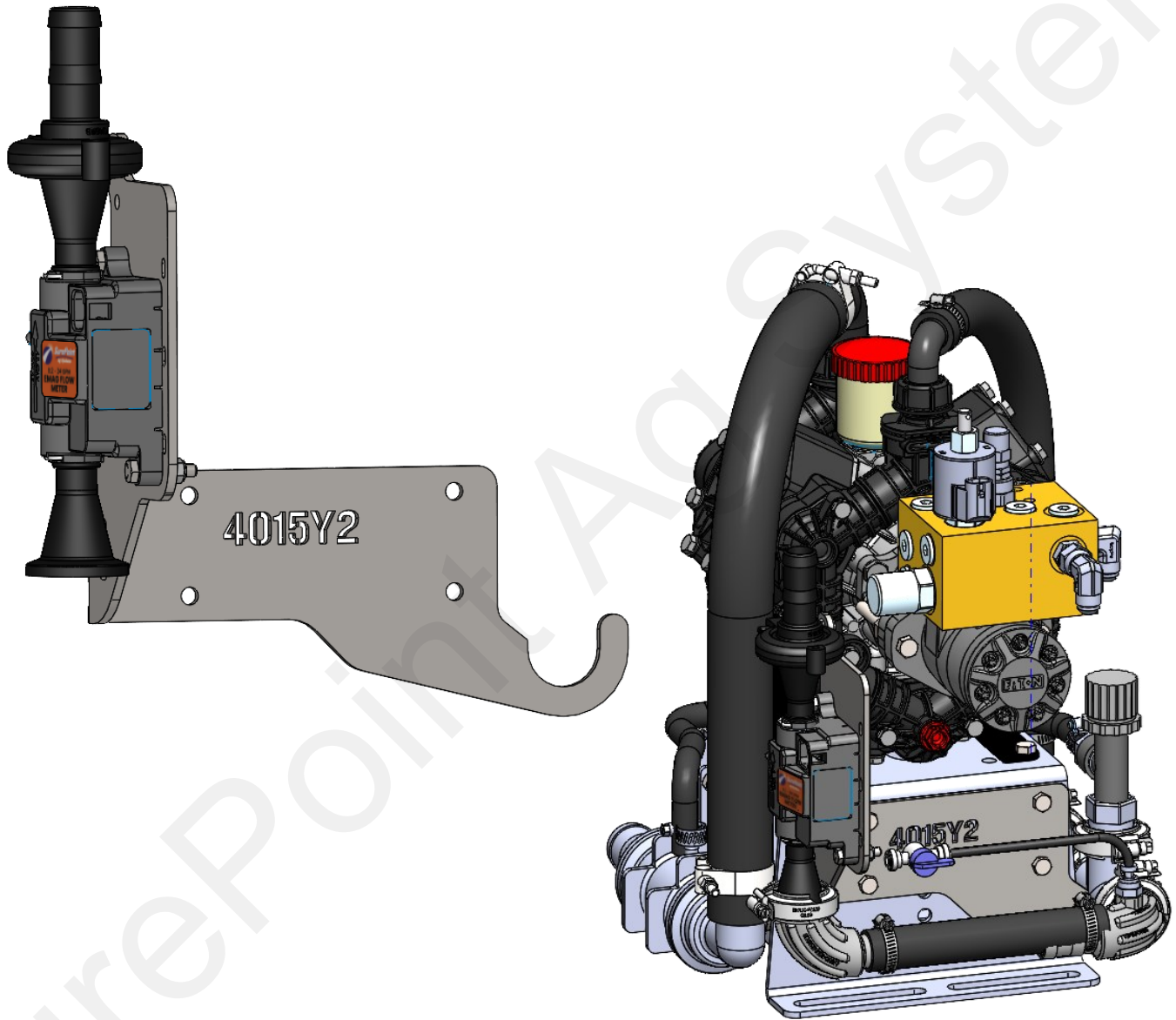




396-6656Y1

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



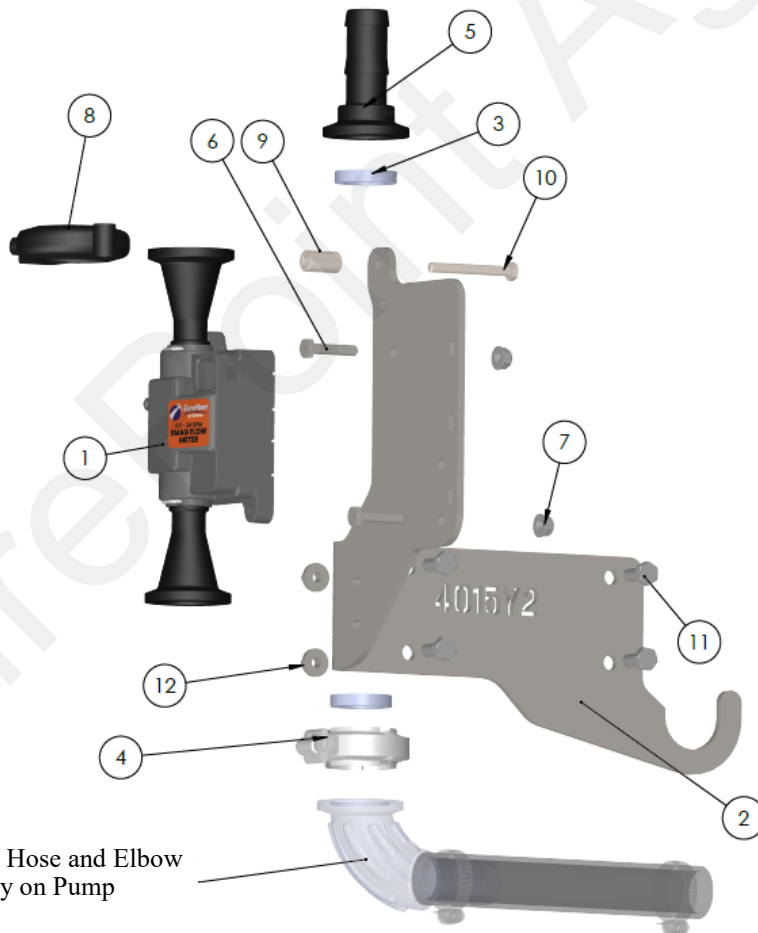
Kit Number:

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



Parts List and Exploded View

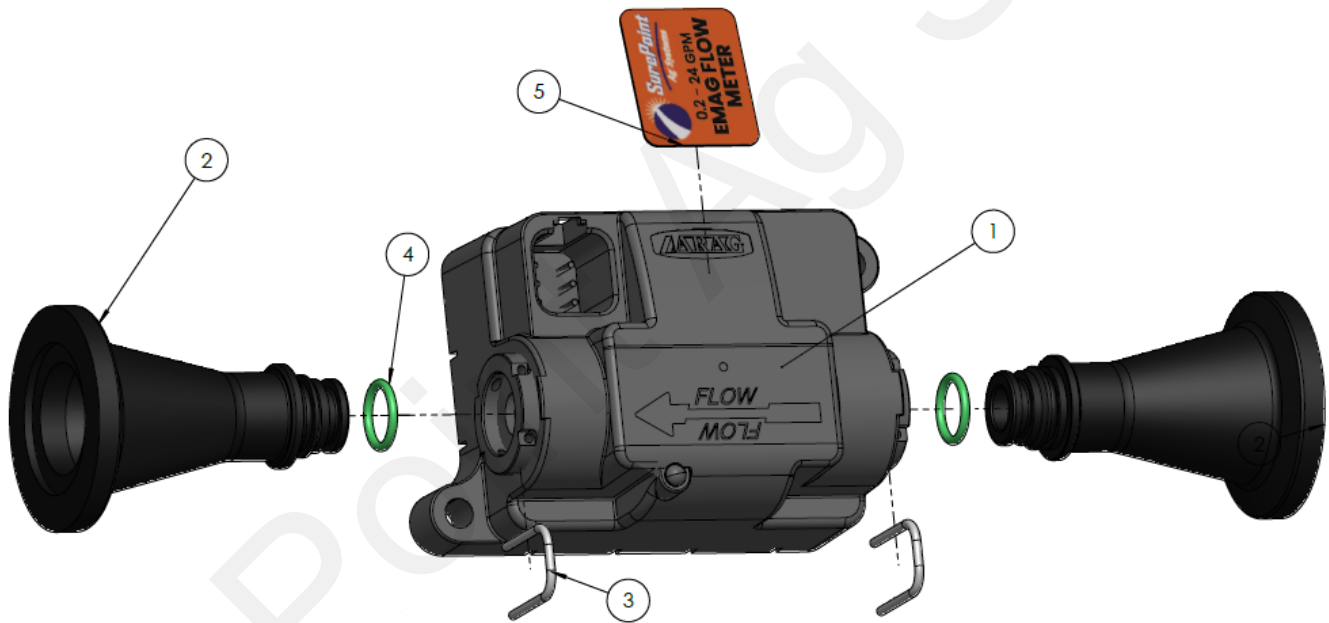
ITEM #	Part Number	Description	QTY
1	204-01-462032A-DN10	Flowmeter Assembly, Orion3 Emag, 0.2 - 24 GPM, M100 Flange	1
2	410-4015Y2-BK	FM Support Bracket - PR17 and PR30	1
3	105-100G-H	1" EPDM Manifold Gasket	2
4	105-FC100	1" Manifold Clamp	2
5	105-100BRB	1" Manifold x 1" HB	1
6	300-040108-SS	1/4" x 1-1/2" 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





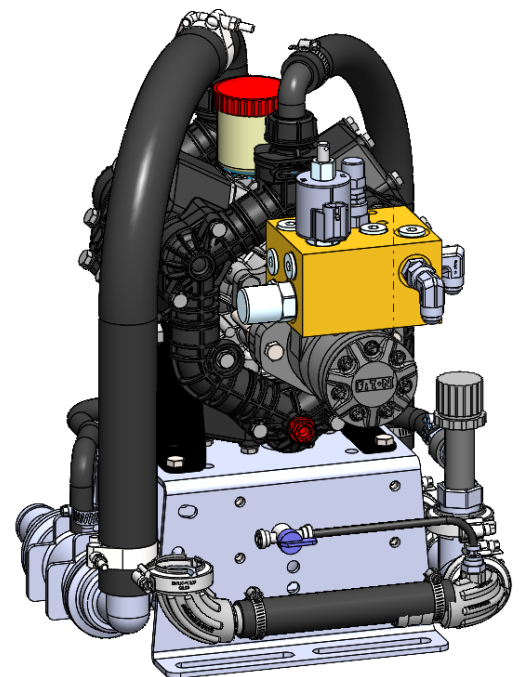
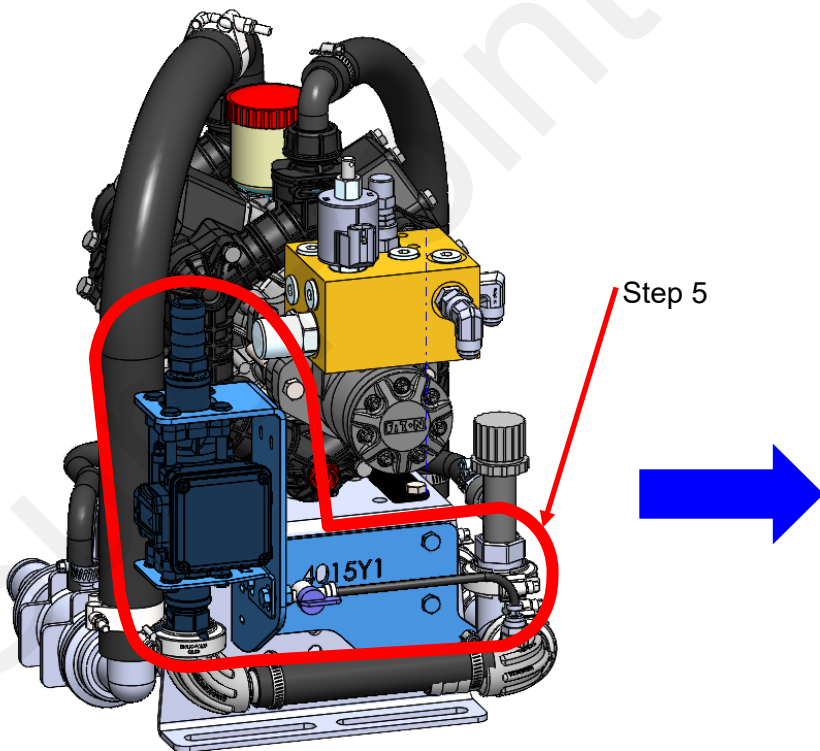
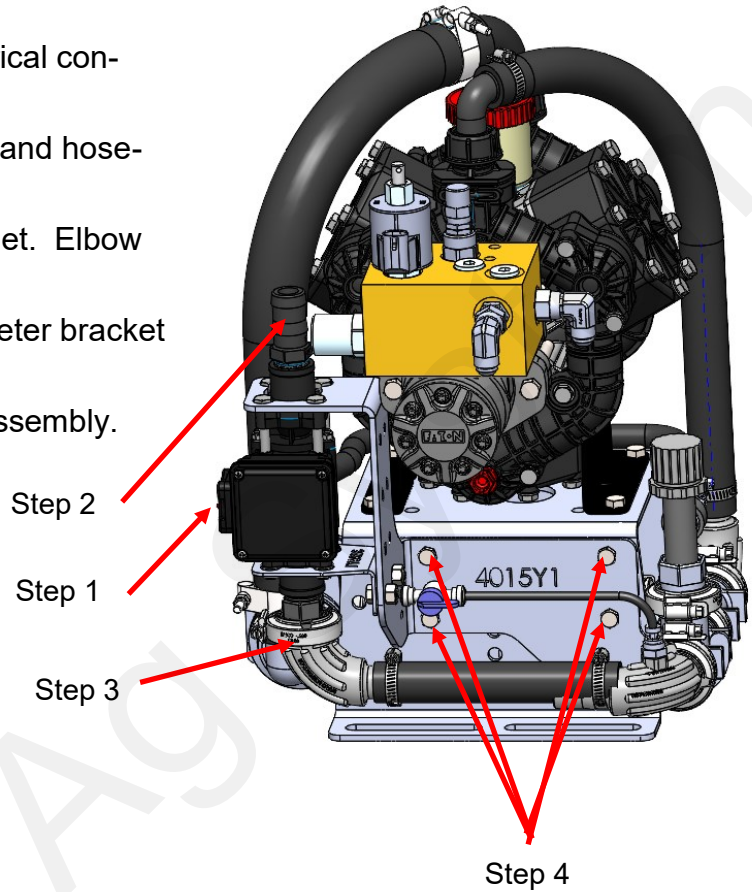
Parts List and Exploded View

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

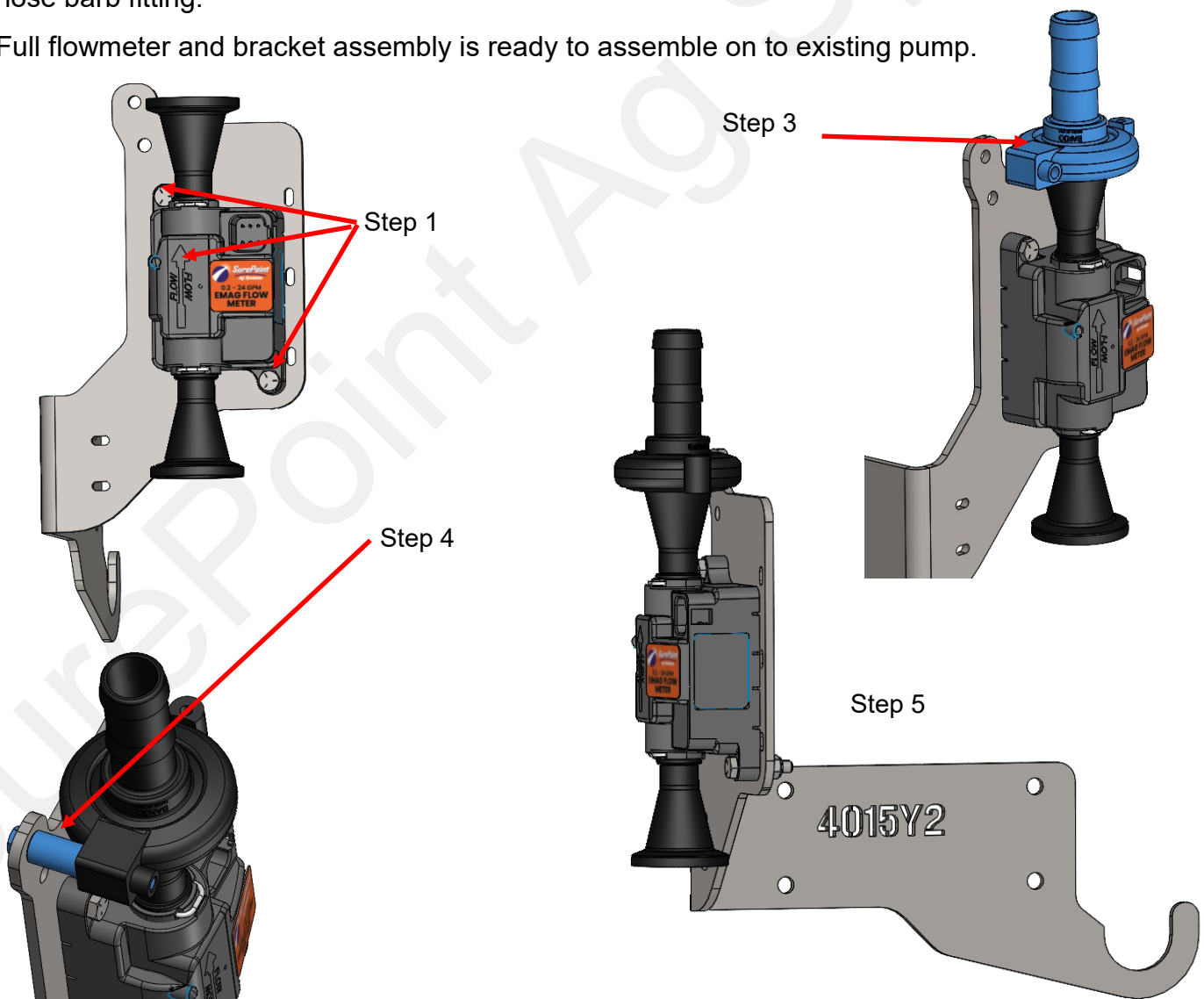
1. Disconnect harness from flowmeter electrical connection point.
2. Detach hose from flowmeter outlet. Hose and hose-clamp will be reused if possible.
3. Loosen 1" manifold clamp at flowmeter inlet. Elbow and hose will remain connected to pump.
4. Remove 4x 5/16" hex bolts holding flowmeter bracket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





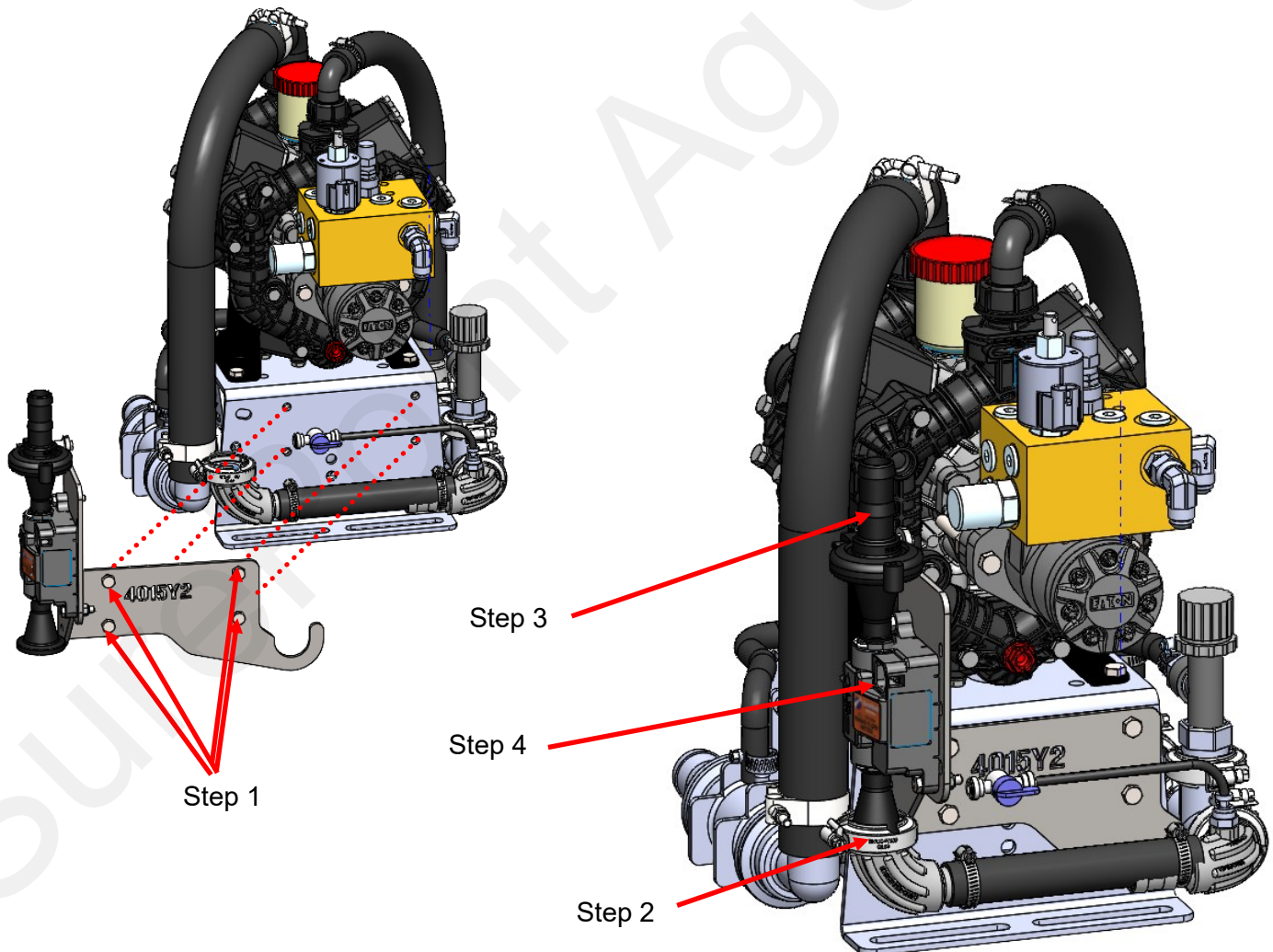
Step by Step Instructions Pre-Assembly– Flowmeter/Bracket

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 & PR30 Electromagnetic Flowmeter Kits

Flowmeter only

0.2 - 24 GPM

Item Number 500-02-2310 (PR17 & PR30)

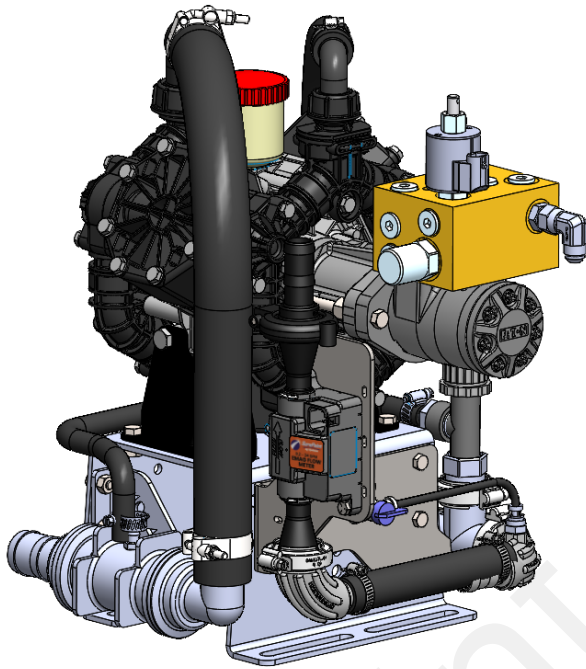
204-01-462032A-DN10

Kits include flowmeter, adapter harness, hose barb fittings & hose clamps.

This flow meter may be used with a PR30 pump but is not ideal for the upper end of the PR30's flow rate capacity (17-30GPM). In this upper end this flowmeter will cause excess pressure loss.

-Before doing any arc 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.*



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

Electromagnetic flowmeters are superior to traditional turbine flowmeters in two basic ways. First, they have no moving parts. This translates into no wear items or potential for contaminants to jam a spinning turbine.

Second, electromagnetic flowmeters detect the flow by electrically measuring the velocity of the liquid, which makes them less sensitive to viscosity or density of the fluid measured. They are generally extremely accurate using the standard calibration number, but the user must verify this.

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 observation of gallons applied and acres worked.

Flowmeter Model	Pulses per gallon	FPT Size	Hose Barb In kit
0.2 - 24 GPM	4542	3/4"	1"

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

The flowmeters will accurately read higher than the rated range.

Earlier model flowmeters (gray meters with white labels with black text) have different calibration numbers. The flow cal number (pulses per gallon) is printed on the serial number sticker on the side of the flowmeter.