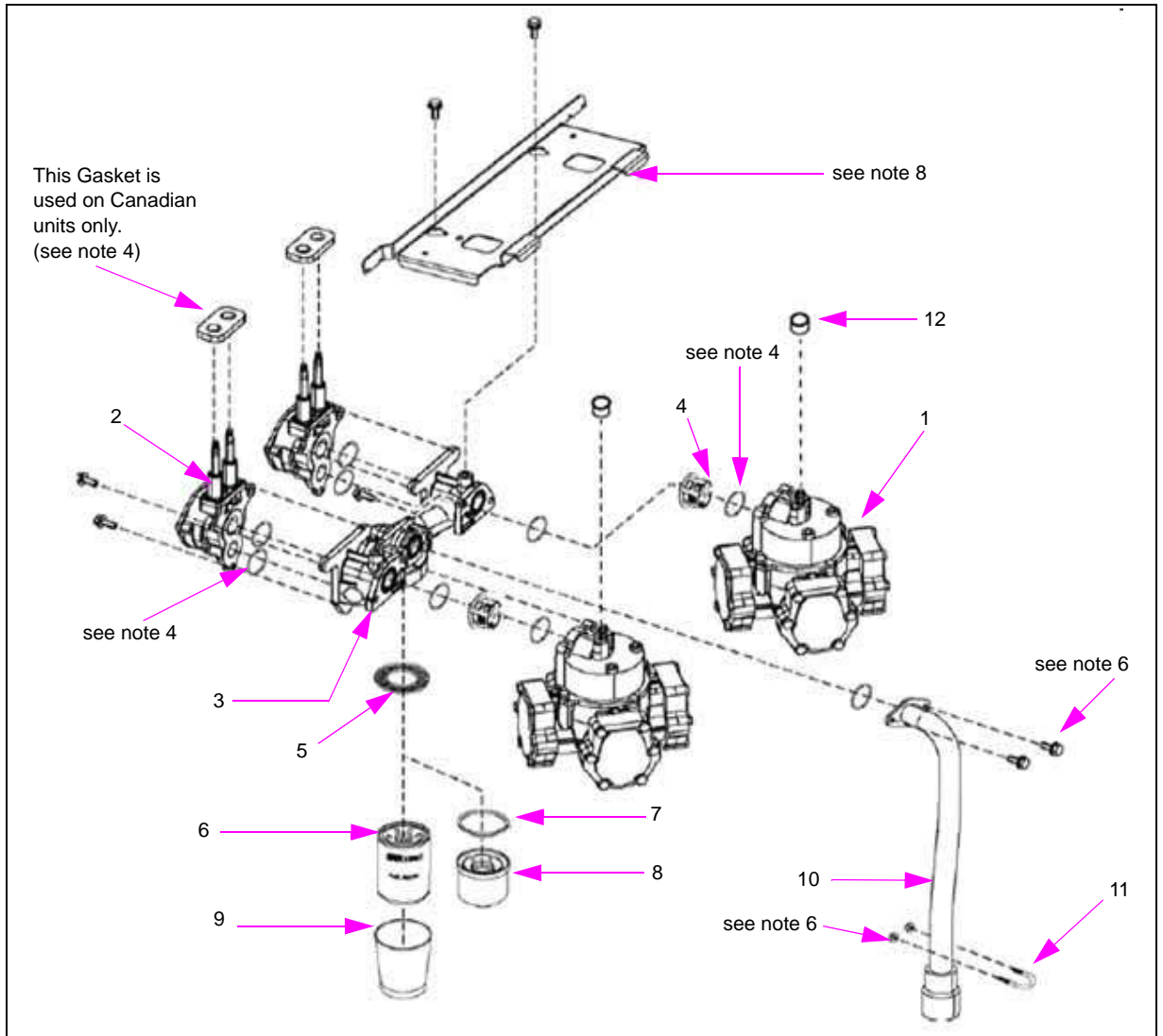


# 12 – Hydraulics

## Lower Hydraulics

### C+ Meter and Manifold Assembly

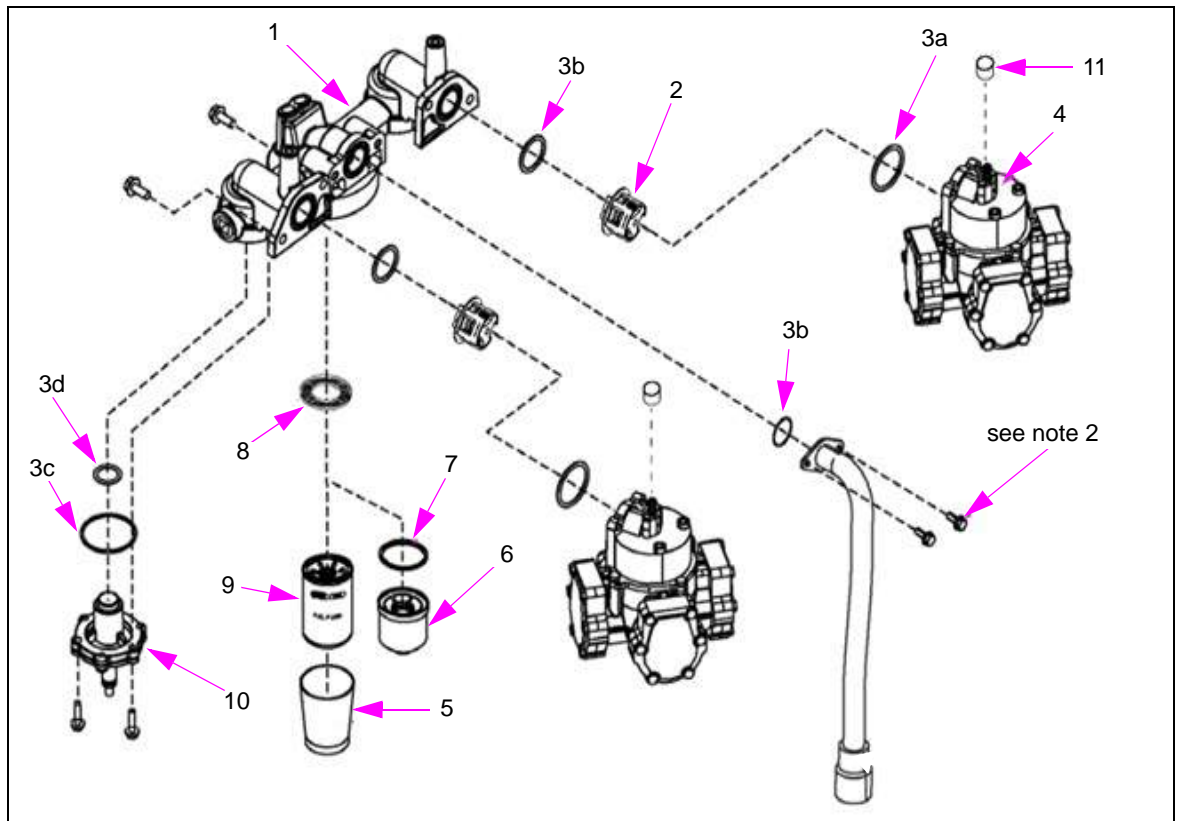


| Item # | Part Description                        | Current Part | Previous Part                       | Quantity       |
|--------|---|--------------|-------------------------------------|----------------|
| 1      | C+ Meter Assembly                       | (see note 1) | -                                   | -              |
| 2      | Digital Valve Assembly                  | (see note 2) | -                                   | -              |
| 3      | Manifold Casting Lower Hydraulics       | M00159B010   | -                                   | 1 per Assembly |
| 4      | Meter Check Valve Assembly (see note 3) | M13257A001   | N23619-G4<br>N23619-G2<br>N23619-G1 | 1 per Meter    |
|        | O-ring (see note 4)                     | -            | -                                   | 2              |
|        | O-ring (see note 4)                     | -            | -                                   | 2              |
| 5      | Strainer, Filter                        | R19457       | -                                   | (see note 5)   |
| 6      | Filter (Water Alert)                    | M08007B010   | R20039                              | 1 per Manifold |
|        | Filter (Particulate only)               | R18189-10    | -                                   |                |
| 7      | Gasket                                  | K93485       | -                                   | 1              |
| 8      | Filter Cap with Gasket (Optional)       | R18896-G2    | R18896-G1                           | 1 per Manifold |
| 9      | Collector, Fuel                         | K35493       | -                                   | 1              |
| 10     | Dispenser Feedline Assembly             | M00302A001   | -                                   | (see note 6)   |
|        | • Screw, Metric M8 X 20 (see note 6)    | -            | -                                   | 14             |
| 11     | • U-bolt, Metric M8 (see note 7)        | -            | -                                   | (see note 5)   |
|        | • Nut, Metric M8 Serrated, Flange       | (see note 6) | -                                   | 2 per U-bolt   |
| 12     | Spacer, Security                        | M13805B001   | M08852B001                          | 2              |

**Notes:**

1. For current part number, refer to [“Meters” on page 10-1](#).
2. For current part number, refer to [“Digital Valve and Coil Assemblies” on page 11-1](#).
3. Use check Valve Kit K96623-01 and K96623-02 [FF (includes check valve, gasket, O-rings, and check valve meter)] to replace parts.
4. Use seals and Gasket Kit K96621-01 and K96621-02 [FF (includes seal, gasket, and O-rings)] to replace seals. Order one kit per manifold assembly.
5. Quantity varies per assembly.
6. Use Metric Hardware Kit K96620-01 (includes screws, nuts, bolts) to replace fasteners.
7. Used on dispensers only. For self-contained pumps, refer to [“Self-contained Pumps” on page 14-1](#).
8. For digital valve units built before April 2004, the meter mounting plate used is M01724B001.

### C+ Meter, Manifold, and Proportional Valve



| Item # | Part Description   | Current Part | Previous Part                       | Quantity       |
|--------|--|--------------|-------------------------------------|----------------|
| 1      | Manifold   | M02226B010   | -                                   | 1              |
| 2      | Meter Check Valve Assembly (see note 1)                  | M13257A001   | N23619-G4<br>N23619-G2<br>N23619-G1 | 1 per Meter    |
|        | Meter Check Valve Assembly [Flexible Fuels (see note 1)] | N23619-G4    | -                                   | 1 per Meter    |
| 3a     | O-rings (see note 1)                                     | Q10068-14    | -                                   | 2              |
|        | O-rings (Flexible Fuels)                                 | Q12974-223   | -                                   | 2              |
| 3b     | O-rings (see note 1)                                     | Q10068-09    | -                                   | 2              |
|        | O-rings (Flexible Fuels)                                 | Q12974-218   | -                                   | 2              |
| 3c     | O-rings (see note 1)                                     | Q10066-51    | Q10068-51                           | 1              |
|        | O-rings (Flexible Fuels)                                 | Q12974-138   | -                                   | 1              |
| 3d     | O-rings (see note 1)                                     | Q10068-03    | -                                   | 1              |
|        | O-rings (Flexible Fuels)                                 | Q12974-212   | -                                   | 1              |
| 4      | C+ Meter Assembly (see note 2)                           | -            | -                                   | 2              |
| 5      | Collector, Fuel  | K35493       | -                                   | 1              |
| 6      | Filter Cap with Gasket (Optional)                        | R18896-G2    | R18896-G1                           | 1 per Manifold |
| 7      | Gasket   | K93485       | -                                   | 1              |
| 8      | Strainer, Filter   | R19457       | -                                   | (see note 3)   |

| Item #  | Part Description                    | Current Part | Previous Part | Quantity |
|---|-------------------------------------|--------------|---------------|----------|
| 9   | Filter (Water Alert)                | M08007B010   | R20039        | 1        |
|   | Filter (Particulate only)           | R18189-10    | -             | 1        |
|   | Filter (Flexible Fuels)             | M08005B010   | M08005A010    | 1        |
| 10  | Proportional Valve                  | M02227A001   | -             | 2        |
|   | Proportional Valve (Flexible Fuels) | M02227A001   | -             | 2        |
| 11  | Spacer, Security                    | M13805B001   | M08852B001    | 2        |
| <b>Not Shown</b>  |                                     |              |               |          |
| -   | Manifold (ATC Option)               | M02226B020   | -             | 1        |
| -   | Manifold Flexible Fuels             | M02226B030   | -             | 1        |
| <b>Notes:</b><br>1. Use check Valve Kit K96623-01 and K96623-02 [FF (includes check valve, gasket, O-rings, and check valve meter)] to replace parts.<br>2. For current part number, refer to <a href="#">"Meters"</a> on page 10-1.<br>3. Use seals and Gasket Kit K96621-01 and K96621-02 [FF (includes seal, gasket, and O-rings)] to replace seals. Order one kit per manifold assembly.<br>4. Use Metric Hardware Kit K96620-01 (includes screws, nuts, and bolts) to replace fasteners.<br>5. Quantity varies per assembly. |                                     |              |               |          |

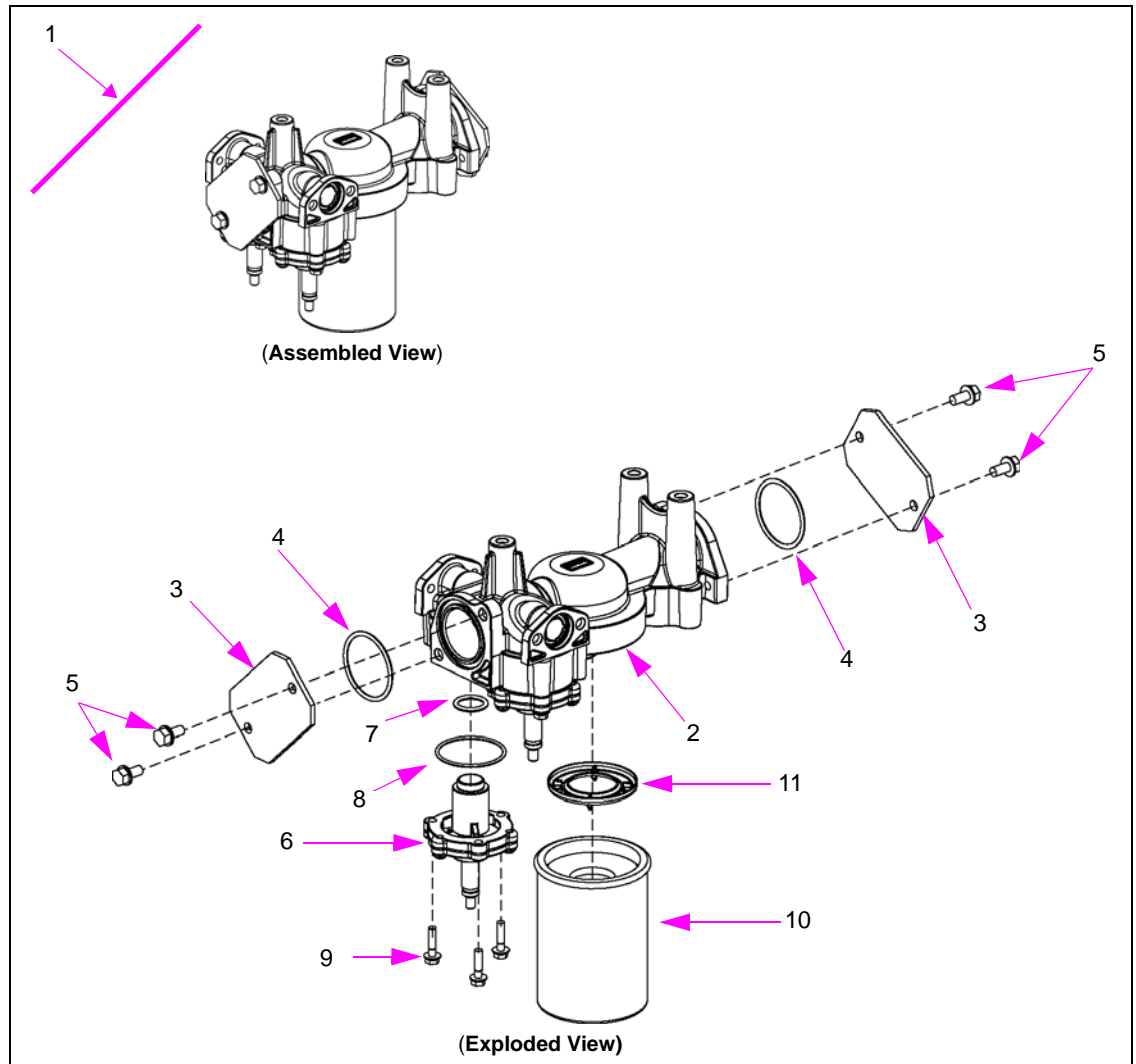
## Manifold Assembly

| Item #   | Part Description                               | Current Part | Previous Part |
|--|--|--------------|---------------|
| 1  | Ecometer Manifold Assembly (see notes 1 and 2) | -            | -             |
| 2  | Hydraulic Blanking Plate for Manifold          | M03633B001   | -             |
| 3  | O-ring for Manifold Blanking Plate             | Q10068-18    | -             |
| 4  | Elbow for Grade 1 on Extended Reach            | M04456A001   | -             |
| 5  | Meter Bracket                                  | M07567A001   | -             |
| 6  | Nut for Meter Bracket                          | M00414B002   | -             |
| 7  | Meter to Bracket Screw                         | M00415B004   | -             |
| <b>Notes:</b><br>1. For current part number, refer to <a href="#">"Lower Hydraulics"</a> on page 12-1.<br>2. Ecometer Manifold Assembly (M03506A002) consist of fuel filters, manifold, filter label, manifold plate, proportional valves, strainer assembly, meter strainer, screws, and o-rings. |  |              |               |

## Filters

| Item #  | Part Description                    | Current Part |
|---|-------------------------------------|--------------|
| 1   | Gasoline Filter (see notes 1 and 2) | M08007B010   |
| 2   | Diesel Filter (see note 1)          | M08007B030   |
| <b>Notes:</b><br>1. These filters must be used with Ecometer units to maintain warranty.<br>2. For illustration refer to <a href="#">"C+ Meter, Manifold, and Proportional Valve"</a> on page 12-3. |                                     |              |

### Manifold Valve and Filter Assembly - Encore 550 SMART Meter

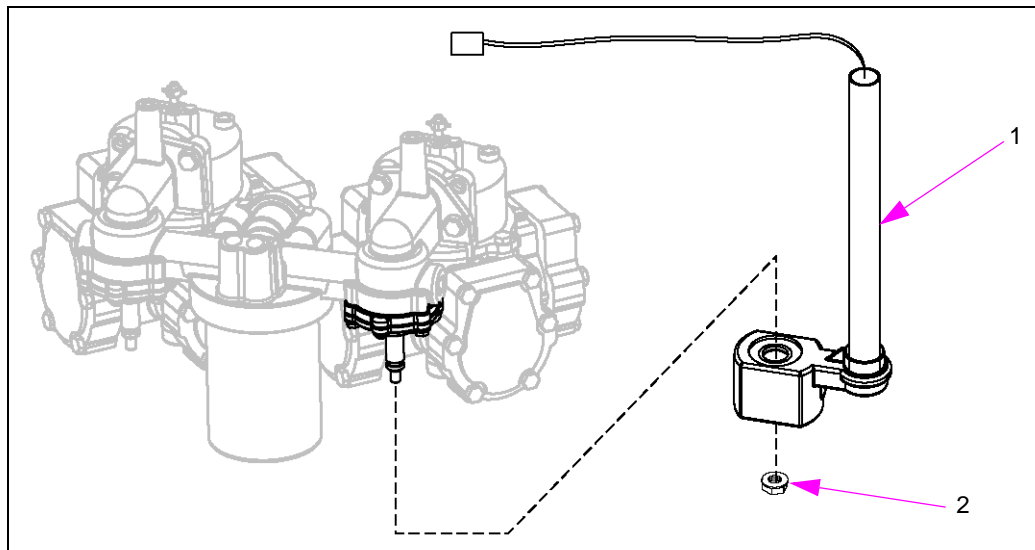


| Item # | Part Description  | Current Part | Previous Part | Quantity |
|--------|---|--------------|---------------|----------|
| 1      | Manifold Valve and Filter Assembly (obsolete, see note 1) | -            | M03506A001    | 1        |
|        | Manifold Valve and Filter Assembly with Ecometer          | M03506A002   | -             | 1        |
| 2      | Manifold (Machined)                                       | M03404B010   | -             | 3        |
| 3      | Manifold Seal Plates                                      | M03622B001   | -             | 2        |
| 4      | O-ring 2.109 X 0.139                                      | Q10068-18    | -             | 1        |
| 5      | Screw M8 X 16 (see note 2)                                | M00417B109   | -             | 4        |
| 6      | Proportional Valve  | M02227A001   | -             | 2        |
|        | Proportional Valve with Ecometer                          | M02227A002   | -             | 2        |
| 7      | O-ring 0.859 X 0.139 (Reference only)                     | Q10068-03    | -             | 2        |
| 8      | O-ring 2.112 X 0.103                                      | Q10066-51    | -             | 2        |
| 9      | Screw M6 X 25   | M00415B016   | -             | 6        |

| Item # | Part Description              | Current Part | Previous Part | Quantity |
|--------|-------------------------------|--------------|---------------|----------|
| 10     | Filter (Water Alert)          | M08007B010   | R20039        | 1        |
|        | Filter with Ecometer          | M08007B010   | R20039        | 1        |
|        | Filter with Ecometer (Diesel) | M08007B030   | -             | 1        |
| 11     | Strainer, Filter              | R19457       | -             | 1        |

Notes:  
 1. No replacement.  
 2. Use Metric Hardware Kit [K96620-01 (includes screws, nuts, and bolts)] to replace fasteners.

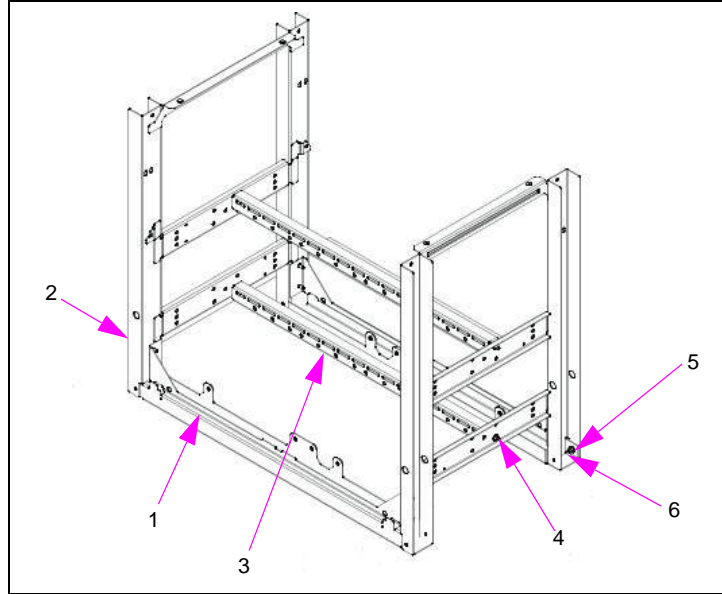
### Valve Coil Assembly



| Item # | Part Description                 | Current Part | Previous Part | Quantity    |
|--------|----------------------------------|--------------|---------------|-------------|
| 1      | Valve Coil Assembly with Conduit | M02958A001   | -             | 1 per Valve |
| 2      | Nut, Metric M8                   | -            | -             | 1           |

# Hydraulic Frame Assembly (Encore 300/500/550/Ultra-Hi Units)

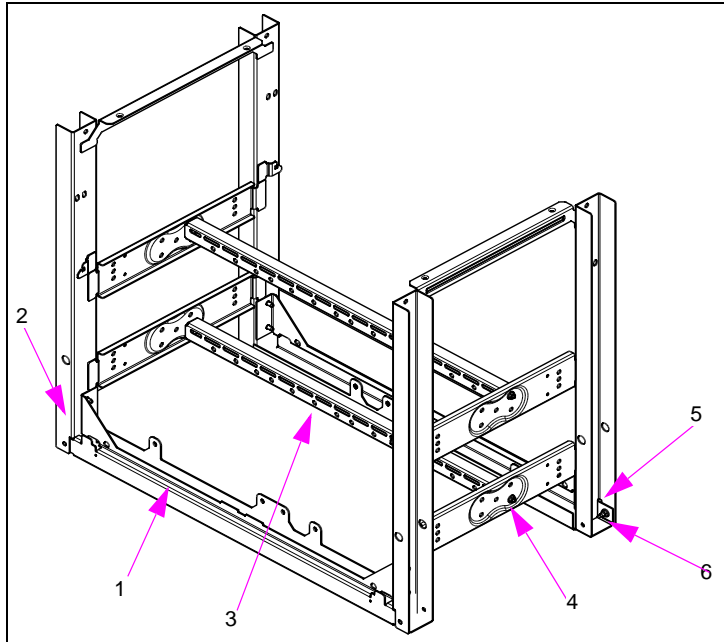
For Units Built Before June 2015



| Item #   | Part Description                          | Current Part | Previous Part | Quantity |
|--|---|--------------|---------------|----------|
| Lower Hydraulic Frame Assembly (see note)  |   | M12190A001   | M01413A004    | 1        |
| 1  | Base Rail Hydraulic Frame                 | M01414B001   | -             | 1        |
| 2  | Assembly Hydraulic Frame, Lower Hydraulic | M12190A100   | M03424B001    | 2        |
| 3  | Frame, Inlet Pipe Support                 | M00406B001   | -             | 1        |
| 4  | Screw, Metric M8 X 18                     | M00417B009   | -             | 10       |
| 5  | Nut, Metric M8 Serrated                   | M00414B003   | -             | 6        |
| 6  | Stud, Metric Clinch M8 X 18 Steel         | Q12887-48    | -             | 4        |
| <p><i>Note: Lower Frame Assembly (M12190A001) is not a direct replacement for this frame. This frame will not fit units built prior to October 2012. The old frame is no longer available to purchase.</i></p> |   |              |               |          |

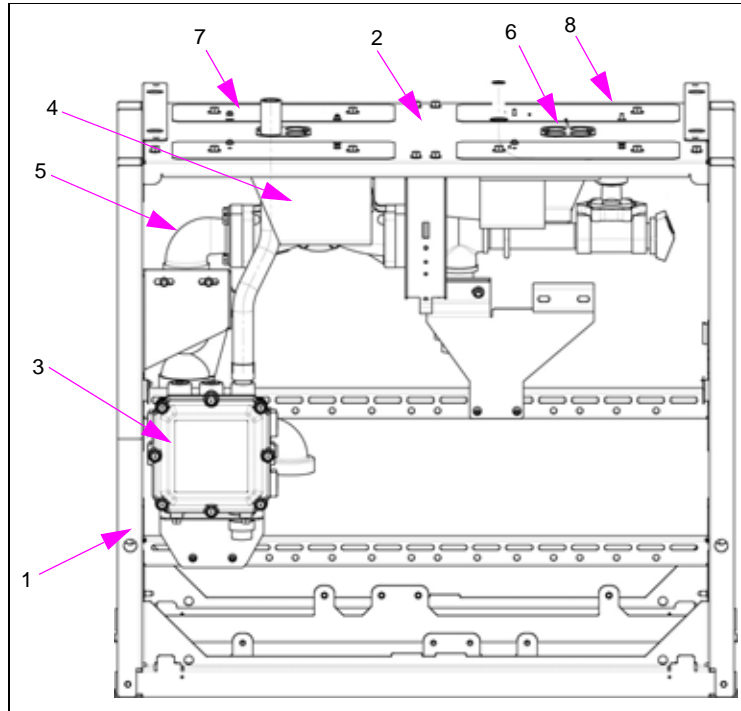
# Hydraulic Frame Assembly (Encore 300/500/550/700/S/Ultra-Hi Units)

For Units Built After June 2015



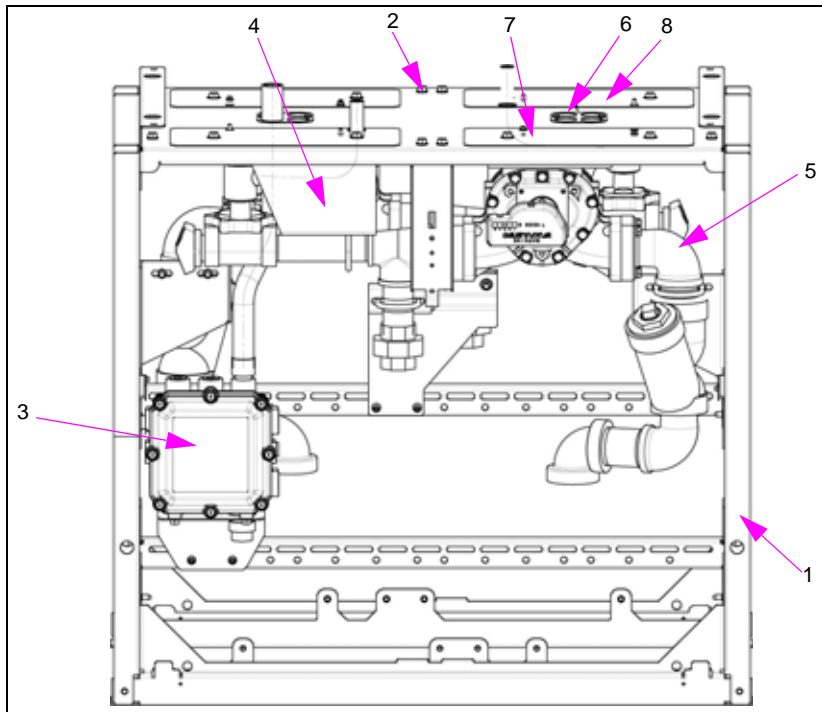
| Item # | Part Description                          | Current Part | Previous Part | Quantity |
|--------|---|--------------|---------------|----------|
|        | Lower Hydraulic Frame Assembly            | M14396A001   | M12190A001    | 1        |
| 1      | Base Rail Hydraulic Frame                 | M01414B001   | -             | 2        |
| 2      | Assembly Hydraulic Frame, Lower Hydraulic | M14396A100   | M12190A100    | 2        |
| 3      | Frame, Inlet Pipe Support                 | M00406B001   | -             | 2        |
| 4      | Screw, Metric M8 X 18                     | M00417B009   | -             | 12       |
| 5      | Nut, Metric M8 Serrated                   | M00414B003   | -             | 8        |
| 6      | Stud, Metric Clinch M8 X 18 Steel         | Q12887-48    | -             | 4        |

### Hydraulic Frame Assembly [Master Single (M13998A001)]



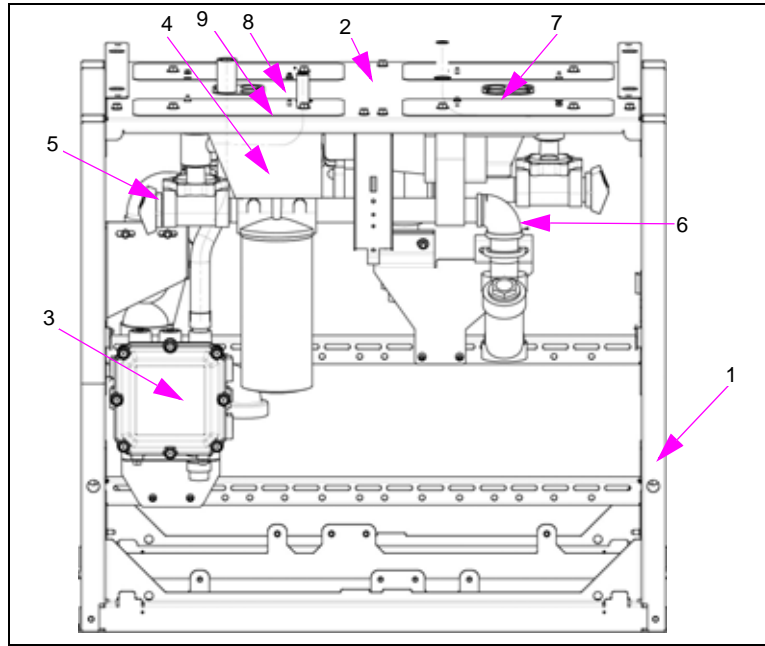
| Item # | Part Description                                   | Current Part | Previous Part                                | Quantity |
|--------|--|--------------|--|----------|
| 1      | PTGP, Lower Hydraulic Frame                        | PGM00002A008 | -  | 1        |
|        | • Lower Frame Assembly                             | M14396A001   | M12190A001                                   | 1        |
|        | • Filter, Chg Instr. Front/Back                    | N70008-01    | -  | 1        |
| 2      | PTGP Air Gap Plate                                 | PGM00002A009 | -  | 1        |
|        | • Air Gap Plate, Lower Frame                       | M02887B001   | -  | 1        |
|        | • Screw, Metric M8 X 18                            | M00417B009   | -  | 8        |
|        | • Bracket, Lower Door Lock                         | M02975B001   | -  | 2        |
| 3      | PTGP, J-box, Encore Ultra-Hi                       | PGM00002A008 | PGM02283A005<br>PGM02283A003<br>PGM02283A006 | 1        |
| 4      | PTGP, Bracket Support, Dual, Encore Ultra-Hi       | PGM12591A003 | PGM12591A001                                 | 1        |
|        | • Bracket Support, Meter                           | M13873B001   | -  | 2        |
|        | • Bracket Support, Combo                           | M13879B001   | -  | 1        |
|        | • Screw, Metric M8 X 18                            | M00417B009   | -  | 10       |
| 5      | PTGP, Master Side, Without Filter, Encore Ultra-Hi | PGM12441A005 | PGM12441A001                                 | 1        |
| 6      | PTGP, Lower Hydraulic Conduit Plate                | PGM00427A001 | -  | 2        |
| 7      | PTGP, Blanking Plate Lower, Encore Ultra-Hi        | PGM00426A009 | -  | 3        |
| 8      | PTGP, Blanking Plate Lower, Encore Ultra-Hi        | PGM00426A011 | -  | 1        |

### Hydraulic Frame Assembly [Master Dual (M13998A002)]



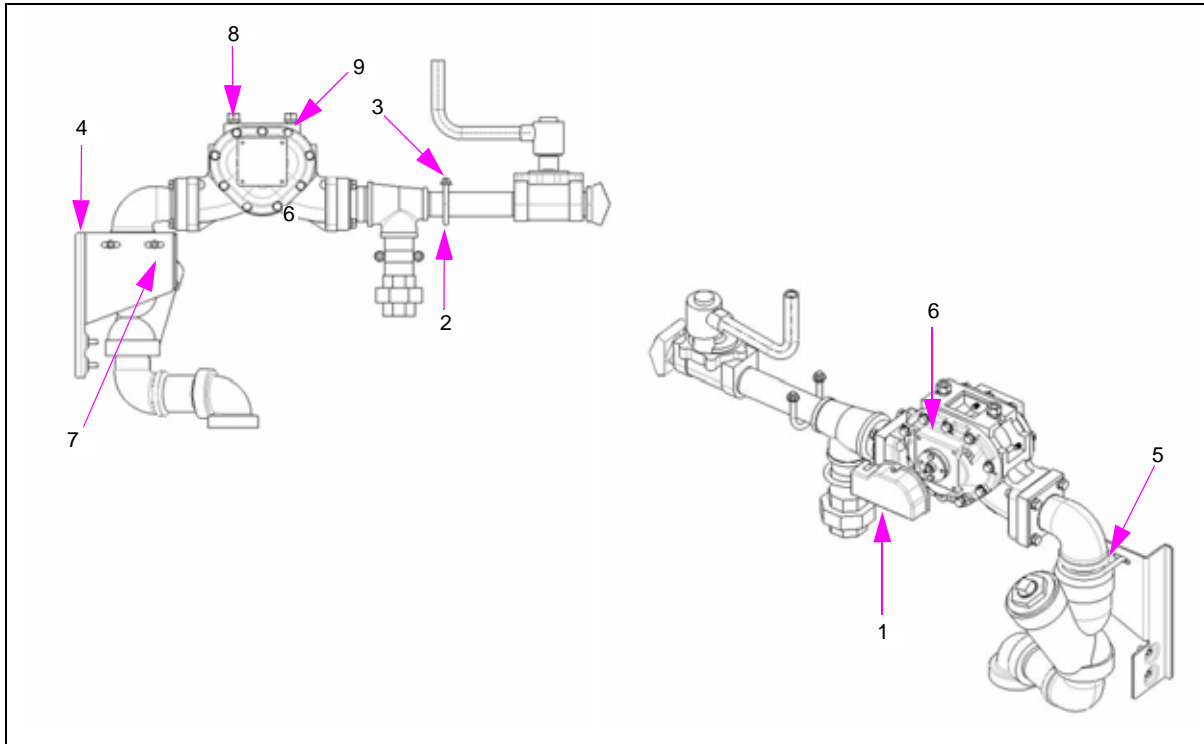
| Item # | Part Description                                    | Current Part | Previous Part | Quantity |
|--------|---|--------------|---------------|----------|
| 1      | PTGP Lower Hydraulic Frame                          | PGM00002A008 | -             | 1        |
| 2      | PTGP Air Gap Plate                                  | PGM00002A009 | -             | 1        |
| 3      | PTGP, J-box, Encore Ultra-Hi                        | PGM02883A008 | PGM02283A006  | 1        |
| 4      | PTGP, Bracket Support, Single/Combo Encore Ultra-Hi | PGM12591A004 | PGM12591A002  | 1        |
| 5      | PTGP, Master Side, Without Filter, Encore Ultra-Hi  | PGM12441A005 | PGM12441A001  | 2        |
| 6      | PTGP, Lower Hydraulic Conduit Plate                 | PGM00427A001 | -             | 2        |
| 7      | PTGP, Blanking Plate Lower, Encore Ultra-Hi         | PGM00426A009 | -             | 2        |
| 8      | PTGP, Blanking Plate Lower, Encore Ultra-Hi         | PGM00426A011 | -             | 2        |

### Hydraulic Frame Assembly [Master Combo (M13998A003)]



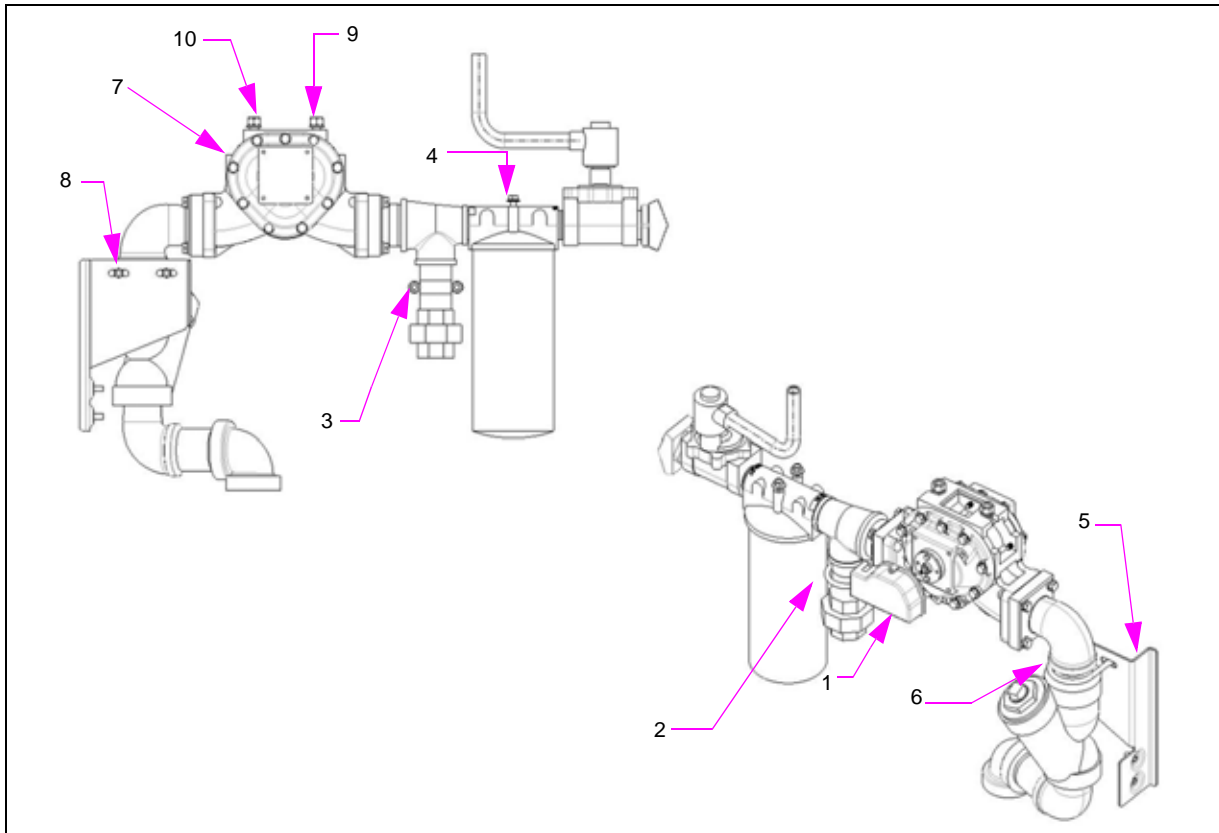
| Item # | Part Description   | Current Part | Previous Part | Quantity |
|--------|--|--------------|---------------|----------|
| 1      | PTGP Lower Hydraulic Frame   | PGM00002A008 | -             | 1        |
| 2      | PTGP Air Gap Plate   | PGM00002A009 | -             | 1        |
| 3      | PTGP, J-box, Encore Ultra-Hi   | PGM02283A008 | PGM02283A006  | 1        |
| 4      | PTGP, Bracket Support, Dual, Encore Ultra-Hi                         | PGM12591A003 | PGM12591A002  | 1        |
| 5      | PTGP, Master Side, Without Filter, Encore Ultra-Hi                   | PGM12441A005 | PGM12441A001  | 1        |
| 6      | PTGP, Satellite Side, Without Filter, Without Y-STR, Encore Ultra-Hi | PGM12442A006 | PGM12442A003  | 1        |
| 7      | Lower Hydraulic Conduit Plate  | PGM00427A001 | -             | 2        |
| 8      | PTGP, Blanking Plate Lower, Encore Ultra-Hi                          | PGM00426A011 | -             | 2        |
| 9      | PTGP, Blanking Plate Lower, Encore Ultra-Hi                          | PGM00426A009 | -             | 1        |

## Master Part Ultra-Hi Without Filter (PGM12441A005)



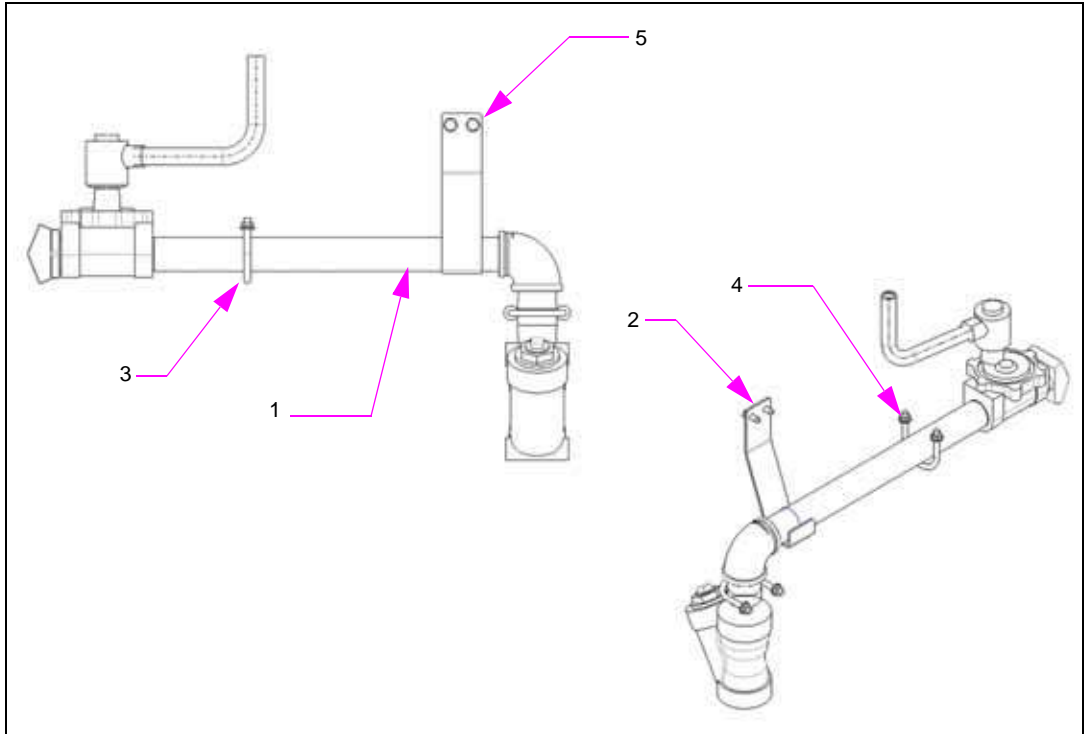
| Item # | Part Description                      | Current Part | Previous Part | Quantity |
|--------|---------------------------------------|--------------|---------------|----------|
| 1      | Assembly, Master Side, Without Filter | M13976A001   | M12745A001    | 1        |
| 2      | U-bolt, Metric, M8                    | M00703B002   | -             | 1        |
| 3      | Nut, Metric M8 Serrated               | M00414B003   | -             | 2        |
| 4      | Bracket, Support (Ultra-Hi Inlet)     | M14600A001   | M12590B001    | 1        |
| 5      | Bolt U 5/16-18 X 2.88                 | K21608       | -             | 1        |
| 6      | Bolt, Carriage 1/2-13 X 1"            | K02394-53    | -             | 2        |
| 7      | Nut, Hexagonal 5/16-18                | K01942       | -             | 2        |
| 8      | Nut, Hexagonal 1/2-13                 | K01945       | -             | 2        |
| 9      | Lockwasher 1/2 Reg                    | K02455       | -             | 2        |

### Master Part Ultra-Hi with Filter (PGM12441A006)



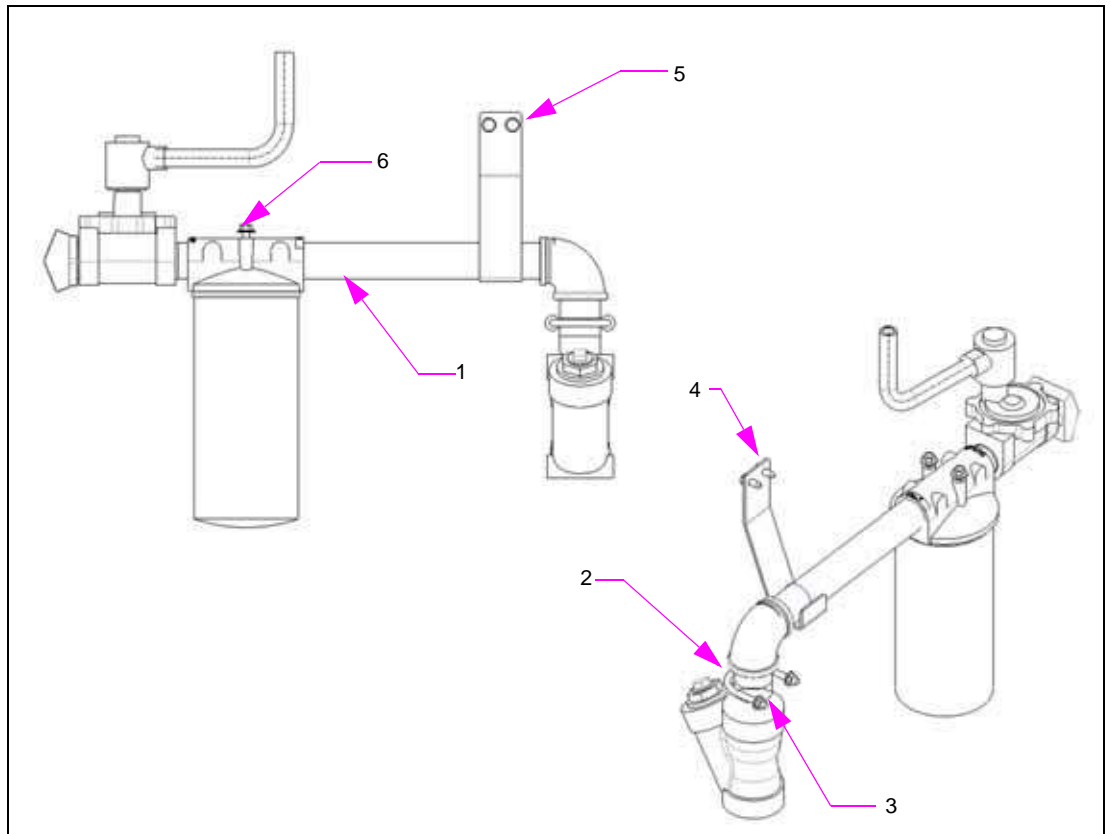
| Item # | Part Description                   | Current Part | Previous Part | Quantity |
|--------|------------------------------------|--------------|---------------|----------|
| 1      | Assembly, Master Side with Filter  | M13976A002   | M12745A002    | 1        |
| 2      | U-bolt, Metric M8                  | M00703B002   | -             | 1        |
| 3      | Nut, Metric M8 Serrated            | M00414B003   | -             | 2        |
| 4      | Screw, Hexagonal-head F-SR LF 5/16 | Q11889-12    | -             | 2        |
| 5      | Bracket, Support (Ultra-Hi Inlet)  | M14600A001   | M12590B001    | 1        |
| 6      | U-Bolt 5/16-18 X 2.88              | K21608       | -             | 1        |
| 7      | Bolt, Carriage 1/2-13 X 1"         | K02394-53    | -             | 2        |
| 8      | Nut, Hexagonal 5/16-18             | K01942       | -             | 2        |
| 9      | Nut, Hexagonal 1/2-13              | K01945       | -             | 2        |
| 10     | Lockwasher 1/2 Reg                 | K02455       | -             | 2        |

### Satellite Part Ultra-Hi Without Filter (PGM12442A005)



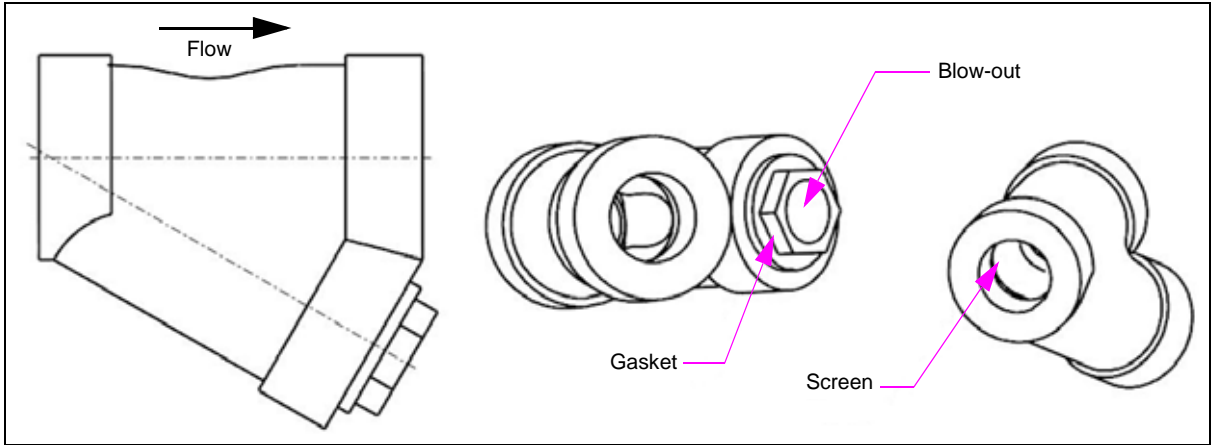
| Item # | Part Description                            | Current Part | Previous Part | Quantity |
|--------|---|--------------|---------------|----------|
| 1      | Hydraulic Assembly, Ultra-Hi Satellite Side | M13906A001   | -             | 1        |
| 2      | Bracket, Support, Filter                    | M13881B001   | M12592B001    | 1        |
| 3      | U-bolt, Metric, M8                          | M00703B002   | -             | 2        |
| 4      | Nut, Metric M8 Serrated                     | M00414B003   |               | 4        |
| 5      | Screw, Metric M8 X 18                       | M00417B009   | -             | 2        |

### Satellite Part Ultra-Hi with Filter (PGM12442A006)



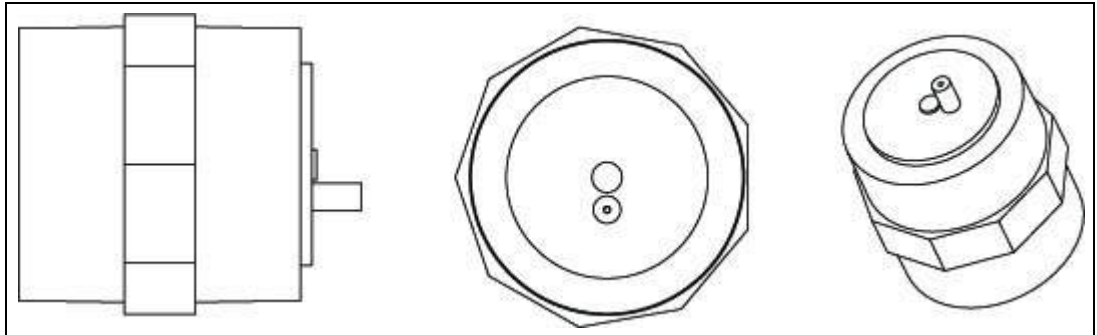
| Item # | Part Description                            | Current Part | Previous Part | Quantity |
|--------|---|--------------|---------------|----------|
| 1      | Ultra-Hi Hydraulic Assembly, Satellite Side | M13906A002   | -             | 1        |
| 2      | U-bolt, Metric, M8                          | M00703B002   | -             | 1        |
| 3      | Nut, Metric M8 Serrated                     | M00414B003   | -             | 2        |
| 4      | Bracket, Support, Filter                    | M12592B001   | -             | 1        |
| 5      | Screw, Metric M8 X 18                       | M00417B009   | -             | 2        |
| 6      | Screw, Hexagonal-head F-SR LF 5/16          | Q11889-12    | -             | 2        |

# Ultra-Hi Strainer Screen



| Item # | Part Description | Current Part |
|--------|------------------|--------------|
| 1      | Assembly         | M09351A001   |
| 2      | Gasket           | M09351B001   |
| 3      | Screen           | M09351B002   |

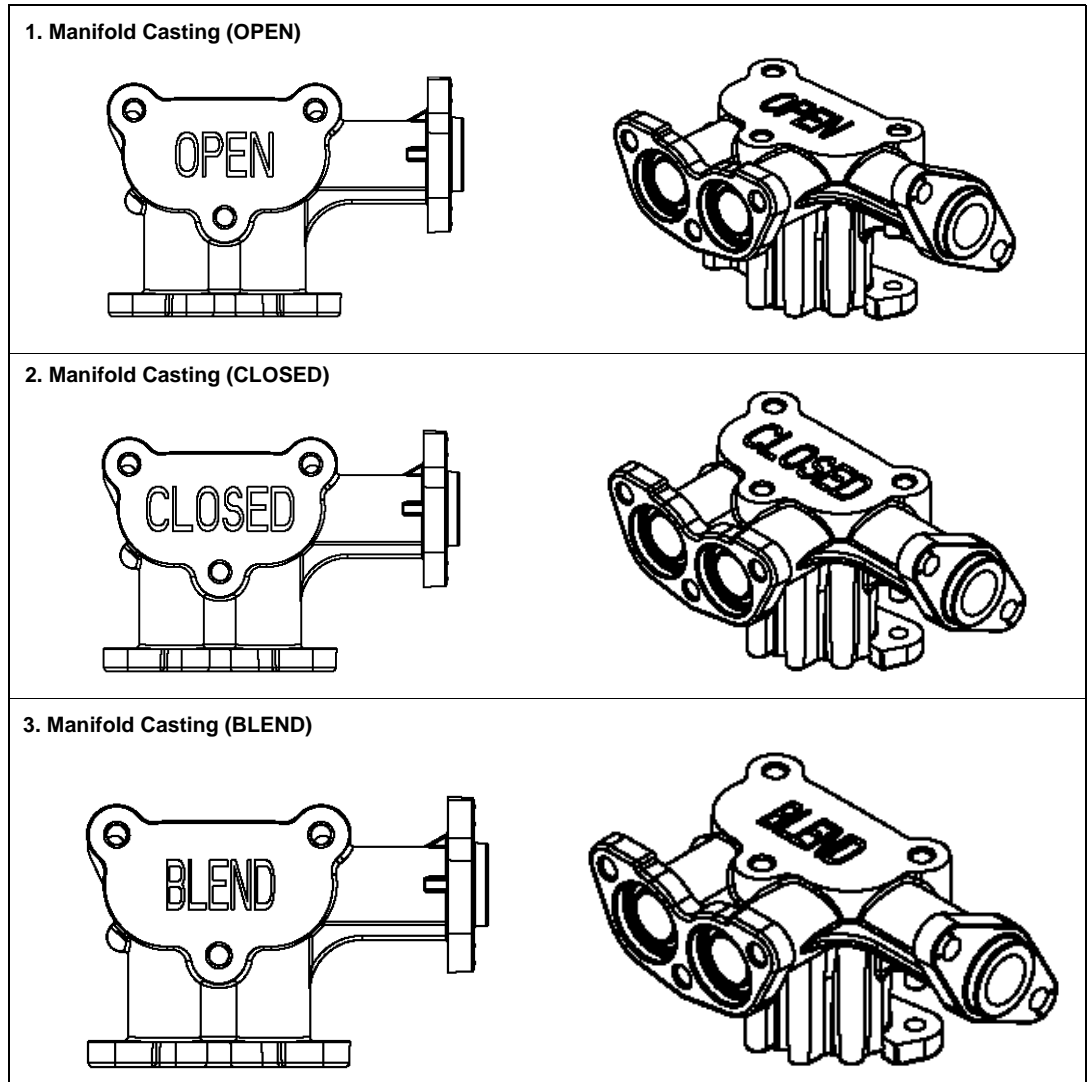
# Check Valve



| Item # | Part Description | Current Part |
|--------|------------------|--------------|
| 1      | Check Valve      | N23274       |

# Upper Hydraulics

## Manifold Angle Castings

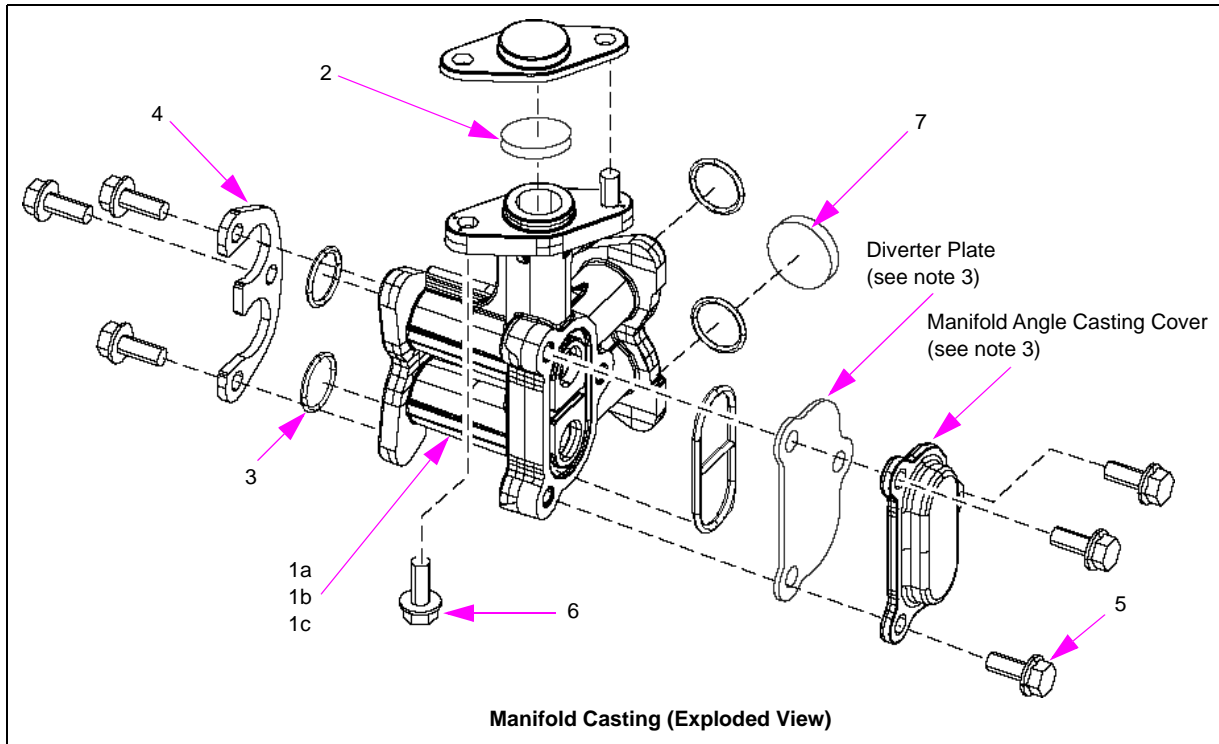


| Item # | Part Description                                 | Current Part | Previous Part | Quantity |
|--------|--|--------------|---------------|----------|
| 1      | Manifold Angle Casting [OPEN (see note)]         | M02087B010   | M00160B010    | 1        |
|        | Manifold Angle Casting [Flexible Fuels (OPEN)]   | M02087B030   | -             | 1        |
| 2      | Manifold Angle Casting (CLOSED)                  | M02088B010   | M00160B010    | 1        |
|        | Manifold Angle Casting [Flexible Fuels (CLOSED)] | M02088B030   | -             | 1        |
| 3      | Manifold Angle Casting (BLEND)                   | M02771B010   | -             | 1        |
|        | Manifold Angle Casting [Flexible Fuels (BLEND)]  | M02771B030   | -             | 1        |

*Note: If the M00160B010 Angle Casting is used with a Diverter Plate (M00591B001), M02088B010 Angle Casting must be ordered. If the diverter plate is not used, M02087B010 Angle Casting must be ordered.*

# Manifold Angle Casting Assembly

For Units Built Before April 2002



| Item # | Part Description                              | Current Part | Previous Part | Quantity     |
|--------|---|--------------|---------------|--------------|
| 1a     | Manifold Angle Casting - Open (see note 1)    | M02087B010   | M00160B010    | 1            |
| 1b     | Manifold Angle Casting - Closed (see note 1)  | M02088B010   | -             | 1            |
| 1c     | Manifold Angle Casting - Blend (see note 1)   | M02771B010   | -             | 1            |
| 2      | Gasket, Angle Casting Plug (see note 2)       | M00613B001   | -             | 1            |
| 3      | O-ring, 0.862 X 0.103 X 0.103 (see note 2)    | -            | -             | 4            |
| 4      | Clamp, Parflange (Not Part of Kit)            | M00133B001   | -             | 2            |
| 5      | Screw, M8 X 20 (see note 3)                   | -            | -             | 6            |
| 6      | Screw, Metric Socket Button Head (see note 3) | -            | -             | 2            |
|        | Manifold Angle Casting Gasket (see note 2)    | M00789B001   | -             | 1            |
| 7      | Plug  | M11310B001   | M00592B001    | (see note 4) |

**Notes:**

- The manifold angle casting has been redesigned, eliminating the diverter plate and cover. For spare part requirements to units manufactured after February 2002, to determine correct part number, refer to ["Hydraulics Configurations"](#) on page 12-19.
- For seal and gasket parts, refer to K96621-01 and K96621-02 (FF) Kits.
- For Metric hardware parts, refer to K96620-01 Kit.
- Quantity will vary between 0 and 3 depending on the model.

# Hydraulics Configurations

## Multi-hose Fixed Blender Manifold Assembly

**LOW**

**REFERENCE INFORMATION**

TYP ALL FIGURES:  
 1- THICK SOLID LINES = LOWER HYDRAULIC PIPING  
 2- THICK DASHED LINES = UPPER HYDRAULIC PIPING  
 3- INLET PRODUCT CODES  
 4- METER CODES  
 5- HOSE OUTLET PRODUCTS  
 6- UPPER HOUSING MANIFOLDS  
 7- LOWER HOUSING MANIFOLDS  
 C = CLOSED MANIFOLD (OLD DESIGN: WITH DIVERTER PLATE)  
 O = OPEN MANIFOLD (OLD DESIGN: LESS DIVERTER PLATE)  
 - = NOT APPLICABLE  
 B = BLEND MANIFOLD

**LOW**

**FIGURE 2A**  
MODEL NO. M00/MC0  
1 GRADE MPO

**FIGURE 2B**  
MODEL NO. M01/MC1  
2 GRADE MPO

**FIGURE 2C**  
MODEL NO. M02/MC2  
3 GRADE MPO

**FIGURE 2D**  
MODEL NO. M03/MC3  
4 GRADE MPO

**FIGURE 2E**  
MODEL NO. M04/MC4  
3 GRADE SINGLE HOSE MPO  
DISCHARGE LEFT

**FIGURE 2F**  
MODEL NO. M05/MC5  
3 GRADE SINGLE HOSE MPO  
DISCHARGE RIGHT

**FIGURE 2G**  
MODEL NO. M06/MC6  
3+1 GRADE SINGLE HOSE MPO

**FIGURE 2H**  
MODEL NO. M07/MC7  
3+1 GRADE BLENDER

**FIGURE 2I**  
MODEL NO. M08/MC8  
3+1 GRADE BLENDER

**FIGURE 2J**  
MODEL NO. M09/MC9  
3+1 GRADE BLENDER

**FIGURE 2K**  
MODEL NO. M10/MC10  
X+1 SELECTABLE BLENDER

**FIGURE 2L**  
MODEL NO. M11/MC11  
X+1 SELECTABLE BLENDER

**FIGURE 2M**  
MODEL NO. M12/MC12  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2N**  
MODEL NO. M13/MC13  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2O**  
MODEL NO. M14/MC14  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2P**  
MODEL NO. M15/MC15  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2Q**  
MODEL NO. M16/MC16  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2R**  
MODEL NO. M17/MC17  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2S**  
MODEL NO. M18/MC18  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2T**  
MODEL NO. M19/MC19  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2U**  
MODEL NO. M20/MC20  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2V**  
MODEL NO. M21/MC21  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2W**  
MODEL NO. M22/MC22  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2X**  
MODEL NO. M23/MC23  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2Y**  
MODEL NO. M24/MC24  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2Z**  
MODEL NO. M25/MC25  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AA**  
MODEL NO. M26/MC26  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AB**  
MODEL NO. M27/MC27  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AC**  
MODEL NO. M28/MC28  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AD**  
MODEL NO. M29/MC29  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AE**  
MODEL NO. M30/MC30  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AF**  
MODEL NO. M31/MC31  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AG**  
MODEL NO. M32/MC32  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AH**  
MODEL NO. M33/MC33  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AI**  
MODEL NO. M34/MC34  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AJ**  
MODEL NO. M35/MC35  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AK**  
MODEL NO. M36/MC36  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AL**  
MODEL NO. M37/MC37  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AM**  
MODEL NO. M38/MC38  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AN**  
MODEL NO. M39/MC39  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AO**  
MODEL NO. M40/MC40  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AP**  
MODEL NO. M41/MC41  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AQ**  
MODEL NO. M42/MC42  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AR**  
MODEL NO. M43/MC43  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AS**  
MODEL NO. M44/MC44  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AT**  
MODEL NO. M45/MC45  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AU**  
MODEL NO. M46/MC46  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AV**  
MODEL NO. M47/MC47  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AW**  
MODEL NO. M48/MC48  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AX**  
MODEL NO. M49/MC49  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AY**  
MODEL NO. M50/MC50  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2AZ**  
MODEL NO. M51/MC51  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BA**  
MODEL NO. M52/MC52  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BB**  
MODEL NO. M53/MC53  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BC**  
MODEL NO. M54/MC54  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BD**  
MODEL NO. M55/MC55  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BE**  
MODEL NO. M56/MC56  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BF**  
MODEL NO. M57/MC57  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BG**  
MODEL NO. M58/MC58  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BH**  
MODEL NO. M59/MC59  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BI**  
MODEL NO. M60/MC60  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BJ**  
MODEL NO. M61/MC61  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BK**  
MODEL NO. M62/MC62  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BL**  
MODEL NO. M63/MC63  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BM**  
MODEL NO. M64/MC64  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BN**  
MODEL NO. M65/MC65  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BO**  
MODEL NO. M66/MC66  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BP**  
MODEL NO. M67/MC67  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BQ**  
MODEL NO. M68/MC68  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BR**  
MODEL NO. M69/MC69  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BS**  
MODEL NO. M70/MC70  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BT**  
MODEL NO. M71/MC71  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BU**  
MODEL NO. M72/MC72  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BV**  
MODEL NO. M73/MC73  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BW**  
MODEL NO. M74/MC74  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BX**  
MODEL NO. M75/MC75  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BY**  
MODEL NO. M76/MC76  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2BZ**  
MODEL NO. M77/MC77  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2C0**  
MODEL NO. M78/MC78  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2C1**  
MODEL NO. M79/MC79  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2C2**  
MODEL NO. M80/MC80  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2C3**  
MODEL NO. M81/MC81  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2C4**  
MODEL NO. M82/MC82  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2C5**  
MODEL NO. M83/MC83  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2C6**  
MODEL NO. M84/MC84  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2C7**  
MODEL NO. M85/MC85  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2C8**  
MODEL NO. M86/MC86  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2C9**  
MODEL NO. M87/MC87  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CA**  
MODEL NO. M88/MC88  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CB**  
MODEL NO. M89/MC89  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CC**  
MODEL NO. M90/MC90  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CD**  
MODEL NO. M91/MC91  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CE**  
MODEL NO. M92/MC92  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CF**  
MODEL NO. M93/MC93  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CG**  
MODEL NO. M94/MC94  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CH**  
MODEL NO. M95/MC95  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CI**  
MODEL NO. M96/MC96  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CJ**  
MODEL NO. M97/MC97  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CK**  
MODEL NO. M98/MC98  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CL**  
MODEL NO. M99/MC99  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CM**  
MODEL NO. M100/MC100  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CN**  
MODEL NO. M101/MC101  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CO**  
MODEL NO. M102/MC102  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CP**  
MODEL NO. M103/MC103  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CQ**  
MODEL NO. M104/MC104  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CR**  
MODEL NO. M105/MC105  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CS**  
MODEL NO. M106/MC106  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CT**  
MODEL NO. M107/MC107  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CU**  
MODEL NO. M108/MC108  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CV**  
MODEL NO. M109/MC109  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CW**  
MODEL NO. M110/MC110  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CX**  
MODEL NO. M111/MC111  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CY**  
MODEL NO. M112/MC112  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2CZ**  
MODEL NO. M113/MC113  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2D0**  
MODEL NO. M114/MC114  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2D1**  
MODEL NO. M115/MC115  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2D2**  
MODEL NO. M116/MC116  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2D3**  
MODEL NO. M117/MC117  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2D4**  
MODEL NO. M118/MC118  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2D5**  
MODEL NO. M119/MC119  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2D6**  
MODEL NO. M120/MC120  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2D7**  
MODEL NO. M121/MC121  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2D8**  
MODEL NO. M122/MC122  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2D9**  
MODEL NO. M123/MC123  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2DA**  
MODEL NO. M124/MC124  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

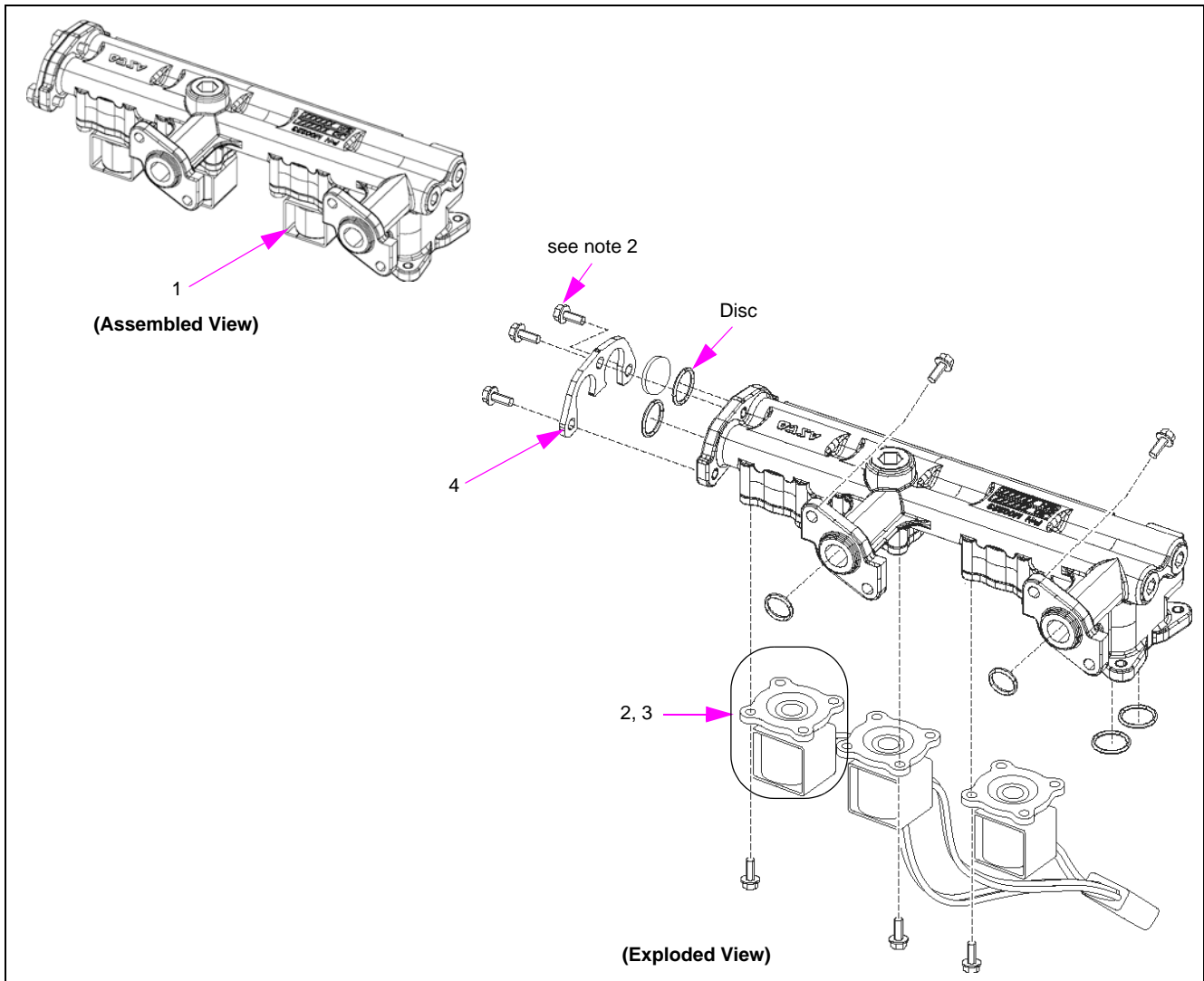
**FIGURE 2DB**  
MODEL NO. M125/MC125  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2DD**  
MODEL NO. M126/MC126  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2DE**  
MODEL NO. M127/MC127  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2DF**  
MODEL NO. M128/MC128  
X+1 SELECTABLE BLENDER  
EXTENDED REAR

**FIGURE 2DG**  
MODEL NO. M129/MC129  
X+1 SELECT

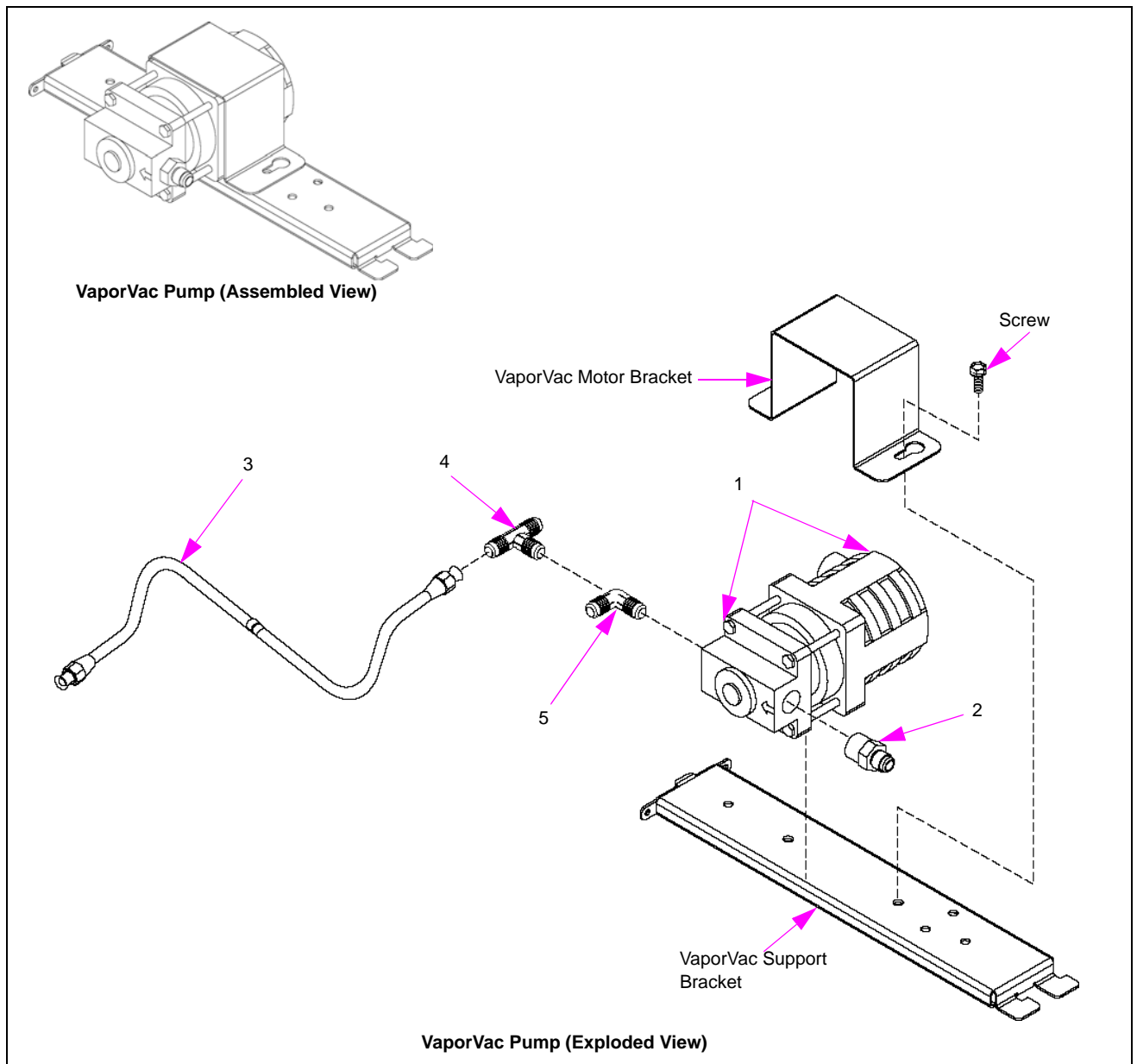


| Item # | Part Description                           | Current Part | Previous Part | Quantity     |
|--------|--|--------------|---------------|--------------|
| 1      | Multi-hose Fixed Blender Manifold Assembly | M00223A001   | -             | 1            |
| 2      | Valve (see note 1)                         | M00223B001   | -             | 1 per Kit    |
| 3      | Coil Assembly (see note 1)                 | M00223B002   | -             | 1 per Kit    |
| 4      | Clamp, Parflange                           | M00133B001   | -             | 1            |
|        | • Screw                                    | -            | -             | (see note 2) |
|        | • O-ring                                   | -            | -             | (see note 3) |

**Notes:**

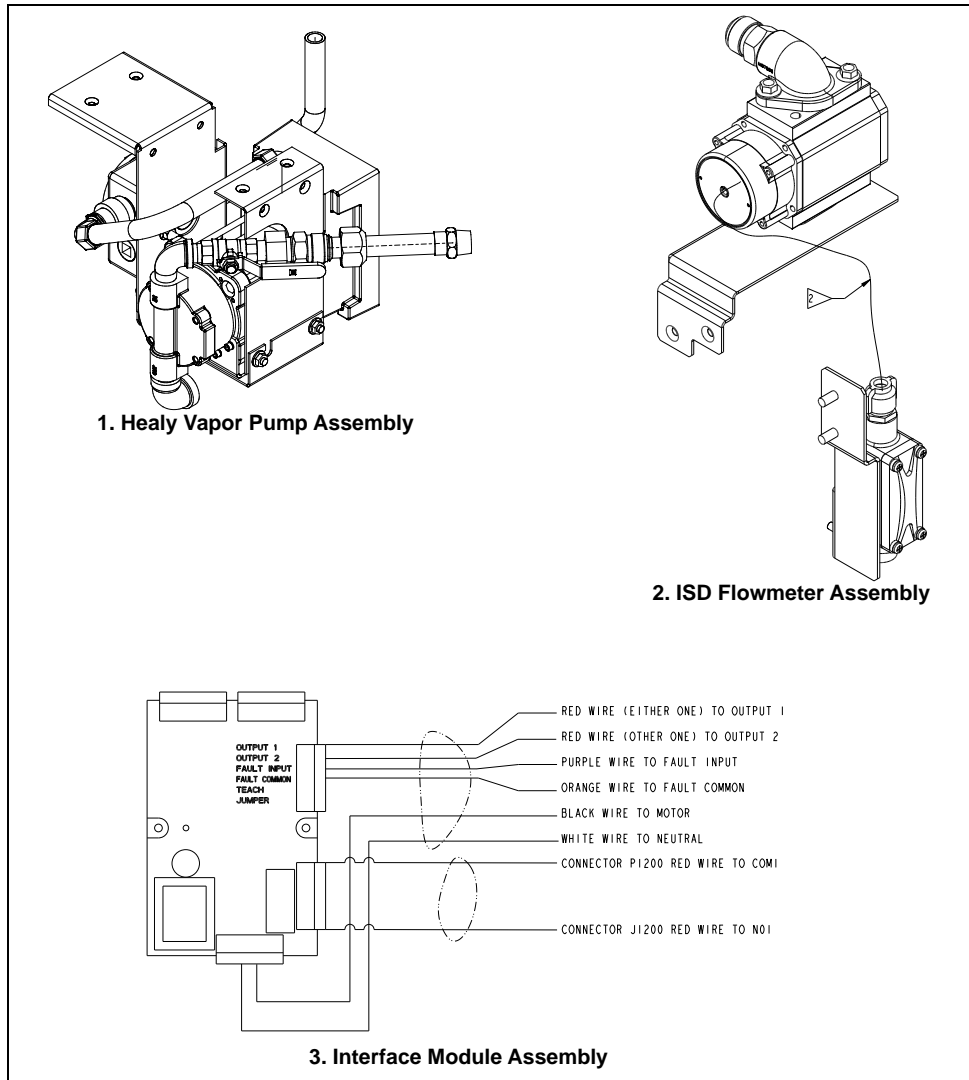
1. To replace valve and coil assembly, use K96642-01 Kit to replace valve (1 per kit) and K96643-01 Kit to replace coil assembly (1 per kit). For more information, refer to MDE-3900 Steering Manifold Valve and Valve Coil Replacement Kits (K9664X-01) for Encore Series. K96643-01 is obsolete with no replacement.
2. Use Metric Hardware Kit K96620-01 (includes screws, nuts, and bolts) to replace fasteners.
3. To replace O-rings, refer to K96621-01 Kit and K96621-02 (FF).

### VaporVac Pump Assembly with VaporVac Fittings



| Item #                 | Part Description   | Current Part | Previous Part | Quantity |
|------------------------|--|--------------|---------------|----------|
| VaporVac Pump Assembly |  |              |               |          |
| 1                      | VaporVac Pump  | R19663-G1    | -             | 1        |
| 2                      | Flare Fitting, Straight 3/4 NPT X 1/2                                      | Q10008-22    | -             | 1        |
| 3                      | Vapor Recovery Tube [between Motors (Dual-sided units only)]               | M00390A001   | -             | 1        |
| 4                      | Flare/Male Pipe Tee 3/4 National Pipe Thread [NPT (Dual-sided units only)] | M00708B001   | -             | 1        |
| 5                      | Elbow 3/4 X 90° Flare/Male   | K76203       | -             | 1        |
| -                      | Vapor Motor Bracket  | -            | -             | 1        |
| -                      | Screw, M5 X 10   | -            | -             | 2        |
| -                      | Vapor Motor Bracket Support  | -            | -             | 1        |

# Healy Vapor Pump

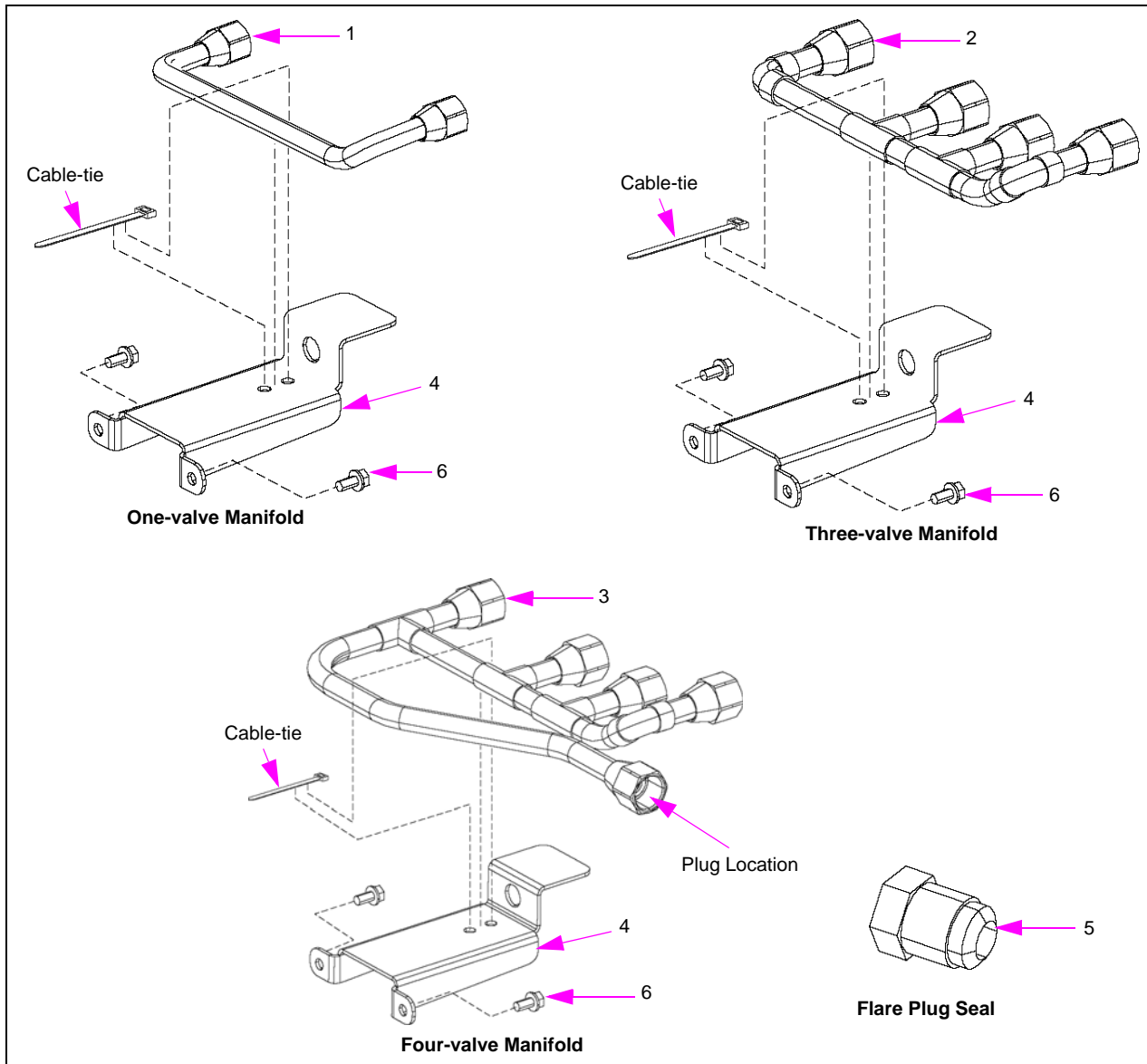


| Item # | Part Description               | Current Part | Previous Part | Quantity |
|--------|--------------------------------|--------------|---------------|----------|
| 1      | Assembly, Healy Vapor Pump     | M06719A001   | -             | 1        |
|        | • Adapter, Pipe Enlarging      | M07132B001   | -             | 1        |
|        | • Assembly, Flared Tube        | M07134A001   | -             | 1        |
|        | • Assembly, Healy Main Conduit | M07170A002   | -             | 1        |
|        | • Ball Valve, Brass            | M06698B002   | M06698B001    | 1        |
|        | • Bracket, Healy Pump          | M06636A001   | -             | 1        |
|        | • Bracket, Healy Pump          | M06636A002   | -             | 1        |
|        | • Bracket, Healy Pump          | M06881B001   | -             | 1        |

| Item # | Part Description                                | Current Part | Previous Part | Quantity |
|--------|---|--------------|---------------|----------|
|        | • Bushing Faced Rdc 3/4 X 1/2                   | K49827       | -             | 2        |
|        | • Bolt Carriage 1/4-20 X 3/4 les                | K02394-34    | -             | 4        |
|        | • Conduit, Vapor J-box                          | M06885B001   | -             | 1        |
|        | • Fitting Straight 3/4 Flare                    | K81023       | -             | 1        |
|        | • Elbow, 90° Street                             | M05197B002   | -             | 1        |
|        | • Elbow Conduit 1/2 X 90° M and F               | K42448       | -             | 2        |
|        | • Pipe Fitting 3/4 X 1/2                        | K02321-27    | -             | 1        |
|        | • J-box Assembly                                | N23269-G4    | -             | 1        |
|        | • Nipple 1/2 X 1-1/8"                           | N16771-25    | -             | 1        |
|        | • Nut, Hexagonal Flange Serrated Lock Fc        | Q11890-04    | -             | 4        |
|        | • Nut, Hexagonal Flange Serrated Lock Fc        | Q11890-05    | -             | 1        |
|        | • Nut, Metric M8 Serrated                       | M00414B003   | -             | 4        |
|        | • Tape Pipe Joint Sealer                        | 470199000    | -             | 0        |
|        | • Union Conduit M and F 1/2                     | Q10016-04    | -             | 1        |
|        | • Conn Wire Nut 74b Yellow                      | M07125B001   | -             | 1        |
|        | • Washer Cup Grn Scr #6-10 X 9                  | K44293       | -             | 6        |
|        | • Screw Tpt Hexagonal Wash Head 10              | Q11097-01    | -             | 1        |
|        | • Lockwasher Extension Thread #10 X 0.022       | K85736-05    | -             | 1        |
|        | • Healy Vapor Pump                              | K50866       | -             | 1        |
| 2      | Assembly, ISD Flowmeter                         | M06722A003   | -             | 1        |
|        | • 1/2" Cord Grip                                | Q13274 -019  | -             | 1        |
|        | • Bolt Hexagonal-head 5/16-18 X 1/2             | K49232       | -             | 2        |
|        | • Bracket, Encore                               | M14407A001   | M03205B001    | 1        |
|        | • Bracket, ISD Meter                            | M14406B001   | M06635B001    | 1        |
|        | • Adapter, Vapor Meter                          | M07096B011   | -             | 1        |
|        | • Fitting Straight 3/4 Flare                    | K81023       | -             | 1        |
|        | • Flange, Tube                                  | M04040B010   | -             | 1        |
|        | • Flowmeter, ISD                                | M03730B001   | -             | 1        |
|        | • Nut, Hexagonal Flange Serrated Lock Fc        | Q11890-04    | -             | 2        |
|        | • O-ring 1-1/2 X 1-3/4 X 1/8                    | Q10068-13    | -             | 1        |
|        | • Unit Power Ln. 1/2 Type Erc                   | K72943       | -             | 1        |
|        | • Screen, Filter, ISD                           | M03845B001   | -             | 1        |
|        | • Screw, Hexagonal-head Flange Serrated lf 5/16 | Q11889-15    | -             | 4        |
|        | • Tape Pipe Joint Sealer                        | 470199000    | -             | 0        |
|        | • U-bolt 1/4-20 X 1.5                           | K67996-02    | -             | 1        |
| 3      | Assembly, Interface Module                      | M07127A001   | -             | 1        |
|        | • Interface Module, Healy                       | M07126B001   | -             | 1        |
|        | • Cable, Healy Motor                            | M07198A001   | -             | 1        |
|        | • Cable, Adaptor V/R                            | M06890A001   | -             | 1        |

# One-, Three-, and Four-valve Manifold

## For Units with Vapor Valves



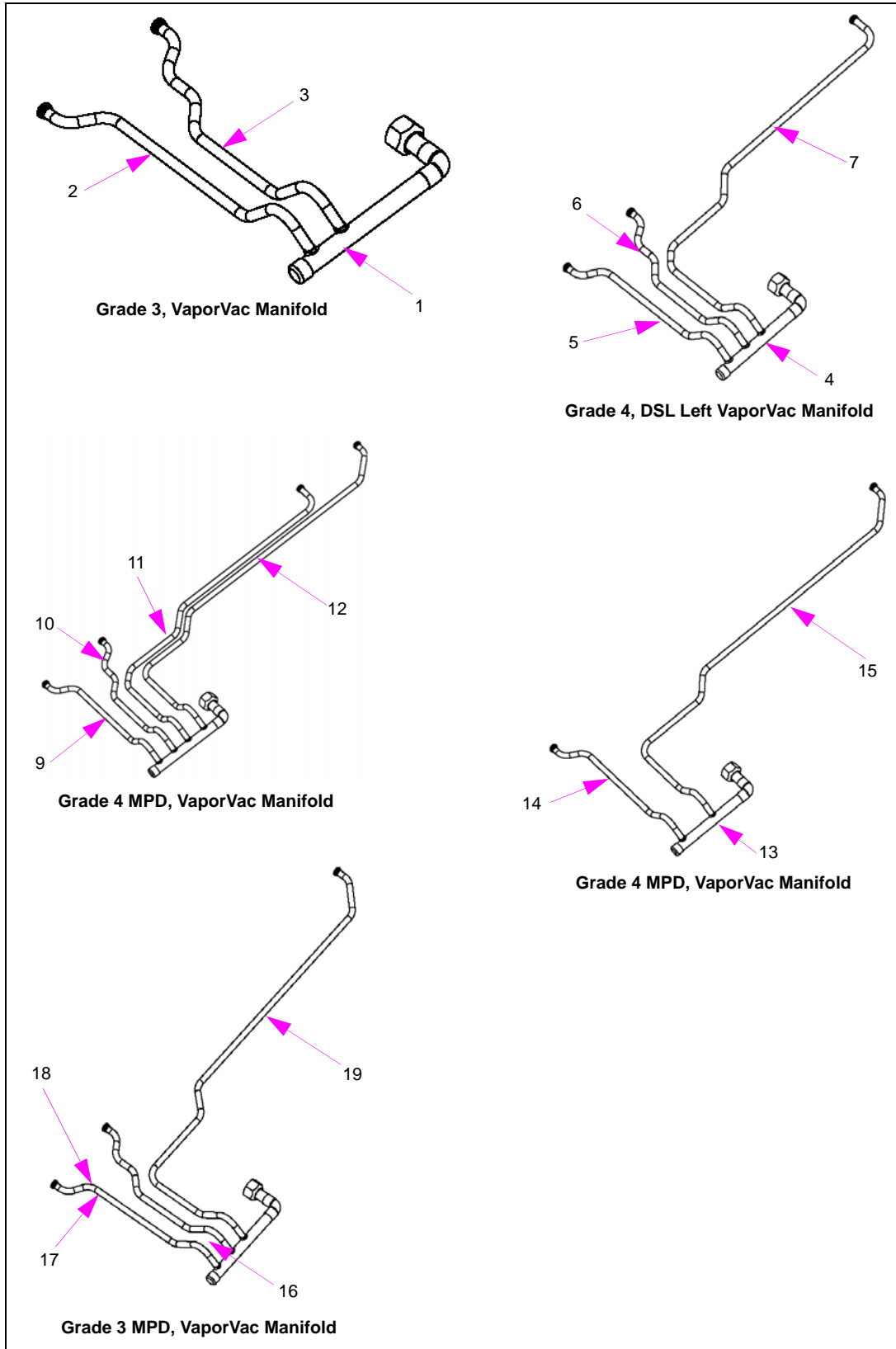
| Item # | Part Description                           | Current Part | Previous Part | Quantity |
|--------|--|--------------|---------------|----------|
| 1      | Vapor Recovery Tube (One-valve Manifold)   | M01443A001   | -             | 1        |
| 2      | Vapor Recovery Tube (Three-valve Manifold) | M00379A001   | -             | 1        |
| 3      | Vapor Recovery Tube (Four-valve Manifold)  | M00381A001   | -             | 1        |
| 4      | • VaporVac Bracket (see note)              | -            | -             | 1        |
| 5      | • Flare Plug Seal (see note)               | -            | -             | 1        |
| 6      | • Screw, M5 X 10 (see note)                | -            | -             | 2        |

Note: Parts not available individually.

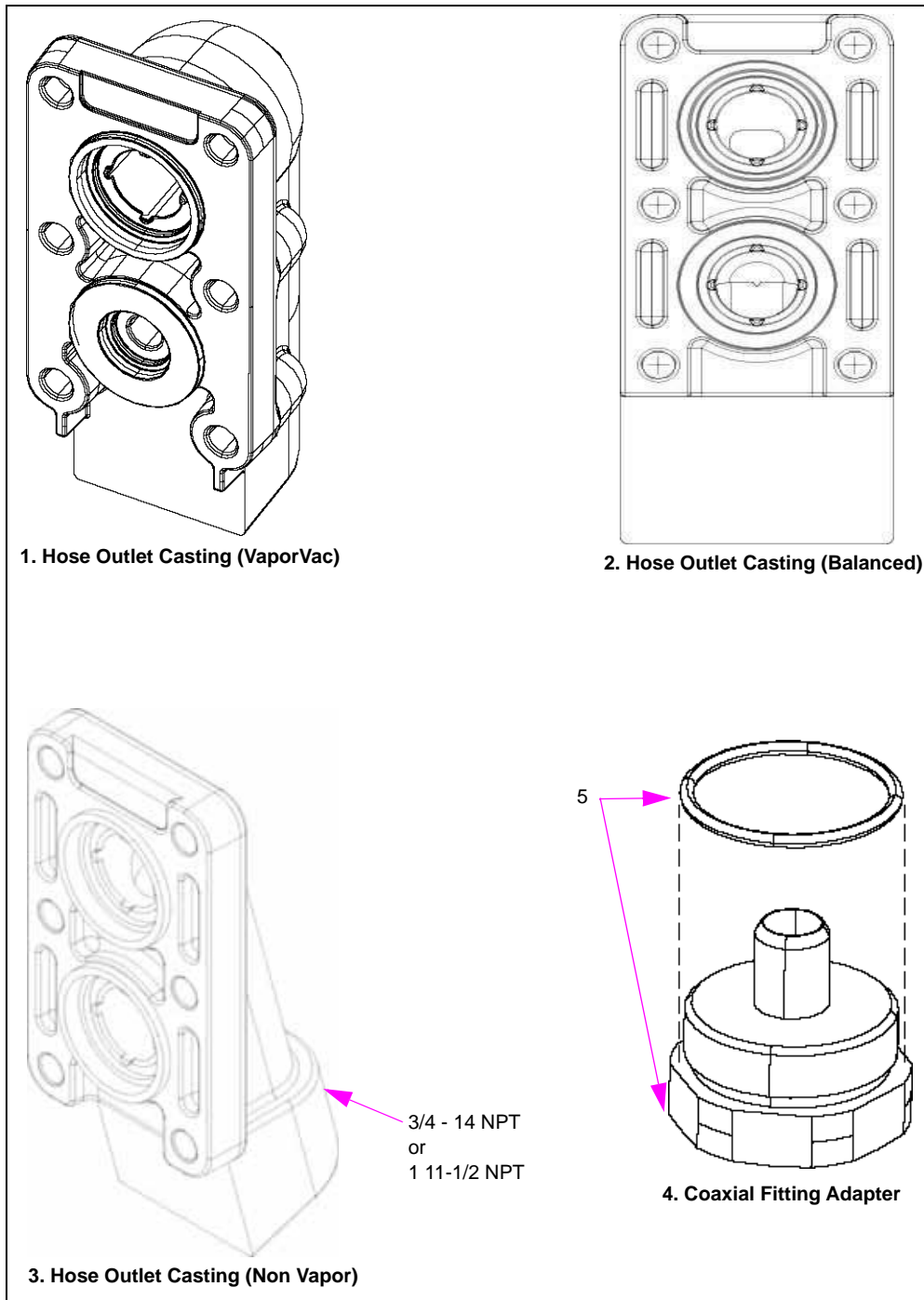
## VaporVac Manifold

### For Units Without Vapor Valves

| Item #   | Part Description           | Current Part | Previous Part | Quantity |
|--|----------------------------|--------------|---------------|----------|
| <b>VaporVac Manifold Assembly, Grade 3 MPD, Digital Subscriber Line (DSL) Left</b> |                            | M02215A001   | -             | 1        |
| 1  | • VaporVac Manifold Tube   | M02216B001   | -             | 1        |
| 2  | • VaporVac Hose Tubing "A" | M02217A001   | -             | 1        |
| 3  | • VaporVac Hose Tubing "B" | M02218A001   | -             | 1        |
| <b>VaporVac Manifold Assembly, Grade 4 MPD, DSL Left</b>                           |                            | M02215A002   | -             | 1        |
| 4  | • VaporVac Manifold Tube   | M02216B002   | -             |          |
| 5  | • VaporVac Hose Tubing "A" | M02217A001   | -             | 1        |
| 6  | • VaporVac Hose Tubing "B" | M02218A001   | -             | 1        |
| 7  | • VaporVac Hose Tubing "C" | M02219A001   | -             | 1        |
| <b>VaporVac Manifold Assembly, Grade 4 MPD</b>                                     |                            | M02215A003   | -             | 1        |
| 8  | • VaporVac Manifold Tube   | M02216B003   | -             | 1        |
| 9  | • VaporVac Hose Tubing "A" | M02217A001   | -             | 1        |
| 10   | • VaporVac Hose Tubing "B" | M02218A001   | -             | 1        |
| 11   | • VaporVac Hose Tubing "C" | M02219A001   | -             | 1        |
| 12   | • VaporVac Hose Tubing "D" | M02220A001   | -             | 1        |
| <b>VaporVac Manifold Assembly, Grade 2 MPD</b>                                     |                            | M02215A004   | -             | 1        |
| 13   | • VaporVac Manifold Tube   | M02216B004   | -             | 1        |
| 14   | • VaporVac Hose Tubing "A" | M02217A001   | -             | 1        |
| 15   | • VaporVac Hose Tubing "D" | M02801A001   | -             | 1        |
| <b>VaporVac Manifold Assembly, Grade 3</b>   |                            | M02215A005   | -             | 1        |
| 16   | • VaporVac Manifold Tube   | M02216B002   | -             | 1        |
| 17   | • VaporVac Hose Tubing "A" | M02217A001   | -             | 1        |
| 18   | • VaporVac Hose Tubing "B" | M02218A001   | -             | 1        |
| 19   | • VaporVac Hose Tubing "D" | M02801A001   | -             | 1        |



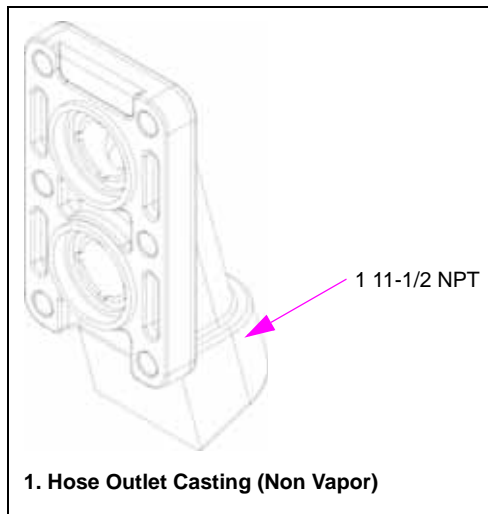
### Hose Outlet Casting and Fitting



| Item #              | Part Description                               | Current Part | Previous Part | Quantity |
|---------------------|--|--------------|---------------|----------|
| Hose Outlet Casting |  |              |               |          |
| 1                   | Hose Outlet Casting, VaporVac                  |              | -             | 1        |
|                     | Hose Outlet Casting, VaporVac (Flexible Fuels) | M05583B030   | M00163B030    | 1        |

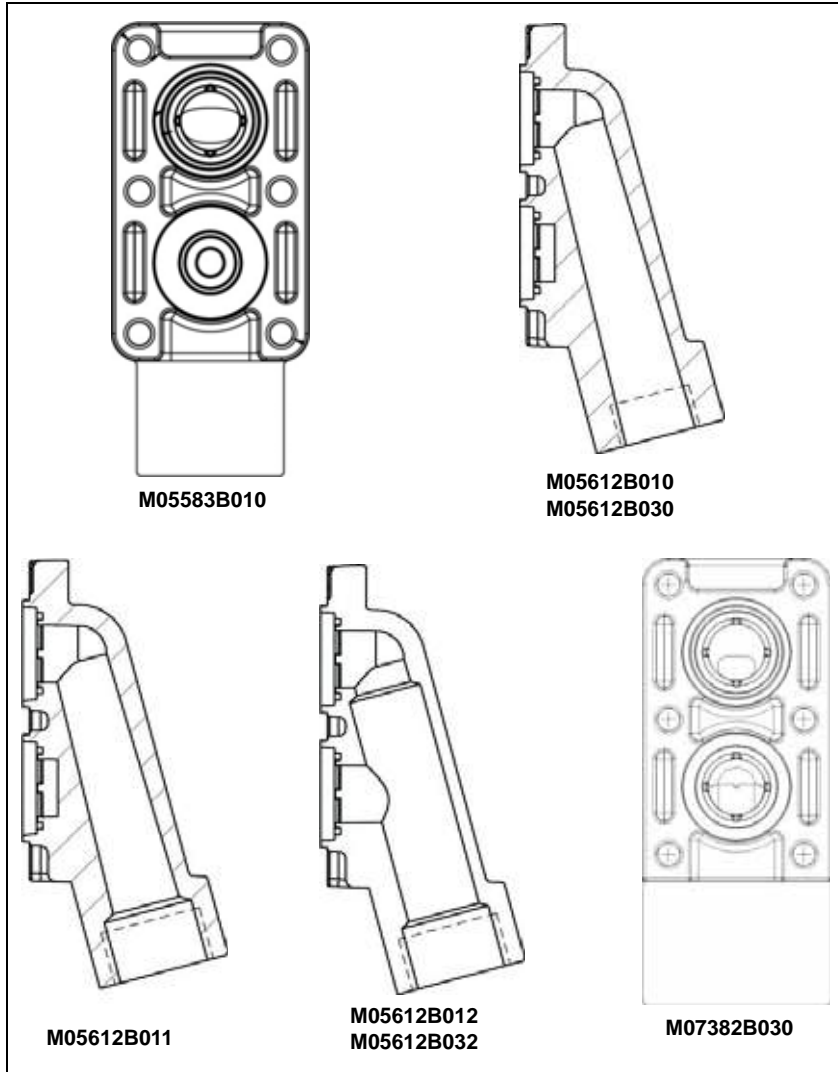
| Item #   | Part Description  | Current Part | Previous Part            | Quantity |
|--|---|--------------|--------------------------|----------|
| 2  | Hose Outlet Casting, Balanced   | M07382B010   | M07308B010<br>M00162B010 | 1        |
|  | Hose Outlet Casting, Balanced (Flexible Fuels)                                    | M07382B030   | M07308B030<br>M00162B030 | 1        |
| 3  | Hose Outlet Casting, Non Vapor 3/4 -14 NPT  | M05612B010   | M00164B010               | 1        |
|  | Hose Outlet Casting, Non Vapor 3/4 -14 NPT (Flexible Fuels)                       | M05612B040   | M05612B030<br>M00164B030 | 1        |
|  | Hose Outlet Casting, Non Vapor 1 11-1/2 NPT                                       | M05612B011   | M00164B011               | 1        |
|  | Hose Outlet Casting, Non Vapor 1 11-1/2 NPT (Flexible Fuels)                      | M05612B041   | M05612B031<br>M00164B031 | 1        |
| 4  | Coaxial Adapter Fitting   | N22963-01    | -                        | 1        |
| 5  | O-ring, 1.956 X 1.720   | -            | -                        | 1        |
| <b>Not Shown</b>   |   |              |                          |          |
| -  | O-ring, 11/16 X 0.13 X 0.10 [see note 1 (Used on Balanced Casting Item 2 only)]   | -            | -                        | 1        |
| -  | O-ring, 0.862 X 0.103 X 0.10 (see note 1)   | -            | -                        | 1        |
| -  | O-ring, 0.424 X 0.103 X 0.10 [see note 1 (Used on Vapor/Vac Casting Item 1 only)] | -            | -                        | 1        |
| -  | Screw, Metric M8 X 20 (see note 2)  | -            | -                        | 4        |
| <b>Notes:</b><br>1. O-rings may be found in Seal and Gasket Kit (K96621-01) and K96621-02 (FF).<br>2. Screws may be found in Metric Kit (K96620-01). |   |              |                          |          |

### Hose Outlet Casting and Fitting (Ultra-Hi Only)



| Item #  | Part Description  | Current Part | Previous Part | Quantity                      |
|---|---|--------------|---------------|-------------------------------|
| Hose Outlet Casting (Ultra-Hi only)                                   |   |              |               |                               |
| 1   | Hose Outlet Casting (Non Vapor Recovery)                  | M05612B012   | -             | 1 per Single/2 Dual and Combo |
|   | Hose Outlet Casting [Non Vapor Recovery (Flexible Fuels)] | M05612B042   | M05612B032    | 1 per Single/2 Dual and Combo |
| <b>Not Shown</b>  |   |              |               |                               |
| -   | O-ring 0.862 X 0.103 X 0.10 (see note)                    | -            | -             | 2                             |
| <b>Note:</b> O-rings may be found in Seal and Gasket Kit (K96621-01). |   |              |               |                               |

### Hose Outlet Casting and Fitting (Encore S Series)



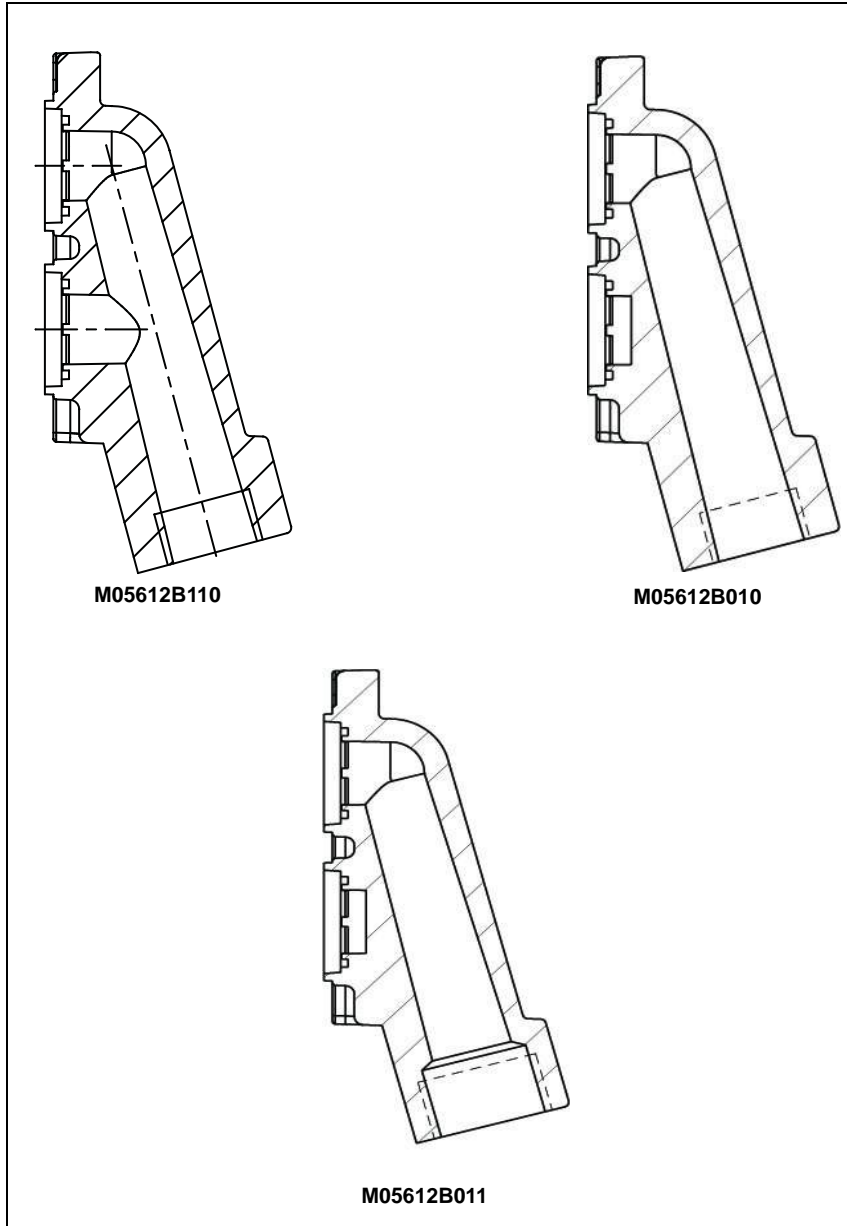
| Item # | Part Description  | Current Part | Previous Part | Quantity |
|--------|---|--------------|---------------|----------|
| 1      | Hose Outlet Casting   |              |               |          |
| 2      | Angled Hose Outlet Casting, VaporVac - Machined   | M05583B010   | M00163B010    | 1        |
| 3      | Angled Hose Outlet Casting, VaporVac - Machined (Flexible Fuels)                        | M05583B030   | M00163B030    | 1        |
| 4      | Angled Hose Outlet Casting, 3/4 NPT - Machined (obsolete, see note 1)                   | -            | M06320B010    | 1        |
|        | Angled Hose Outlet Casting, 3/4 NPT - Machined (Flexible Fuels), (obsolete, see note 1) | -            | M06320B011    |          |
|        | Angled Hose Outlet Casting, 1" NPT - Machined   | M05583B030   | M00163B030    |          |
|        | Angled Hose Outlet Casting, 1" NPT - Machined (Flexible Fuels)                          | M05612B011   | M00164B011    |          |
|        | Angled Hose Outlet Casting, 1" NPT - Machined   | M05612B031   | M00164B031    |          |
|        | Angled Hose Outlet Casting, 1" NPT - Machined (Flexible Fuels), (obsolete, see note 2)  | M05612B012   | M00164B012    |          |
|        |   | M05612B042   | M00164B032    |          |
|        |   | M05612B032   | M05612B032    |          |
| 5      | Angled Hose Outlet Casting, Balance Vapor and Healy Vapor                               | M07382B020   | M07308B020    | 1        |
| 6      | Angled Hose Outlet Casting, Balanced (Flexible Fuels)                                   | M07382B030   | M07308B030    | 1        |

**Notes:**

1. No replacement.

2. M05612B032 is obsolete and replaced by M05612B042.

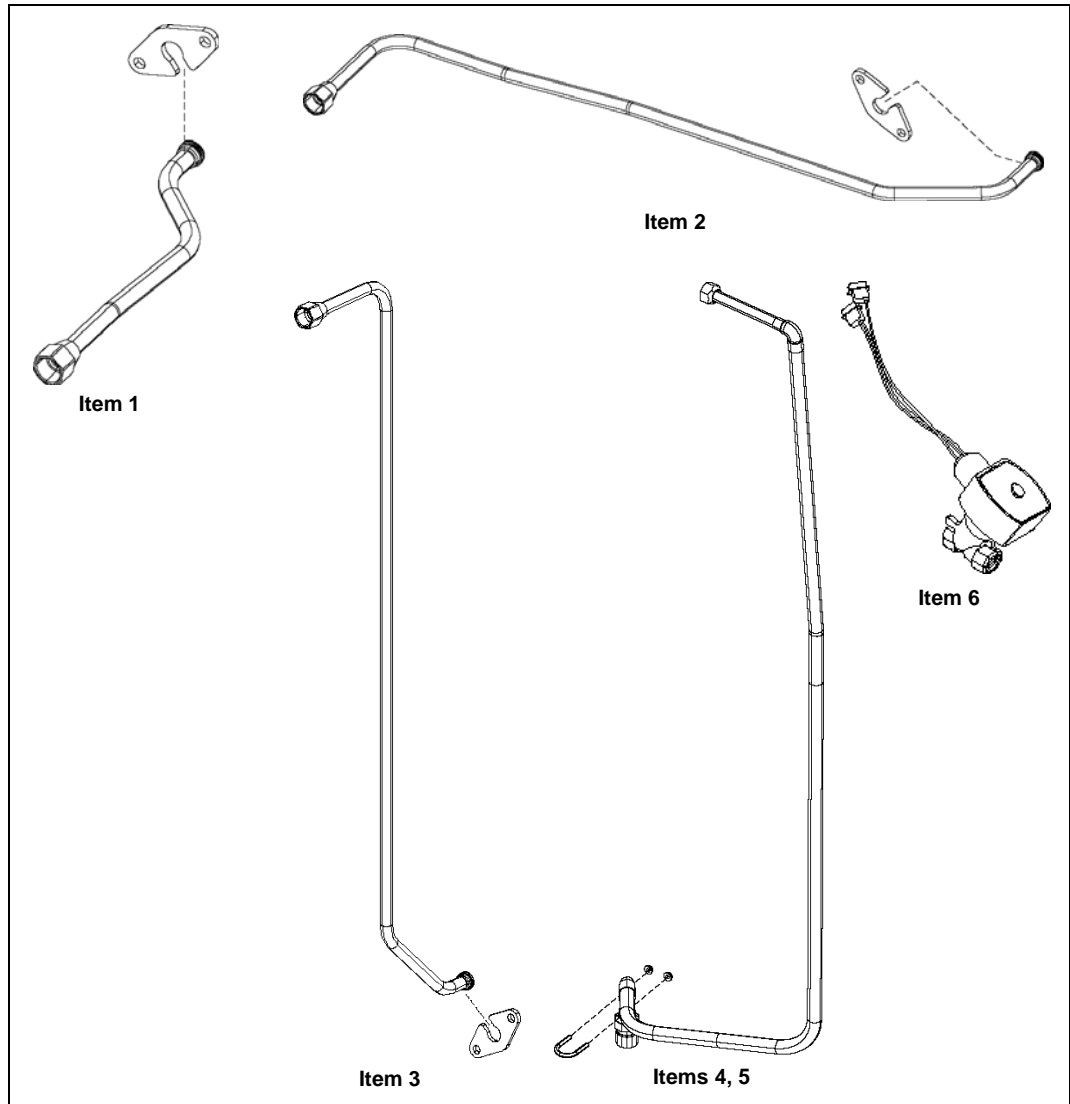
### Hose Outlet Casting and Fitting (Units Without Angle Casting)



| Item # | Part Description                                     | Part Number | Quantity |
|--------|--|-------------|----------|
| 1      | Hose Outlet Casting, Non Vapor, Standard             | M05612B110  | 1        |
| 2      | Hose Outlet Casting, Non Vapor, Diesel Hose          | M05612B010  | 1        |
| 3      | Hose Outlet Casting, Non Vapor, Hi Flow, Diesel Hose | M05612B011  | 1        |

# Vapor Recovery Tubes

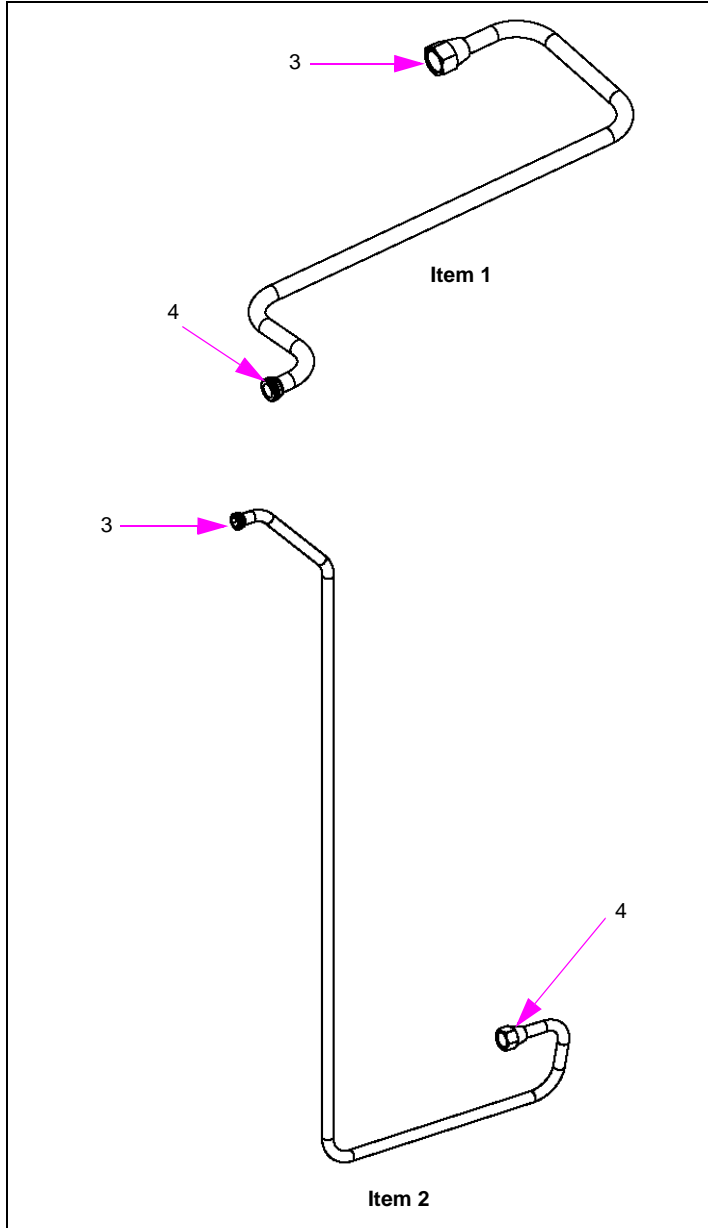
Note: Items 1, 2, 3, and 6 are for units with vapor valves.



| Item #                       | Part Description   | Current Part | Previous Part | Quantity     |
|------------------------------|--|--------------|---------------|--------------|
| VaporVac Tubes               |  |              |               |              |
| 1                            | Vapor Recovery Tube, Short (Valve to Casting) (obsolete, see note 1)   | -            | M00382A001    | (see note 2) |
| 2                            | Vapor Recovery Tube  | M00383A001   | -             | (see note 2) |
| 3                            | Vapor Recovery Tube, Blender (Valve to Casting) (obsolete, see note 1) | -            | M00386A001    | (see note 2) |
| 4                            | Vapor Recovery Tube (Dispensers)                                       | M02585A001   | M00388A001    | (see note 2) |
| 5                            | Vapor Recovery Tube (Pump)   | M02610A001   | M00388A002    | (see note 2) |
| 6                            | Vapor Valve (Solenoid)   | T17909       | -             | (see note 2) |
| Notes:                       |  |              |               |              |
| 1. No replacement.           |  |              |               |              |
| 2. Quantity varies per unit. |  |              |               |              |

# Vapor Recovery Tube

## For Units Without Vapor Valves



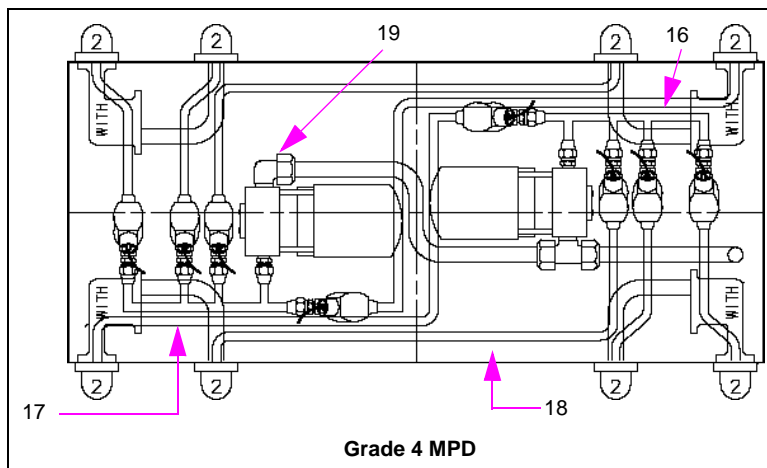
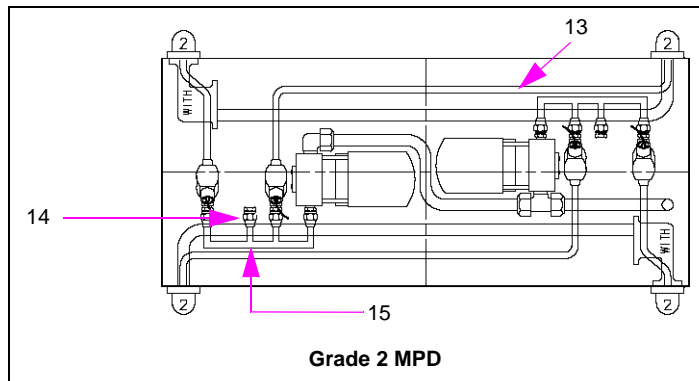
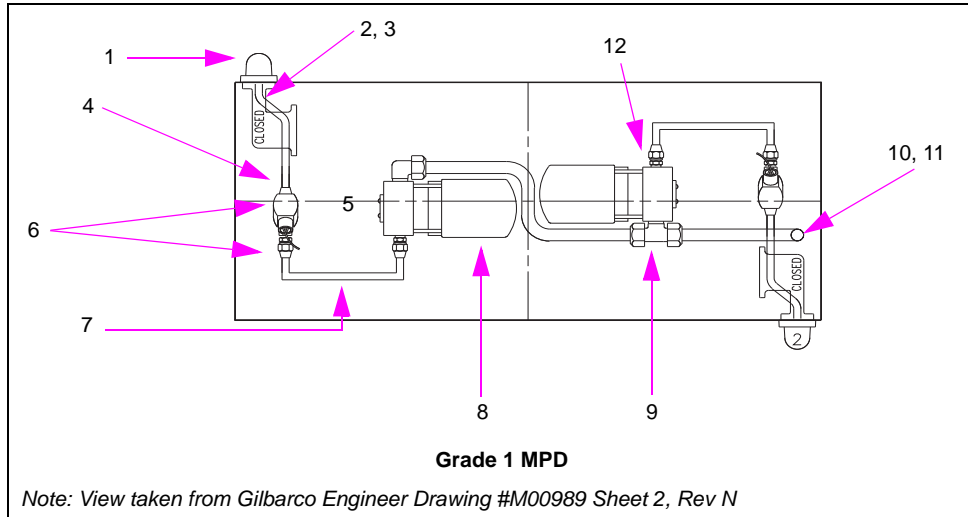
| Item # | Part Description                                  | Current Part | Previous Part | Quantity     |
|--------|---|--------------|---------------|--------------|
| 1      | VaporVac Tubing [Hose to VaporVac Pump (Grade 1)] | M02173A001   | -             | (see note 1) |
| 2      | VaporVac Extended Reach Tubing                    | M02221A001   | -             | (see note 1) |
| 3      | Flare Nut 1/2" Tube (see note 2)                  | -            | -             | 1            |
| 4      | Parflange Sleeve 1/2" Tubing (see note 2)         | -            | -             | 1            |

**Notes:**

- 1. Quantity varies per unit.
- 2. Parts not available individually.

# Upper Hydraulics Housing Assembly (VaporVac)

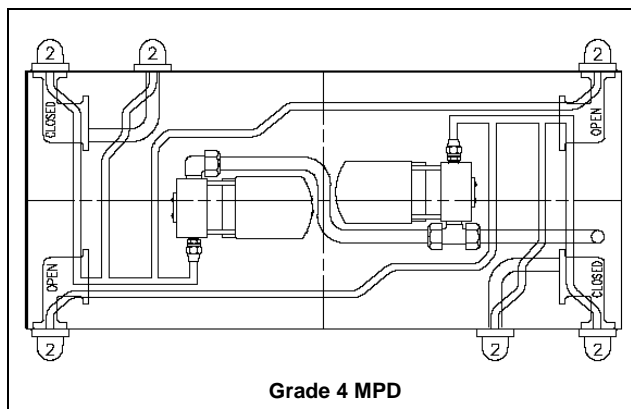
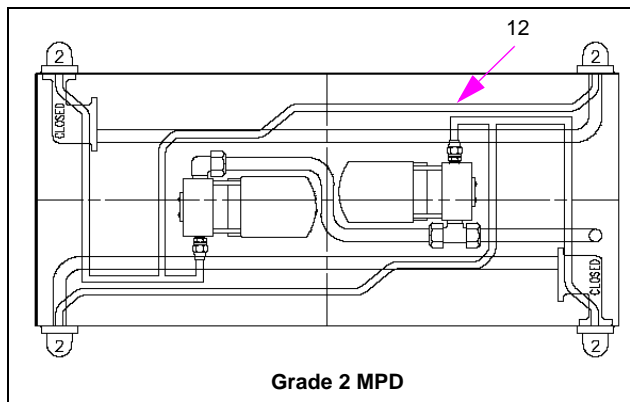
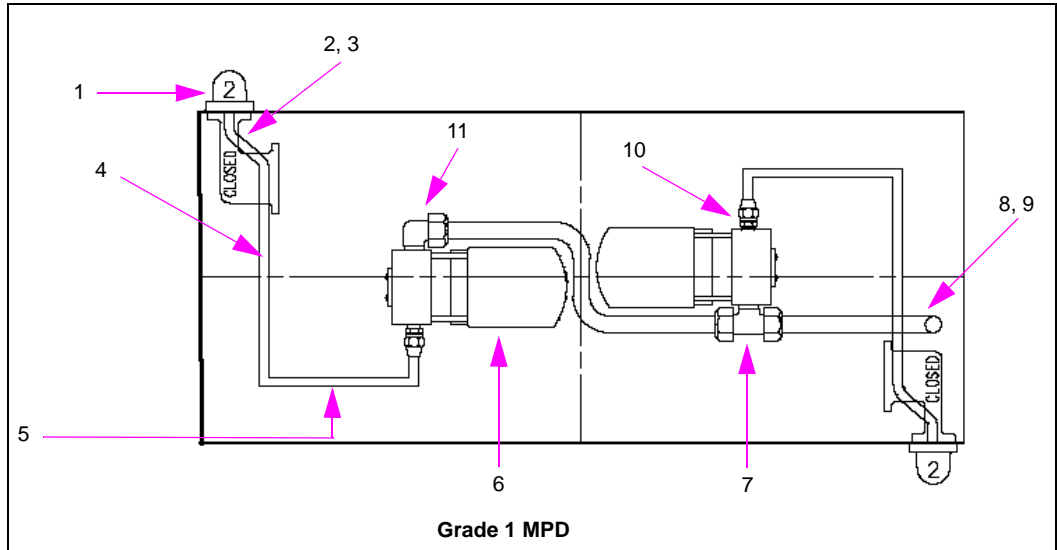
## For Units with Vapor Valves



| Item #  | Part Description   | Current Part | Previous Part | Quantity     |
|---|--|--------------|---------------|--------------|
| Upper Hydraulics (VaporVac) with Vapor Valves |  |              |               |              |
| 1   | Hose Outlet Fitting (VaporVac)   | M05583B010   | M00163B010    | 2            |
|   | Hose Outlet Fitting [VaporVac (Flexible Fuels)]                                    | M05583B030   | M00163B030    | 2            |
| 2   | O-ring, 0.862 X 0.103 X 0.103 [Fuel Connection (Flexible Fuels)]                   | Q12974-118   | N16891-32     | 4            |
|   | O-ring, 0.862 X 0.103 X 0.103 (Fuel Connection)                                    | Q12974-118   | N16891-32     | 4            |
| 3   | O-ring, 0.424 X 0.103 X 0.103 (Vapor Connection)                                   | N16891-34    | -             | 4            |
| 4   | Vapor Recovery Tube, Short (Valve to Casting) (obsolete, see note 1)               | -            | M00382A001    | 2            |
| 5   | Solenoid Vapor Valve   | T17909       | -             | 2            |
| 6   | Flare Fitting, Straight 1/2  | Q10008-21    | -             | 4            |
| 7   | Single Valve Vapor Inlet Line  | M01443A001   | -             | 2            |
| 8   | Vapor Pump 1 Motor with Connect  | R19663-G1    | -             | 2            |
| 9   | Flare/Male Pipe Tee, 3/4 NPT   | M00708B001   | -             | 1            |
| 10  | Vapor Recovery Tube (Dispensers)   | M02585A001   | M00388A001    | 1            |
| 11  | Vapor Recovery Tube (Pump)   | M02610A001   | M00388A002    | 2            |
| 12  | Flare Fitting, Straight 3/4 NPT X 1/2  | Q10008-22    | -             | 2            |
| 13  | Vapor Recovery Tube, Blender (Valve to Casting) (obsolete, see note 1)             | -            | M00386A001    | 1            |
| 14  | Flare Plug Seal  | Q12890-01    | -             | 1            |
| 15  | Vapor Recovery Tube (3 Valve Manifold)   | M00379A001   | -             | (see note 2) |
| 16  | Vapor Recovery Tube (4 Valve Manifold)   | M00381A001   | -             | (see note 2) |
| 17  | Vapor Inlet Line (Valve to Casting - 4 <sup>th</sup> Valve) (obsolete, see note 1) | -            | M00384A001    | (see note 2) |
| 18  | Vapor Recovery Tube (Valve to Casting)   | M00383A001   | -             | (see note 2) |
| 19  | Elbow Fitting 3/4 X 90° Flare/Male   | K76203       | -             | 1            |
| Notes:  |  |              |               |              |
| 1. No replacement.                            |  |              |               |              |
| 2. Quantity is determined by type of unit.    |  |              |               |              |

# Upper Hydraulics Housing Assembly (VaporVac)

## For Units Without Vapor Valves

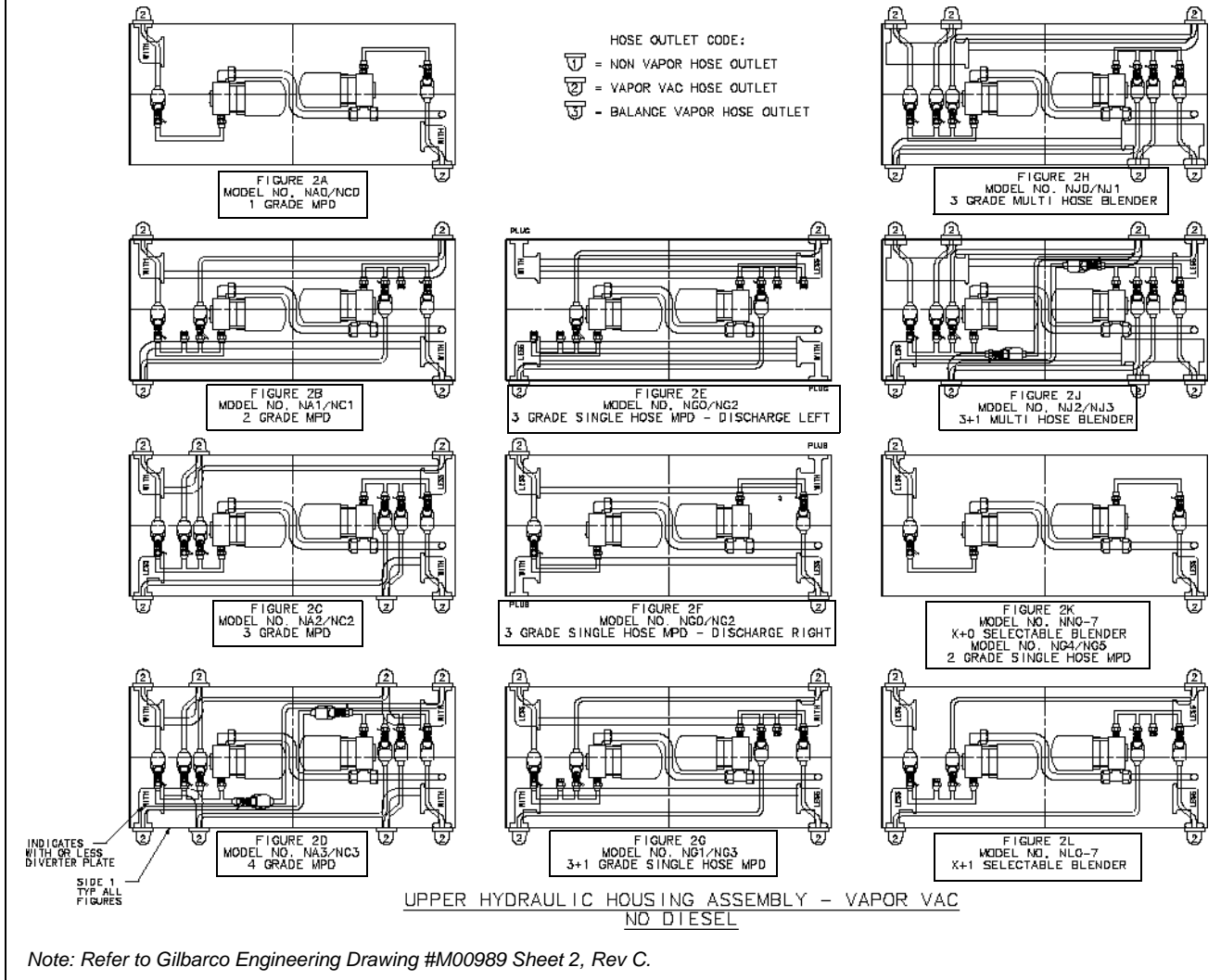


| Item #   | Part Description   | Current Part | Previous Part             | Quantity |
|--|--|--------------|---------------------------|----------|
| Upper Hydraulics (VaporVac) without Vapor Valves |  |              |                           |          |
| 1  | Hose Outlet Fitting (VaporVac)   | M05583B010   | M00163B010                | 2        |
|  | Hose Outlet Fitting [VaporVac (Flexible Fuels)]                        | M05583B030   | M00163B030                | 2        |
| 2  | O-ring, 0.862 X 0.103 X 0.103 (Fuel Connection)                        | Q12974-118   | N16891-32                 | 4        |
|  | O-ring, 0.862 X 0.103 X 0.103 [Fuel Connection (Flexible Fuels)]       | Q12974-118   | N16891-32                 | 4        |
| 3  | O-ring, 0.424 X 0.103 X 0.103 (Vapor Connection)                       | N16891-34    | -                         | 4        |
| 4  | Vapor Recovery Tube, Short (Valve to Casting) (obsolete, see note 1)   | -            | M00382A001                | 2        |
| 5  | Single Valve Vapor Inlet Line  | M01443A001   | -                         | 2        |
| 6  | Vapor Pump 1 Motor with Connect  | R19663-G1    | -                         | 2        |
| 7  | Flare/Male Pipe Tee, 3/4 NPT   | M00708B001   | -                         | 1        |
| 8  | Vapor Recovery Tube (Dispensers)                                       | M02585A001   | M00388A001                | 1        |
| 9  | Vapor Recovery Tube (Pump)   | M02610A001   | M02610A002,<br>M00388A002 | 2        |
| 10   | Flare Fitting, Straight 3/4 NPT X 1/2                                  | Q10008-22    | -                         | 2        |
| 11   | Elbow Fitting 3/4 X 90° Flare/Male                                     | K76203       | -                         | 1        |
| 12   | Vapor Recovery Tube, Blender (Valve to Casting) (obsolete, see note 1) | -            | M00386A001                | 1        |
| Notes:   |  |              |                           |          |
| 1. No replacement.                               |  |              |                           |          |
| 2. Quantity is determined by type of unit.       |  |              |                           |          |

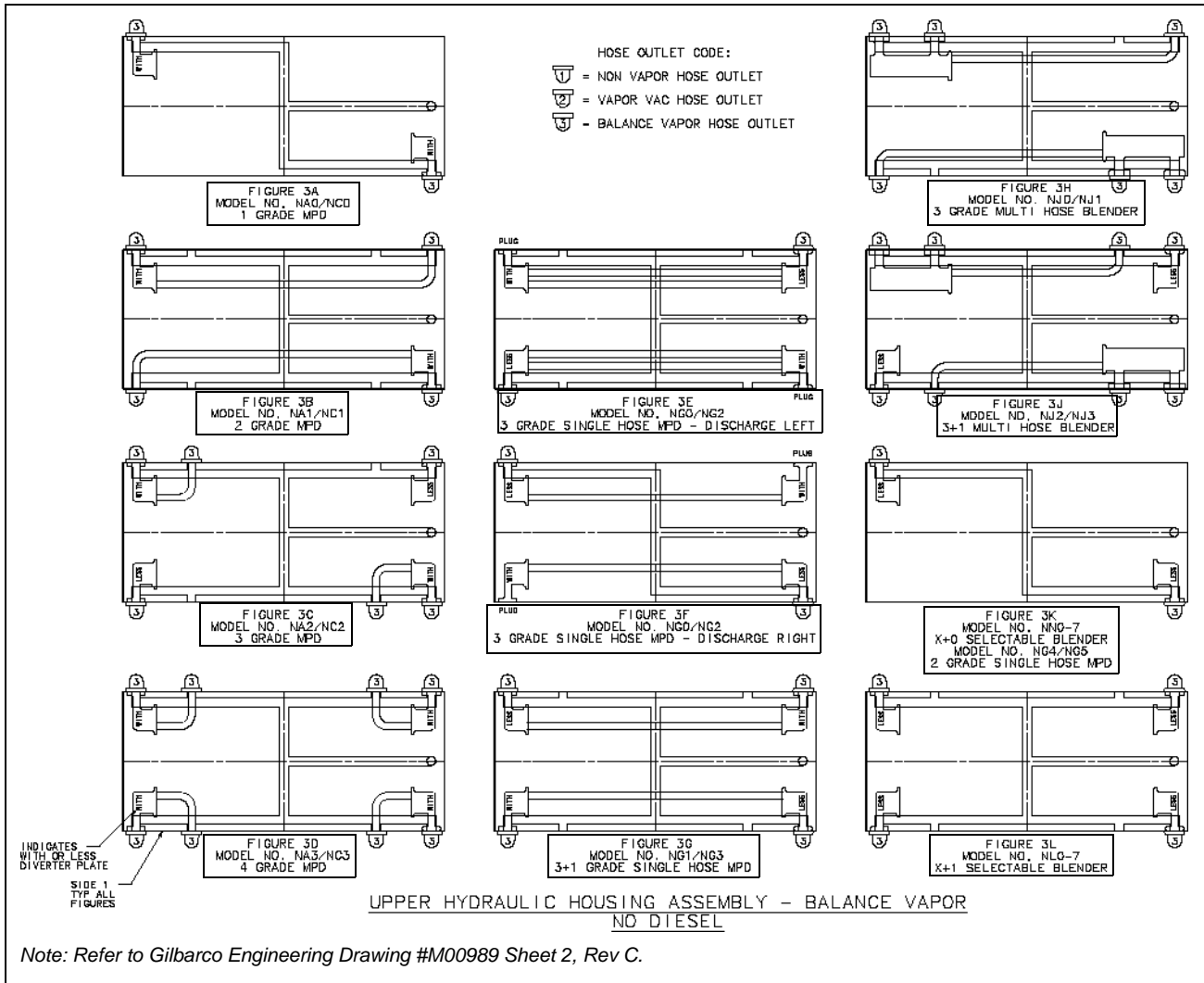
# Upper Hydraulics Configurations (Reference Page)

## For Units with Vapor Valves

To view parts shown on Grade 1, Grade 2, and Grade 4 MPD units, refer to [page 12-33](#).

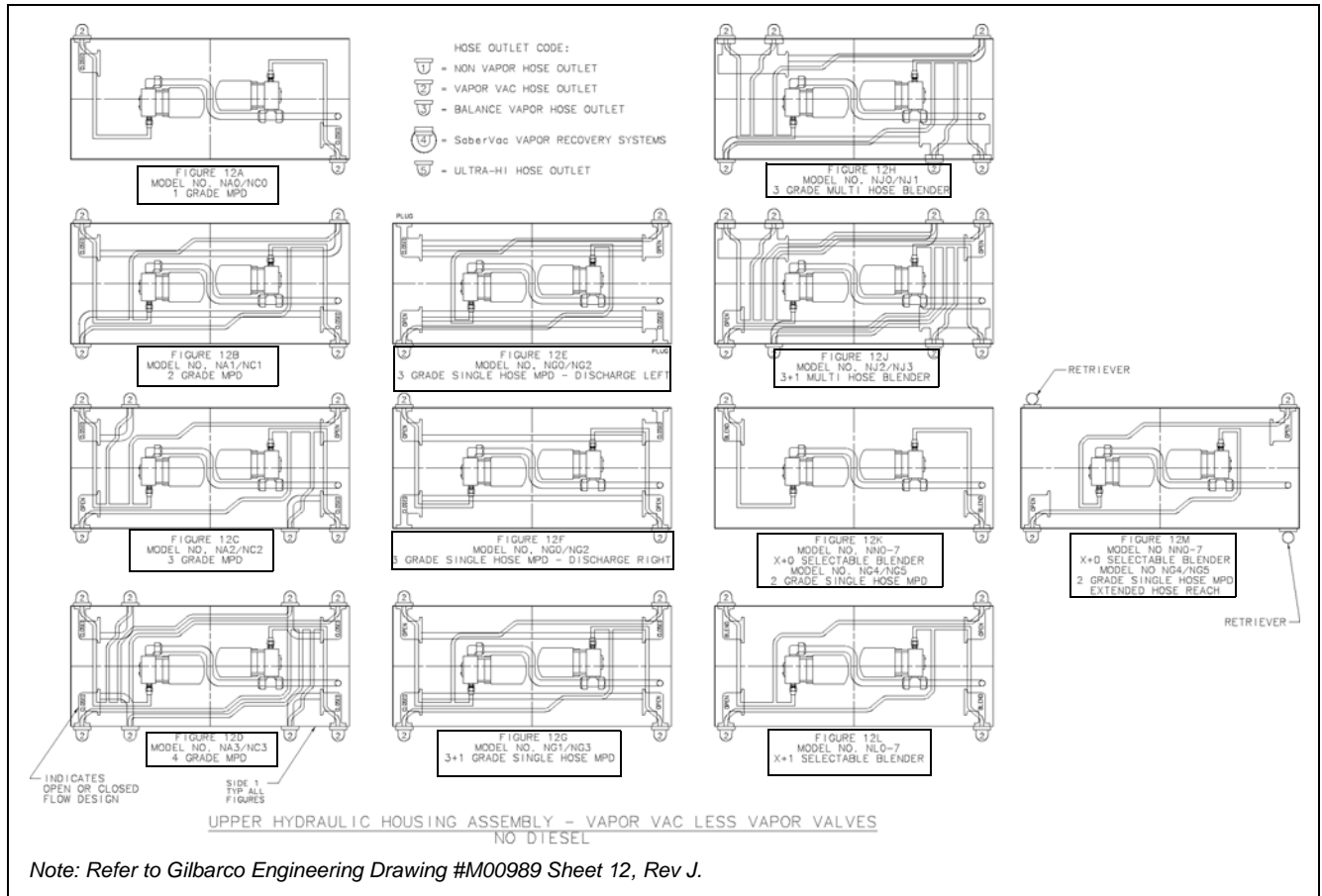


# Upper Hydraulics Configurations - [Balance Vapor (Reference Page)]



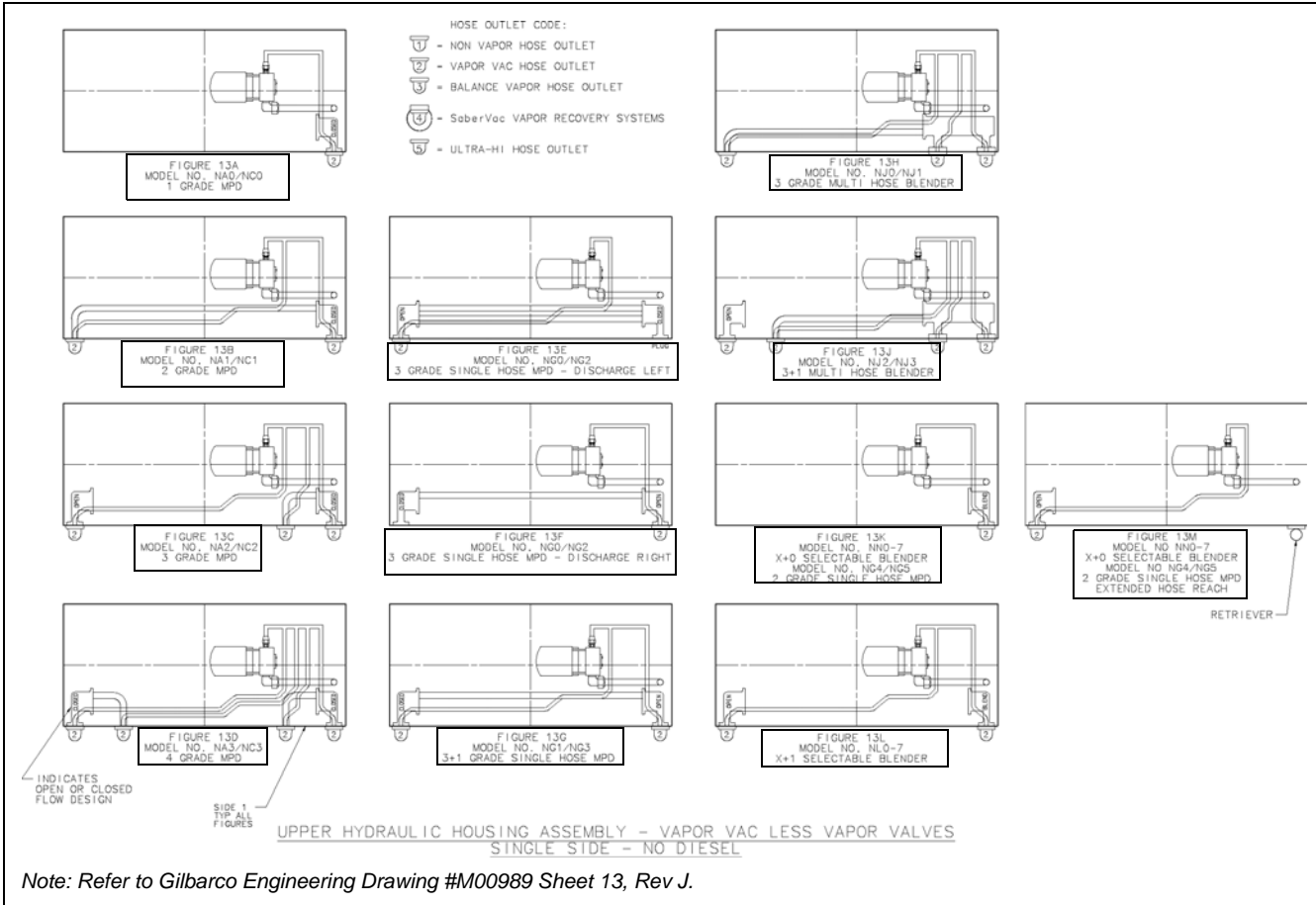
# Upper Hydraulics Configurations - (Reference Page)

## For Units with VaporVac Without Vapor Valves (No Diesel)



# Upper Hydraulics Configurations - (Reference Page)

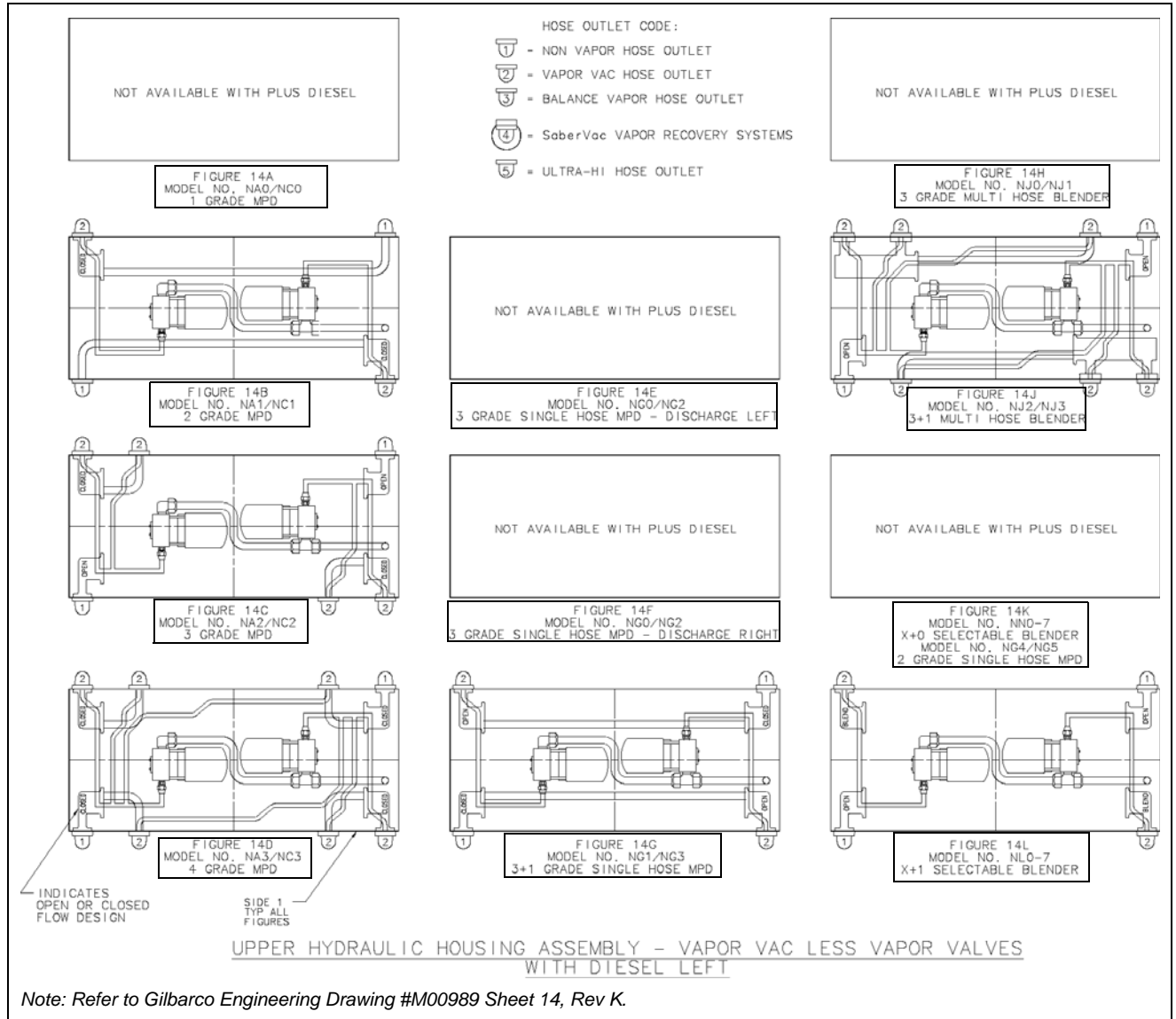
## For Units with VaporVac Without Vapor Valves (Single-sided, No Diesel)



Note: Refer to Gilbarco Engineering Drawing #M00989 Sheet 13, Rev J.

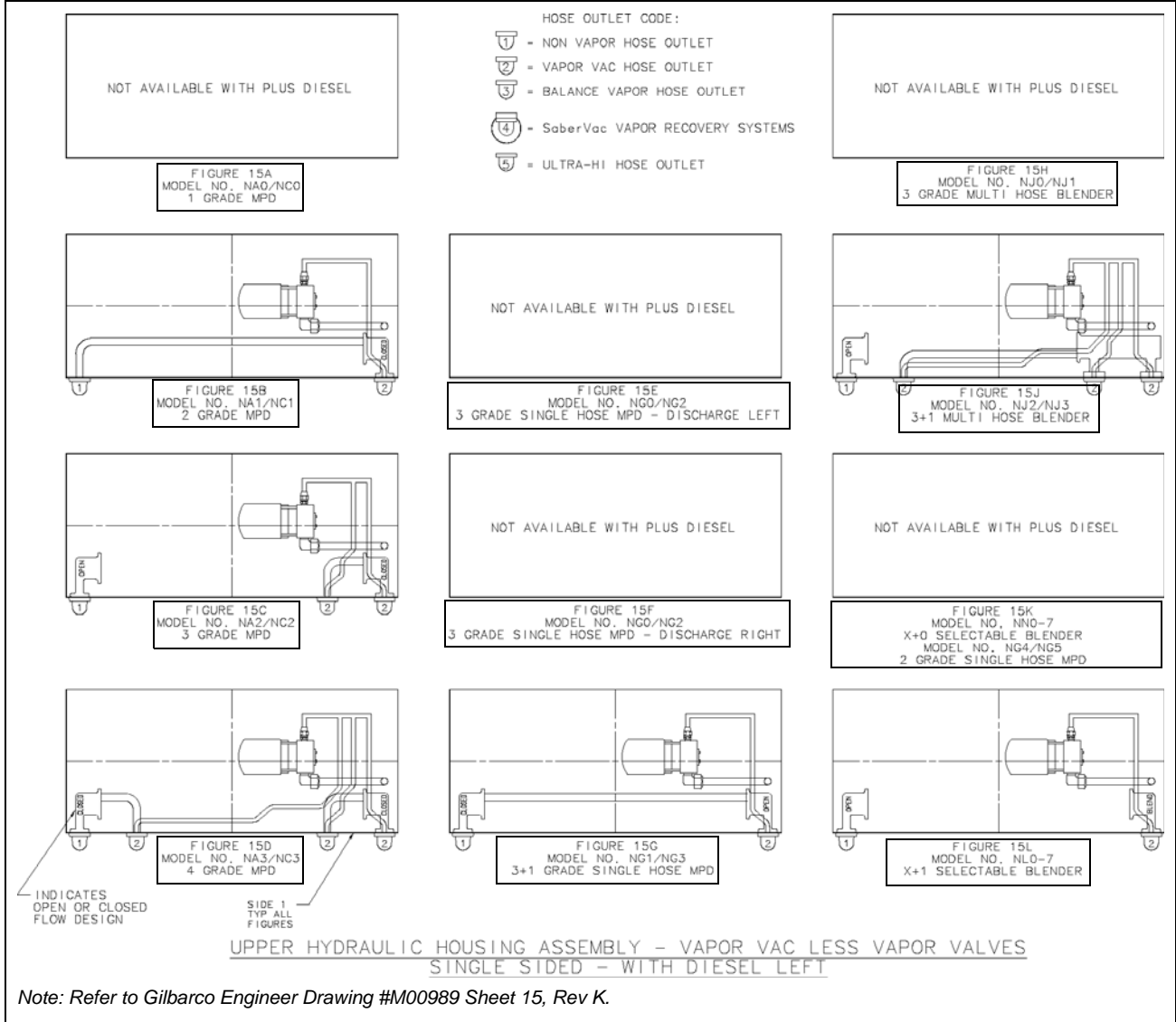
# Upper Hydraulics Configurations - (Reference Page)

## For Units with VaporVac Without Vapor Valves (with Diesel, Left)



# Upper Hydraulics Configurations - (Reference Page)






**For Units with VaporVac Without Vapor Valves (Single-sided with Diesel, Left)**



# Upper Hydraulics Configuration - (Reference Page)

## For Ultra-Hi Single and Dual Units

HOSE OUTLET CODE :

-  = NON VAPOR HOSE OUTLET
-  = VAPOR VAC HOSE OUTLET
-  = BALANCE VAPOR HOSE OUTLET
-  = SaberVac VAPOR RECOVERY SYSTEMS
-  = ULTRA-HI HOSE OUTLET

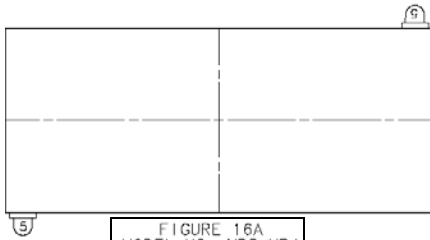


FIGURE 16A  
MODEL NO. NP3/NP4  
DUAL MASTER/COMBO

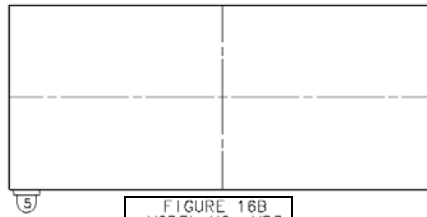


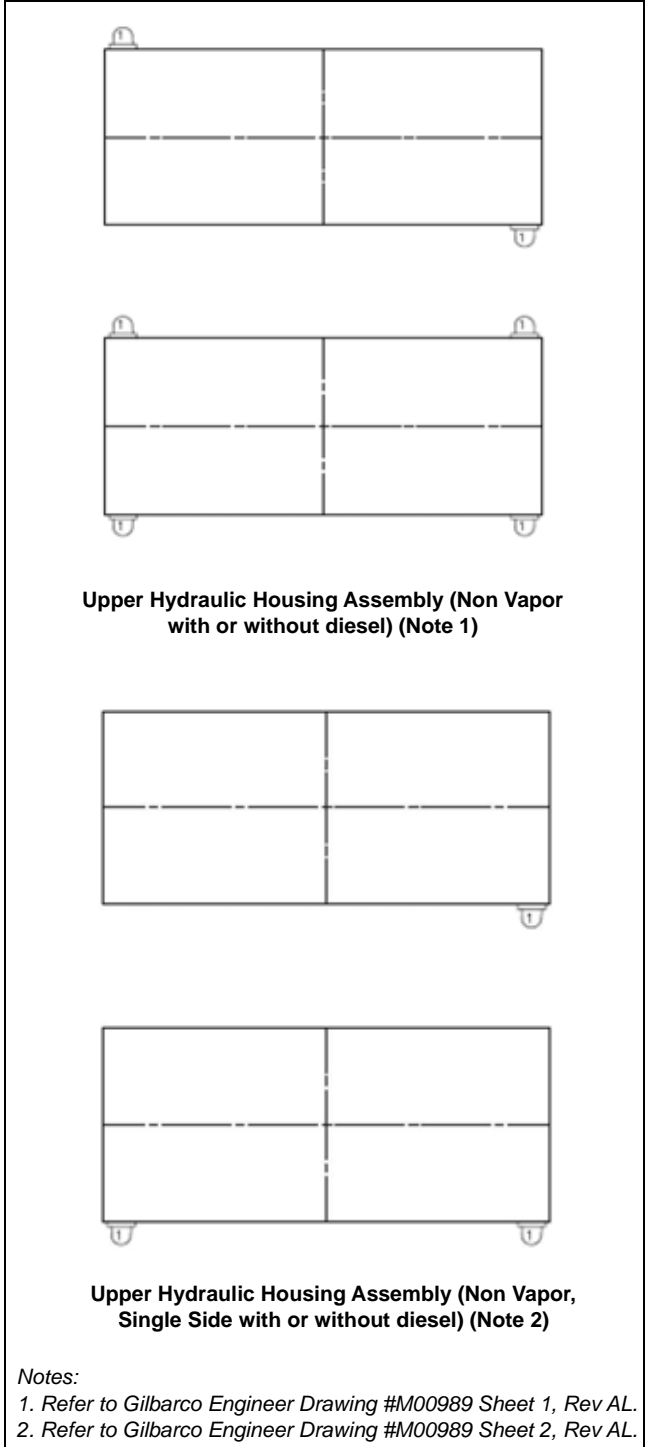
FIGURE 16B  
MODEL NO. NP3  
SINGLE MASTER

UPPER HYDRRAULIC HOUSING ASSEMBLY - ULTRA-HI SINGLE AND DUAL

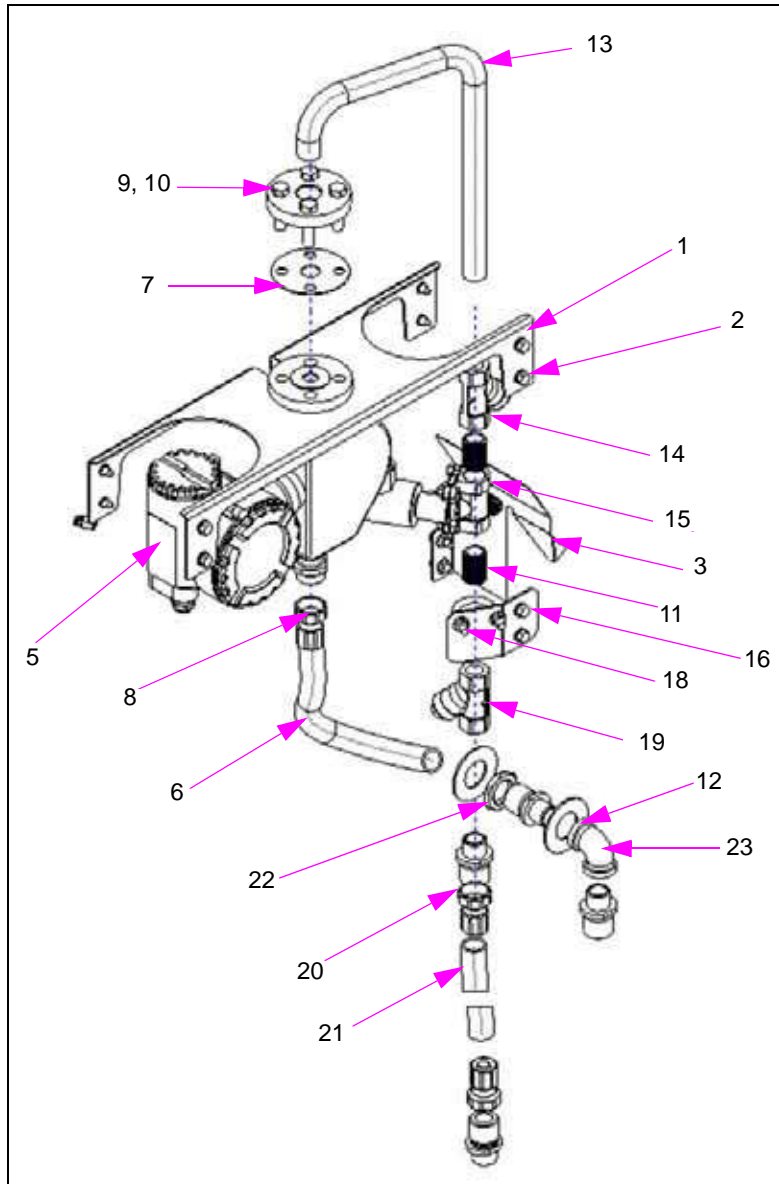
Note: Refer to Gilbarco Engineering Drawing #M00989 Sheet 16, Rev K.

# Upper Hydraulics Configuration

## For Units Without Angle Casting



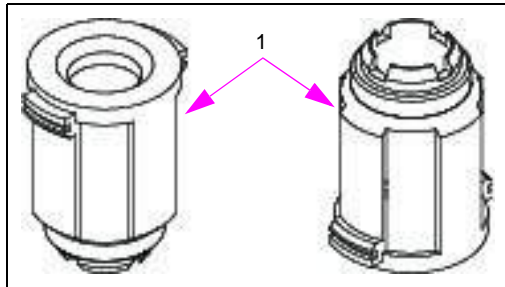
### Hydraulics for DEF Dispensers



| Item # | Part Description  | Current Part | Previous Part | Quantity |
|--------|---|--------------|---------------|----------|
| 1      | Bracket, Heater Area                                    | M10757B001   | -             | 1        |
| 2      | Screw, Thread Forming, Hexagonal Washer Head<br>M8 X 18 | M00417B009   | -             | 10       |
| 3      | Assembly Bracket Urea Filter                            | M10759A001   | -             | 1        |
| 4      | Screw, Metric M8 X 20                                   | M00415B010   | -             | 2        |
| 5      | Coriolis Meter  | M10006A003   | -             | 1        |
| 6      | Hose, Internal DEF3 Encore                              | M10226B106   | -             | 1        |
| 7      | Seal, Flange  | M10164B001   | -             | 1        |
| 8      | Adapter Hose  | M10145B001   | -             | 3        |
| 9      | Metric, Bolt M12 X 50                                   | Q11106-02    | -             | 4        |

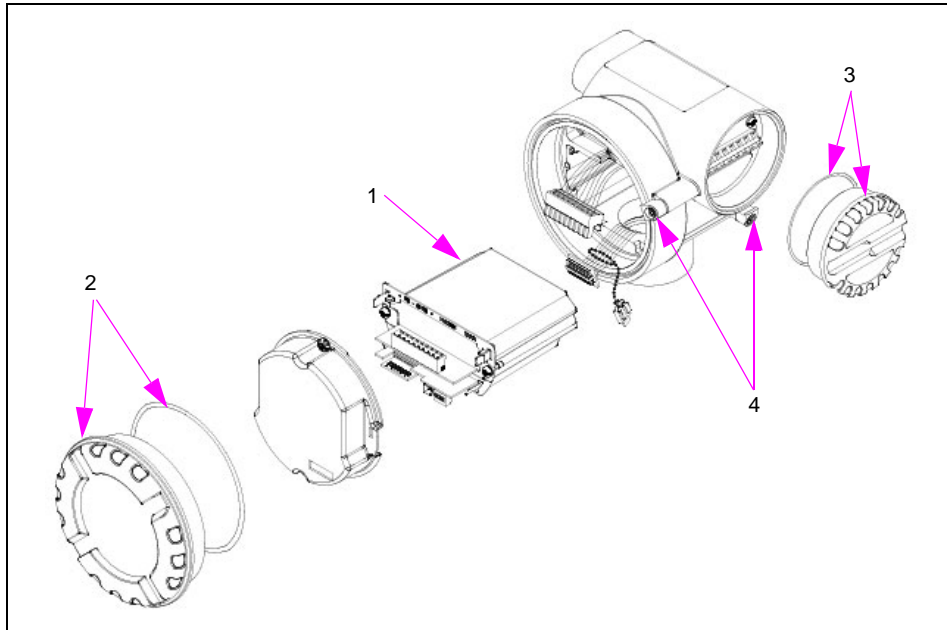
| Item # | Part Description                              | Current Part | Previous Part | Quantity |
|--------|---|--------------|---------------|----------|
| 10     | Nut, Metric, Hexagonal with External M12 Blue | Q12885-10    | -             | 4        |
| 11     | Nipple 1-1/2" LG X 3/4"                       | M10166B001   | -             | 2        |
| 12     | Elbow, 90° Female, 3/4" - 14 NPT              | M10169B001   | -             | 1        |
| 13     | Pipe Outlet Welded Assembly, DEF              | M14737A001   | M10756B001    | 1        |
| 14     | Y-Strainer                                    | M10820A001   | -             | 1        |
| 15     | Two-stage Valve Assembly                      | M02321A005   | -             | 1        |
| 16     | Bracket, Check Valve                          | M10151B001   | -             | 1        |
| 17     | U-bolt Metric                                 | M00703B001   | -             | 1        |
| 18     | Nut, Metric, Hexagonal Serrated Flange (M8)   | M00414B003   | -             | 4        |
| 19     | Check Valve 3/4" - 14 NPT                     | M10170B002   | -             | 1        |
| 20     | Adapter, Hose                                 | M10145B001   | -             | 1        |
| 21     | Hose Inlet DEF Encore                         | M10226B105   | -             | 1        |
| 22     | Nut, Conduit 1.00                             | N23655-01    | -             | 1        |
| 23     | Washer, Flat 2.700 X 1.345                    | N16599-109   | -             | 2        |

### Magnetic Nozzle Adapter



| Item # | Part Description              | Current Part | Previous Part | Quantity |
|--------|-------------------------------|--------------|---------------|----------|
| 1      | Magnetic Nozzle Adapter - DEF | M10656B001   | -             | 1        |

## Elect Module Kit



| Item # | Part Description                 | Current Part | Previous Part | Quantity |
|--------|----------------------------------|--------------|---------------|----------|
| 1      | Elect Module Kit                 | M10006B501   | -             | 1        |
| 2      | Cover Version Blind Kit          | M10006B502   | -             | 1        |
| 3      | Cover Connection Compartment Kit | M10006B503   | -             | 1        |
| 4      | Ground Terminal/Cover Clamp Kit  | M10006B504   | -             | 1        |