



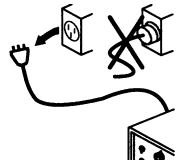
***Coolant System Upgrade***  
***HD4070 / HT4400***  
***Field Service Bulletin***

***804980 – Revision 0 – December, 2004***

***Hypertherm®***

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plasma cutting technology™*

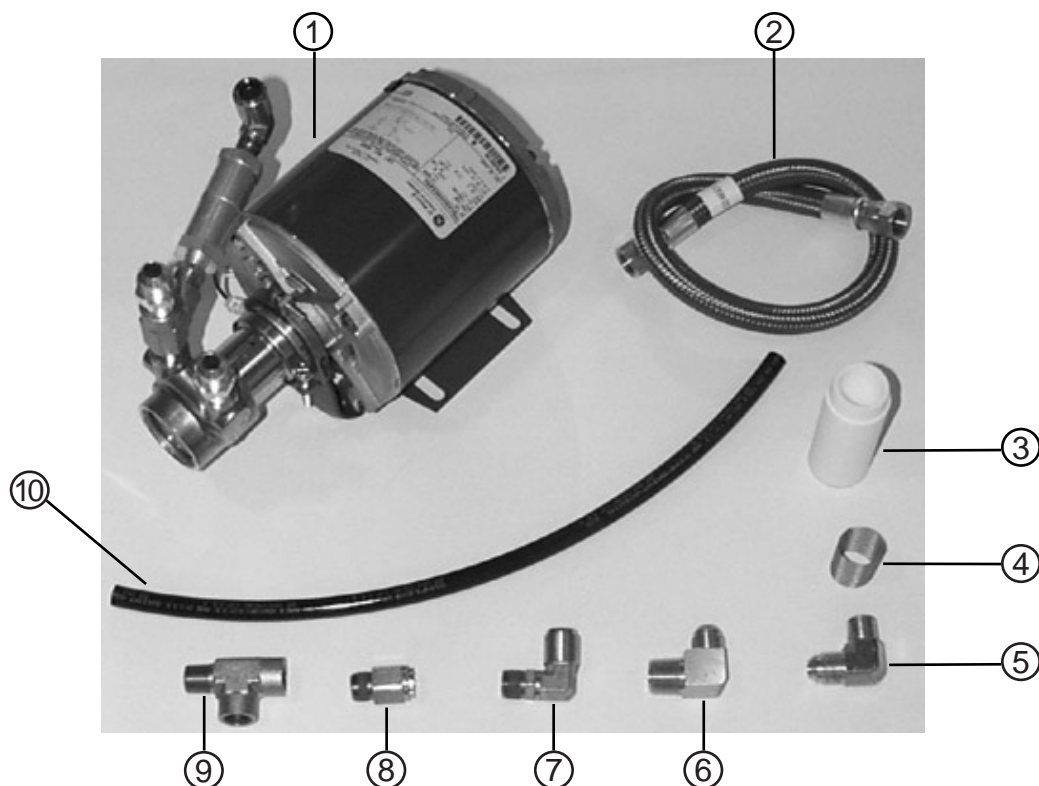
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|  |   |   |
|--|---|---|
|   |  | <p style="text-align: center;"><b>WARNING</b><br/>ELECTRIC SHOCK CAN KILL</p> |
| <div style="display: flex; align-items: center;">  <p><b>Disconnect all electrical power before performing any maintenance. Read and follow precautions in the <i>Safety Section</i> of the system's Instruction Manual when performing any maintenance.</b></p> </div> |   |   |

## Introduction

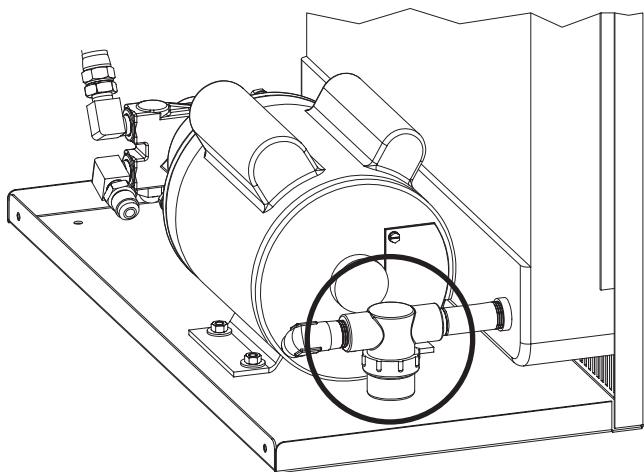
### 128968 – Kit contents

| Item | Part number | Description   | Qty |
|------|-------------|---|-----|
| 1    | 229067      | Pump/motor assembly                                       | 1   |
| 2    | 024601      | Hose assembly: 12.7 mm (1/2") OD, 584 mm (23")            | 1   |
| 3    | 027664      | Filter insert for 027634                                  | 1   |
| 4    | 027927      | Filter insert for 027926                                  | 1   |
| 5    | 015662      | Adapter: 3/8" NPT X #8 male, 90° (used in HT4400)         | 1   |
| 6    | 015027      | Adapter: 1/2" NPT X #8 male, 90° (used in HT4400)         | 1   |
| 7    | 015665      | Male elbow: 3/8" NPT x 1/2" push-in tube (used in HD4070) | 1   |
| 8    | 015669      | Male connector: 3/8" NPT x 1/2" tube (used in HT4400)     | 1   |
| 9    | 015342      | Tee connector: 3/8"                                       | 1   |
| 10   | 046043      | Tubing: , 584 mm (1/2") OD, 482.6 mm (19")                | 1   |

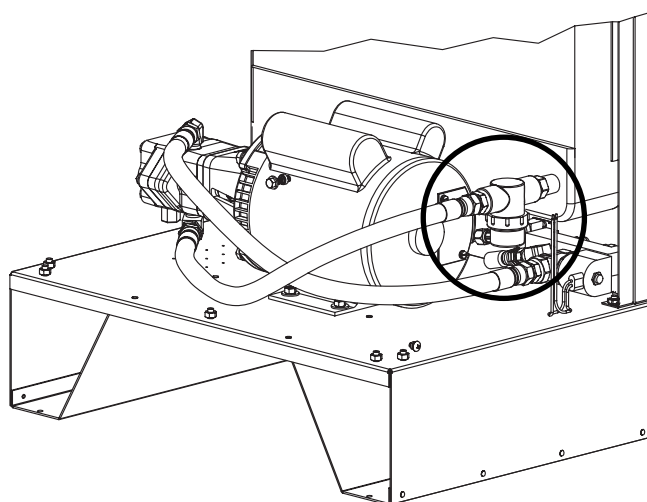


### Preparation (HD4070 and HT4400)

1. Flush and drain the system twice before removing pump. Water can be used to flush system.
2. Disconnect all power to the system.
3. An in-line filter **must be installed** in the system before the upgrade can be completed. If the filter is not installed order kit number 128714 for the HD4070 or kit number 128713 for the HT4000.



HD4070 filter location

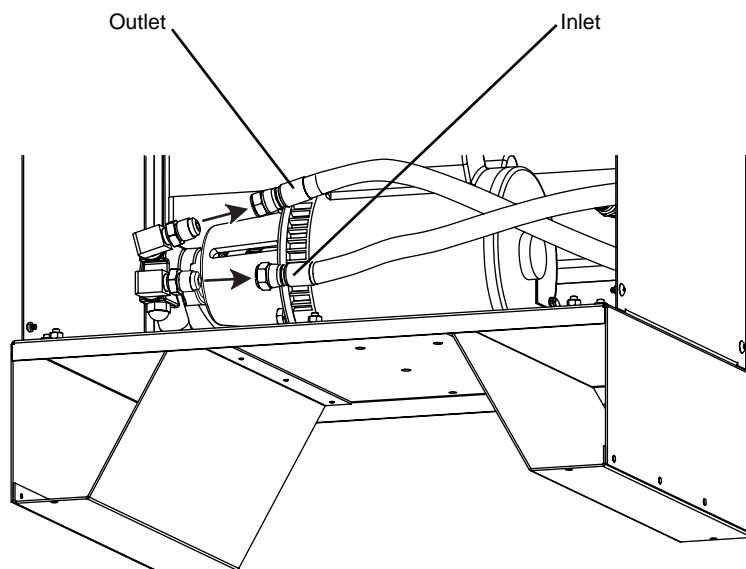
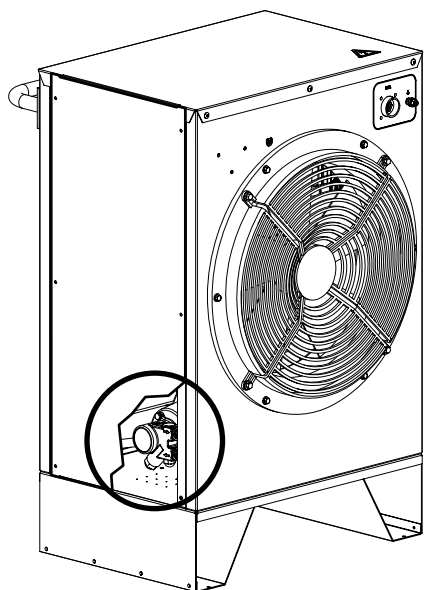


HT4400 filter location

## HT4400

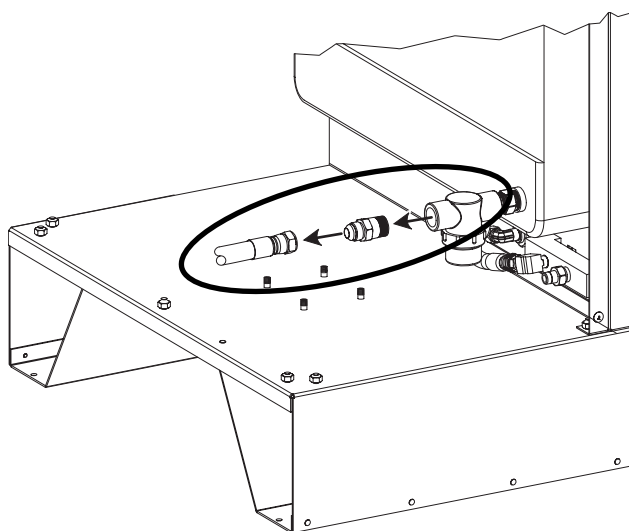
### Pump removal

1. Mark inlet and outlet hoses and disconnect them from the pump.
2. Remove and save the nuts that fasten the motor to the floor of the enclosure and remove pump/motor assembly.

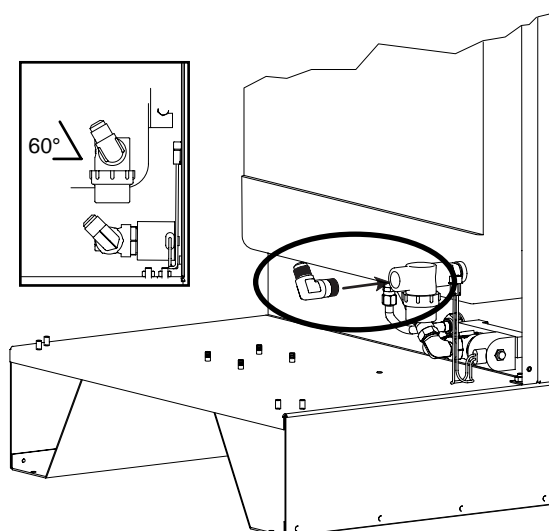


### New pump installation

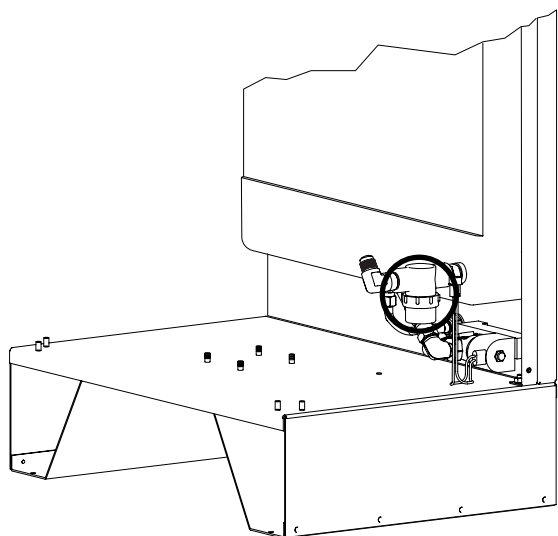
Note: Use thread sealant when installing all fittings. DO NOT use pipe tape.



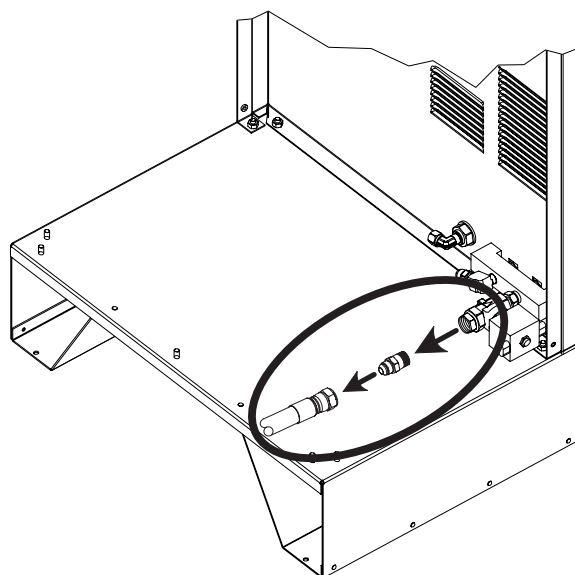
1. Disconnect the inlet hose and remove the straight fitting from the in-line filter. Discard inlet hose (024602).



2. Install the elbow fitting (015027) provided in this kit. Orient fitting as shown.

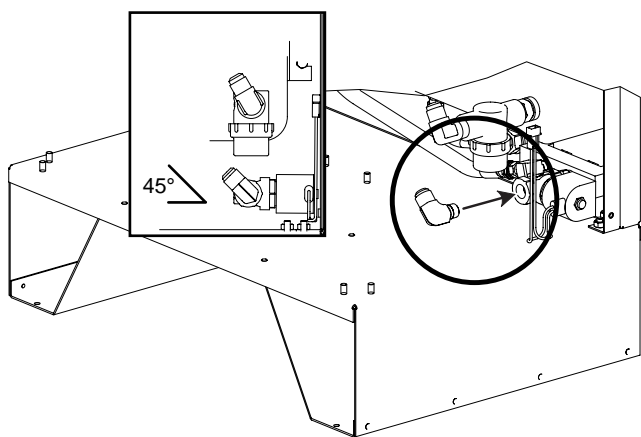


3. Install the new filter element (027927) into the in-line filter.

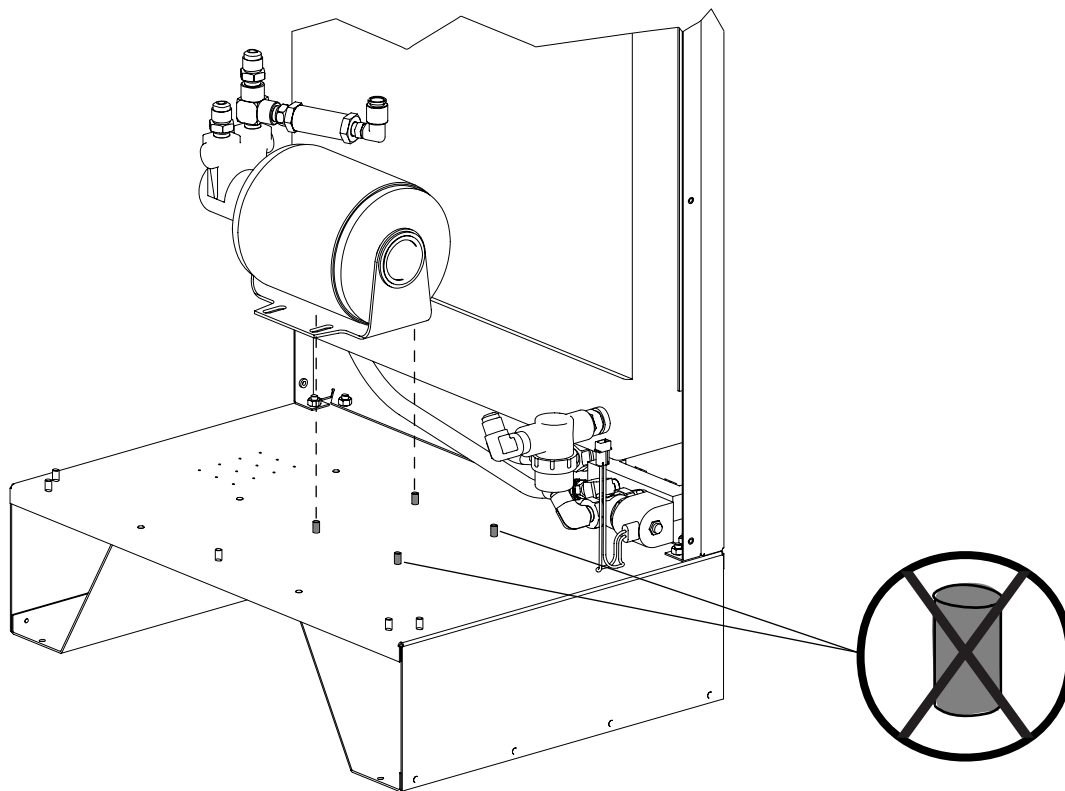


4. Disconnect the outlet hose and remove the straight fitting.

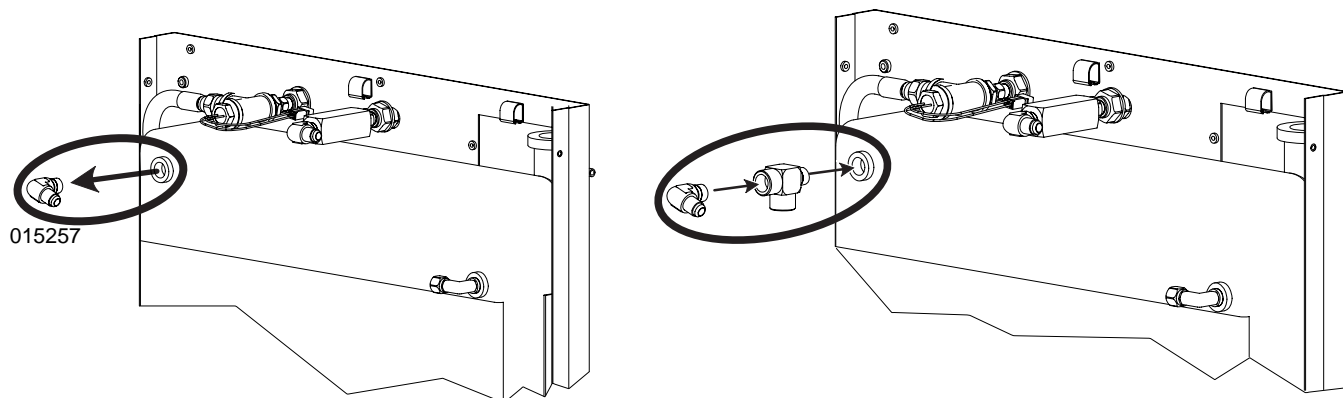
Note: Use 2 wrenches when removing the straight fitting, 1 on the solenoid valve and 1 on the fitting, to prevent breaking the fitting off in the manifold.



5. Install elbow fitting (015662) provided in this kit.  
Orient fitting as shown.



6. Install new pump/motor assembly (229067) as shown. Only 2 studs are used to secure the pump to the bottom of the enclosure.

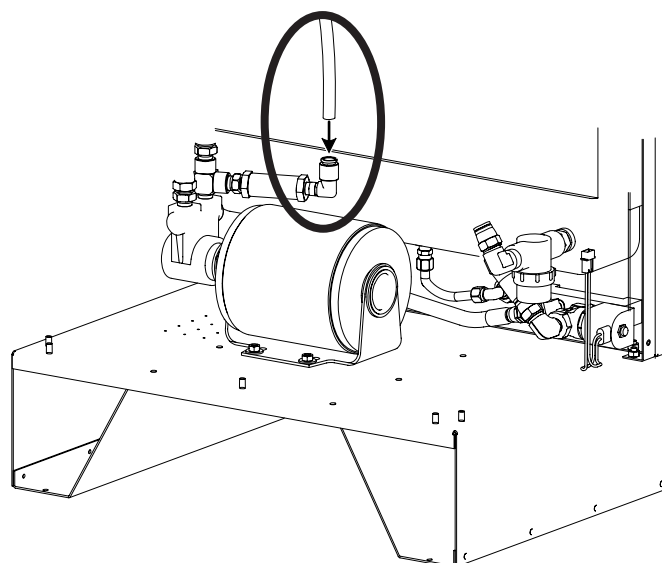
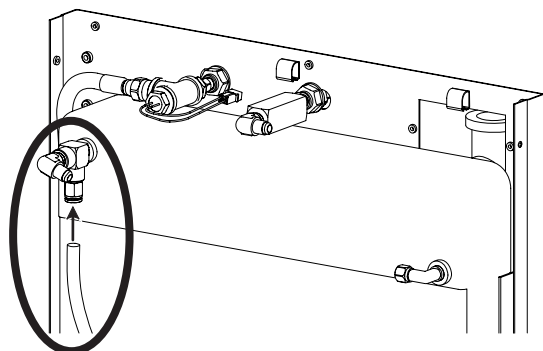
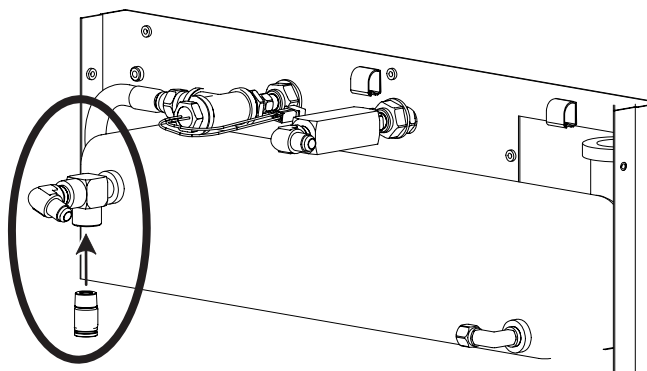


7. Remove fitting (015257) temporarily. Install the straight tee fitting (015342) and reinstall 015257. Orient fittings as shown. The 015257 fitting is 20° from horizontal.

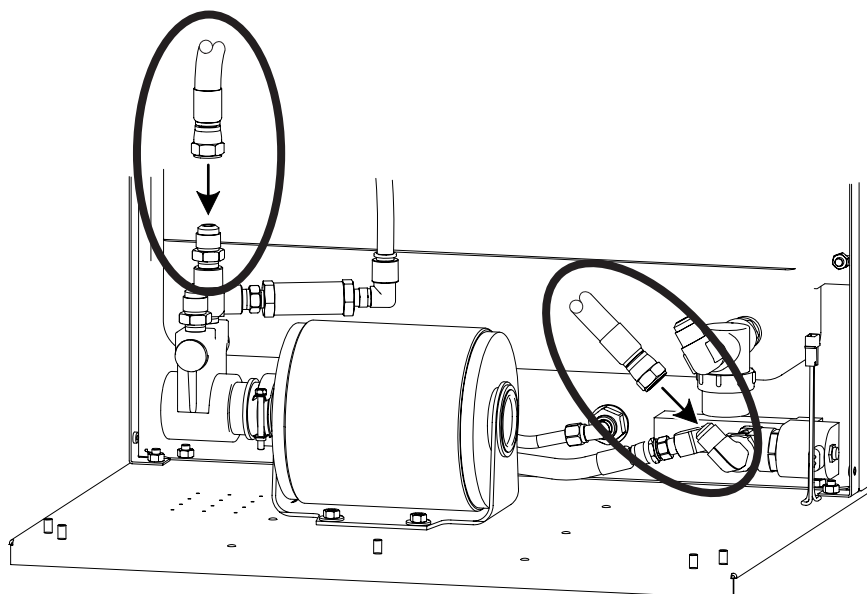
## HT4400 AND HD4070 COOLANT SYSTEM UPGRADE

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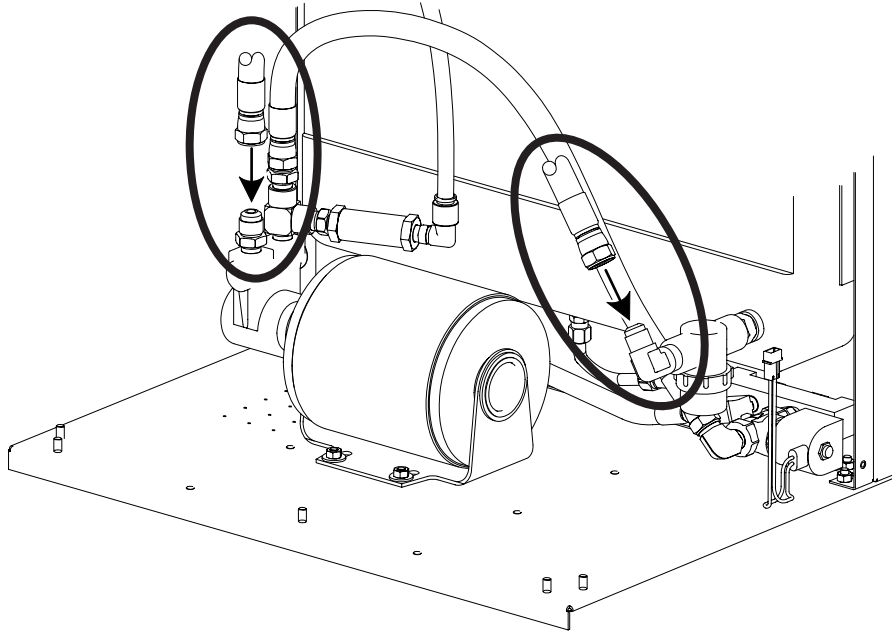
8. Install the push-to-connect fitting (015669) into the tee fitting.



9. Install the tubing (046043) into both of the push-to-connect fittings



10. Install the outlet hose 024601– 584 mm (23").



11. Install the inlet hose 024601–584 mm (23”).
12. Install the new filter element (027664) into the filter housing on the back panel of the cooler.

|  |  |
|--|--|
|  | <b>Caution</b>   |
|  | Use Hypertherm coolant (028872) to reduce the risk of damage from freezing and to prevent long-term corrosion. |

13. Reinstall the side panel and fill power supply with coolant. See *Installation* section of the instruction manual for details.

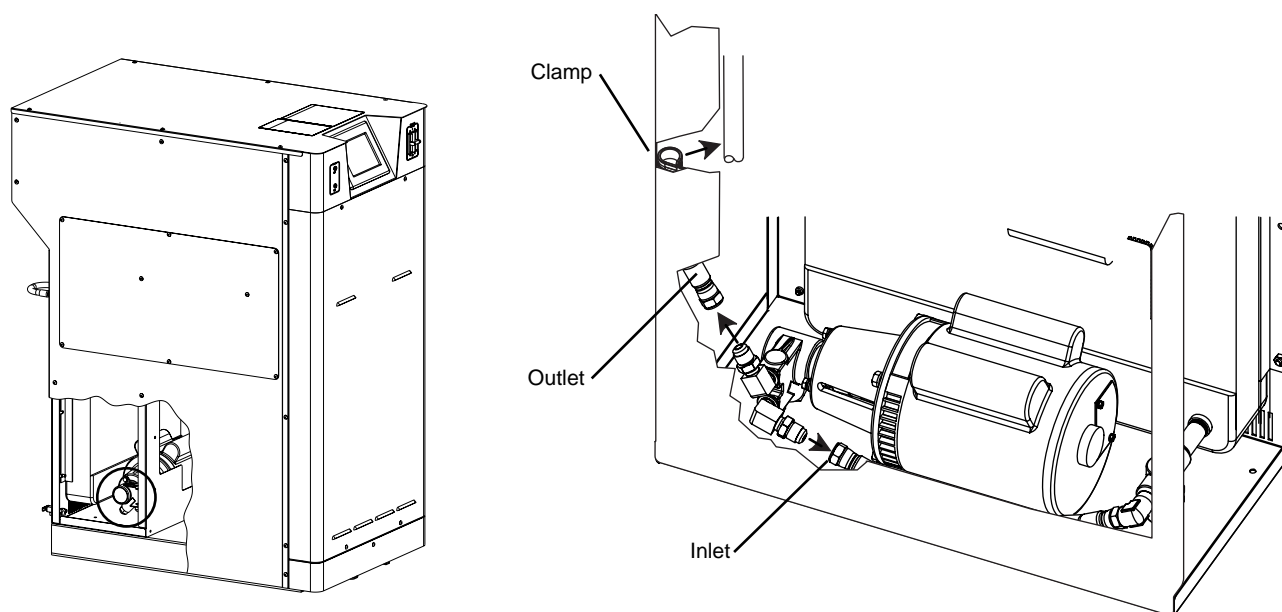


### HD4070

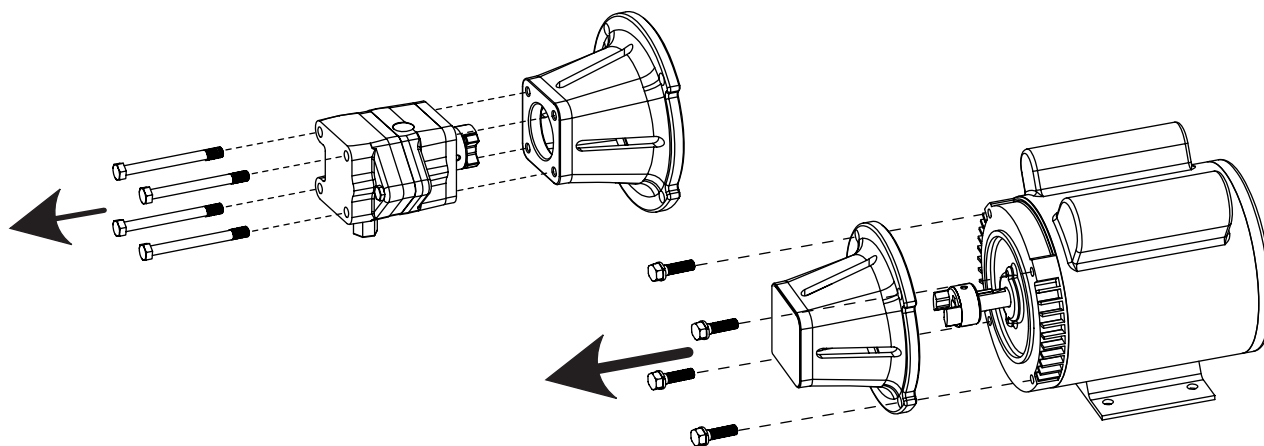
#### Pump removal

1. Mark inlet and outlet hoses and disconnect them from the pump.

Note: Remove the outlet hose from the clamp. Do not use hose clamp when attaching outlet hose to new pump



3. To allow room to access the nuts holding the motor to the enclosure floor: remove the pump from the motor bracket and then the bracket from the motor

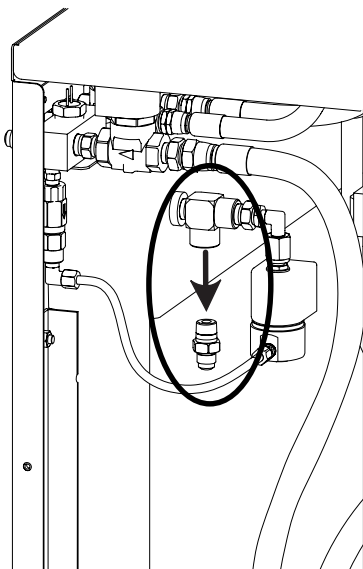
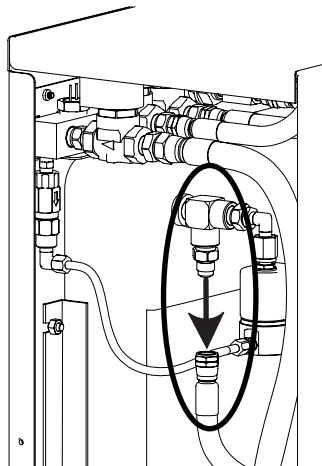


3. Remove and save the nuts that fasten the motor to the floor of the enclosure and remove pump/motor assembly.

## New pump installation

Note: Use thread sealant when installing all fittings. DO NOT use pipe tape.

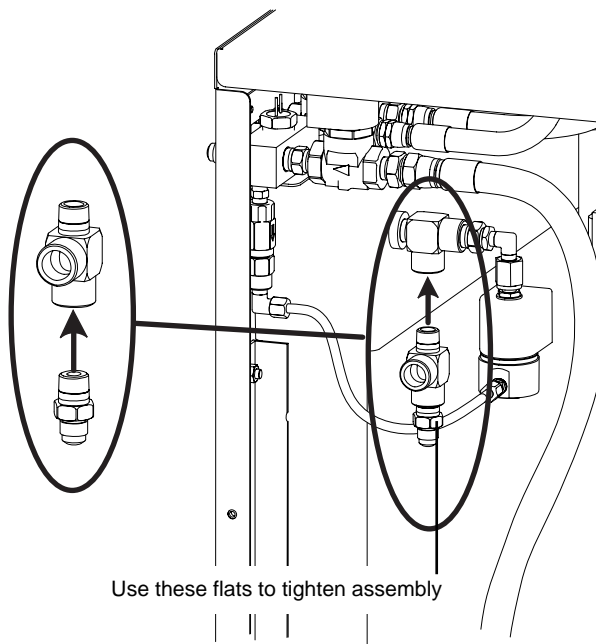
1. Remove the return hose (024606) from the fitting as shown.



2. Remove the straight fitting (015258). Save fitting for use in step 3.

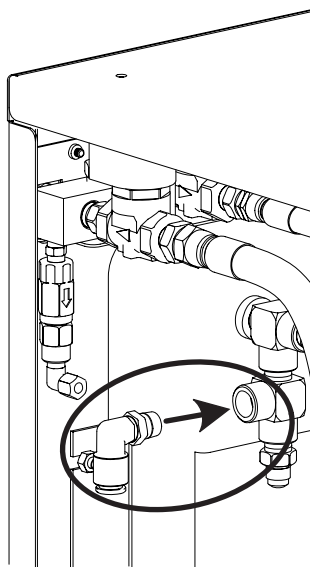
015342

015258

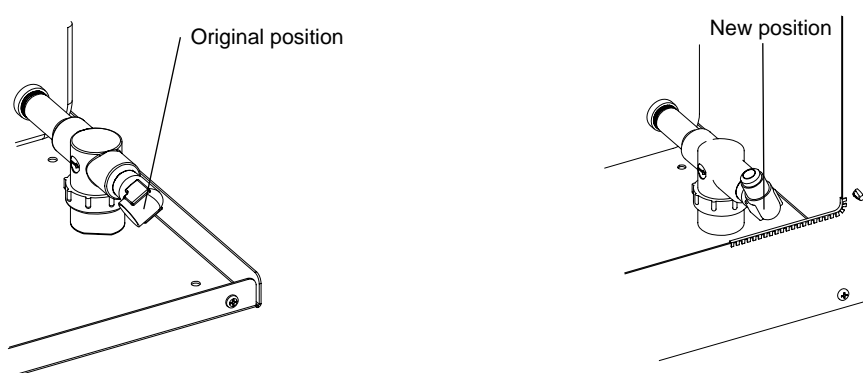
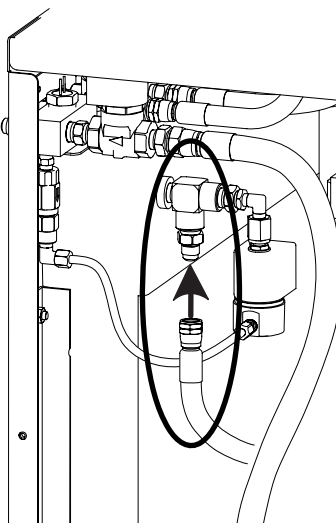


3. Install fitting 015258 into fitting 015342 (provided in this kit). Install the assembled fittings and orient as shown.

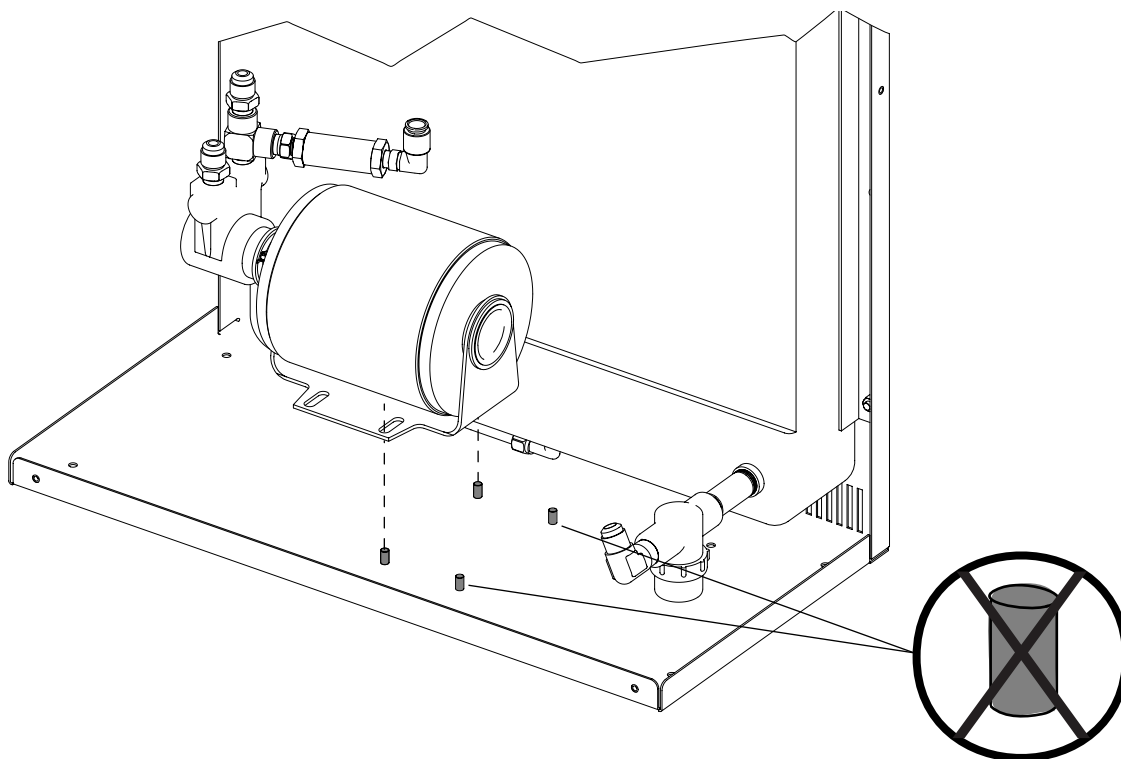
4. Install 015665 fitting and orient as shown.



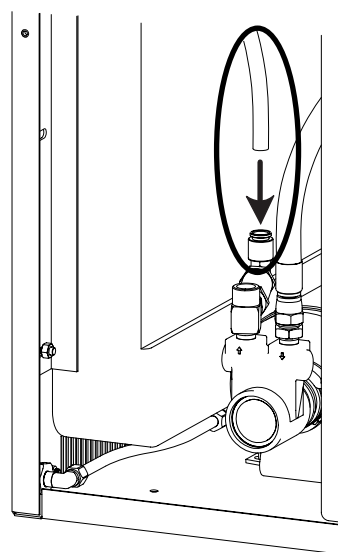
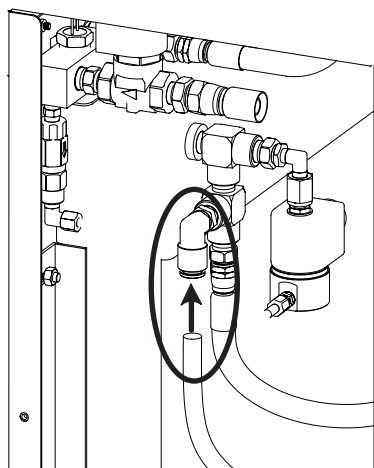
5. Reconnect the return hose.



6. Turn the fitting on in-line filter clockwise 90° from it's original position. Install the new filter element (027927) into the in-line filter.

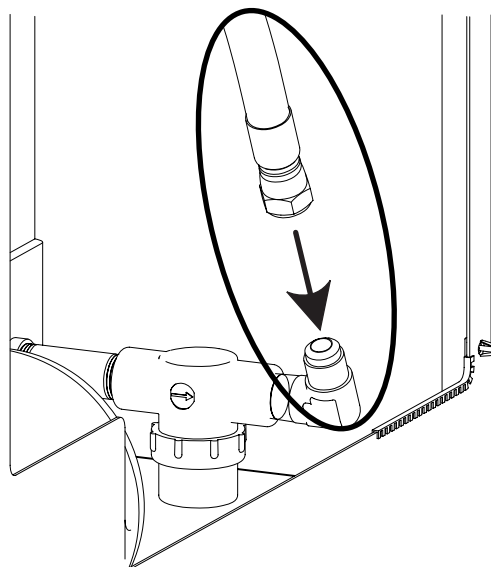
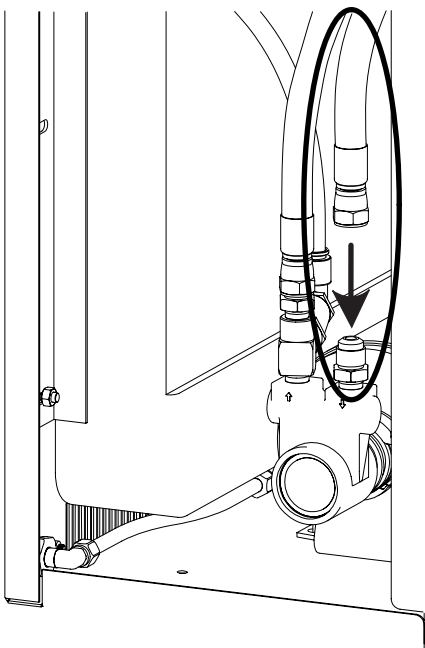
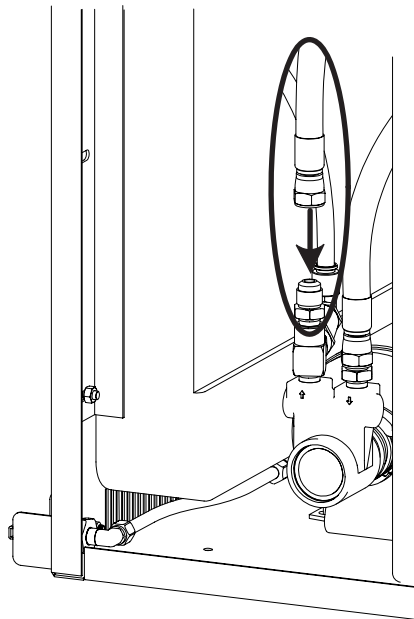


7. Install new pump/motor assembly (229067) as shown. Only 2 studs are used to secure the pump to the bottom of the enclosure.




8. Install the tubing (046043) into both of the push-to-connect fittings

9. Reconnect the outlet hose (024749) to the pump.



10. Install the inlet hose (024601) provided in this kit.
11. Install the new filter element (027664) into the filter housing on the back of the power supply.

|   |   |
|---|---|
|  | <p style="text-align: center;"><b>Caution</b></p> <p>Use Hypertherm coolant (028872) to reduce the risk of damage from freezing and to prevent long-term corrosion.</p> |
|---|---|

12. Reinstall the side panels and fill power supply with coolant. See *Installation* section of the instruction manual for details.

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