

## Encore® HD Pump Upgrade Kit



**WARNING:** Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

### Description

Use the Encore® HD Pump Upgrade Kit to improve pump performance in powder flow consistency with a wider range of powders.

See Figure 1 to see the items included in upgrade kit. Exploded view of pump provided for reference.

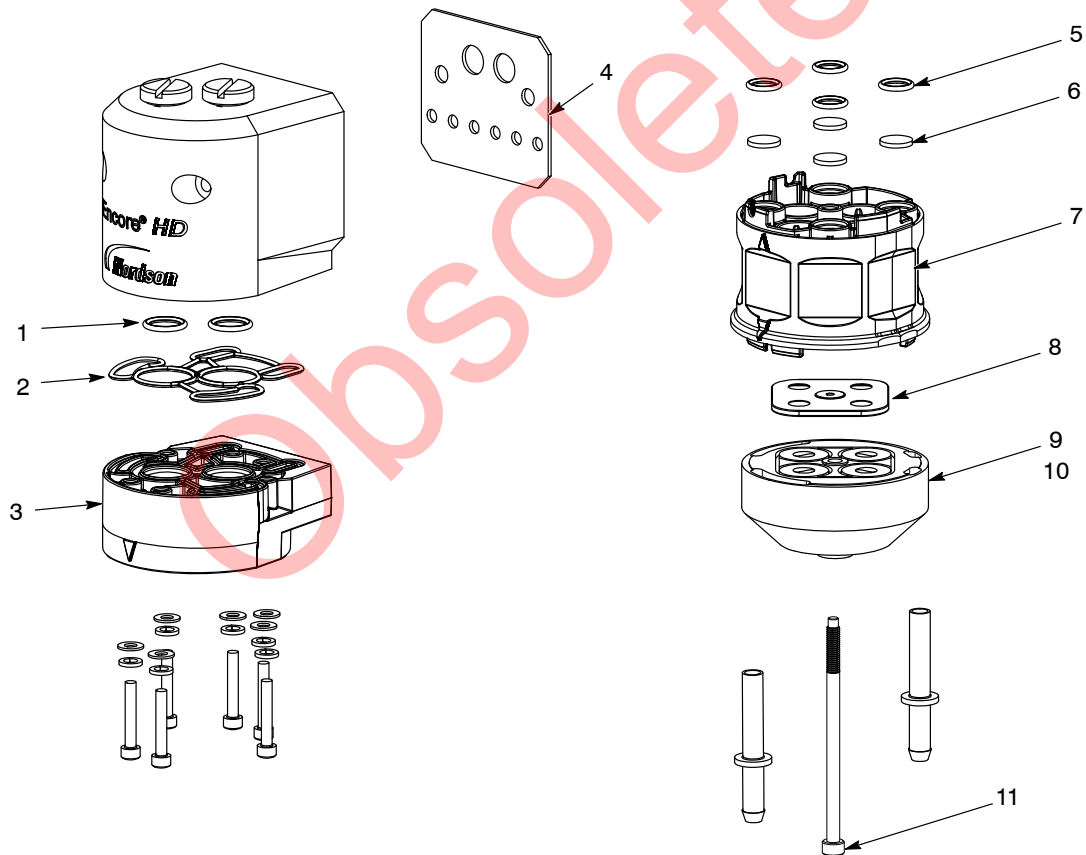


Figure 1 Items in Encore HD Pump Upgrade Kit

- |                                    |                                    |                              |
|------------------------------------|------------------------------------|------------------------------|
| 1. O-rings (0.437 x 0.562 x 0.063) | 5. O-rings (0.375 x 0.500 x 0.063) | 9. Lower Y block             |
| 2. Custom O-ring seal              | 6. Filter discs                    | 10. Pinch Valves (installed) |
| 3. Upper Y block                   | 7. Pinch valve block               | 11. Shoulder screw           |
| 4. Pump manifold gasket            | 8. Gasket                          |                              |

## Pump Disassembly

**NOTE:** Any time the pump is disassembled, the Y block gasket (item 13 in Figure 4) must be replaced.



**WARNING:** Shut off and relieve system air pressure before performing the following tasks. Failure to relieve air pressure may result in personal injury.

**NOTE:** Tag all air and powder tubing before disconnecting from the pump.

1. See Figure 2. For retrofit pumps, disconnect the purge air lines (1) from the top of the retrofit pump where applicable.
2. See Figure 3. Disconnect the inlet (2) and outlet powder tubing (3) from the bottom of the pump.
3. Remove the cabinet mounting hardware (4) securing the pump to the pump panel and move the pump to a clean work surface.
4. See Figure 4. Starting with the shoulder screw (15) and lower Y block (14), disassemble the pump as shown.
5. Discard the old items 6–15 from the pump.

**NOTE:** Retain screws and washers for the upper Y block for reassembly.

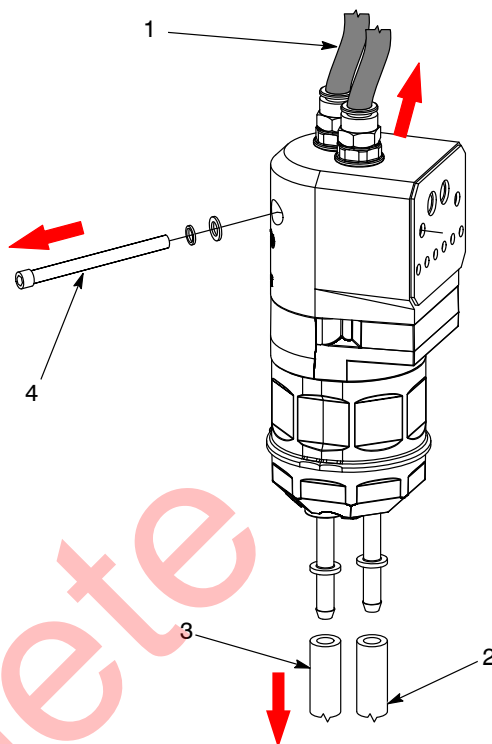


Figure 2 Retrofit Pump Disassemble Preparation

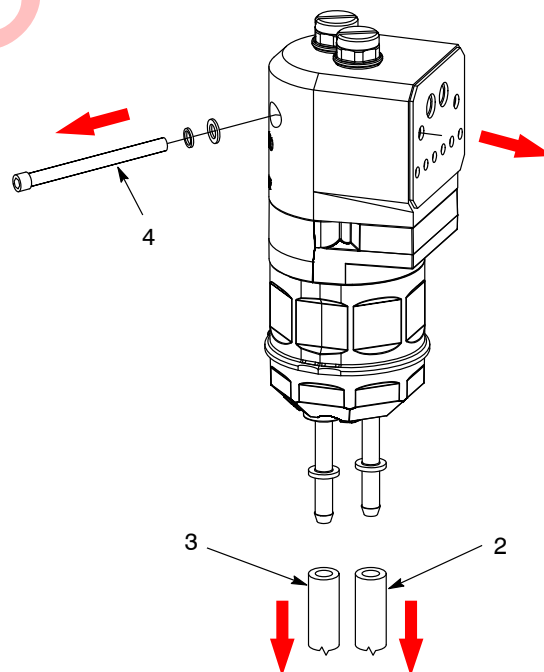


Figure 3 Standard Pump Disassemble Preparation

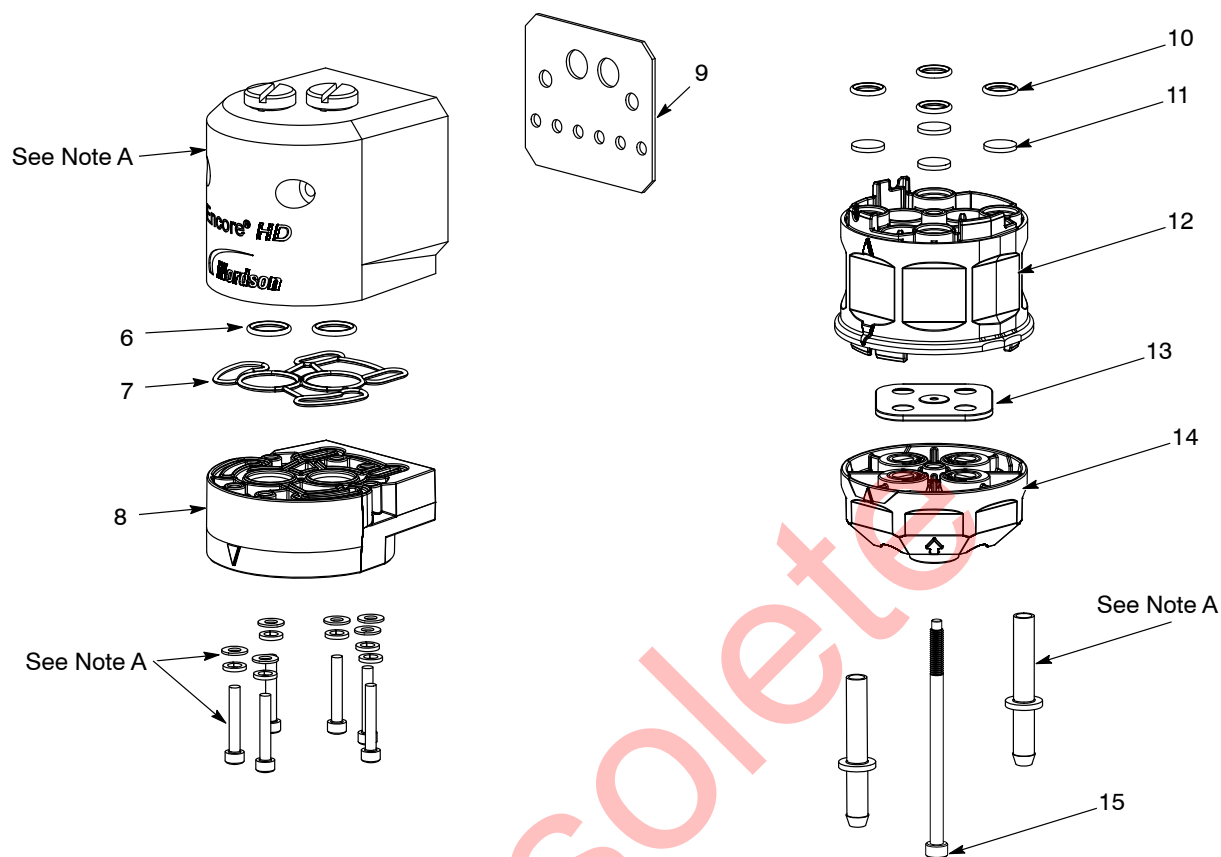


Figure 4 Pump Disassembly (Encore HD shown)

- |                                    |   |                    |
|------------------------------------|---|--------------------|
| 6. O-rings (0.437 x 0.562 x 0.063) | 10. O-rings (0.375 x 0.500 x 0.063)     | 13. Gasket         |
| 7. Custom O-ring seal              | 11. Filter discs                        | 14. Lower Y block  |
| 8. Upper Y block                   | 12. Pinch valve block with pinch valves | 15. Shoulder screw |
| 9. Pump manifold gasket            |   |                    |

NOTE A: Retain for reassembly.

## Pump Assembly with Upgrade Kit

1. Place the new O-rings (1) and new custom O-ring (2) into the new upper Y block (3) as shown, then fasten the upper Y block to the purge manifold housing (4) with hardware (5).

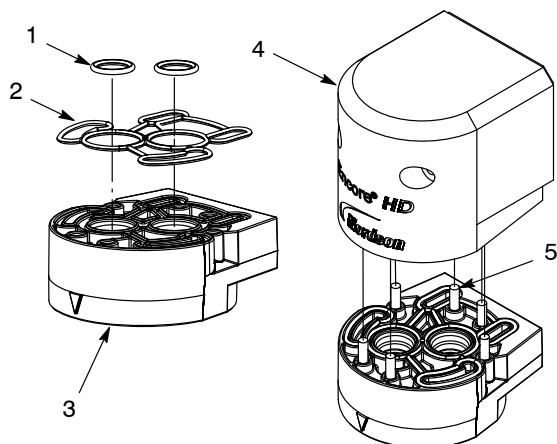


Figure 5 Assemble Upper Y Block to Purge Manifold

2. Install new filter discs (6), and new O-rings (7) into pinch valve block (8).

**NOTE:** Pinch valves come preinstalled in the new pinch valve block.

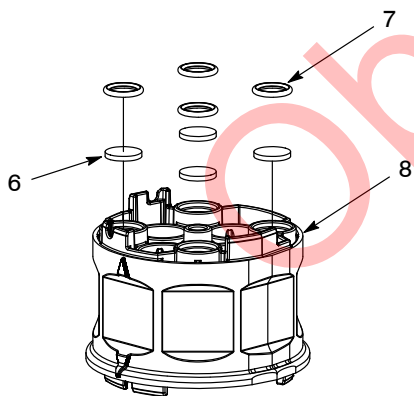


Figure 6 Install Filter Gaskets and O-rings

3. Install new gasket (9) over lower Y block (10).
4. Thread the new shoulder screw (11) through the lower Y block (10), pinch valve housing (8), and into the upper Y block (3). Tighten the shoulder screw (11) until shoulder bottoms out and cannot be turned anymore.

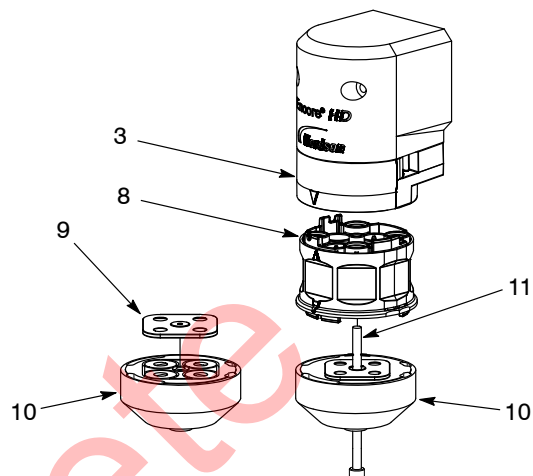


Figure 7 Assemble Gasket and Lower Y Block

## Replacing Pump Gasket

1. See Figure 8. Remove old pump gasket from the pump.
2. Using an industrial citrus based adhesive remover and plastic scraper, remove any residual adhesive left from old gasket from the pump. Clean any debris from port holes.
3. Remove the sticker backing from the new gasket and place on the pump, aligning the holes of the gasket with the port holes on the pump.



**CAUTION:** Ensure gasket is not covering any of the port holes on pump.

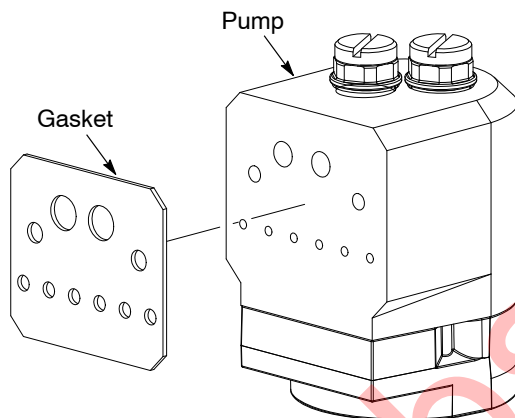


Figure 8 Replacing Pump Gasket

## Mount and Connect Pump

1. See Figure 9 for standard pump and Figure 10 for retrofit pump. Use the mounting hardware to (1) secure the pump to the pump panel.
2. Connect the inlet (3) and outlet powder tubing (2) from the bottom of the pump.
3. See Figure 10. For retrofit pumps, connect the purge air lines (4) from the top of the retrofit pump where applicable.

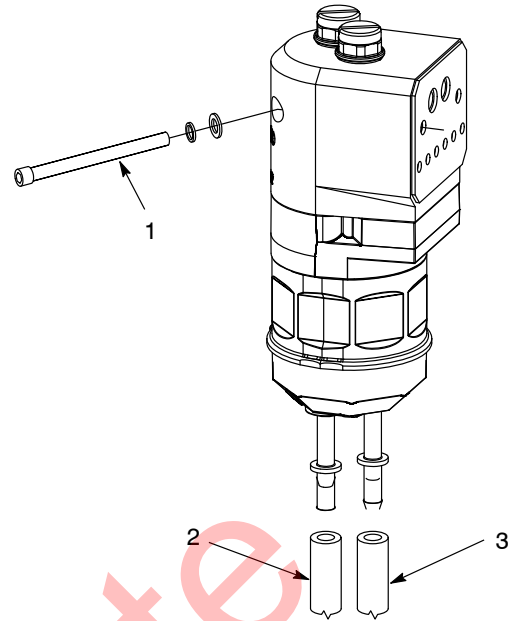


Figure 9 Standard Pump Mounting and Connections

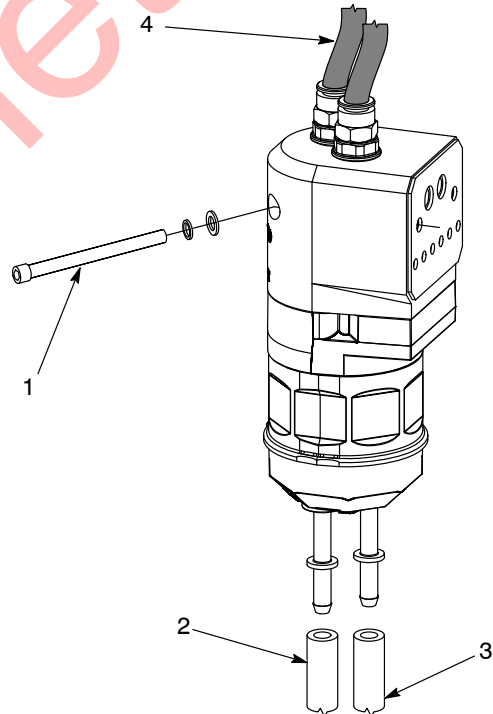


Figure 10 Retrofit Pump Mounting and Connections

## Pump Verification

Complete the following tests to verify pump is ready for operation.

1. Check for a good ground connection between the pump manifold and the shoulder screw on bottom of pump. Resistance should be less than 500  $\Omega$ .
2. Perform a vacuum check. Refer to *Troubleshooting* section of the *Encore HD Pump* manual for procedure.

## Parts

See Figure 11 and the following parts list.

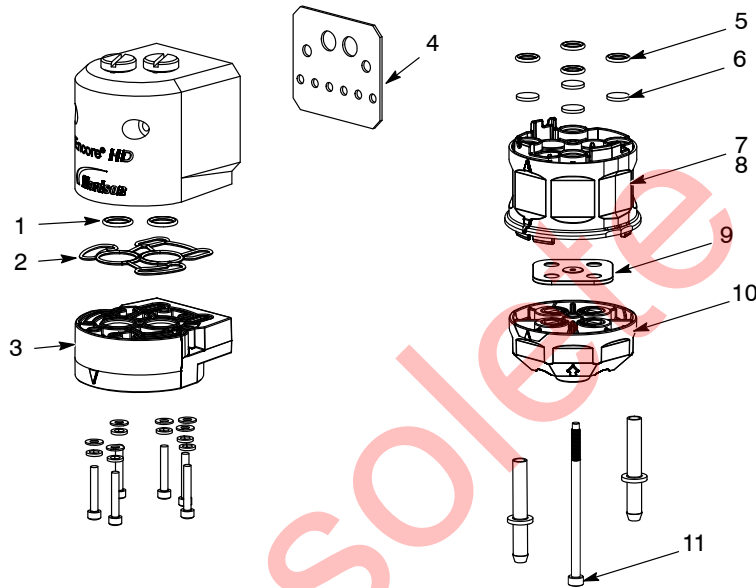


Figure 11 Parts for Upgrade Kit (Exploded View of Pump Shown for Reference)

Item	Part	Description	Quantity	Note
—	1619690	KIT, upgrade, Encore HD pump	1	
1	940137	• O-RING, silicone, 0.437 x 0.562 x 0.063	2	
2	1604072	• SEAL, upper Y block, conductive, Encore HD	1	
3	1604059	• BLOCK, upper Y, pump, Encore HD	1	
4	1612795	• GASKET, manifold	1	
5	940126	• O-RING, silicone, 0.375 x 0.500 x 0.063	4	
6	1604071	• DISC, filter, pump, Encore HD	4	
7	1604060	• BLOCK, pinch chamber, pump, Encore HD	1	
8	1604061	• VALVE, pinch, pump, Encore HD	4	A
9	1608603	• GASKET, conductive, Encore lower Y block	1	
10	1611092	• BLOCK, lower Y assembly, pump, Encore HD Tivar®	1	
11	1619013	• SCREW, socket M5, shoulder, stainless steel	1	

NOTE A: Pinch valves come assembled in the pinch valve block.

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