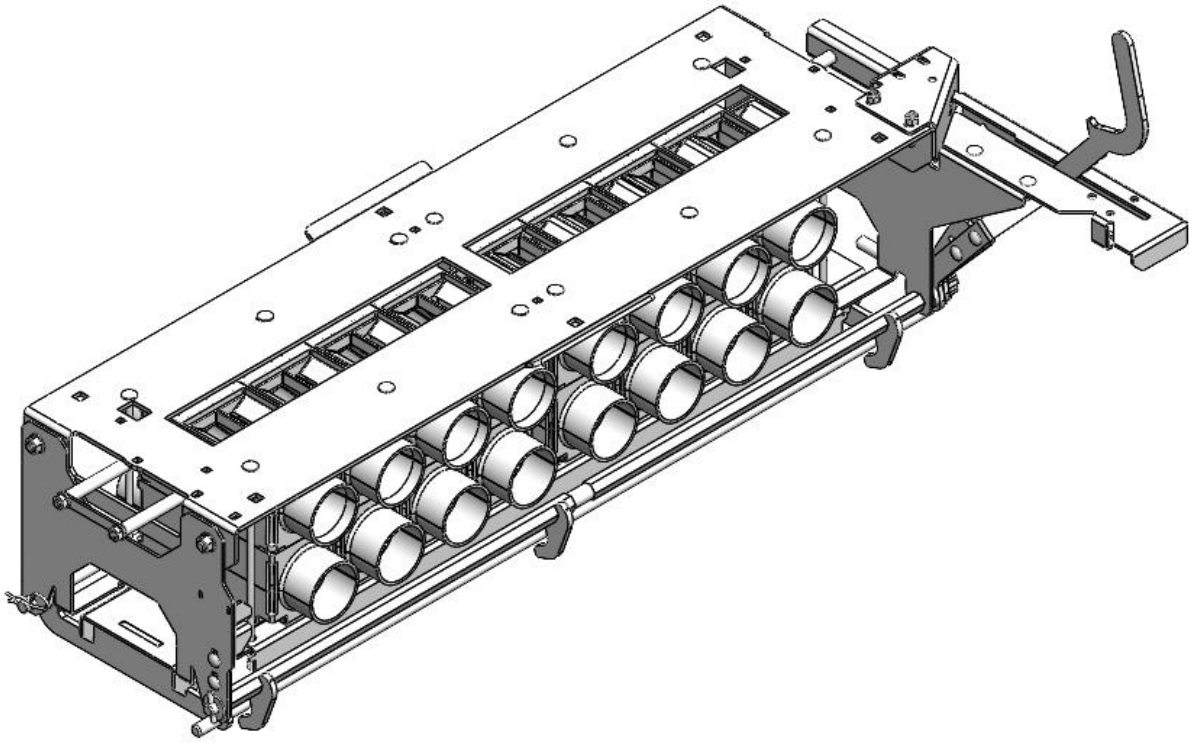
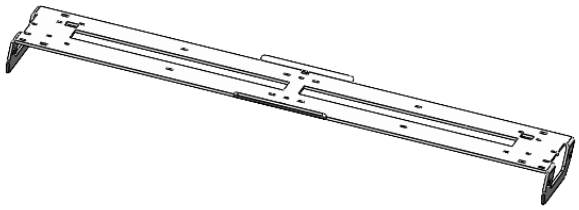
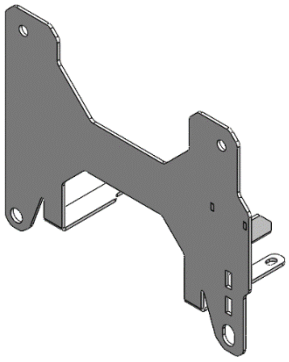
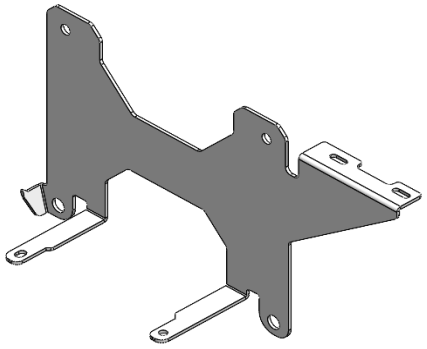
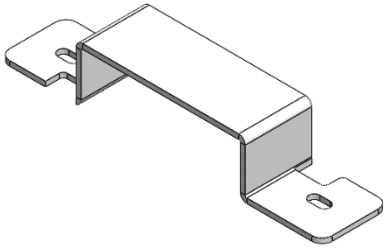
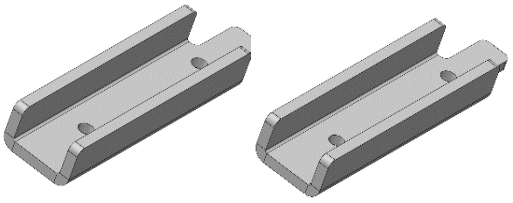
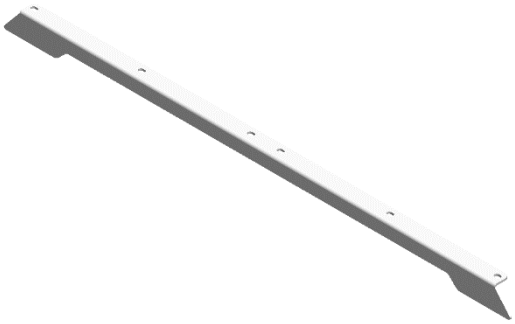
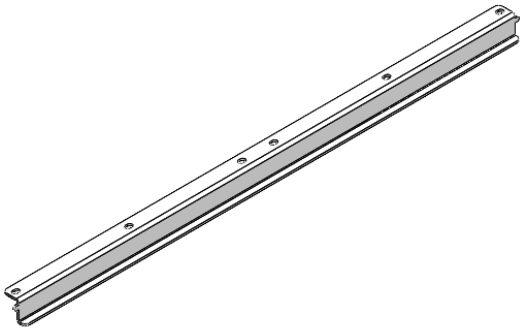
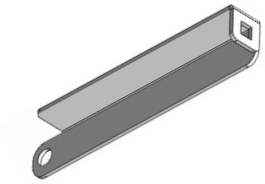
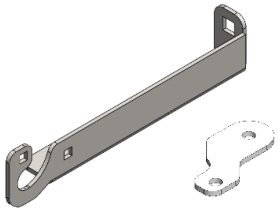
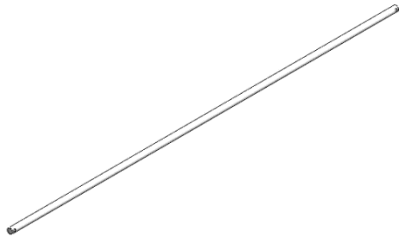
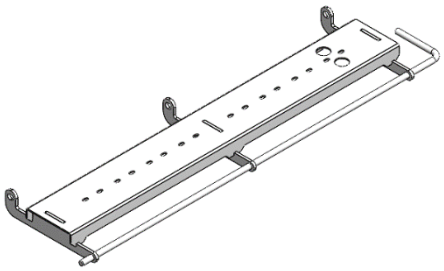
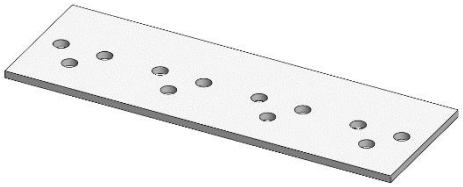
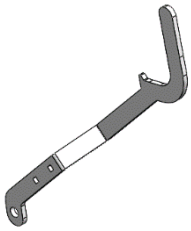
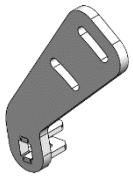
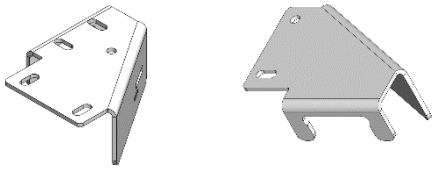
C-SERIES BELOW METER INSTALLATION MANUAL



Includes

 **C-Series Mounting Plate (1)**	**Double Shoot Gasket (1)**
 **Tensioner Side Plate (1)**	 **Lever Side Plate (1)**
 **8 Run Double Shoot Cover (1)**	 **Double Shoot Shift handles (2)**
 **C-Series Bag Hanger (2)**	 **C-Series Tray Hanger (2)**

 **C-Series Pivot Bracket – Solid (1)**	 **C-Series Pivot Bracket – Open (1)**
 C-Series Hex Shaft (1)	 **C-Series Pivot Rod (1)**
 **C-Series Clean Out Door (1)**	 **Clean Out Door Gasket (2)**
 **C-Series Locking Handle (1)**	 **C-Series Handle Tensioner (1)**
 Plenum Gasket (1)	 **Shift Bracket - Left and Right (1)**

Manifold Assembly Hardware

¼" x 8 ½" Carriage Bolts (12)

¼" x 2 ½" Carriage Bolts (4)

¼" x 2" Carriage Bolts (2)

¼" x 5/8" Carriage Bolts (2)

¼" Serrated Flange Nuts (20)

Double Shoot Filler Gaskets (2)

Shift Handle Roll Pins (2)

C-Series Assembly Hardware

3/8" x ¾" Carriage Bolts (4)

3/8" Serrated Flange Nuts (4)

Thick Stainless Washers (3)

Hex Shaft Roll Pin (1)

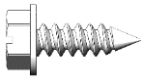
Thick Nylon Washer (5)

Stainless Hairpins (2)

¼" x ¾" Carriage Bolts (2)

¼" Serrated Flange Nuts (8)

M5 x 25MM Hex Head Bolt and Nut



#14 x ¾" Hex Head Screws (16)

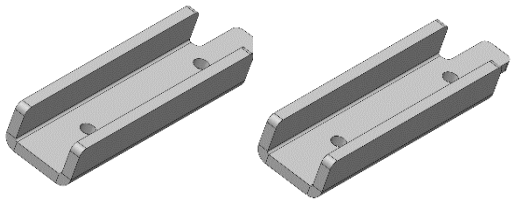
¼" x 5/8" Carriage Bolts (6)

Shift Bracket Hardware Kit (2)

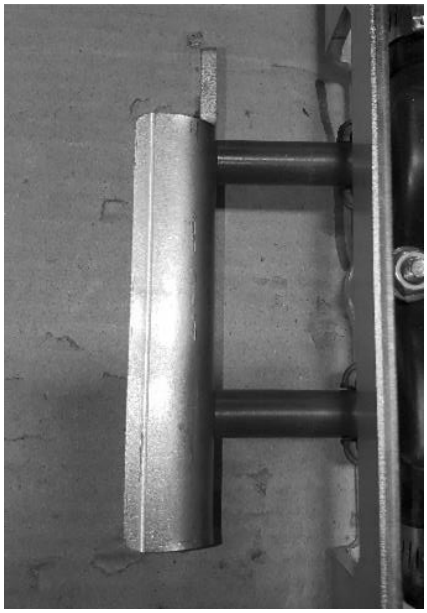
Mounting Hardware	
3/8" Serrated Flange Nuts (6)	**Thick Nylon Washer (6)**
3/8" x 1 ¼" Carriage Bolts (6)	

Slide Gate Assembly

- (2) Double Shoot Shift Handles
- Manifold Assembly Hardware Kit
    - Shift Handle Roll Pins



In this kit, we include stainless steel Shift Handles that can be replaced if desired. The Manifold Assembly Hardware kit includes (2) Shift Handle Roll Pins that replace the roll pins on the left side.



Note the orientation of the handle tabs so they are assembled back to the same position.

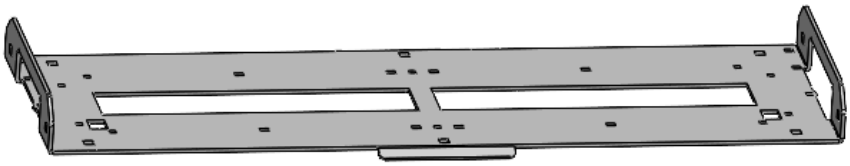
Manifold Assembly

Items Needed:

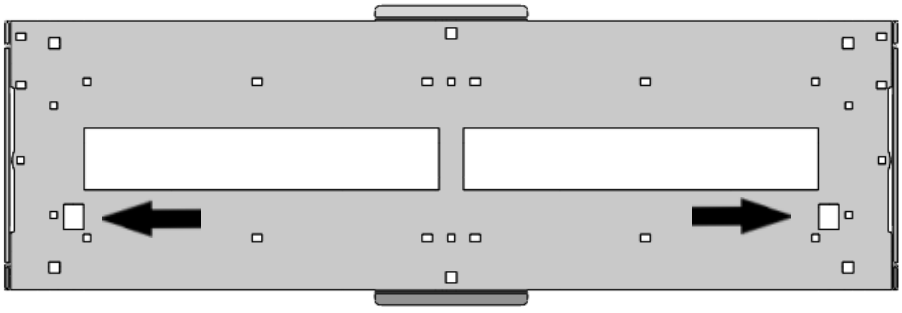
- C-Series Mounting Plate
- Double Shoot Gasket
- (2) C-Series Tray Hanger or (2) C-Series Bag Hanger
- Manifold Assembly Hardware Kit
- JD Plastic Manifolds (Not included)
- JD Manifold Section Cover (Not included)
- JD Air Control Housing Covers (Not included)
- JD Slide Gate Assembly (From previous section)

Place the C-Series Mounting Plate face down so that the tank pressure ports are closest to you.

Face Down

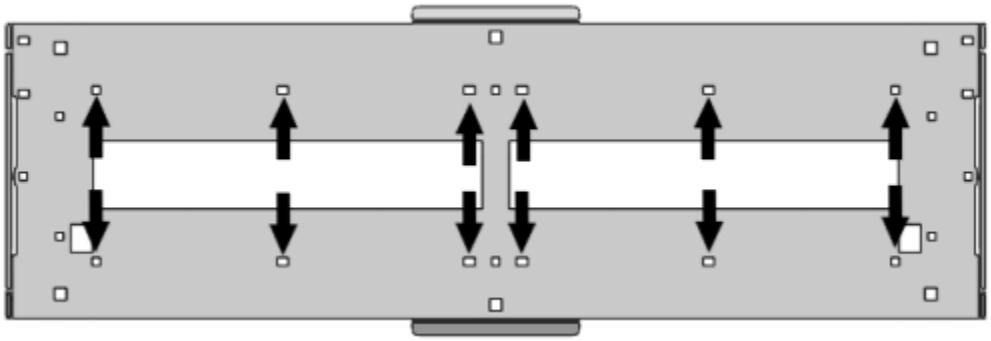


Tank Pressure Ports

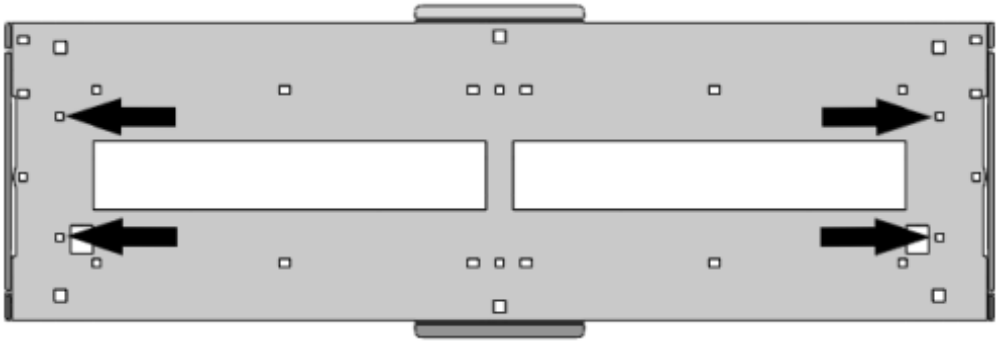


- Apply the Double Shoot Gasket onto the Mounting plate. Remove the paper and apply the adhesive side to the plate. Start at the middle bridge and work your way out to the sides.

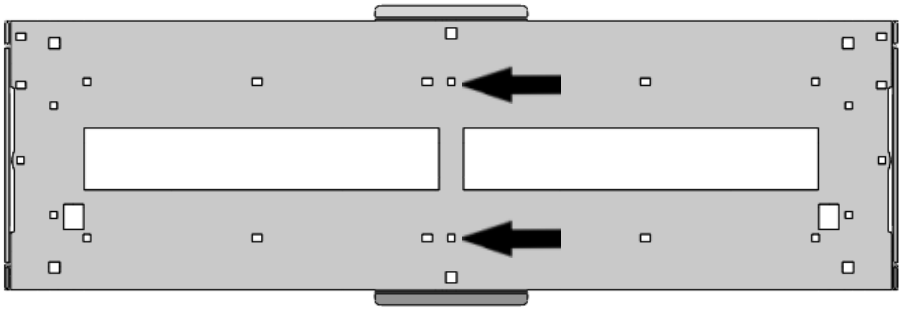
- Insert the (12) ¼ x 8 ½" carriage bolts through the holes shown below facing up/towards you and apply tape to the carriage bolt heads to keep in place.



- Insert (4) ¼" x 2 ½" carriage bolts through the holes shown below facing up/towards you and apply tape to the carriage bolt heads to keep in place.



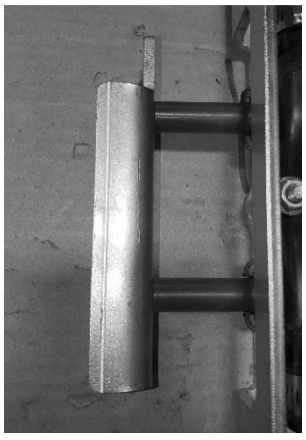
- Insert (2) ¼" x $^{5}/_{8}$" carriage bolts through the holes shown below facing up/towards you and apply tape to the carriage bolt heads to keep in place.

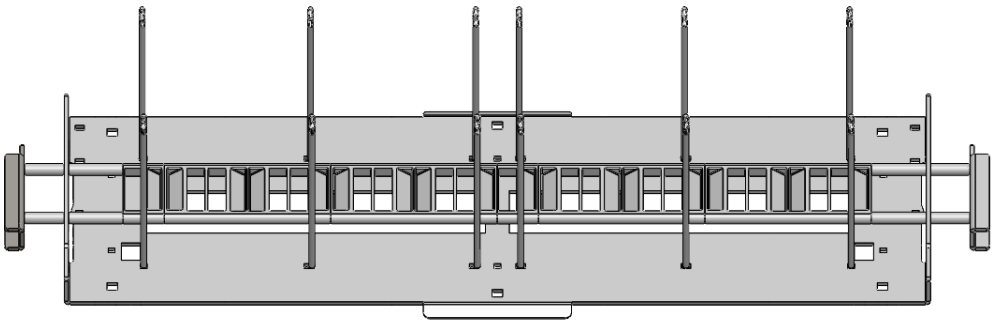


Note: All hardware must have anti-seize applied to prevent binding

- Lay the JD Manifold Section Covers, flat side down, onto the Double Shoot Gasket. Position the covers where the manifold sections will eventually go. These sections will snap into place onto the manifolds.

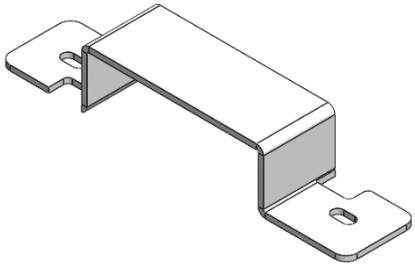
- Place the completed Slide Gate Assembly onto the Manifold section covers
    - The assembly will fit through the holes in the mounting plate
    - Position the slide gate handles so that the tabs are facing away from you as shown





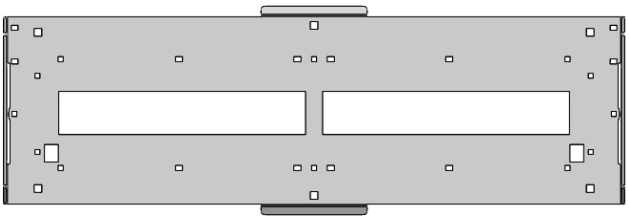
- Install Upper Air Control Housing covers (2) ¼" x 2"
- Do not use any nuts at this time

Ensure O-rings are seated correctly in Air Control Housing grooves.



Install DSFILLER gaskets onto the Double Shoot 8 Run Cover and bolt onto the Mounting Plate using the 2 holes shown below and (2) ¼" x 5/8" carriage bolts.

Assemble the Plastics



- Keep in mind the air flow arrows on the manifolds. This will be different depending on your tank configuration.
- If you still have the Mounting plate in the position shown here, the arrow oriantation will be as listed below.

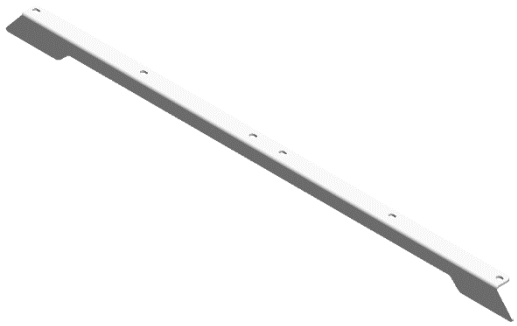
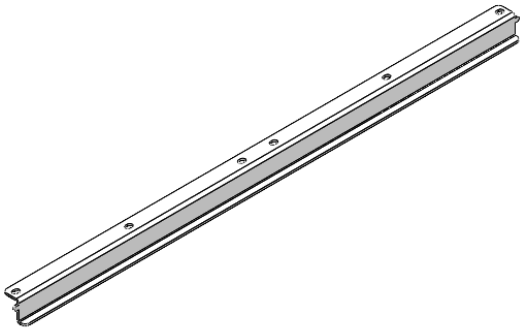
Tow Between Carts

Tow Behind Carts

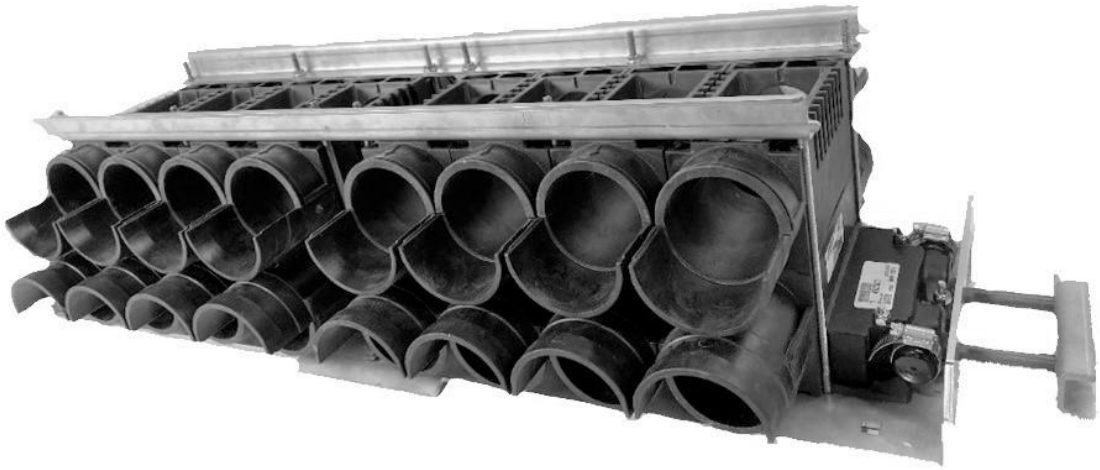
Ensure plastics are seated correctly on caps/slide gate.

- Install Lower Air Control Housing covers while the manifolds are still loose. Secure with ¼" serrated flange nuts.
- Once the plastics have all been assembled, add the appropriate support brackets.

Supplied are 2 sets of support brackets that differ depending on your calibration meathod.

	
C-Series Bag Hanger (2)	**C-Series Tray Hanger (2)**

- Secure brackets with ¼" serrated flange nuts. **Leave the outside 4 nuts off until the next step.**

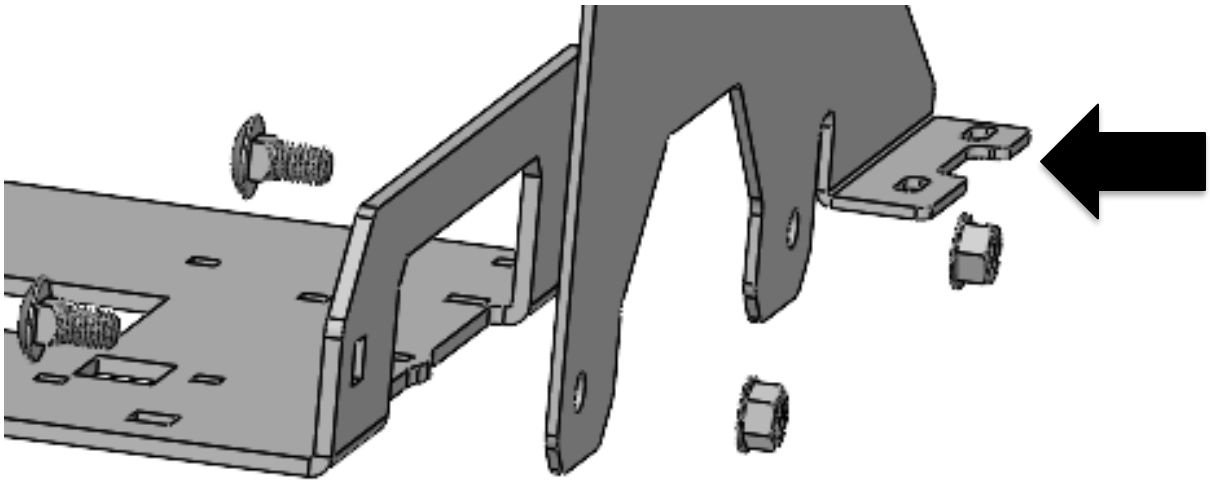


Side Plate Assembly

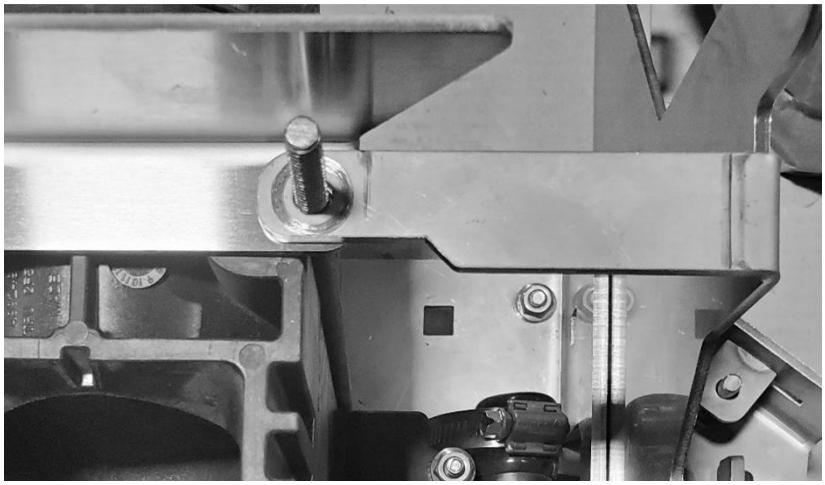
- Attach Lever Side Plate on the right outside of the Mounting Plate as seen below.

  C-Series Assembly Hardware
  - (2) 3/8" x ¾" carriage bolts
  - (2) 3/8" serrated flange nuts
  - (2) ¼" serrated flange nuts

  Ensure the flange of the Lever Side Plate is facing out as shown.

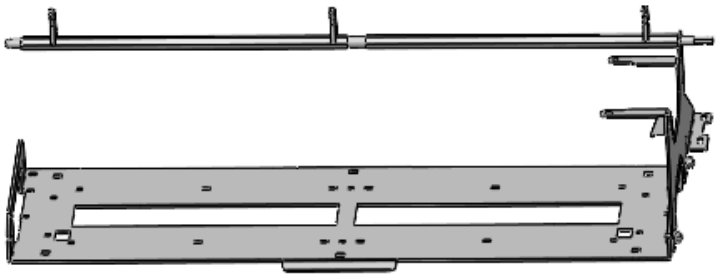


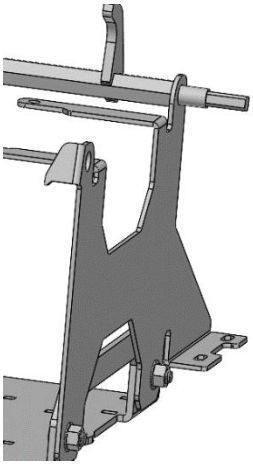
The tabs will go onto the outside bolts that did not have nuts installed from the previous step.



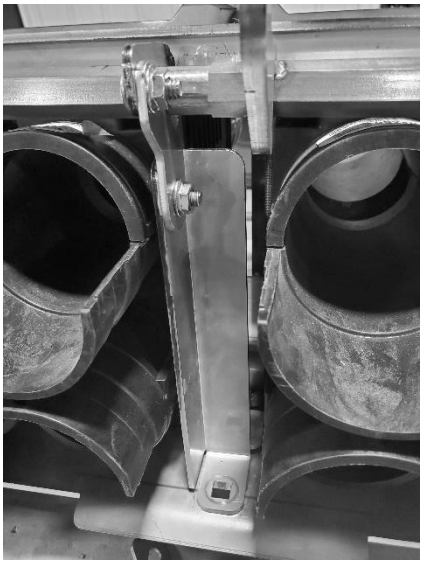
- Secure the remaining manifold bolts with ¼" serrated flange nuts.

- Insert C-Series Hex Shaft into the Lever Side Plate by sliding the square end through the hole.





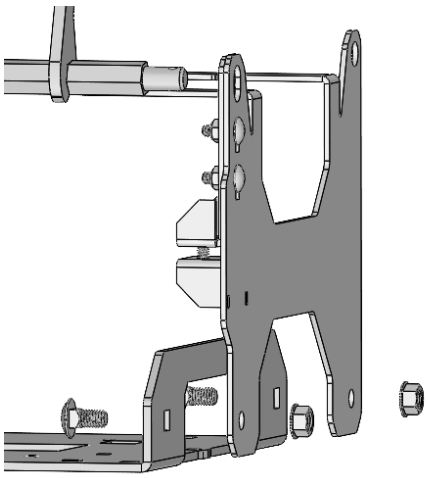
- Loosen bolts on the C-Series Pivot Bracket – Open and install onto the Hex Shaft in the middle section. Tighten the ¼" carriage bolts.



The Bracket will remain unsecured to mounting plate until later.

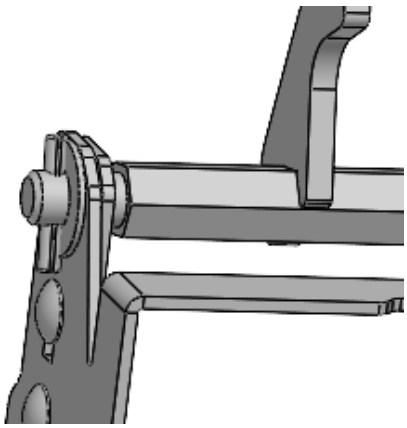
- Attach Tensioner Side Plate onto the outside of Mounting Plate inserting C-Series Hex Shaft through tensioner hole.

(2) 3/8" x ¾" carriage bolts
(2) 3/8" serrated flange nuts
(2) ¼" serrated flange nuts



- Place side plate tabs onto manifold bolts and secure with ¼" serrated flange nuts.

- Install Thick Stainless Washer onto end of hex shaft and secure with roll pin.



Clean Out Door Assembly

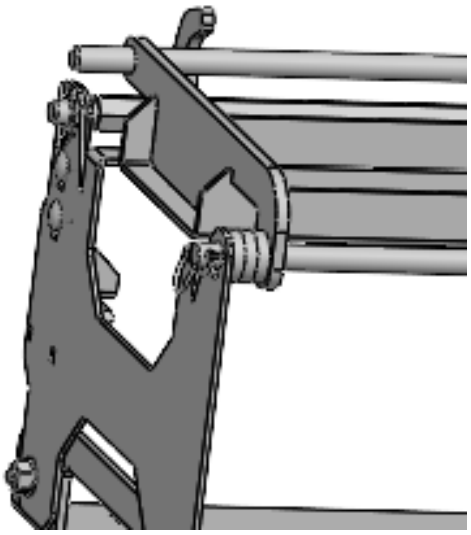
Items needed in this step include:

- C-Series Clean Out Door
- C-Series Pivot Rod
- C-Series Pivot Bracket (Solid)
- (3) Thick Nylon Washers
- (2) Thick Stainless Steel Washers
- (2) Stainless Hairpins

- Lay the C-Series Clean Out Door onto the manifolds and install using the C-Series Pivot Rod.

- The C-Series Pivot Bracket will be installed in the middle as shown. The Bracket will remain unsecured to mounting plate until later.

- On the left side, install (3) Thick Nylon Washers onto the Pivot Rod in between the Clean Out Door and the Tensioner Side Plate (as shown).



- Secure ends with one Thick Stainless Steel Washer and one Thick Stainless Hairpin on each side.

Clean Out Door Plugs

Items needed in this step include:

- (8) JD Manifold Plugs (Not included)
- (2) Clean Out Door Gasket
- (16) #14 x ¾" Hex Screws

- Open the Clean Out Door.

- Put all JD Manifold Plugs into the Manifolds. The plugs have a notch so it will only fit one way.

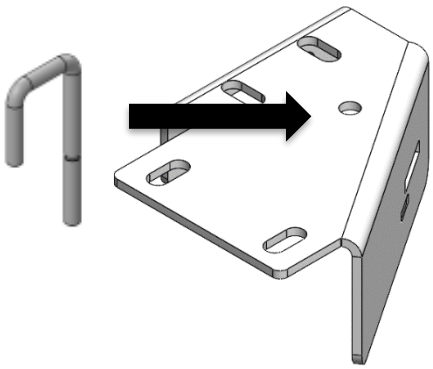
- Install the provided plug gaskets (2) over the plugs. (one for each half)

- Close the door over the gaskets/plugs and secure to the door with screws. Do not tighten fully until mounted onto meter housing.

Shift Bracket Assembly

Rotate the assembly right side up so that the cleanout door is on the bottom.

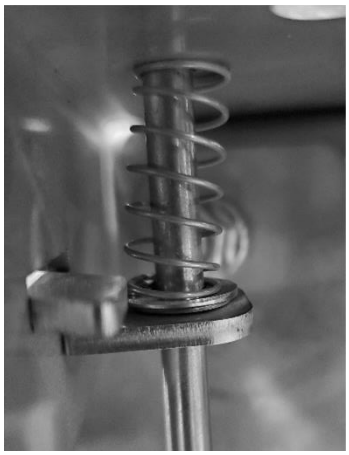
Shift bracket pin assembly



- Install the Shift Bracket Hardware onto the Shift Bracket – Left. This pin will hold the Slide Gate Assembly into the top or bottom shoot position

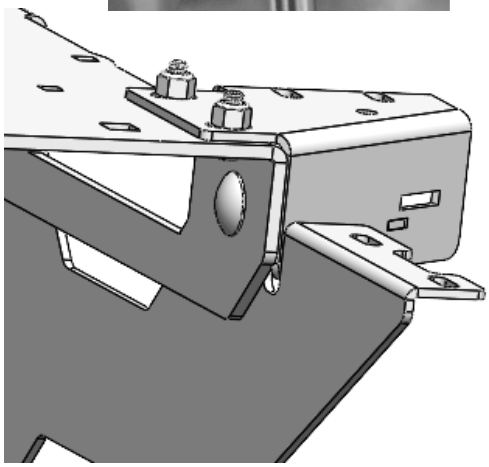
- The Shift Bracket Hardware includes:
  - Spring
  - Flat Washer
  - Clip

- Put the Spring and Washer onto the pin, between the top of the bracket and the tab. Use the notch in the pin to install the clip



- Attach Shift Bracket – Left to the Mounting Plate using (2) ¼" x $^{5}/_{8}$" carriage bolts and ¼" serrated flange nuts. Do not fully tighten.

- Do the same on the other side for the Shift Bracket - Right. Do not fully tighten.



Adjusting Slide Gate / Shift Brackets

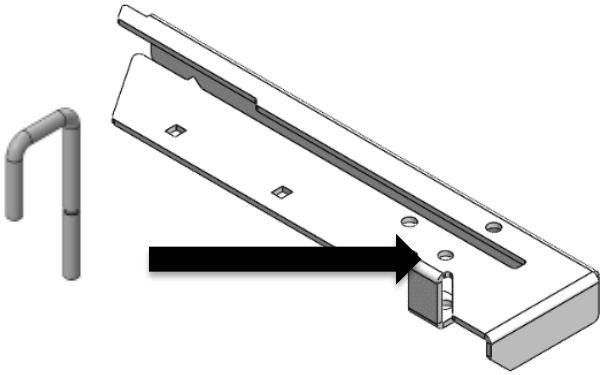
- Push the Slide Gate into the Top Run Position

- Tighten up the hardware on both of the Shift Brackets to make sure that the stops for both the Top and Bottom Run are in the right position.

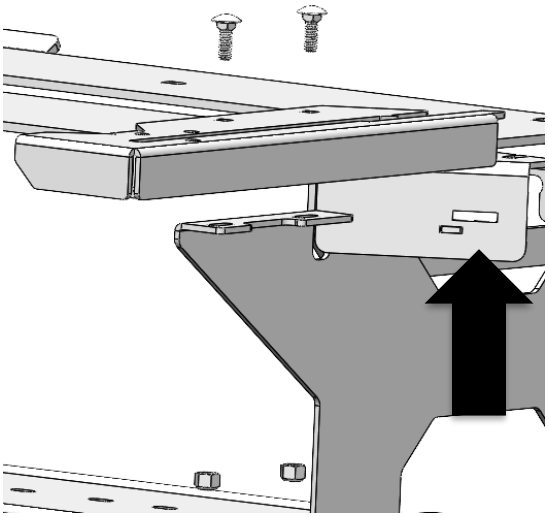
- Test to make sure that the Slide Gate Assembly and the Shift Brackets are functioning properly.

Clean Out Door Handle Assembly

Shift bracket pin assembly

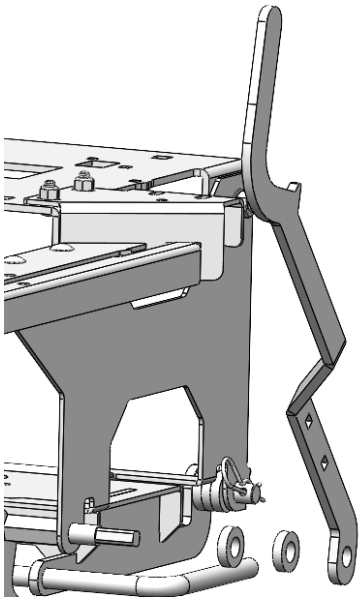


- Install the Shift Bracket Hardware onto the Shift Bracket
- Follow the same steps to install the pin hardware from the previous page



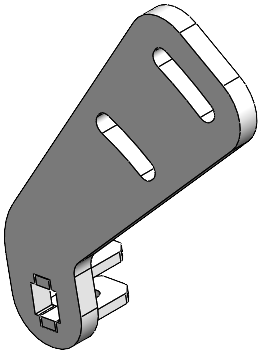
- Attach the C-Series Latch Bracket to the Lever Side Plate using (2) ¼" x $^{5}/_{8}$" carriage bolts and ¼" serrated flange nuts. Do not fully tighten

The tab on the Latch Bracket goes though the slot on the Shift Bracket (see arrow)

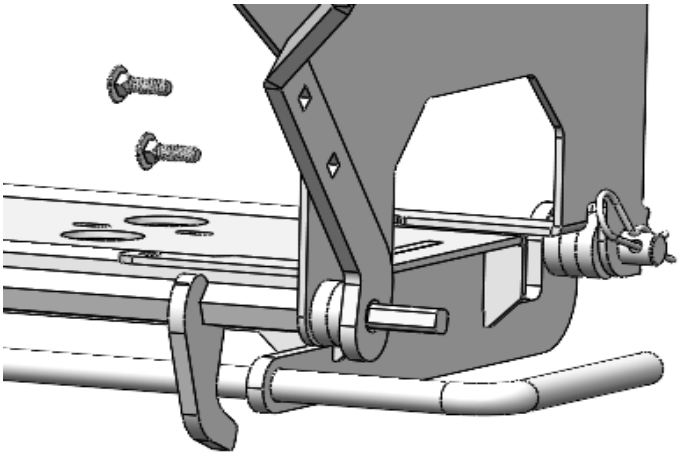


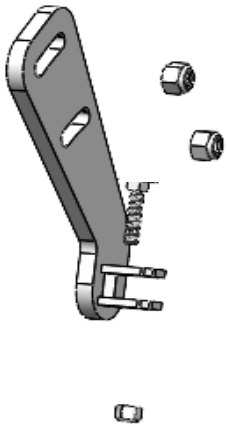
- Insert C-Series Locking Handle through Latch Bracket slot and place on Hex Shaft with two Thick Nylon Washers in between as shown.

- Place the C-Series Lever Tensioner onto the shaft and install with hardware (M5 x 25MM hex head bolt and locking nut). **Make sure that the hooks on the Hex Shaft are somewhat in the tightened position.**



- Adjust the Locking Handle so the holes line up with the Lever Tensioner and install with (2) ¼" x ¾" carriage bolts and (2) ¼" serrated flange nuts. Do not fully tighten.





Mounting Instructions

Items needed in this step include:

- (1) PLSEAL
- (6) 3/8" x 1 ¼" Carriage Bolts
- (6) 3/8" Serrated Flange Nuts
- (6) Thick Nylon Washers

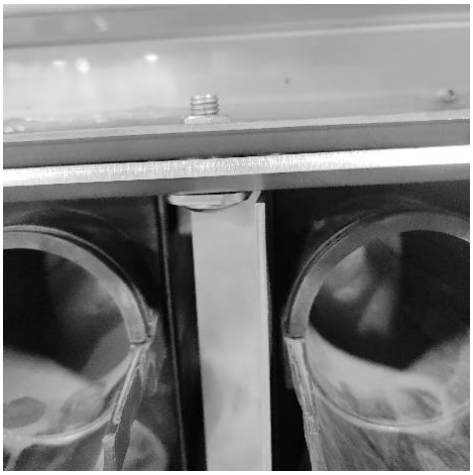
- Apply PLSEAL on top of Mounting Plate.

- Attach the 4 corners of the assembly to the meter using (4) 3/8" x 1 ¼" carriage bolts and (4) 3/8" Serrated Flange Nuts.

- Use the Thick Nylon Washers as spacers to go between the assembly and the meter housing.

  The Shift Bracket with the locking pin should be on the same side as the Meter cartridge opening.

- When installing the 2 center bolts, they will also need to secure the center support brackets
  - (2) 3/8" x 1 ¼" carriage bolts
  - (2) 3/8" serrated flange nuts
  - (2) Thick nylon washers

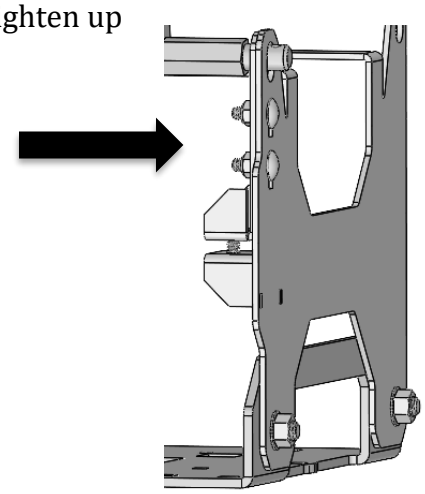


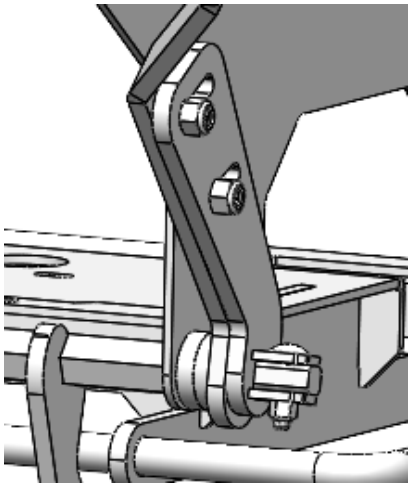
Adjustments

Once the manifold has been installed, there is a few remaining things to fasten/adjust.

- Make sure that the clean out door is seated properly and tighten the hex head screws

- Adjust the Hex Shaft by tightening/loosening the adjuster bolt on the tensioner side plate. The hooks on the hex shaft should be level across the assembly to apply equal pressure to the clean out door. Once adjusted, tighten up the bolts seen here:



- Adjust Latch Handle by making sure that the handle both locks in the up position and provides adequate pressure in the down position.

- Once that position is found, tighten the bolts