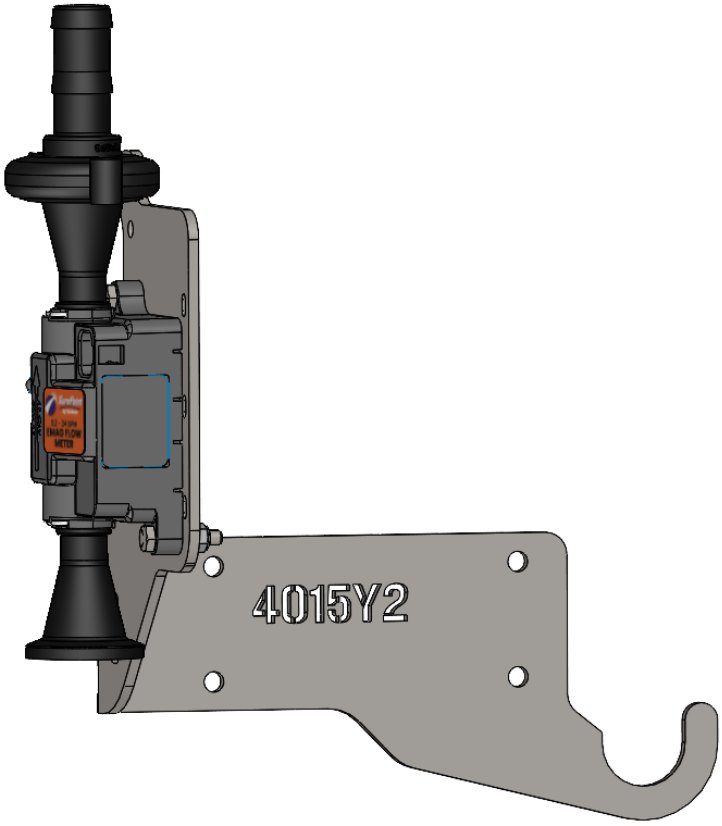
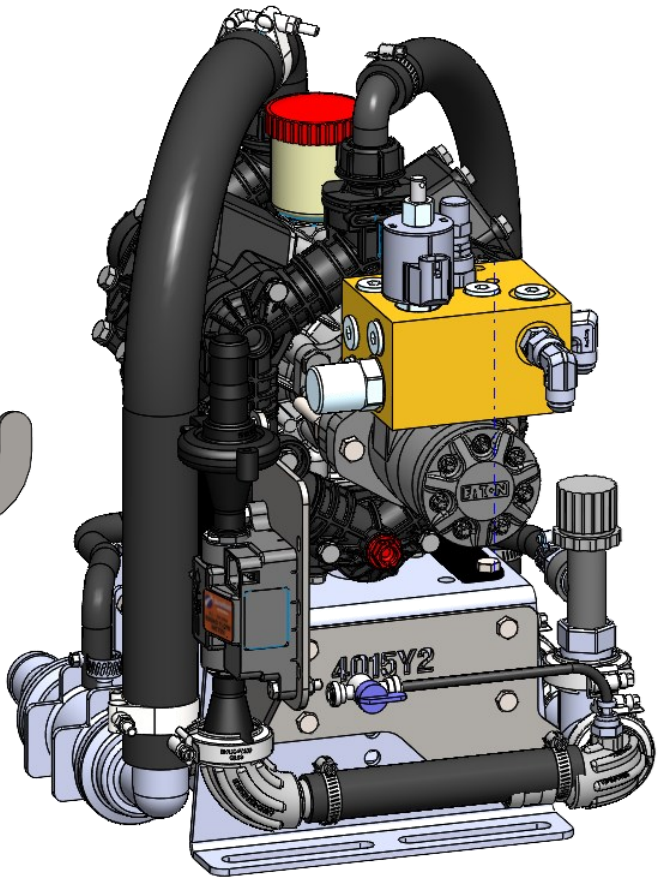
396-6656Y1

PR17/PR30 Pump, Orion 3 DN10 Flowmeter Retrofit Kit Instructions



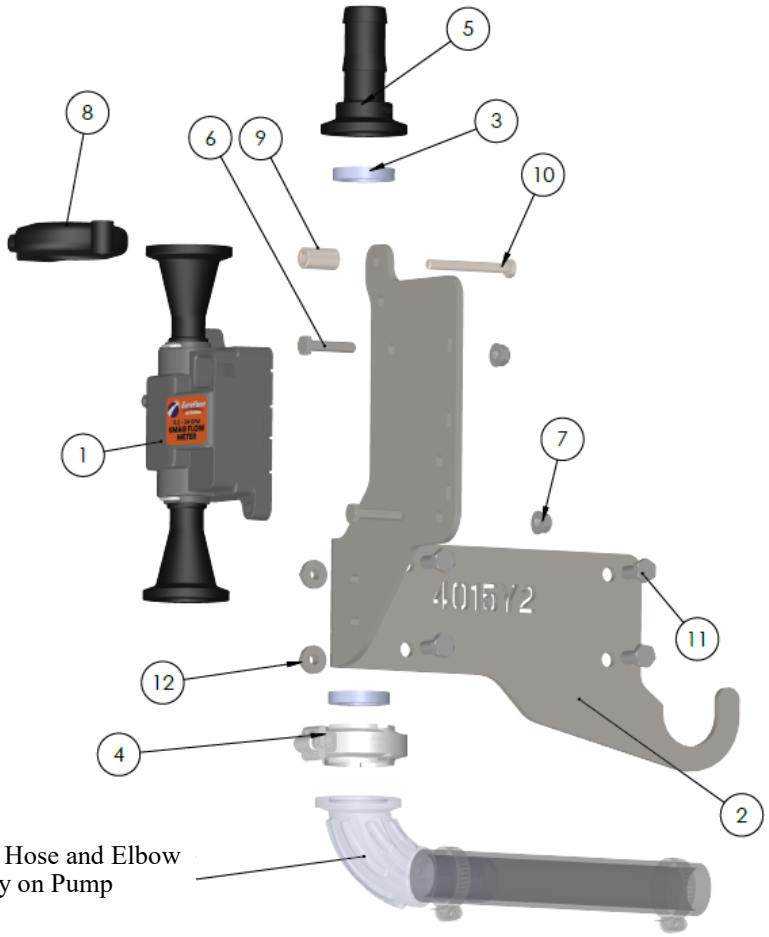


Kit Number:

500-02-2401 : DN10 Orion 3 Flowmeter Retrofit Kit for PR17

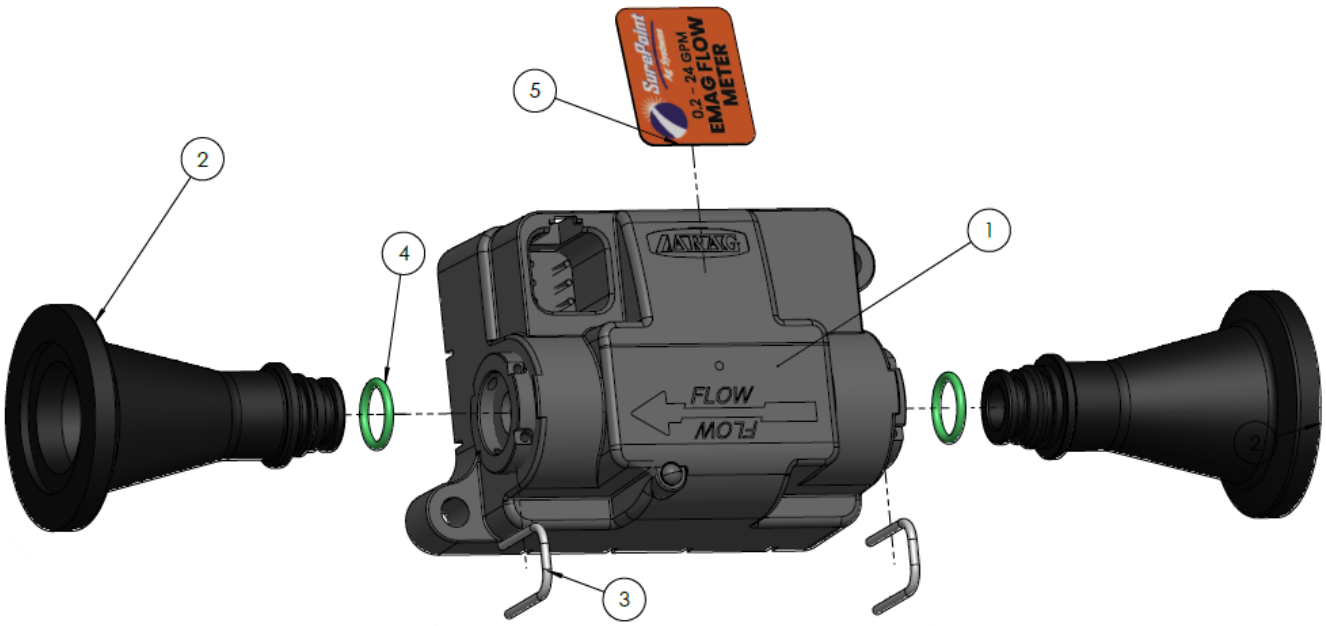
Parts List and Exploded View

ITEM #	Part Number	Description	QTY
1	204-01-462032A-DN10	Flowmeter Assembly, Orion3 Emag, 0.2 - 24 GPM, M100 Flange	1
2	410-4015Y2-BK	FM Support Bracket - PR17 and PR30	1
3	105-100G-H	1" EPDM Manifold Gasket	2
4	105-FC100	1" Manifold Clamp	2
5	105-100BRB	1" Manifold x 1" HB	1
6	300-040108-SS	1/4" x 1-1/2" Hex Head Bolt - SS	2
7	323-04-SS	1/4" Flange Nut - SS	2
8	105-UFC100	1" UF Clamp	1
9	400-6633Y1	Spacer Bushing, Steel 1/2"OD x 1/4" ID x 7/8" Long	1
10	300-M655MM-SS	M6 x 55mm, Hex Flange Head Bolt - SS	1
11	300-050012-SS	5/16" x 3/4" Hex Head Bolt - SS	4
12	323-05-SS	5/16" Flange Nut - SS	4
13	201-5954Y1	3-pin Amp Superseal to 6-pin Deutsch Orion 3 Flow Adapter	1
14	350-1608	SS Hose Clamp - Size 16 - 1-1/2" Diameter (fits 1" AG200)	2
15	105-100BRBSWP90	1" Manifold x 1" HB - 90 Degree Sweep	1
16	124-01-G11056-V	O-Ring, Viton, T1 Fork Fittings	2
17	124-02-010001	T1 fork	2



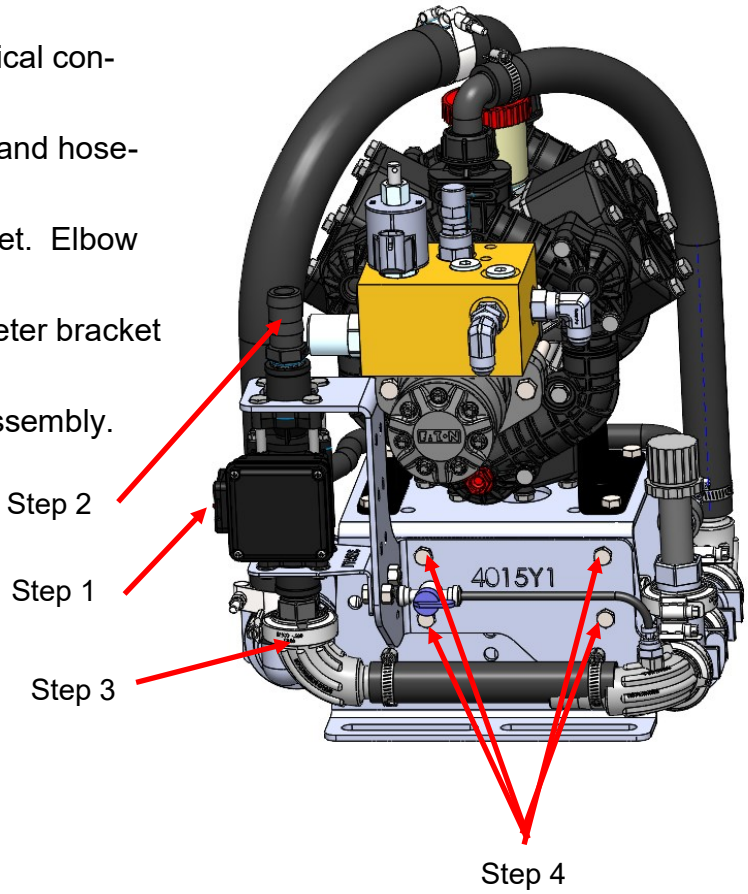
Parts List and Exploded View

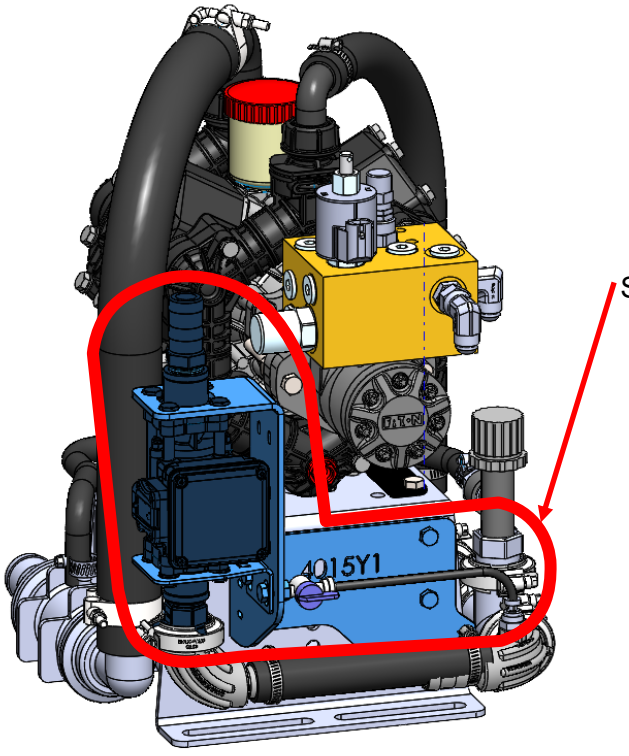
ITEM #	Part Number	Description	QTY
1	204-01-462032	Flowmeter, Orion3 Emag, 0.2 - 24 GPM, T1F Connection	1
2	120-M100T1M	Flange Fitting, M100 x T1M Fork Fitting	2
3	124-02-010001	T1 Fork	2
4	124-01-G11056-V	Viton O-Ring for T1 Fittings	2
5	398-20-6313Y1	Decal, EMAG (Orion 3) Flowmeter 0.2—24 GPM	1

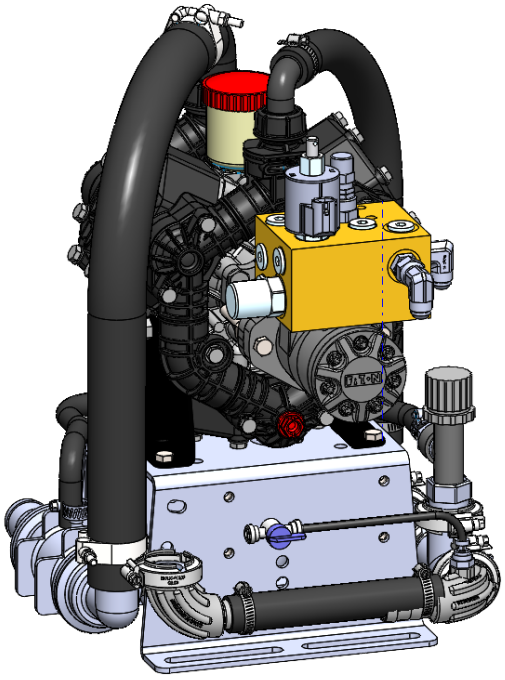


Step by Step Instructions
Old Flowmeter Removal

1. Disconnect harness from flowmeter electrical connection point.
2. Detach hose from flowmeter outlet. Hose and hose-clamp will be reused if possible.
3. Loosen 1” manifold clamp at flowmeter inlet. Elbow and hose will remain connected to pump.
4. Remove 4x 5/16” hex bolts holding flowmeter bracket to pump base.
5. Remove and discard flowmeter/bracket assembly.

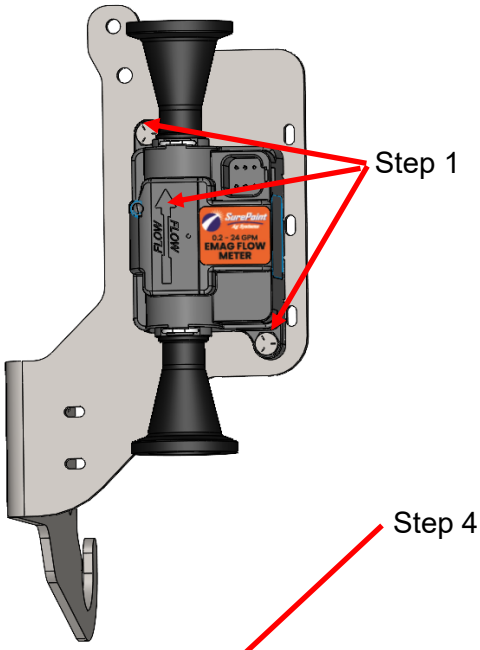


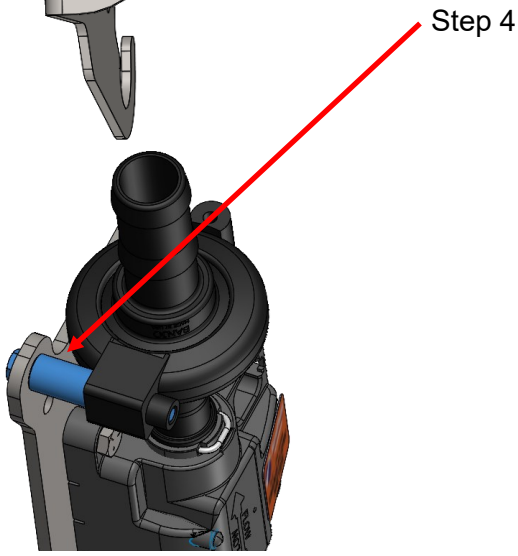


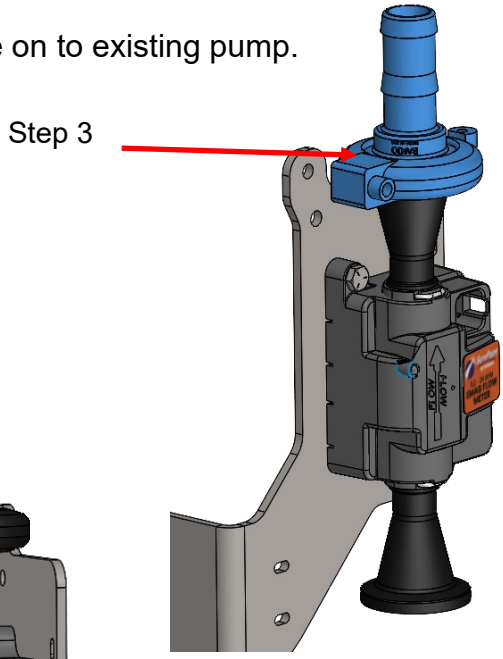


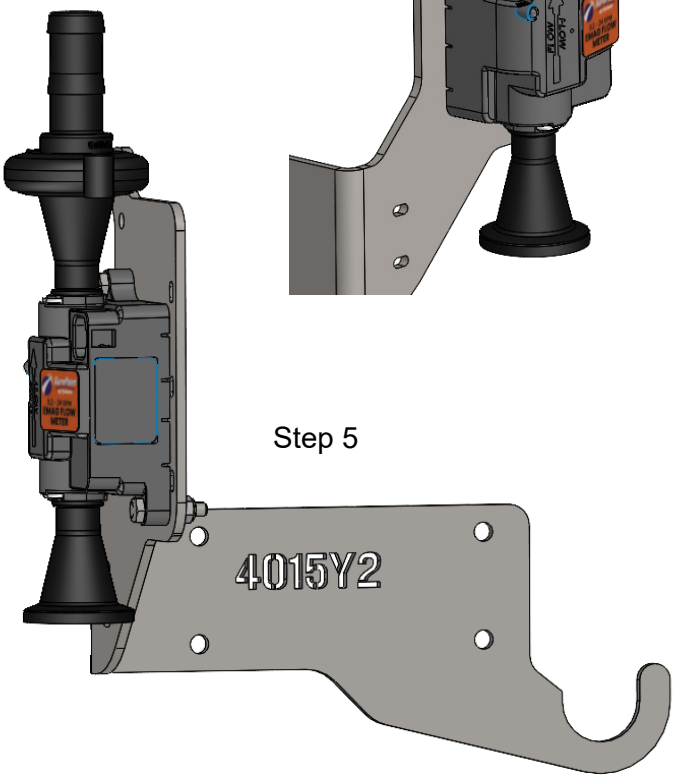
Step by Step Instructions
Pre-Assembly– Flowmeter/Bracket

1. Attached new flowmeter assembly [204-01-462032A-DN10] to new bracket [410-4015Y2-BK], using two bolts [300-040108-SS — 1/4" x 1-1/2" Hex Head Bolt - SS] and nuts [323-04-SS — 1/4" Flange Nut - SS].
   Ensure Flowmeter flow direction arrow is pointing up.
2. Remove the M6 bolt that comes in the 1” clamshell manifold clamp [105-UFC100 — 1" UF Clamp] and discard bolt.
3. Position 1” gasket [105-100G-H — 1" EPDM Manifold Gasket], and 1” hose barb fitting [105-100BRB — 1" Manifold x 1" HB] on the flowmeters outlet flange (top), loosely secure with clam shell clamp [105-UFC100 — 1" UF Clamp] . Clamshell orientation is important; —captured nut in clamp should be on “left” side of pipe axis and capture nut half of the clamshell should be “away” from the bracket metal.
4. Using M6 x 55mm hex bolt [300-M655MM-SS — M6 x 55mm, Hex Flange Head Bolt - SS] and 7/8” Spacer Bushing [400-6633Y1 — Spacer Bushing, Steel 1/2"OD x 1/4" ID x 7/8" Long], secure clamshell clamp to bracket through top hole. This connection will also clamp and seal the 1” manifold connection to the hose barb fitting.
5. Full flowmeter and bracket assembly is ready to assemble on to existing pump.



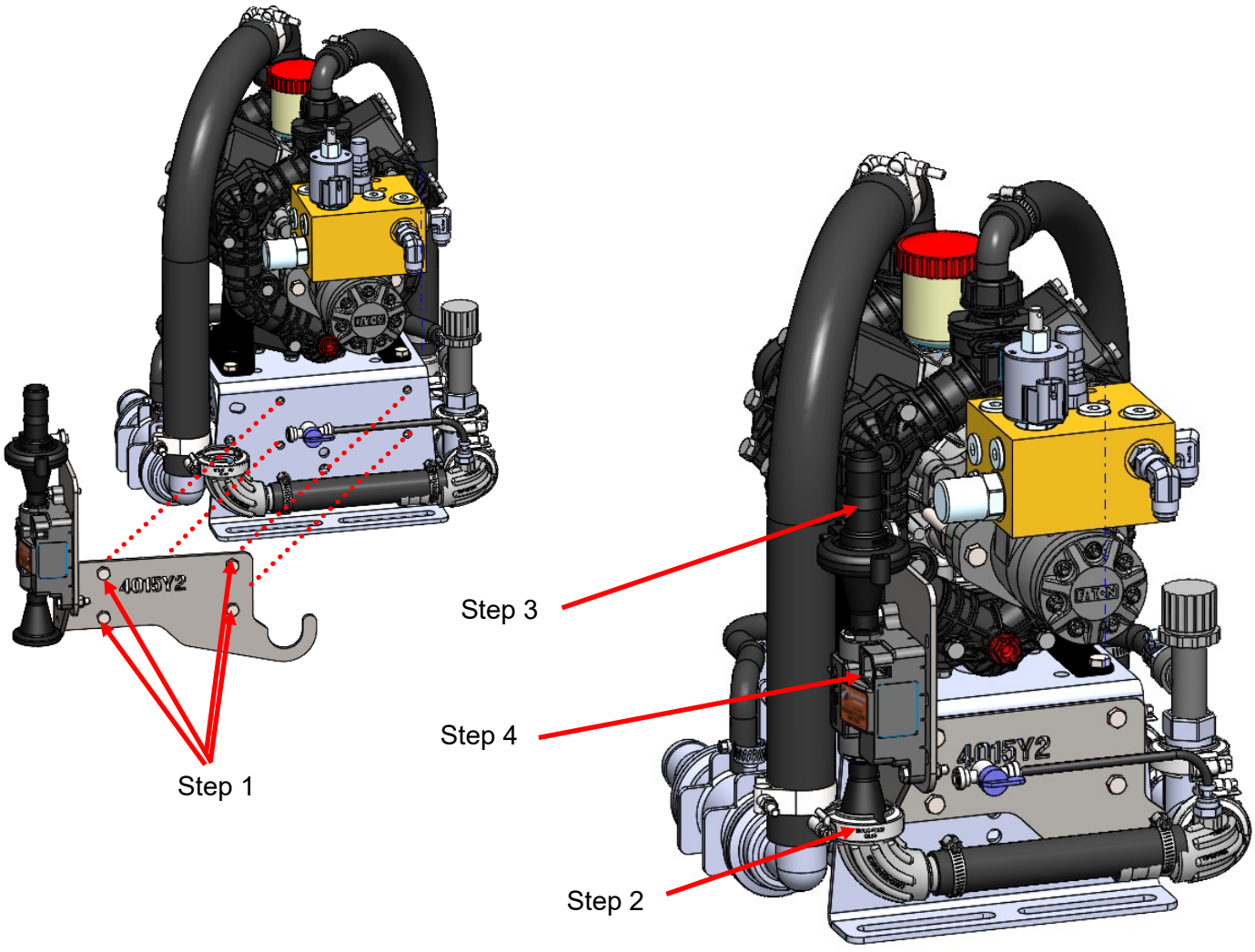






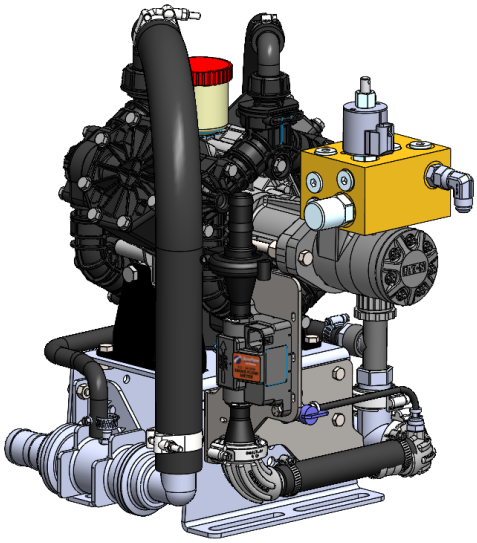
Step by Step Instructions Assembly– Flowmeter/Bracket to Pump

1. Attach the new flowmeter/bracket pre-assembly to pump base, using 4 bolts [300-050012-SS — 5/16" x 3/4" Hex Head Bolt - SS] and nuts [323-05-SS — 5/16" Flange Nut - SS]. New flowmeter bracket will attach to pump base using same 4 holes in pump base that the old bracket was attached to.
2. Reattach 1” manifold elbow to inlet flange of new flowmeter, using gasket and clamp.
3. Reattach flowmeter outlet hose to flowmeter hose barb using hose clamp.
4. Using supplied harness adapter connect “flowmeter-labeled” harness lead to 6-pin connection point on new flowmeter.
5. Update flowmeter calibration number in controller settings (see next page).



PR17 & PR 30 Electromagnetic Flowmeter Update Part Info Sheet

0.2 - 24 GPM Orion 3 DN10 Flowmeter P/N *204-01-462032A-DN10*



6-Pin Deutsch connector

Use adapter 201-5954Y1 to connect to 3-pin AMP Superseal harness.

OR Alternate adapter 201-6647Y1 to connect to 3-pin MP Shroud

Note: At flowrates above 17 GPM there will be in excess of 15psi of pressure loss through this meter. 24GPM of water = 30psi of pressure loss

Controller- Flow Cals are listed in Pulses per Gallon unless noted	DN10 .2-24 GPM Flow Cal Number	**DN10 .2-24 GPM Flow Cal Number with Divide by 8 Cable**
Sentinel	4542	568
Commander	Requires Divide by 8 Cable	1136
Commander II	9084	1136
John Deere	4542	568
Ag Leader	4542	568
Trimble	4542	568
Raven	4542	568
Topcon	4542	568
Case (ECU) Pulses per 10 Liters	Requires Divide by 8 Cable	1499
Case (UCM) Pulses per Liter	1199	150

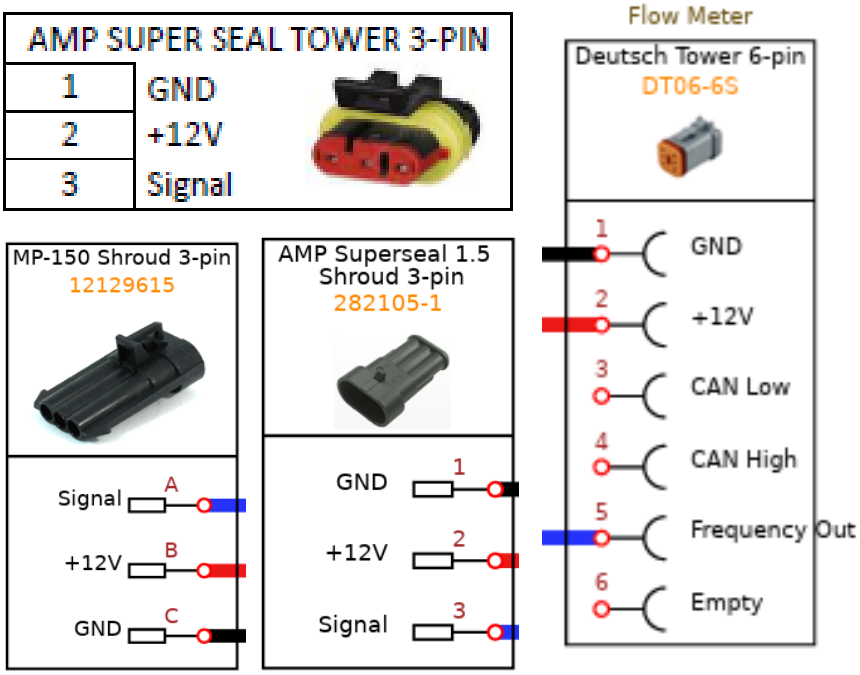
Orion 3 Flowmeter will need to adapt from the 6-Pin Deutsch to the flowmeter plug on the harness. These adapters are listed on page 2.

The "Divide by 8" adapter harness must be used in applications where the controller will not accept the required flow cal number. The "Divide by 8" adapters listed on the next page could be on your system and will need to use the above flow cal number associated with your controller.

PR17 & PR30 Electromagnetic Flowmeter Update Part Info Sheet

0.2 - 24 GPM Orion 3 DN10 Emag Flowmeter P/N *204-01-462032A-DN10*

Adapter Part Number	Description	Uses
201-5954Y1	3-Pin AMP Superseal Shroud to 6-Pin Deutsch Tower	Pump final cable to Orion 3 Flowmeter
201-6647Y1	3-Pin MP Shroud to 6-Pin Deutsch Tower	Pump final cable to Orion 3 Flowmeter used on Commander II and E-Mag Flowmeter with Blue Sticker and White Lettering.
Divide by 8 Adapters	**The "Divide by 8" adapter harness must be used in applications where the controller will not accept the required flow cal number.**	**Could be on your existing system and will need to use correct flow cal from chart on previous page.**
201-14226	3-Pin MP Shroud to 3-Pin MP Tower with divide by 8	Multiple Controllers
201-17842	3-Pin MP Shroud to 3-Pin AMP Superseal Tower with divide by 8	Multiple Controllers
201-19849	3-Pin AMP Superseal Shroud to 3-Pin AMP Superseal Tower with divide by 8	Used commonly with Case Planter with ECU



Adapter Harness Connections Shown to the Left.

201-14226 -Shown with divide by 8 module circled.

SurePoint recommends you perform a catch test to verify the system is properly installed and configured. Adjust the flow cal as needed based on accurate catch tests with the actual product or

Warning!!!

-Before doing any welding on the implement, unplug the cable to the flowmeter, or damage to the flowmeter may result.

-Do not power wash the flowmeter. High pressure spray directed at the back edge of the face plate or at the wire connector may allow water into the flowmeter electronics.