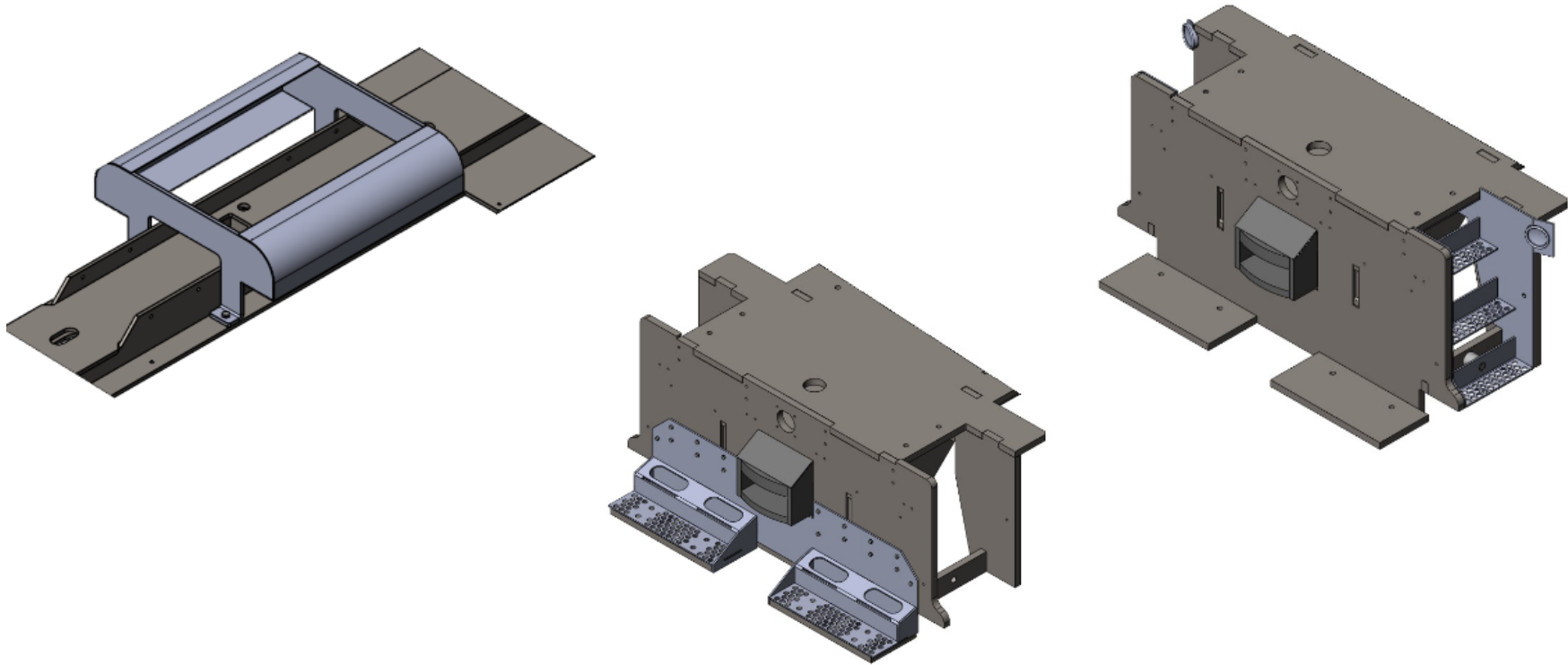


# GP9 FRAME DETAIL PARTS FOR 1:8 SCALE



## INSTRUCTION MANUAL

# KIT OVERVIEW

**THE INFORMATION CONTAINED IN THIS INSTRUCTION MANUAL IS THE SOLE PROPERTY OF PACIFIC DESIGN SHOPS. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PACIFIC DESIGN SHOPS IS PROHIBITED.**

Tools you may need to assemble the kit:

- Welder
- Grinder
- Clamps
- Square
- Cordless Drill
- 2-56 Tap and #49 Drill Bit
- 4-40 Tap and #41 Drill Bit
- 10-32 Tap and #18 Drill Bit
- 1/4"-20 Tap and 7/32" Drill Bit

Extra materials you may need:

- Blomberg Trucks (Pike River Shops)
- Paint
- Decals
- 3M DP420 Epoxy & Applicator

Common acronyms:

- BOM - Bill of Material
- PDS - Pacific Design Shops
- PSC - Precision Steel Car
- MMC - McMaster Carr

Helpful Tips

- Assemble sections together before welding or gluing to see how the parts go together.
- Tack weld the pieces together. It is easier to undo a tack than a bead.
- When applying the finishing welds, use skip welds instead of a continuous welding to avoid extreme warping and twisting.
- Weld from one end to the other to avoid warping.
- Use clamps to keep joints tight together when welding or gluing.
- Note locations of holes and mating parts, avoid welding in those areas to reduce need to come back and grind out.

See the FAQ page for more helpful tips and answers to common questions.

**We want your feedback!** If you see an area to improve either on the kit or the instructions, please let us know. Send your feedback to [info@pacificdesignshops.com](mailto:info@pacificdesignshops.com).

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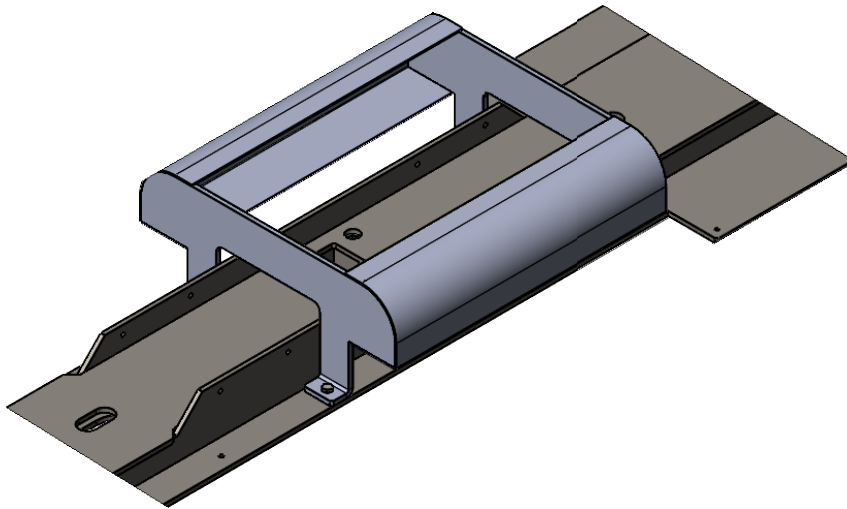
## SECTION 1: FUEL TANK

Use BOM below for pages 1-2 to 1-3.

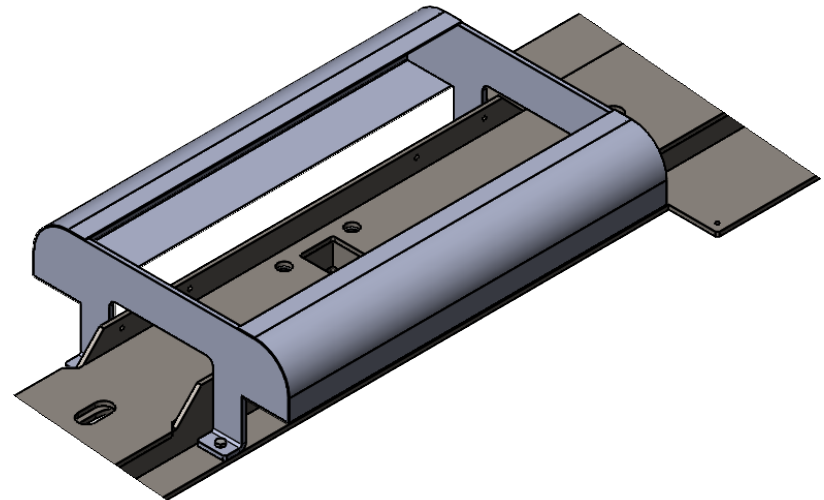
Instructions reflect standard tank.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GP9E75_ST25_A2	Fuel Tank Ends	2
2	GP9E75_ST16G_AA2	Fuel Tank Sides	2
3	MMC_92240A537	1/4"-20 x 1/2" Hex Bolt	4

### STANDARD TANK



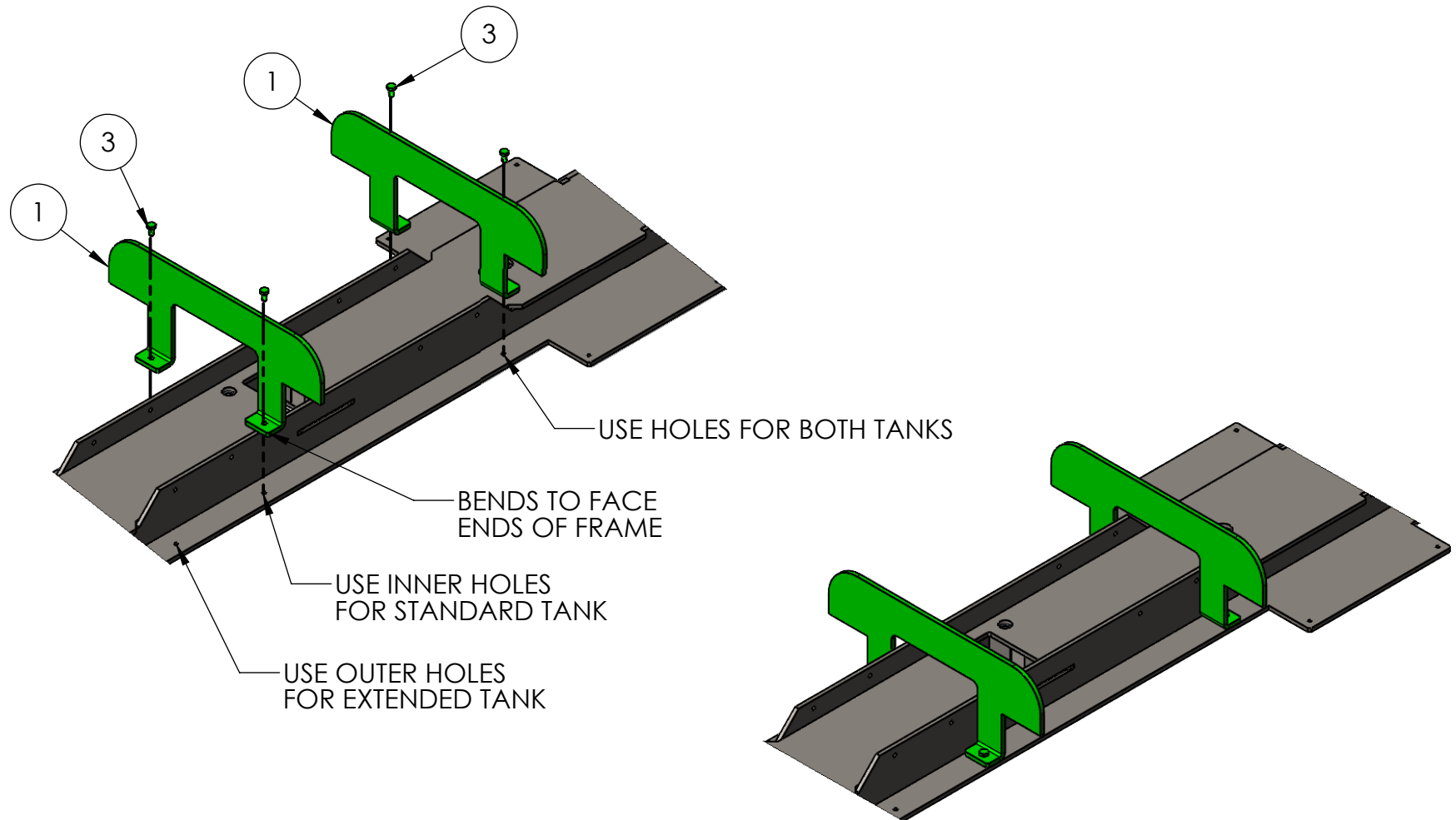
### EXTENDED TANK



## STEP 1: TANK ENDS

Attach tank ends to frame as shown below. Note orientation of bends on tank ends.

NOTE: If building unit with extended tank, use outer holes on both ends.

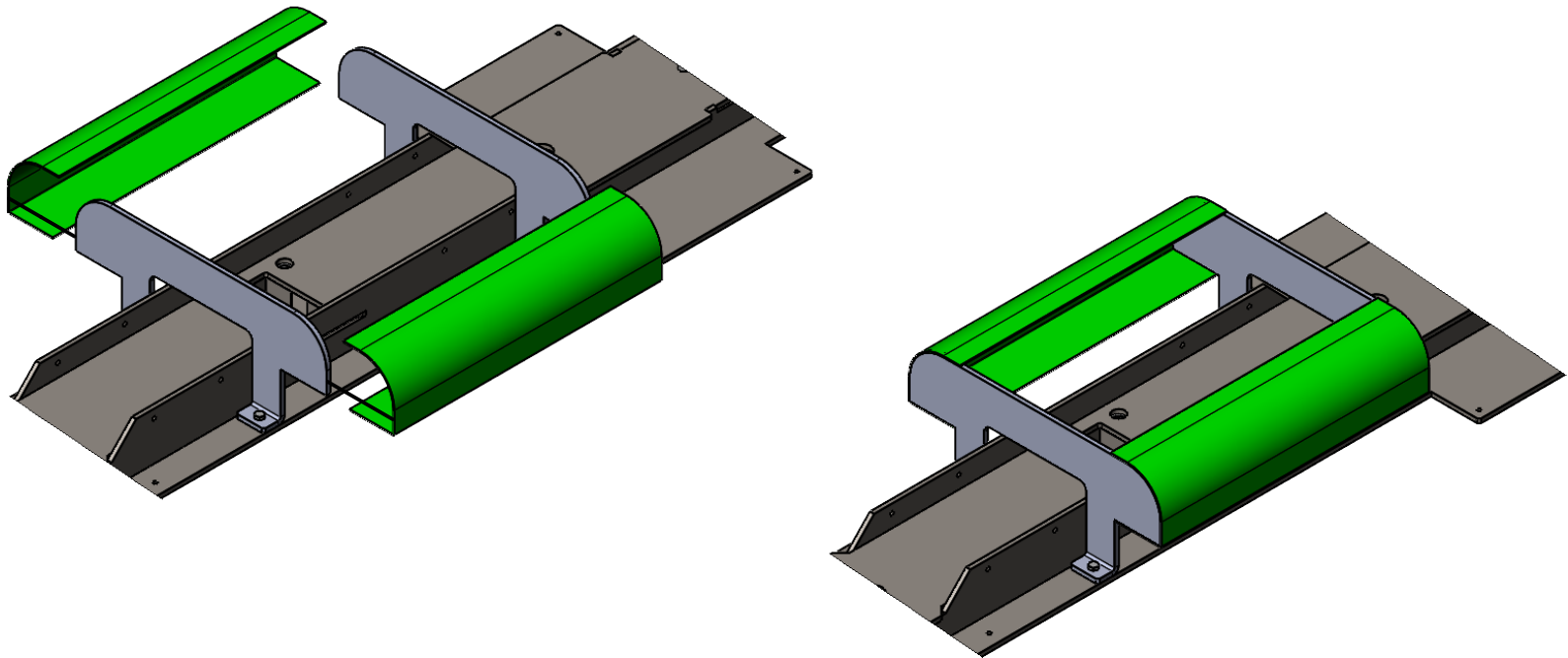


## STEP 2: TANK SIDES

Align and clamp tank sides to tank ends as shown below. Tack tank sides to tank ends. Remove tank from frame and apply finish welds.

Once complete, grind welds and prepare for painting.

After painting, use hardware shown to attach tank to frame.



## SECTION 2: AIR TANKS

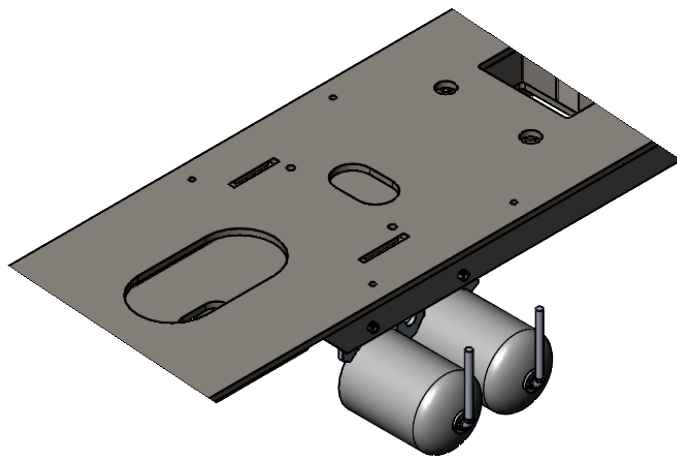
Use BOM below for pages 2-2 to 2-7.

NOTE: Air tanks shown not used with extended fuel tank.

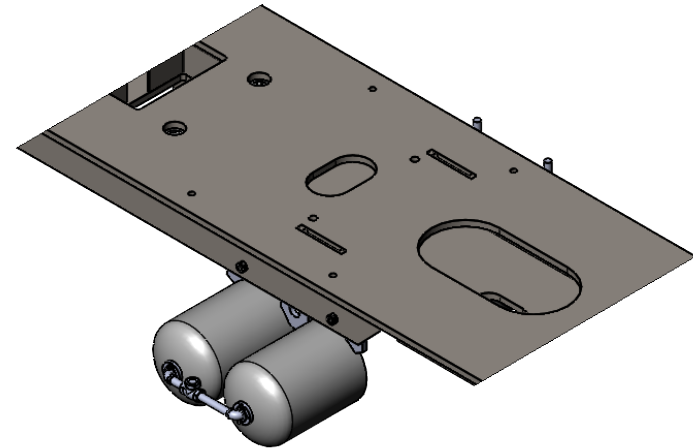
Fittings on Side A & B reflect a basic piping configuration. More detail can be added by the user as desired.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GP9E75_ST316S_A2	Air Tank Bracket	2
2	-	2.5" Weld Cap w/ Pipe	4
3	PDS-1020	Air Tank End Flange	4
4	PDS-1021	¼" Flanged Elbow	4
5	PDS-1050	¼" Check Valve Dummy	1
6	MMC_92314A401	2-56 x 3/16" Hex Screw	8
7	MMC_91773A105	4-40 x 3/16" RHPS	4
8	MMC_98449A005	#4 Int Tooth Lock Washer	4
9	MMC_92196A271	10-32 x 5/8" SHCS	4
10	-	¼" Round or Tubing	3

**SIDE A**

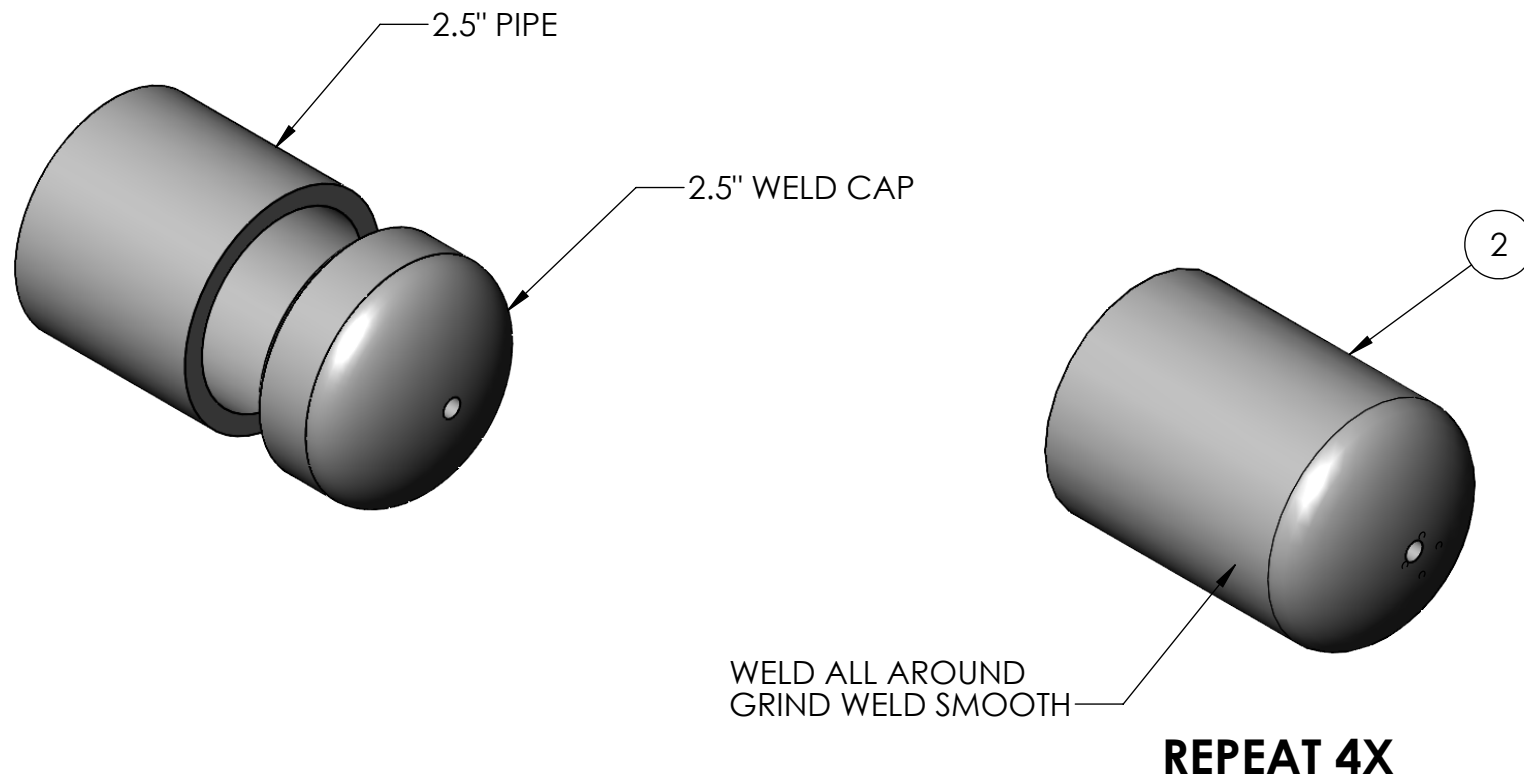


**SIDE B**



## STEP 1: AIR TANK

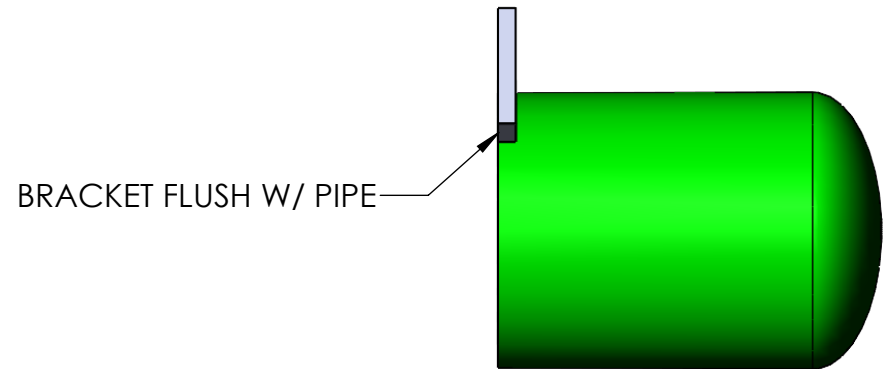
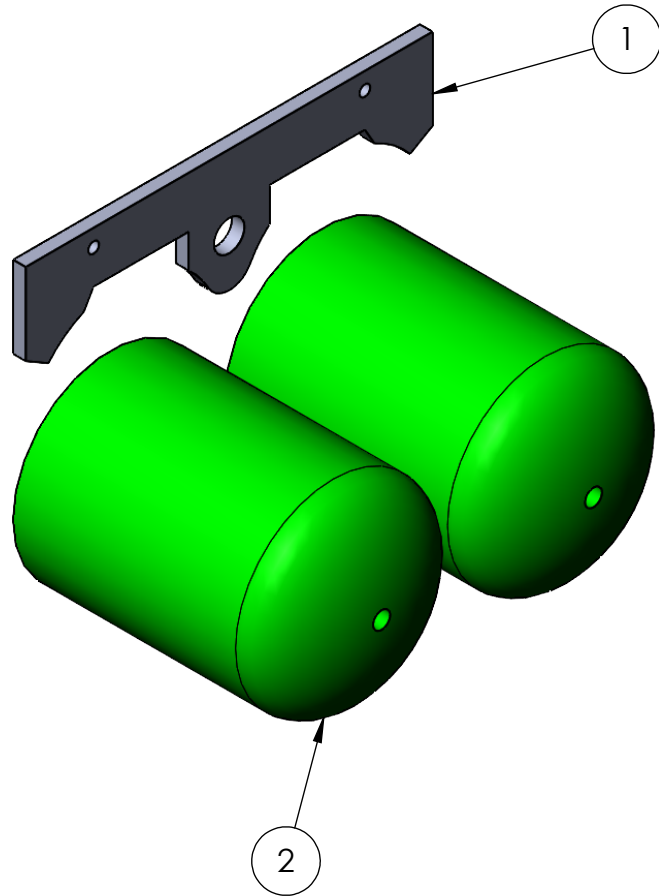
Assemble pipe and weld cap as shown below. Align parts to be concentric and with no gap between. Weld all the way around and grind smooth.



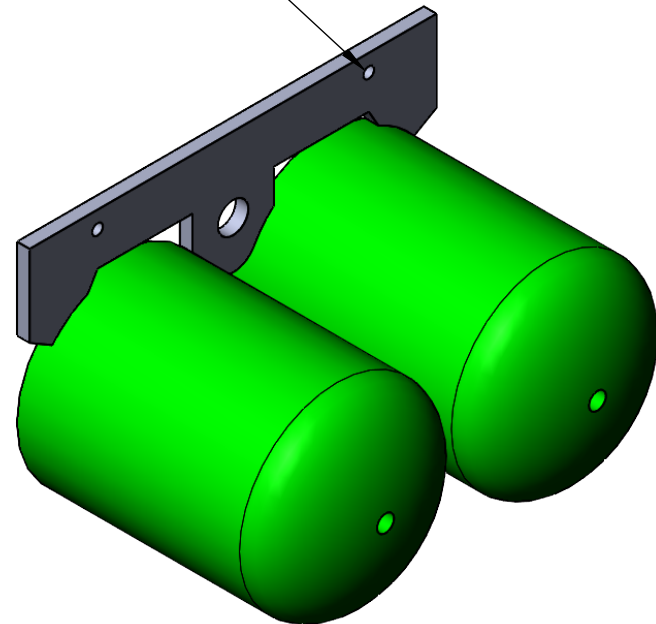
## STEP 2: BRACKET

Assemble pipe assemblies to bracket as shown below.

Tap bracket after welding.



2X 10-32 UNF THRU ALL

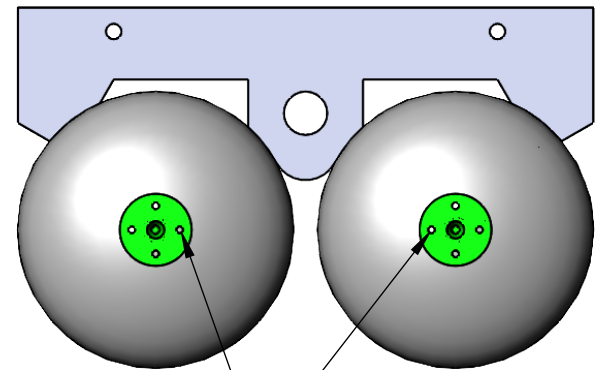


**REPEAT 2X**

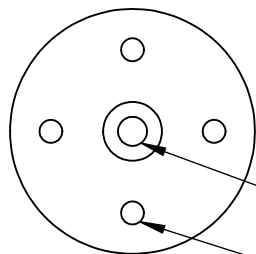
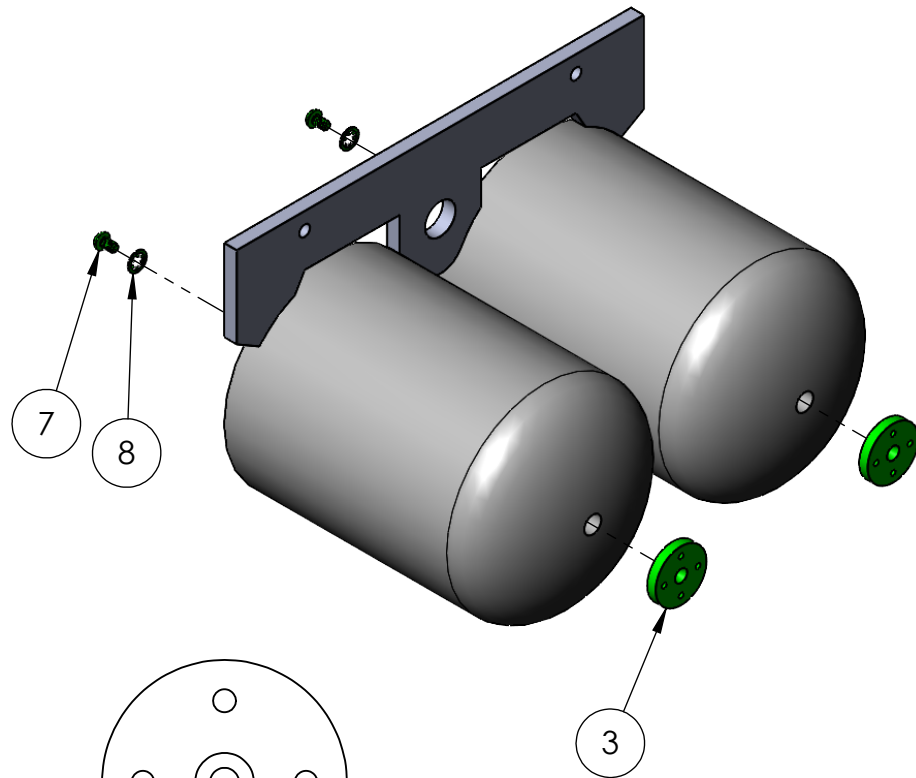
### STEP 3: AIR TANK FLANGES

Tap holes in flanges prior to assembly as shown.

Assemble flanges to pipes as shown below. Align hole pattern before tightening screws.

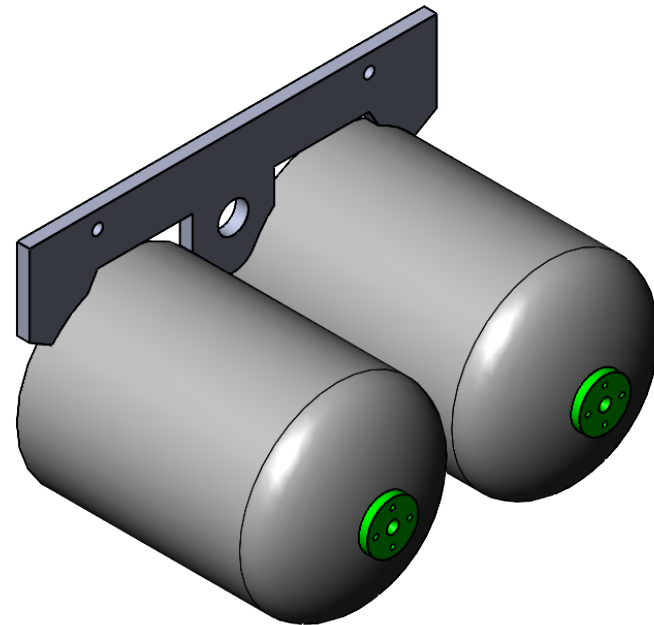


ALIGN BOLT PATTERNS AS SHOWN



CENTER HOLE 4-40 UNC THRU ALL

4X 2-56 UNC THRU ALL

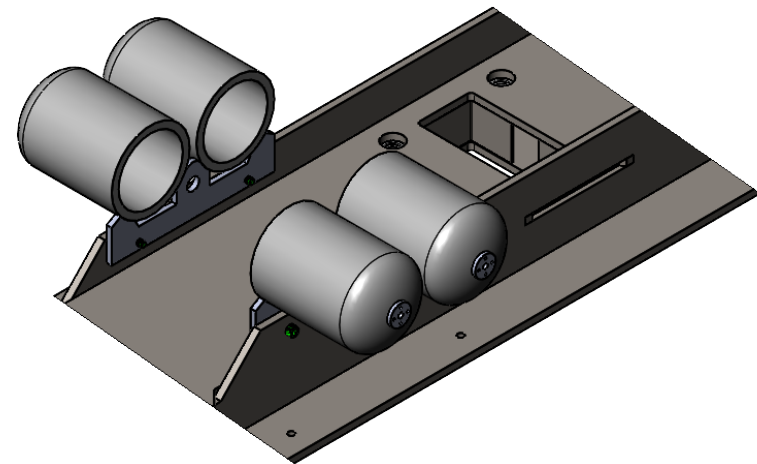
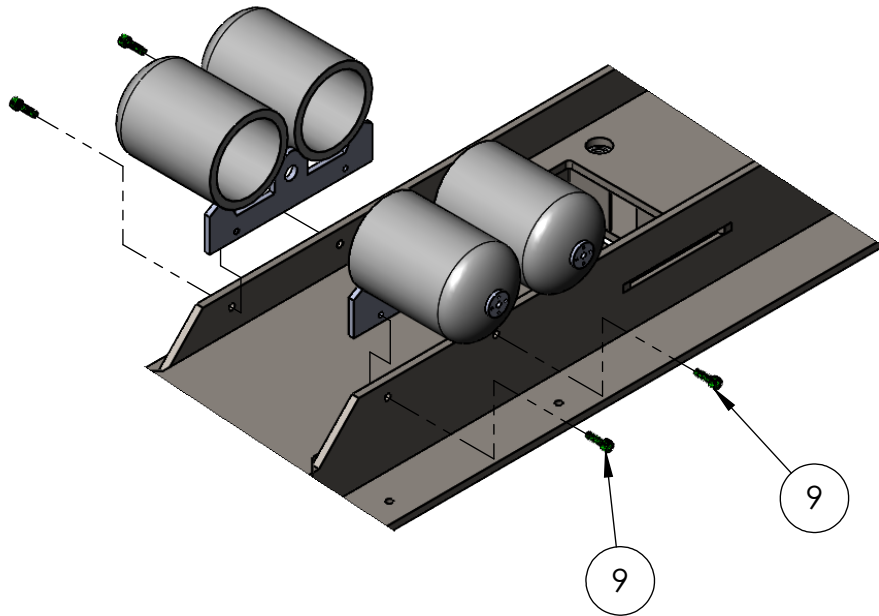


**REPEAT 2X**

## STEP 4: AIR TANK MOUNTING

Assemble tank assemblies to frame as shown below.

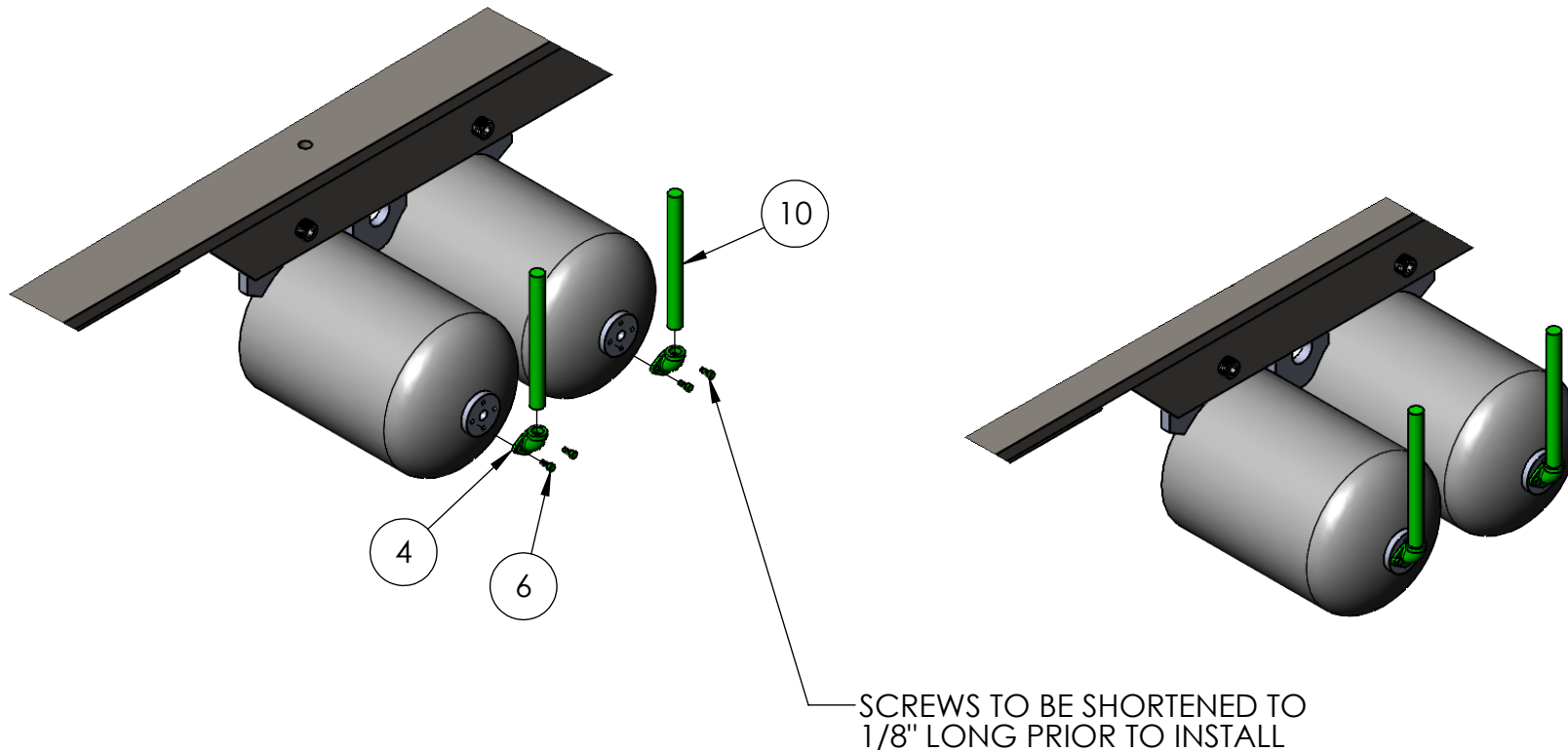
Tank locations are standard towards the mounts furthest from the cab.



## STEP 5: SIDE A

Assemble elbows, fittings and hardware as shown below.

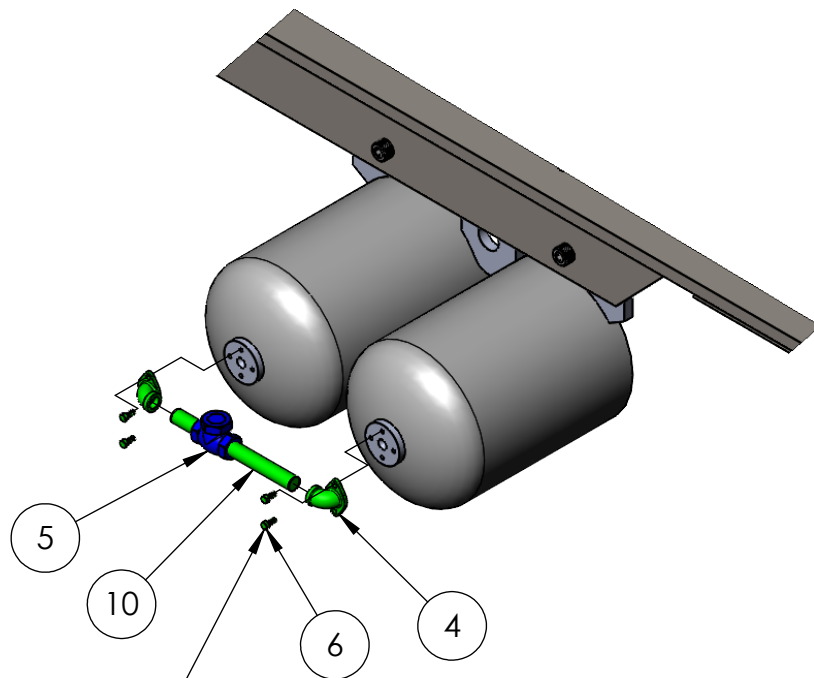
Item (4) can be tapped for 1/4"-40 threads, or drilled out to 1/4" to accept round or tubing for piping.



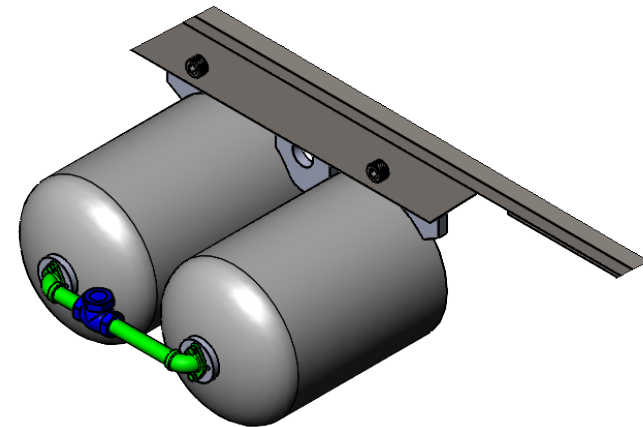
## STEP 6: SIDE B

Assemble elbows, fittings and hardware as shown below.

Item (4) & (5) be tapped for 1/4"-40 threads, or drilled out to 1/4" to accept round or tubing for piping.



SCREWS TO BE SHORTENED TO  
1/8" LONG PRIOR TO INSTALL

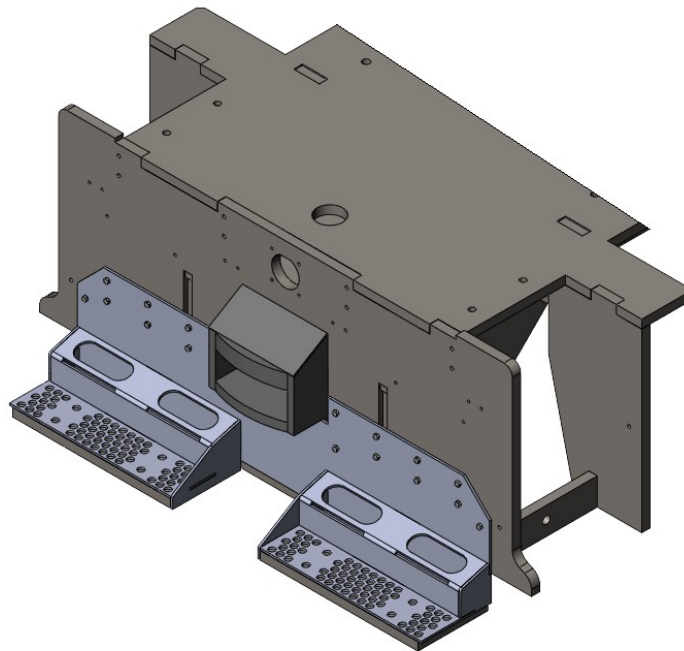


## SECTION 3: FRONT PILOT

Use the BOM below for pages 3-2 to 3-5.

Pilot repeats on front and rear of engine.

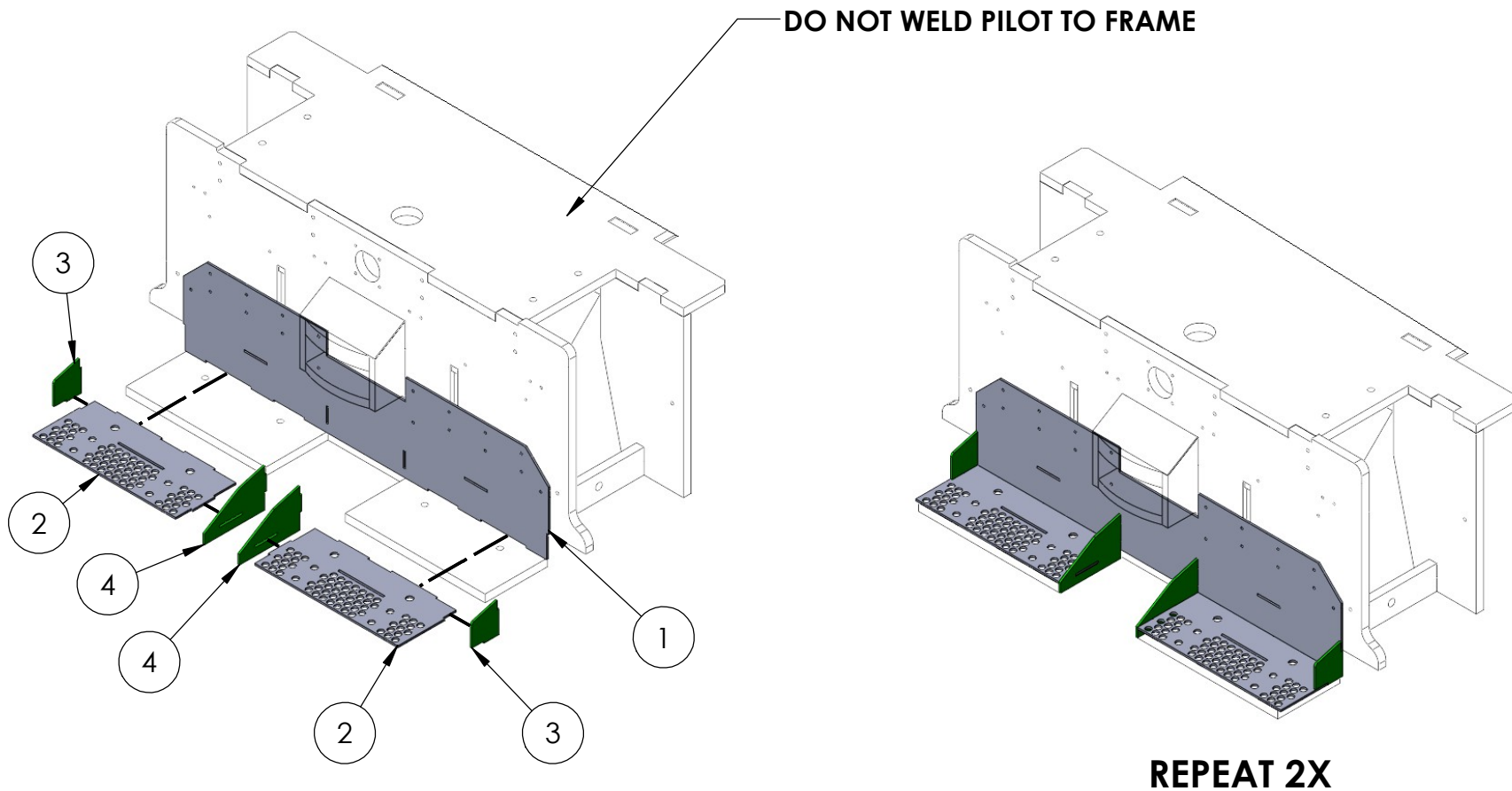
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GP9E75_ST16G_H2	Front Pilot Back Plate	2
2	GP9E75_ST16G_J4	Front Pilot Bottom Plate	4
3	GP9E75_ST16G_K4	Front Pilot Outside Plate	4
4	GP9E75_ST16G_L4	Front Pilot Inside Plate	4
5	GP9E75_ST16G_M4	Front Pilot Front Plate	4
6	MMC_92314A401	2-56 x 3/16" Hex Screw	36
7	MMC_92949A261	10-32 x 1/4" BHCS	8



# STEP 1: FRONT PILOT

**\*\*\*TACK WELD ONLY\*\*\***

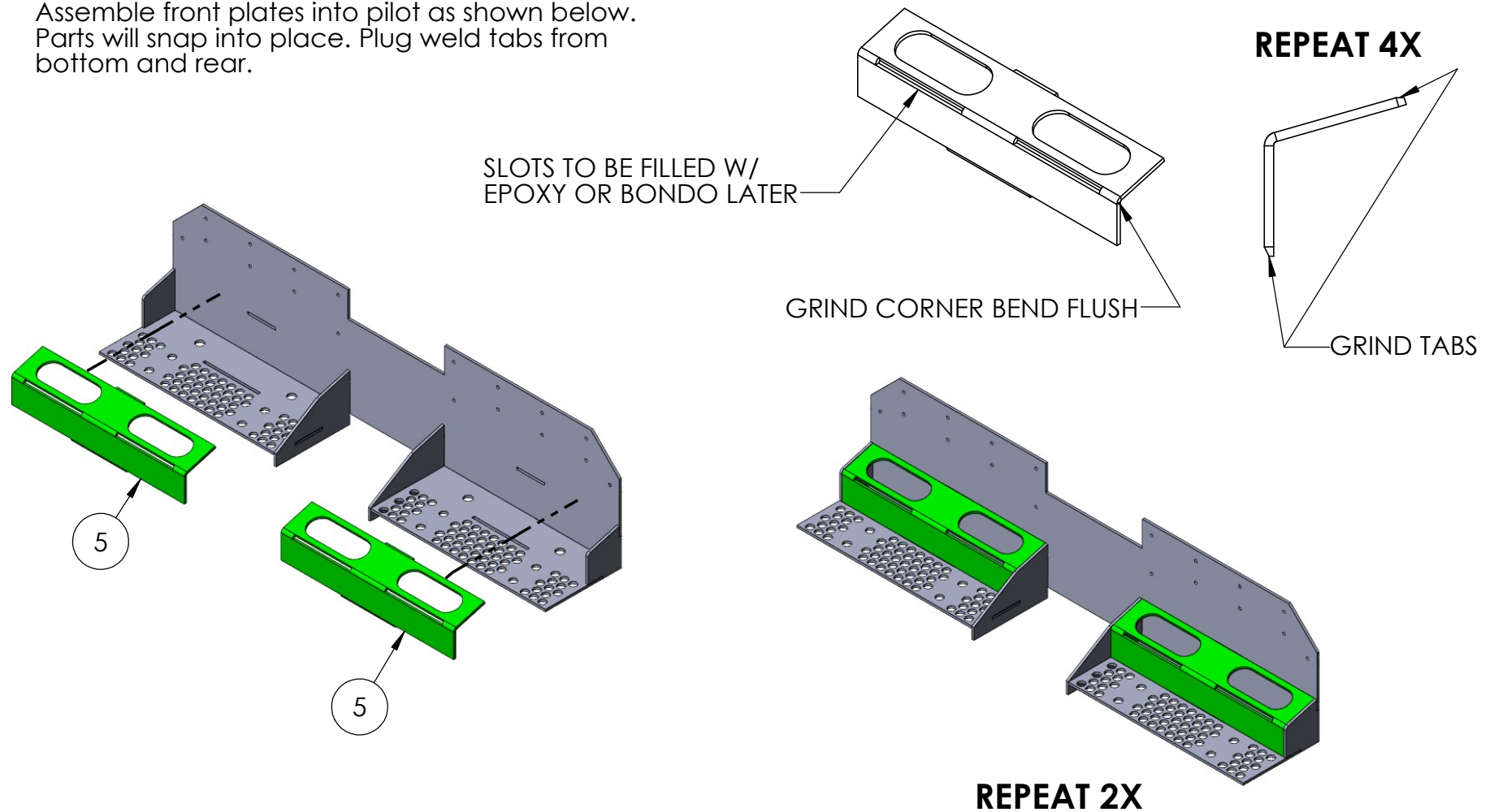
Using the GP9 frame as a jig, assemble front pilot parts as shown below.



## STEP 2: FRONT PLATES

Grind tabs on top and bottom and corner bends flush of front plates as shown.

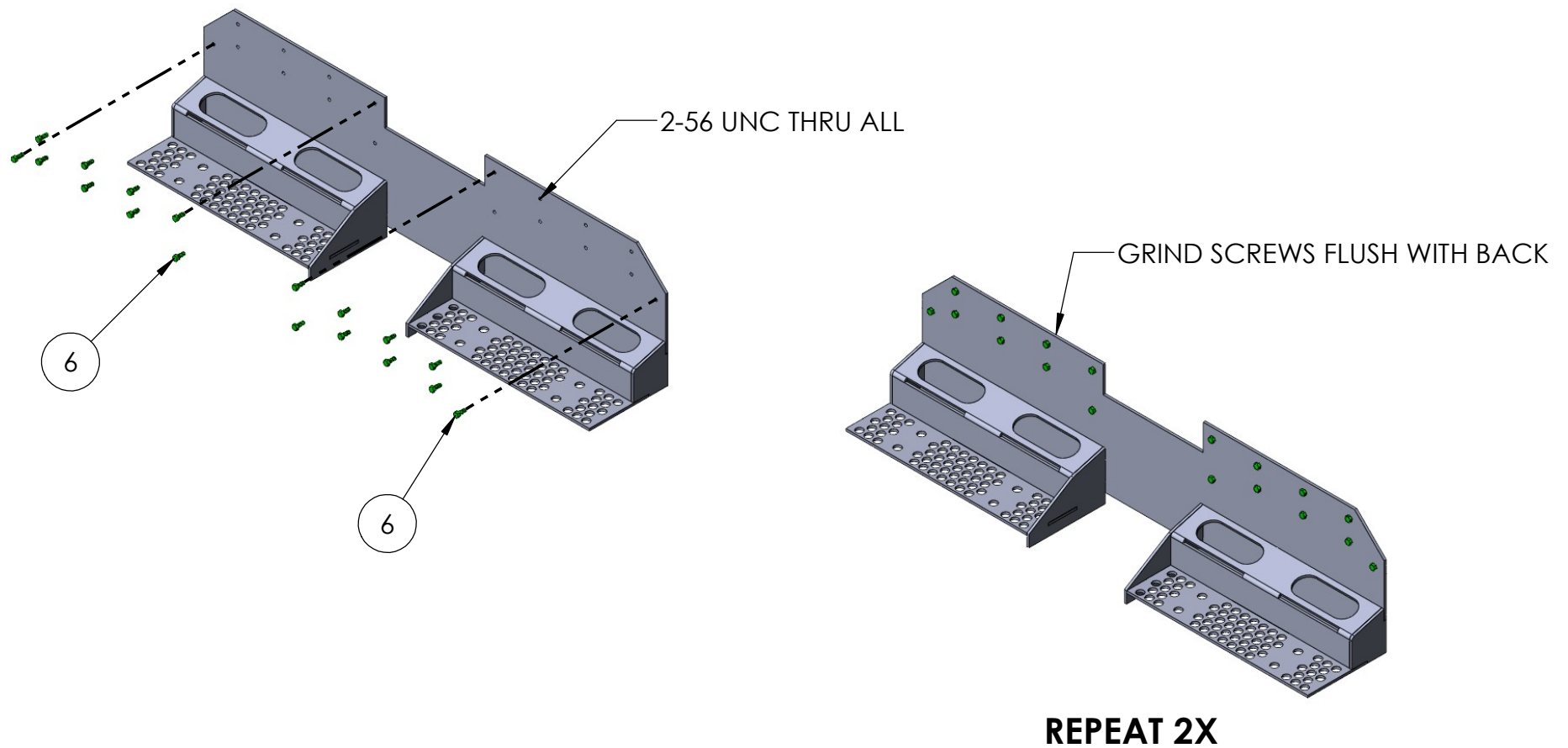
Assemble front plates into pilot as shown below. Parts will snap into place. Plug weld tabs from bottom and rear.



## STEP 3: SCREWS

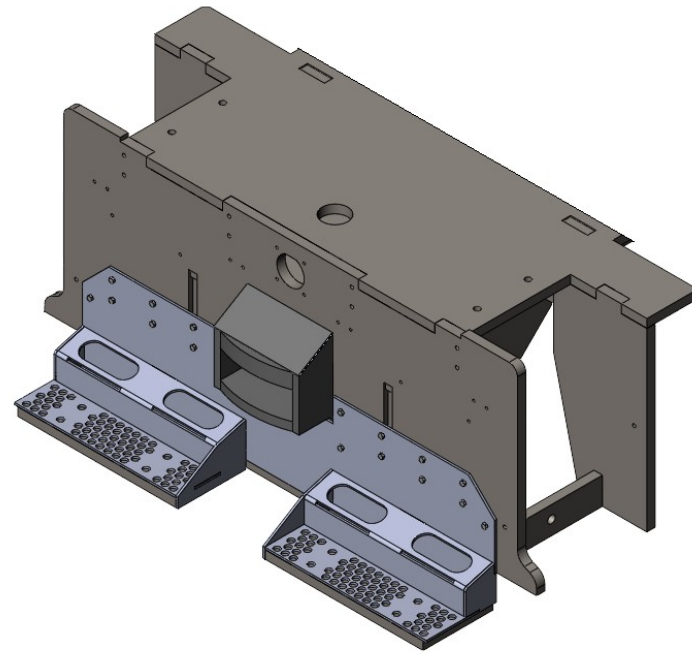
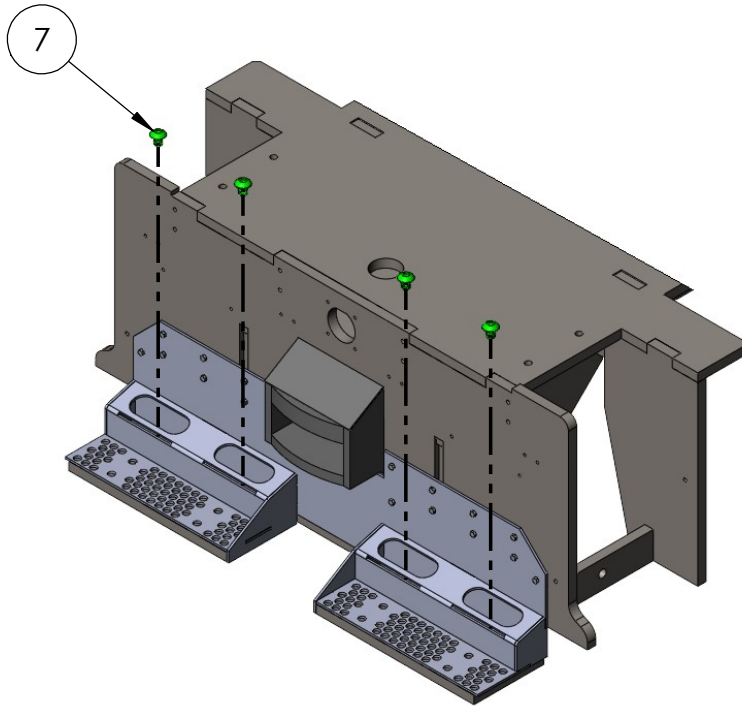
Tap back plate and assemble screws as shown below.

Grind screws flush with back of plate.



## STEP 4: PILOT MOUNTING

After painting, assemble pilot to frame as shown below. Repeat on both ends.



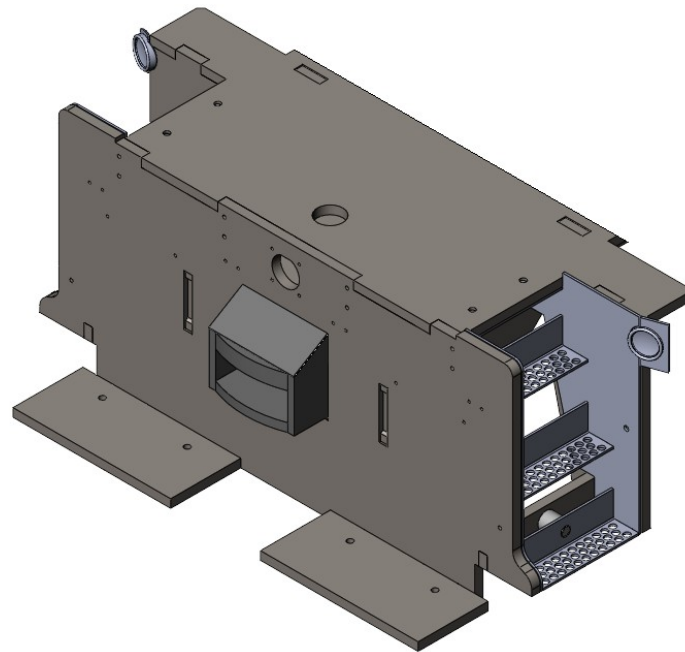
**REPEAT 2X**

## SECTION 4: SIDE STEPS

Use BOM below for pages 4-2 to 4-5.

Recommended process for poling pocket assembly is to glue in place w/ **3M DP420 Epoxy**. Follow manufacturer instructions for surface prep, mixing and curing times.

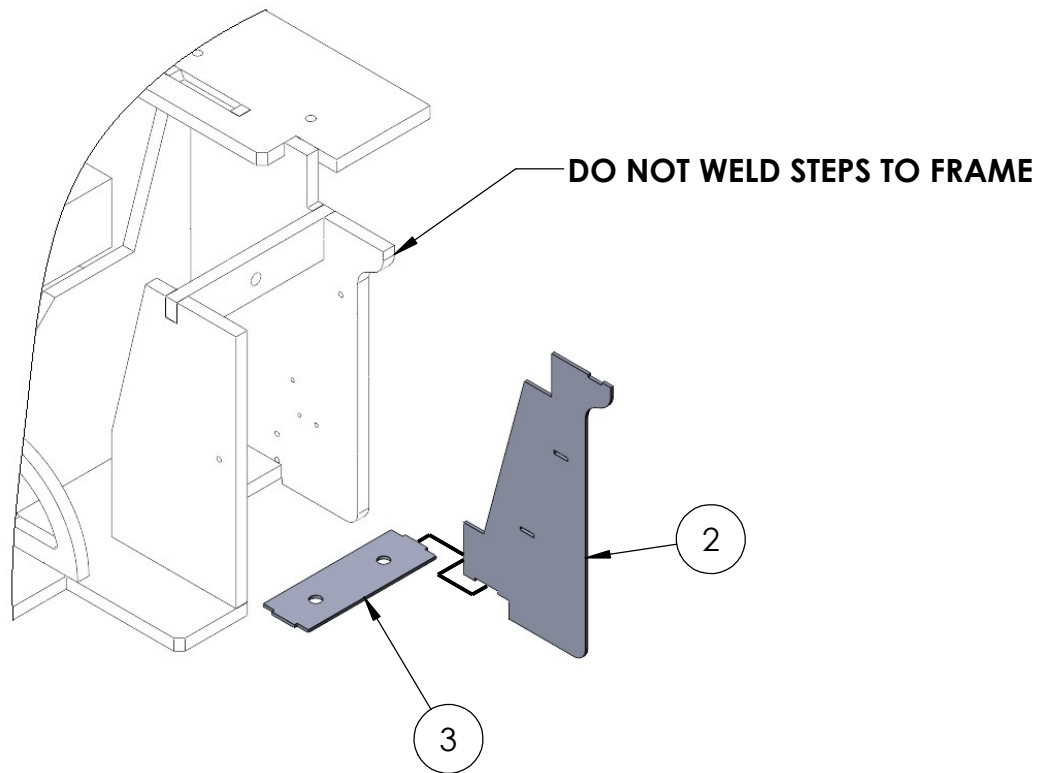
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GP9E75_ST16G_C4	Steps Side A	4
2	GP9E75_ST16G_D4	Steps Side B	4
3	GP9E75_ST16G_E4	Steps Top	4
4	GP9E75_ST16G_G8	Steps Rungs	8
5	GP9E75_ST16G_F4	Steps Bottom Rung	4
6	PDS-1006	Poling Pocket	4
7	MMC_92949A261	10-32 x ¼" BHCS	8
8	MMC_92825A112	#10 x ½" Spacer	4
9	MMC_90633A411	10-32 Nyloc Nut	4



## STEP 1: STEPS

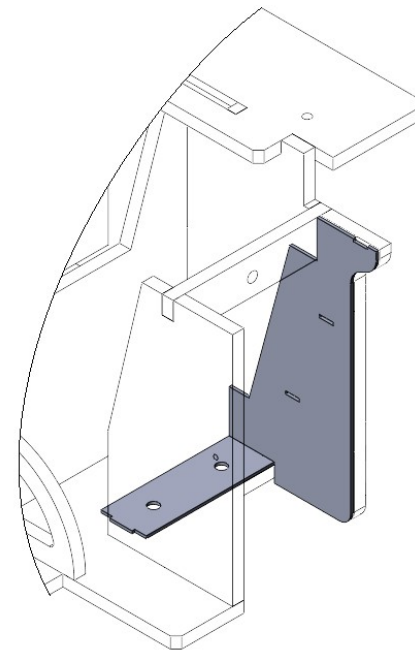
Using the GP9 frame as a jig, assemble side step parts as shown below.

Repeat assembly on opposite side of frame for a left hand version.



**\*\*\*TACK WELD ONLY\*\*\***

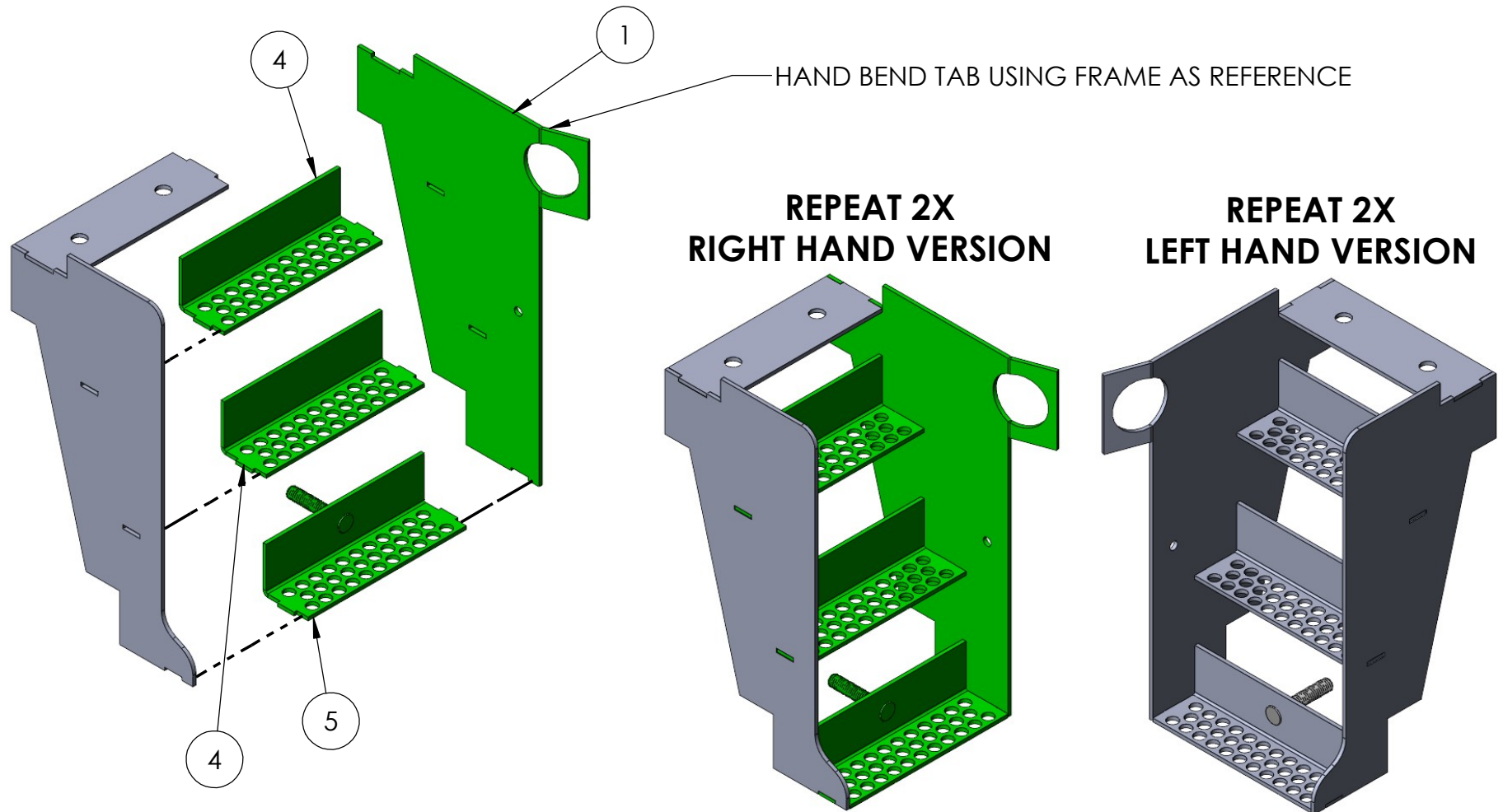
**REPEAT 2X  
RIGHT HAND VERSION**



**REPEAT 2X  
LEFT HAND VERSION  
(NOT SHOWN)**

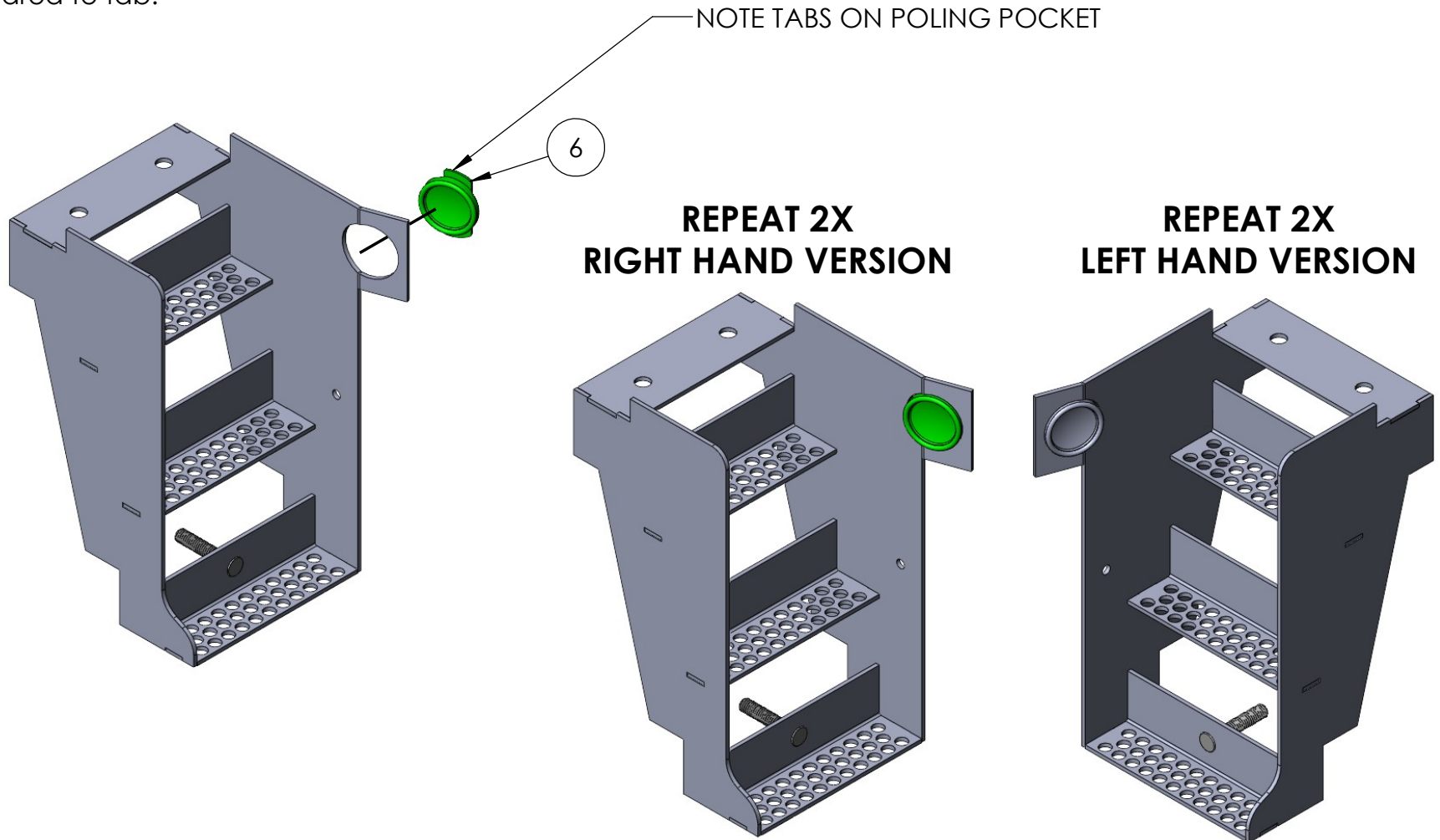
## STEP 2: STEPS

Assemble steps as shown below. After welding, use frame to hand bend tab of Step Side A.



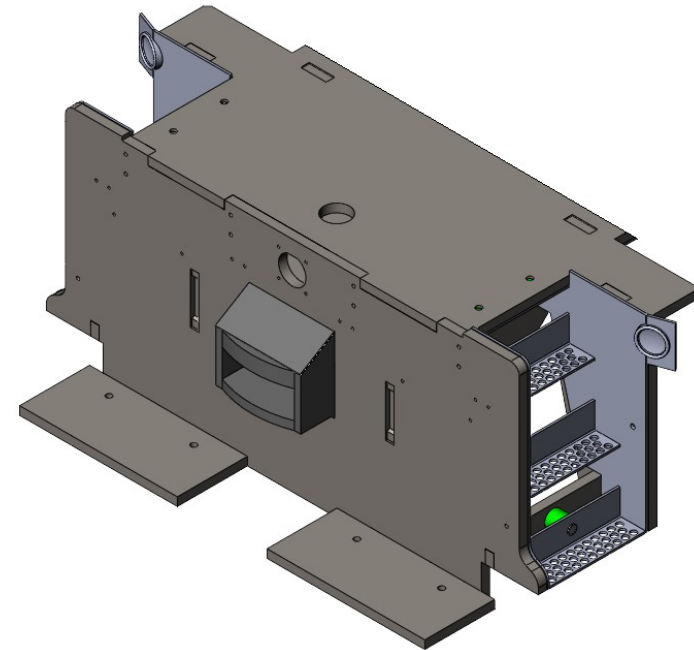
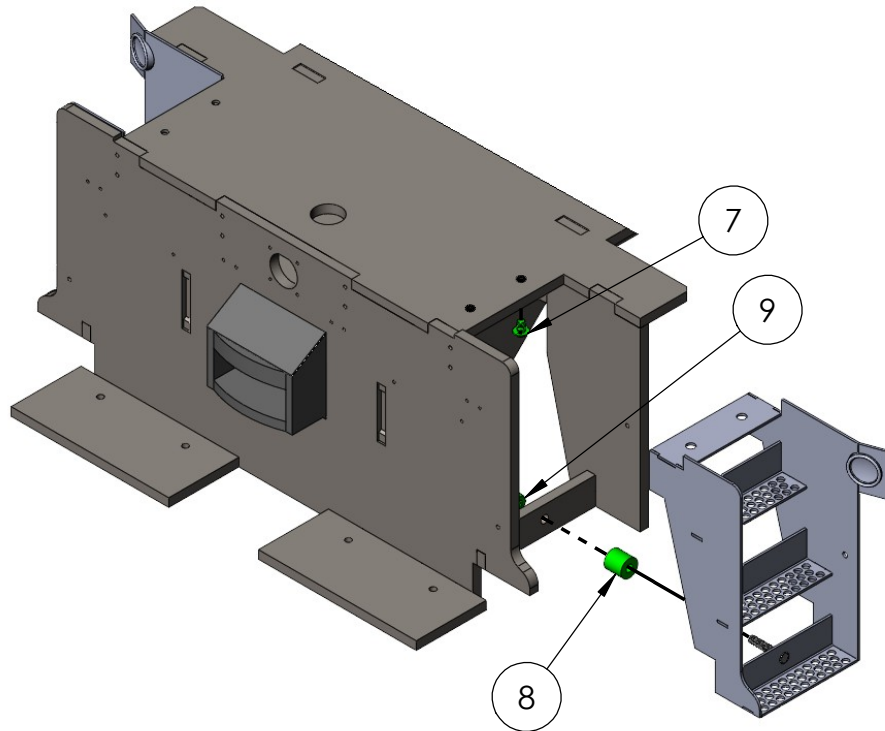
## STEP 3: POLING POCKET

Assemble and glue in poling pocket as shown below. Note orientation of tabs on poling pocket as compared to tab.



## STEP 4: STEPS MOUNTING

After painting, assemble steps to frame as shown below. Repeat on both sides and ends.



**REPEAT 2X**