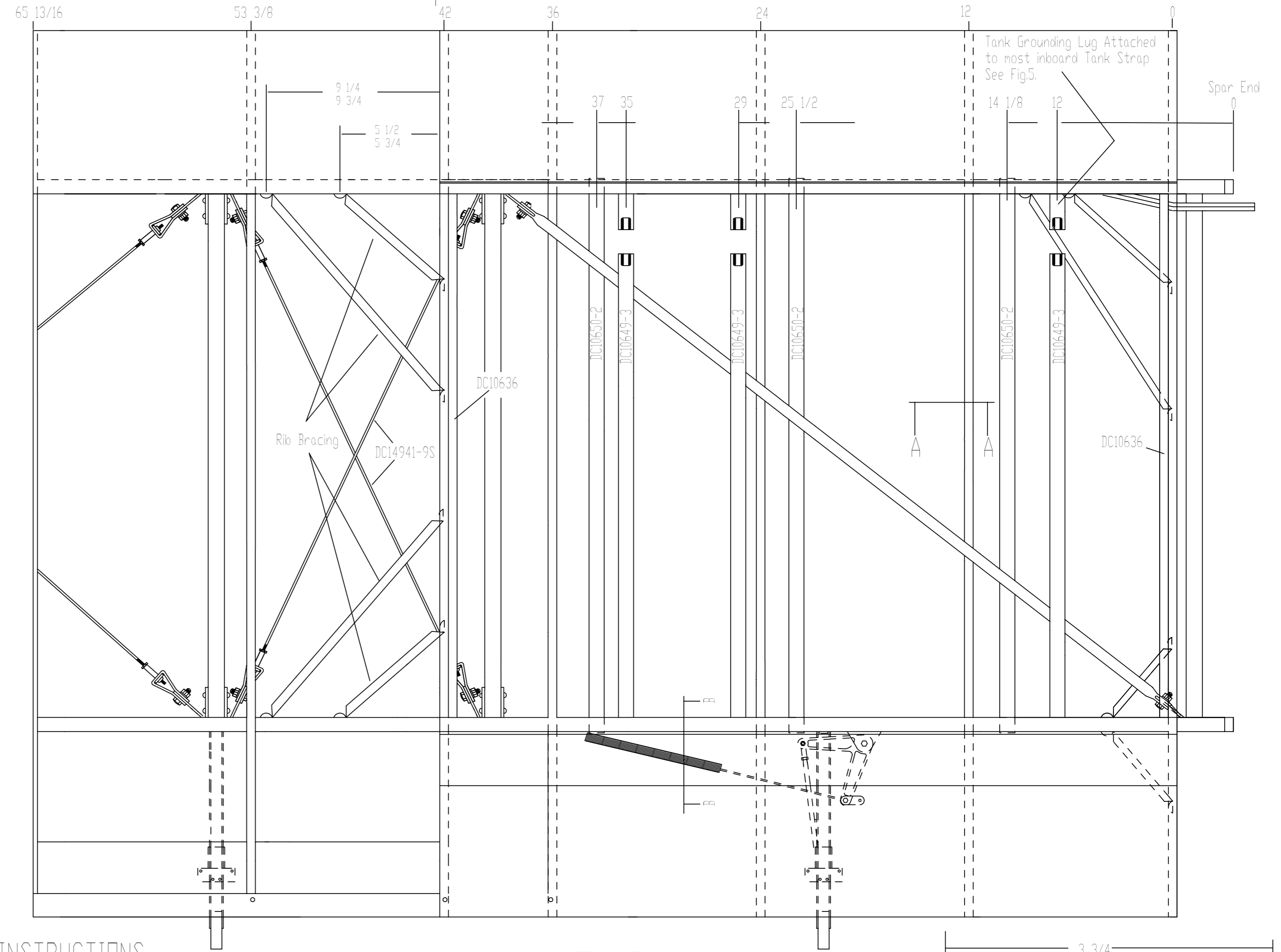
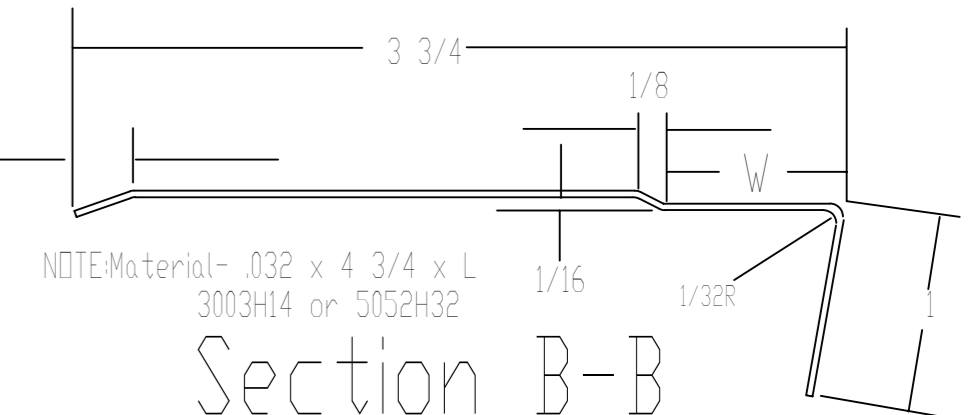


Fig.2

INSTALLATION INSTRUCTIONS

- 1- Remove fabric covering from kutt rib outboard to within 2' of #8 rib.
- 2- Remove the following Piper original components: Fuel tank lids, Fuel tanks, Inboard 52" of leading edge skin material, Tank bay false spar (PA14), Fuel tank supports (10113, 10113-1, 10115, 10115-1), Tank strap assemblies, Tank strap attachment fittings, Drag wire assemblies bays 1 & 2, #2 drag strut and wire pulls, brace channels from #4 rib. Note: Reverse direction of strap fitting bolt at front spar kutt hinge fitting to prevent interference with new 23 gallon tank.
- 3- Remove and modify #1 drag strut assembly as shown in Fig.8, and reinstall with new wire pull DC10171-24T as shown in Figs.8 & 9. New wire pull fitting is installed at the rear spar, and furnishes an attachment point for PA18 tank bay tube DC10641.
- 4- Modify ribs 2-3-4 as illustrated in Fig.3. Original #4 rib is modified as per top illustration, and tank bay ribs have the original rib reinforcement removed and reinforcement DC6189 installed on each rib with a minimum of 9 MS20470A03-4 rivets. Section A-A details reinforcement installation. Tank lid attachment DC10636 must be added to ribs 1 and 5 with a minimum 12 MS20470A03-4 rivets. NOTE: Rib #5 must be relocated from original location at rib station 44 11/16 to new rib station at 42. This new rib position accommodates the installation of extended tank lid DC12570-EXT.
- 5- Install new drag strut DC14222 at 42 11/16" dimension (from reference zero) shown in Fig.6. A double wire pull is utilized at the front spar, and a single wire pull (connecting tab facing outboard) at rear spar. Install drag wires DC14941-9S into bay 2.
- 6- Layout spar trammel points above drag struts 1-2-3, measuring equal distances from spar end "zero" point as shown in Fig.6. Trammel bay 2. Install tank bay drag tube DC10641 into bay 1, and trammel. Only one end of the drag tube has been pre-drilled. It is important to accurately trammel the bay before marking and drilling a #11 attachment hole in assembly.
- 7- Install tank strap assemblies to dimensions indicated in Figs.2 & 6. Fig.5 details strap part numbers and locations with fastener call-out.
- 8- Install Pitot lines as previously installed. Alternate line routing aft of front spar web, ahead of and tied off to tank strap DC10649-3 as shown in Fig.5. Anti-chaffle Pitot line at oil contact points.
- 9- Install leading edges and false spar utilizing any previously drilled attachment holes.
- 10- Install fuel tank and adjust placement to allow the tank drag tube to center within the tank cross tube as closely as possible. Locate tank lid and layout fastener holes as per lid hole layout drawing. Also locate tank filler neck hole and install -5 reinforcement (Section C-C).
- 11- Remove tank and install nut plates in leading edge and false spar. Re-attach leading edge and false spar. Glue anti-chaffle felt to tank bay ribs, tank straps, and tank lid reinforcing ribs.
- 12- Install fabric covering as per manufacturers process directions or as per AC4313.
- 13- For additional installation information on installing the 23 gallon tanks into wings utilizing Univair stamped ribs see reverse side of drawing.



Section B-B
Left Installation Shown
Right Installation Opposite

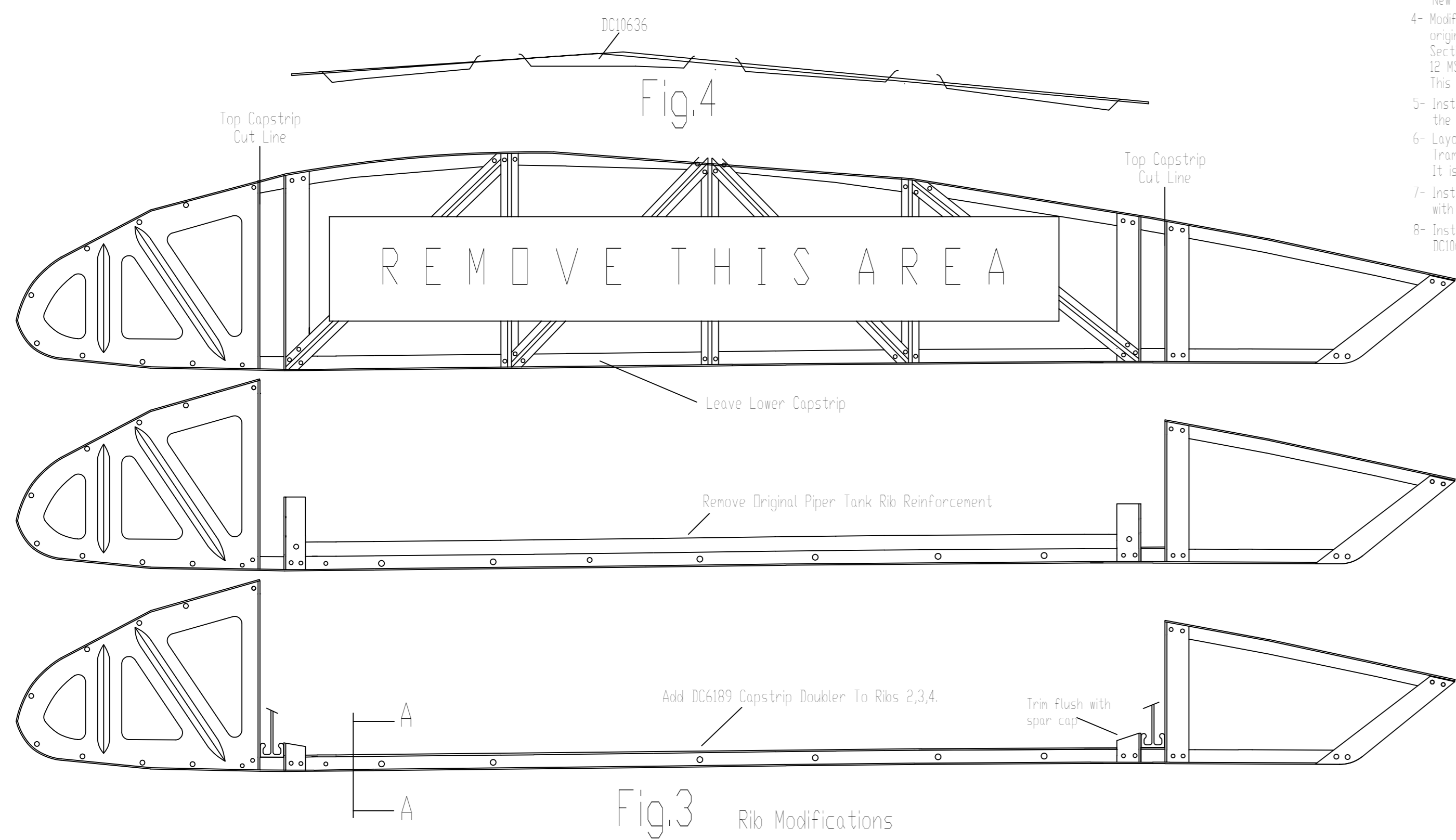
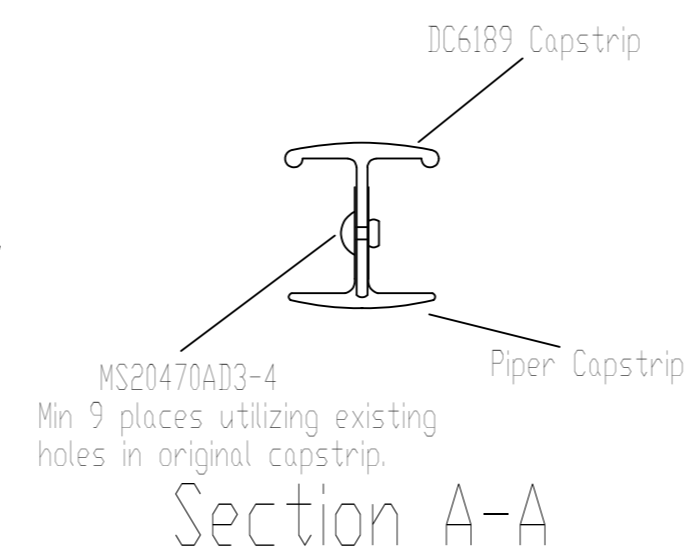


Fig.3 Rib Modifications



Section A-A

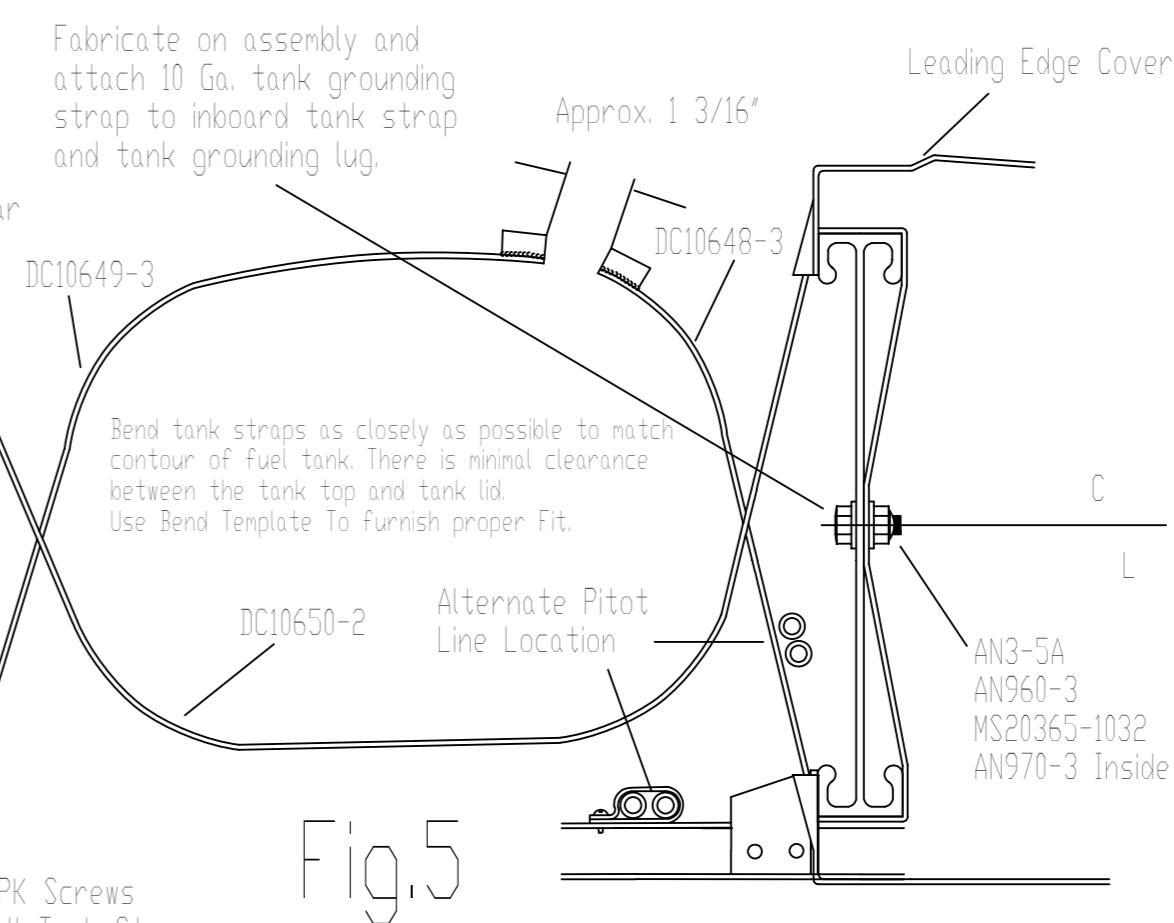


Fig.5

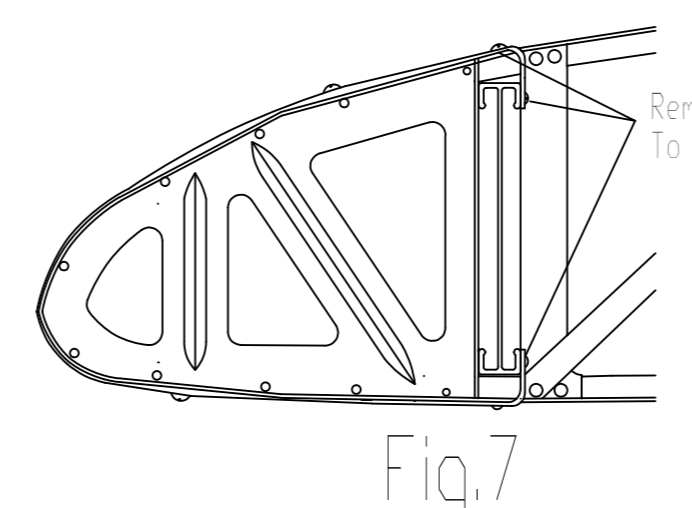


Fig.7

Note:
Install original fuel gauge in original location or if headliner has been replaced with sky-lite, PA18 wing root fuel gauge assembly 10804 can be installed.

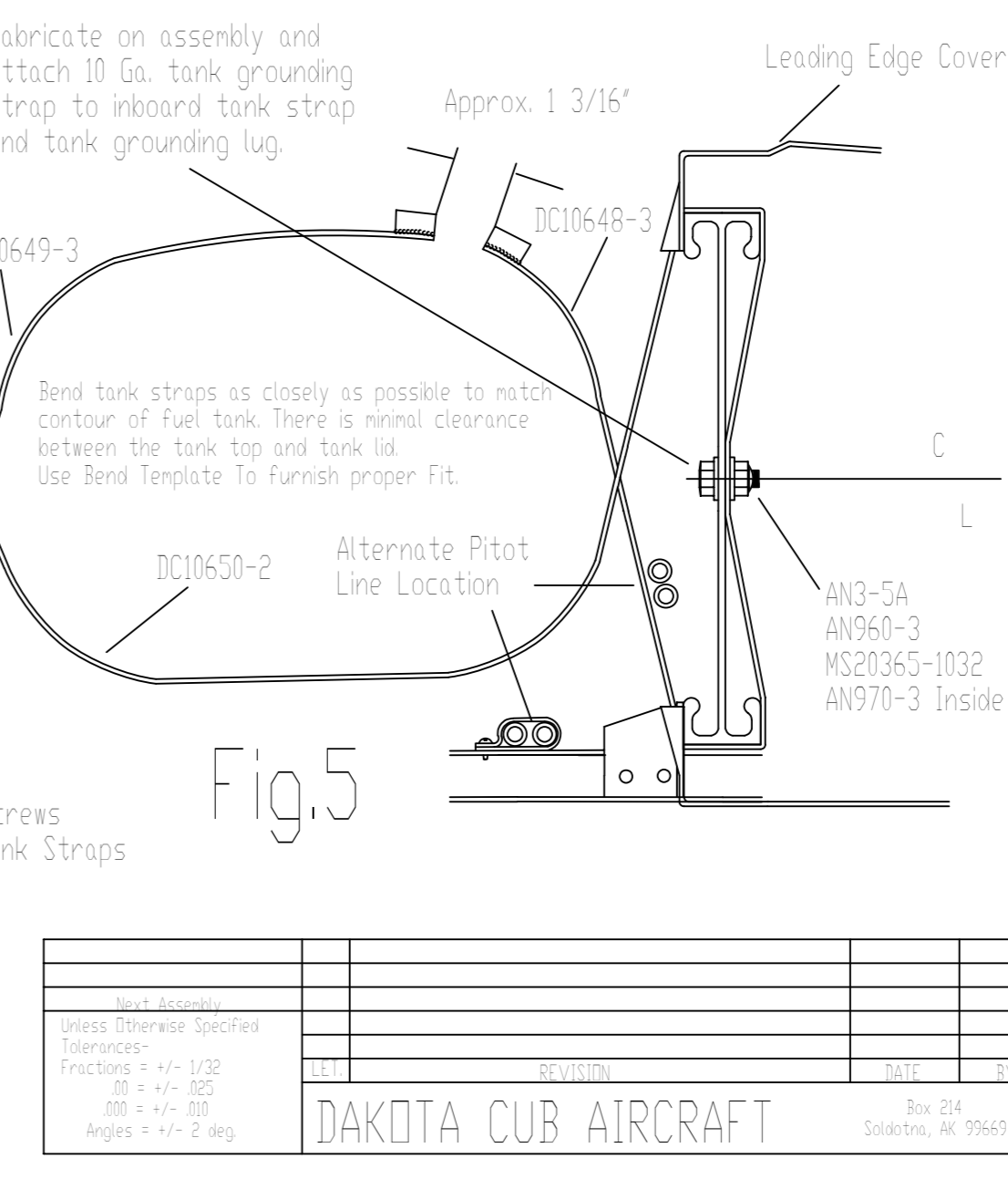


Fig.6

PART NO.	QTY	MATERIAL	DESCRIPTION
10804	1		Optional Fuel Gauge
LE-Screws	1		Leading Edge Screws
DC12570-EXT	1		Extended Tank Lid
DC14222	1		Drag Strut
DC10171-24T	1		Wire Pull Special
DC14941-9S	2		Brace Wire
DC10641	1		Tank Tube
Section B-B	1	Ø42 1/2" Long	Std. False Spar
PA14-FS-1	1	Ø42 1/2" Long	Tank Bay False Spar
PA12-LE-2	1	Ø24 1/2" Long	#2 Leading Edge
PA12-LE-1	1	Ø42 1/2" Long	Tank Bay Leading Edge
DC8011-0	3		Tank Strap Stud
3/32 x 1"	3	72"	Felt Anti-Chaffle
DC6189	2	29"	Rib Extrusion
MS20365-1032	12		Nut
AN3-5A	12		Bolt
AN970-3	12		Washer
AN960-3	12		Washer
DC10849-24G-32L	1		23 Gallon Fuel Tank
DC10849-24G-20R	1		23 Gallon Fuel Tank
DC10636	2		Lid Attachment
DC10648-3	3		Tank Strap
DC10649-3	3		Tank Strap
DC10650-2	3		Tank Strap

SCALE	Full Size
Next Assembly	
Manufacturing Practices	ISA Process Spec #1
From	ISA Process Spec #1
Manufacturer	
Install - Extended Range Tank-PA12/PA14	
REV	REV
12-14-2001	12-14-2001
REV 20	REV 20
DAKOTA CUB AIRCRAFT	
Rev 214	Rev 214
Sioux Falls, AK 57669	Sioux Falls, AK 57669

Installation with Univair Stamped Ribs

Follow the installation instructions on front side, with the following exceptions-

- 1- Move number 4 rib to the number 5 rib location. On Right wing the vertical attachments must be trimmed to provide clearance for brace wire clevises. See Supplement 1, pages 1&2.
- 2- Install additional rib attachment screw as per Supplement 1, page 3. Drill #40 and use std rib attachment screw.
- 3- Install additional tank bay rib at number 4 rib location.
- 4- If necessary, Lengthen "relief area" to provide adequate clearance at fuel guage fittings as per Supplement 1, page 3. For "Wing Root" fuel gauge location only.
- 5- Upon completion check for adequate tank clearances, and adjust as necessary. Tighten tank straps as per Fig.5.

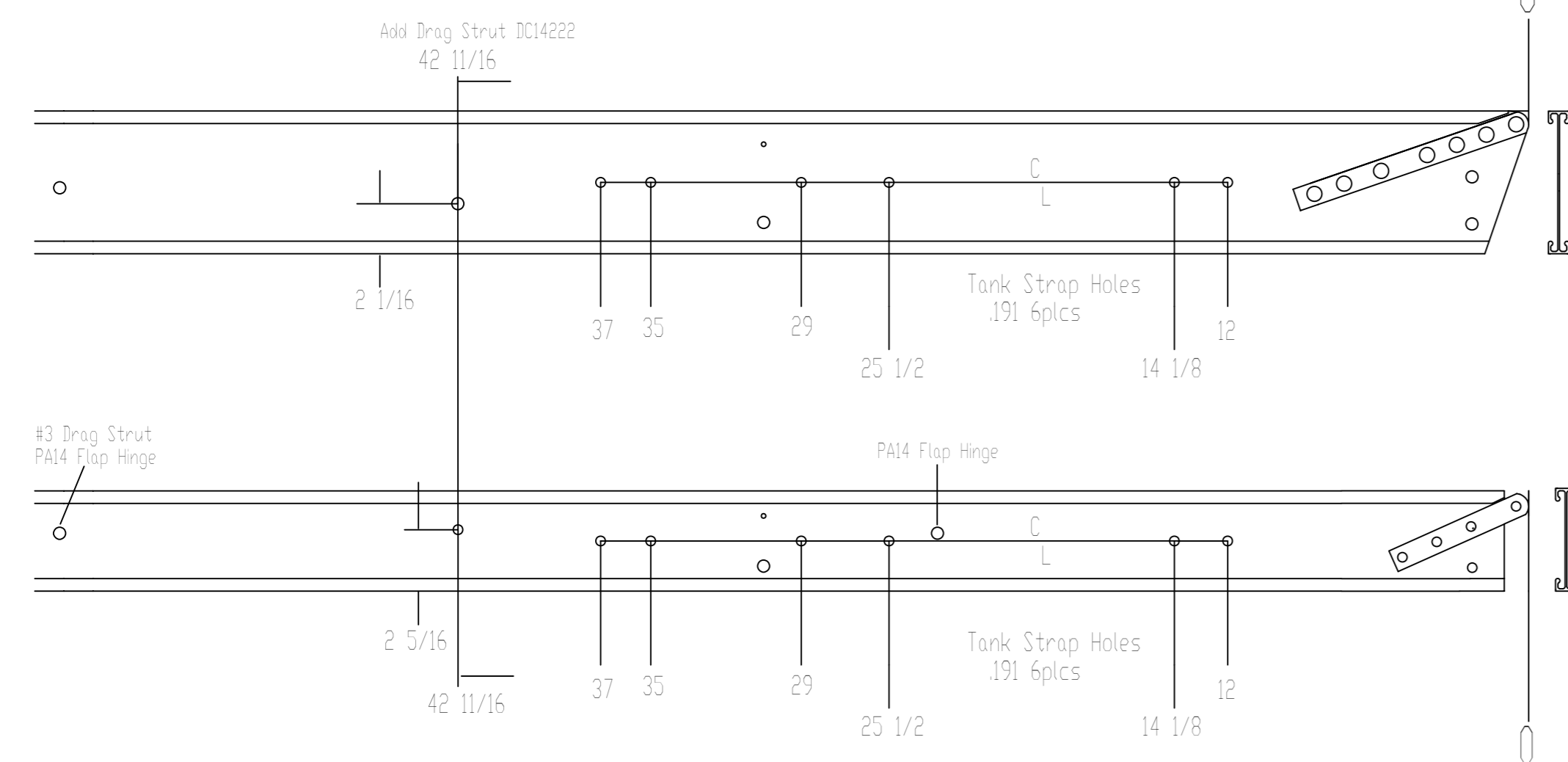


Fig.6

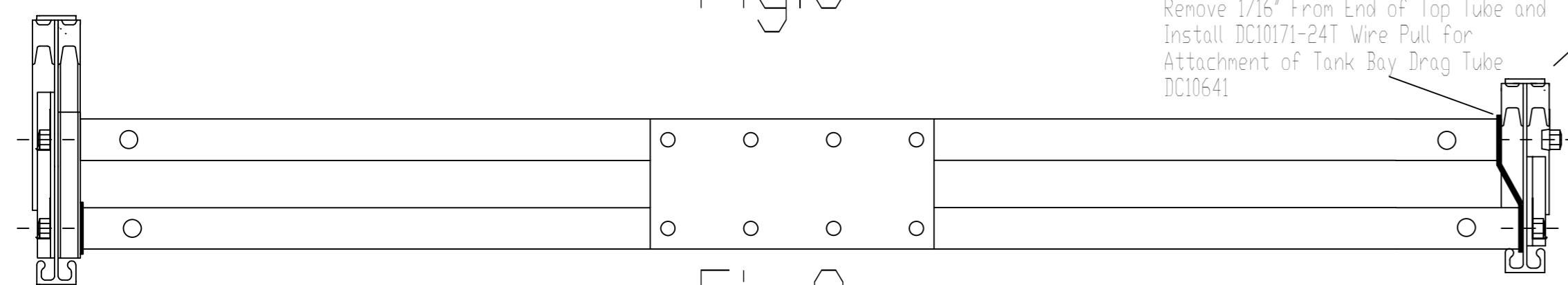


Fig.8

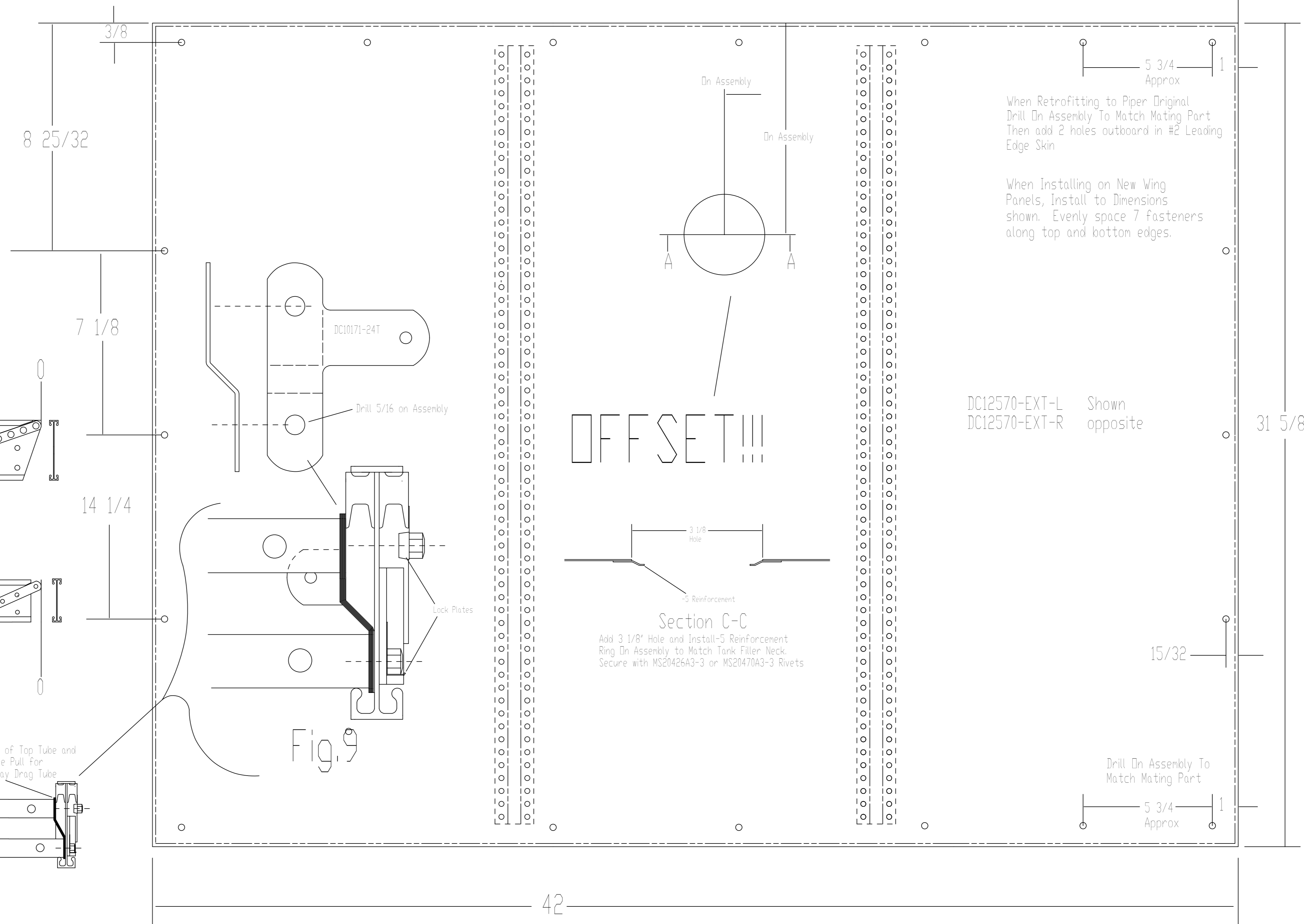
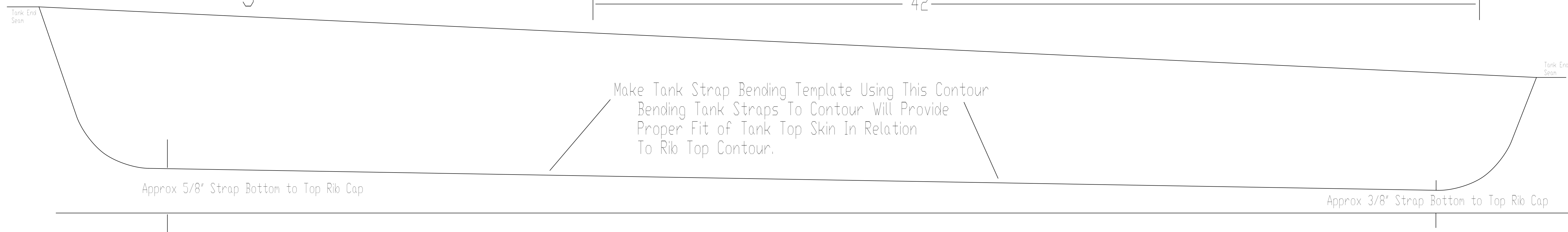


Fig.9



Drill On Assembly To Match Mating Part!!!

When Retrofitting to Piper Original Drill On Assembly To Match Mating Part Then add 2 holes outboard in #2 Leading Edge Skin

When Installing on New Wing Panels, Install to Dimensions shown. Evenly space 7 fasteners along top and bottom edges.

DC12570-EXT-L Shown opposite
DC12570-EXT-R

OFF SET!!!

Section C-C
Add 3 1/8" Hole and Install 5 Reinforcement Ring On Assembly to Match Tank Filler Neck. Secure with MS20426A3-3 or MS20470A3-3 Rivets