

MAXPRO200 ***Pump Replacement***

Field Service Bulletin

807770 – Revision 0 – April 2013

Hypertherm[®]

Hypertherm, Inc.

Etna Road, P.O. Box 5010

Hanover, NH 03755 USA

603-643-3441 Tel (Main Office)

603-643-5352 Fax (All Departments)

info@hypertherm.com (Main Office Email)

800-643-9878 Tel (Technical Service)

technical.service@hypertherm.com (Technical Service Email)

800-737-2978 Tel (Customer Service)

customer.service@hypertherm.com (Customer Service Email)

866-643-7711 Tel (Return Materials Authorization)**877-371-2876 Fax (Return Materials Authorization)**

return.materials@hypertherm.com (RMA email)

Hypertherm Plasmatechnik GmbH

Technologiepark Hanau

Rodenbacher Chaussee 6

D-63457 Hanau-Wolfgang, Deutschland

49 6181 58 2100 Tel

49 6181 58 2134 Fax

49 6181 58 2123 (Technical Service)**Hypertherm (S) Pte Ltd.**

82 Genting Lane

Media Centre

Annexe Block #A01-01

Singapore 349567, Republic of Singapore

65 6841 2489 Tel

65 6841 2490 Fax

65 6841 2489 (Technical Service)**Hypertherm (Shanghai) Trading Co., Ltd.**

Unit 301, South Building

495 ShangZhong Road

Shanghai, 200231

PR China

86-21-60740003 Tel

86-21-60740393 Fax

Hypertherm Europe B.V.

Vaartveld 9

4704 SE

Roosendaal, Nederland

31 165 596907 Tel

31 165 596901 Fax

31 165 596908 Tel (Marketing)

31 165 596900 Tel (Technical Service)**00 800 4973 7843 Tel (Technical Service)****Hypertherm Japan Ltd.**

Level 9, Edobori Center Building

2-1-1 Edobori, Nishi-ku

Osaka 550-0002 Japan

81 6 6225 1183 Tel

81 6 6225 1184 Fax

Hypertherm Brasil Ltda.

Rua Bras Cubas, 231 – Jardim Maia

Guarulhos, SP - Brasil

CEP 07115-030

55 11 2409 2636 Tel

55 11 2408 0462 Fax

Hypertherm México, S.A. de C.V.

Avenida Toluca No. 444, Anexo 1,

Colonia Olivar de los Padres

Delegación Álvaro Obregón

México, D.F. C.P. 01780

52 55 5681 8109 Tel

52 55 5683 2127 Fax

Hypertherm Korea Branch

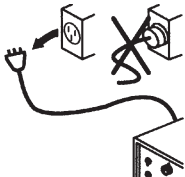
#3904 Centum Leaders Mark B/D,

1514 Woo-dong, Haeundae-gu, Busan

Korea, 612-889

82 51 747 0358 Tel

82 51 701 0358 Fax

		DANGER! ELECTRIC SHOCK CAN KILL
		
Disconnect electrical power before performing any maintenance. All work requiring removal of the power supply cover must be performed by a qualified technician. See the <i>Safety</i> section of the system's manual for more safety precautions.		

Purpose

This Field Service Bulletin explains how to replace the coolant pump in the MAXPRO200.

Kit contents – 428043

Part Number	Description	Quantity
027005	Filter: 1.5 inch diameter, 50 micron	1
031114	Pump: 70 gpm, 200 psi	1
129471	Clamp	1

Required tools and materials

- 3/8 inch wrench
- Number 2 phillips screwdriver

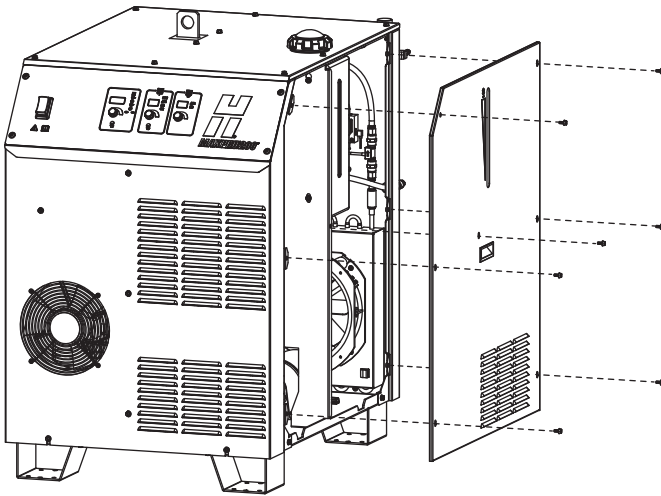
Introduction

The 4 procedures described in this document should all be performed while replacing the coolant pump.

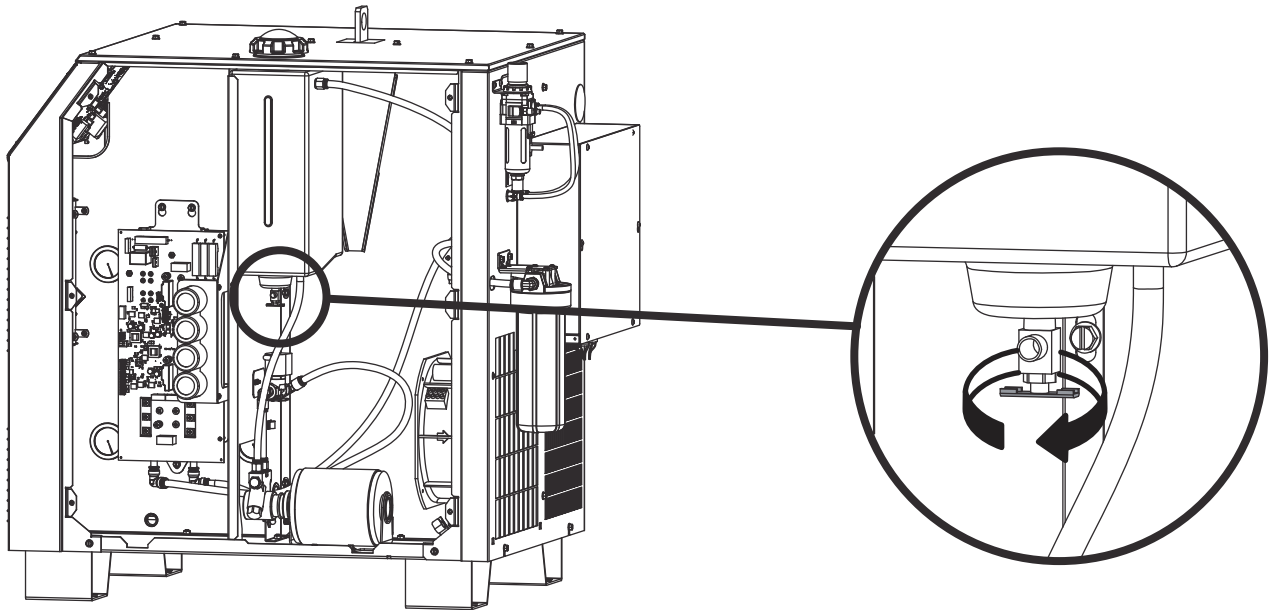
- Draining coolant from the system
- Flushing out the coolant system
- Clean and replace coolant system filters
- Replace the coolant pump

Draining the coolant system

1. Turn OFF the power and remove the right side panel from the power supply.



2. Locate the coolant drain valve and use a 20 liter (5 gallon) container to catch the coolant. Coolant will flow as soon as the drain is opened. Close the drain valve when the coolant stops flowing. Always dispose of coolant according to local and national codes.



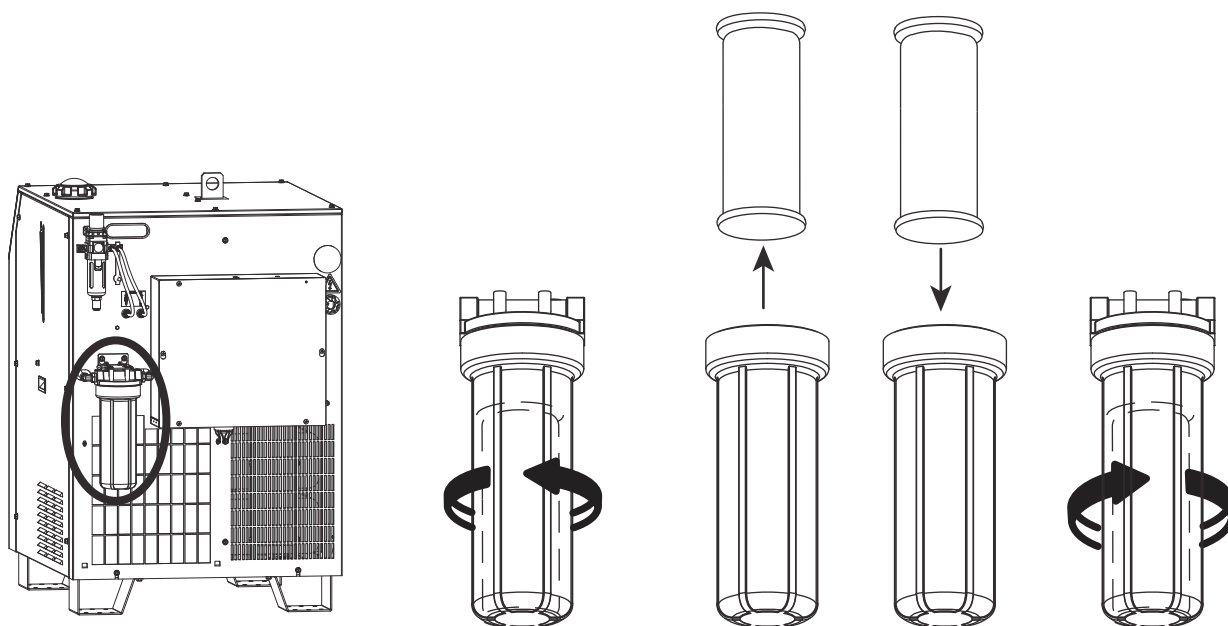
Flush the coolant system

Performing the maintenance described below can help extend the life of the coolant pump.

1. Fill the coolant system with water.
2. Run the pump for 5 minutes.
3. Drain the water from the system.
4. Repeat steps 1 through 3.

Coolant system filter replacement

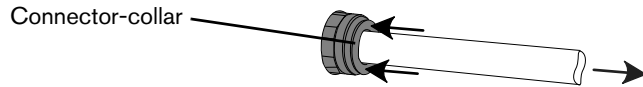
1. Make sure the water has been drained from the system, then turn OFF all power to the system.
2. Remove the filter housing. Make sure the o-ring inside the filter housing remains in place.
3. Remove and discard the filter element.
4. Install the new filter element 027005.
5. Make sure the o-ring is properly installed before re-installing the housing.
6. Refill the power supply with coolant.



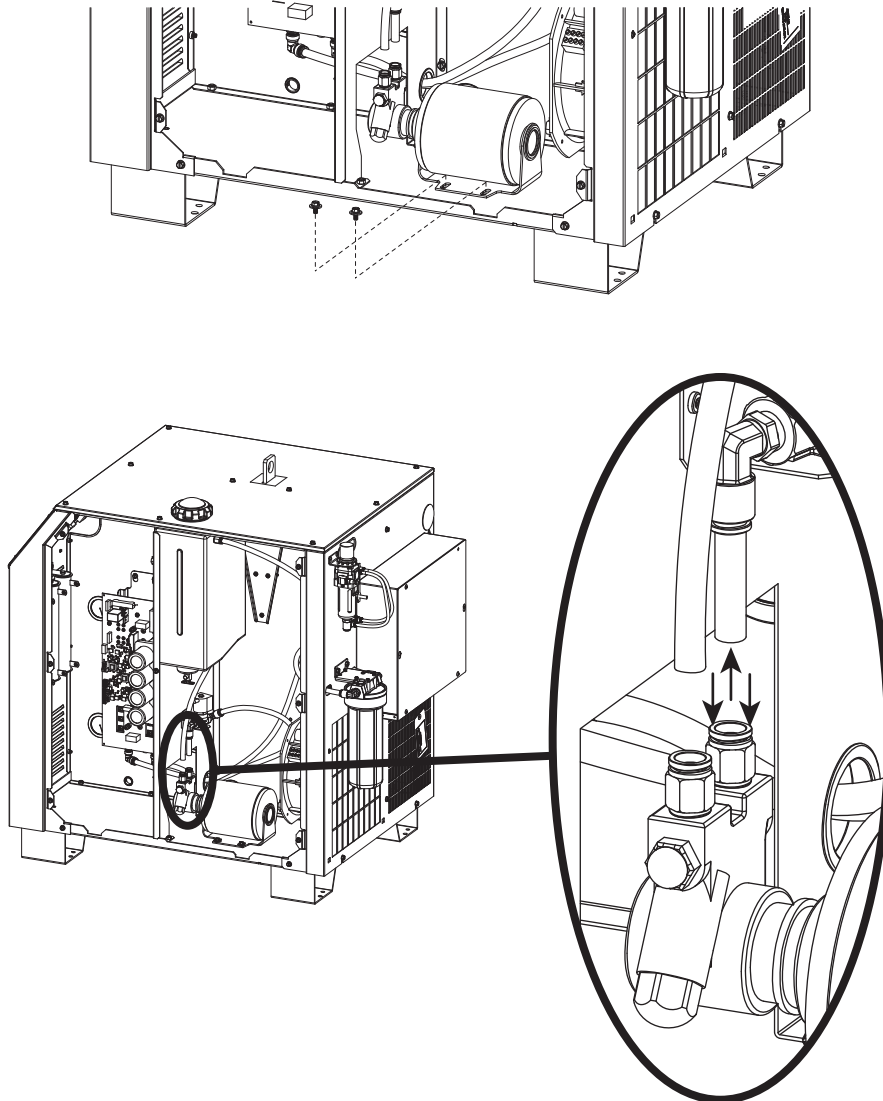
Remove the existing pump

Push-to-Connect fittings

The coolant hose connections use push-to-connect fittings. To disconnect a fitting, push the connector-collar toward the fitting, hold the collar in place and pull the hose away from the fitting.

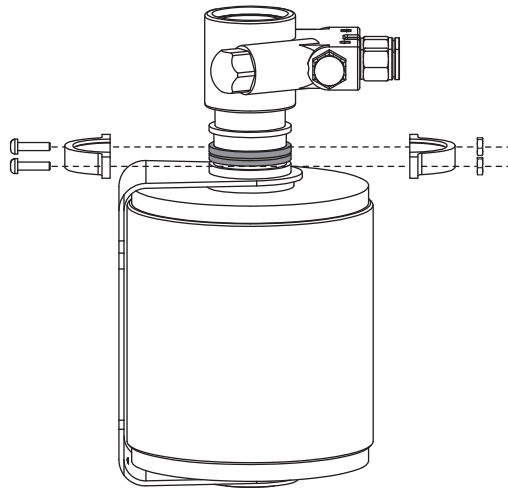


1. Remove the screws (2) that secure the pump/motor assembly to the floor of the power supply and slide the pump/motor assembly toward you until the tab on the back side of the motor mounting bracket clears the slot in the floor of the power supply. This will allow the pump/motor assembly to move enough to disconnect the hoses as shown.

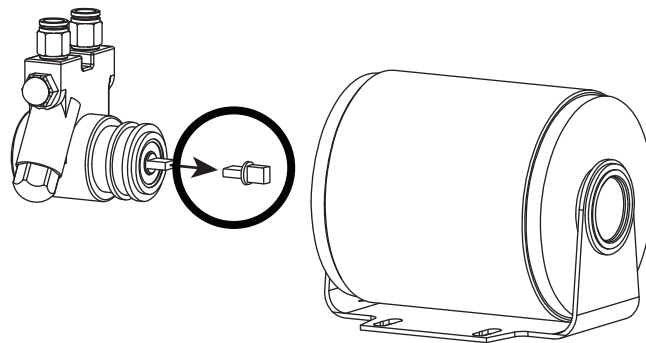


2. Disconnect the pump motor wire marked 21 from the power supply wire harness at connector J15.

3. Use a number 2 phillips screwdriver to remove the screws from the clamp that secures the pump to the motor. Discard the old clamp.



4. Pull the pump from the motor and remove the brass coupler that is between the shaft of the motor and the pump. Discard the brass coupler.

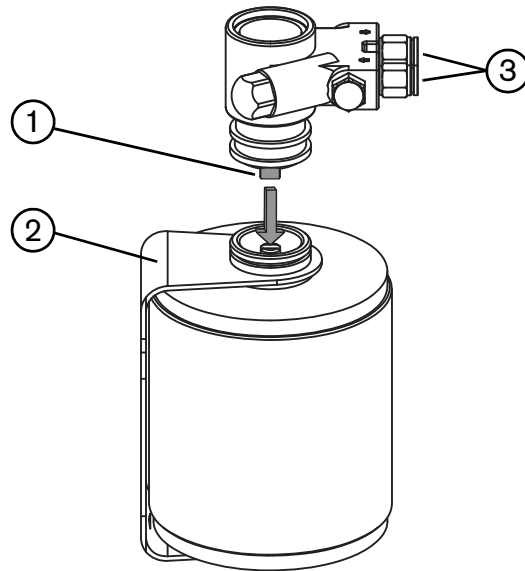


5. Remove the brass coupler from the new pump. A small piece of foam is used to keep the coupler in place during shipping. It MUST be removed before installation. Insert the new brass coupler into the motor shaft.

Note: the motor should be vertical when you attach the new pump. This will help assure that the pump and motor flanges are flush against each other. If the new pump is attached when the motor is horizontal, the alignment may be off. This will cause excessive vibration and shorten the life of the pump and motor.

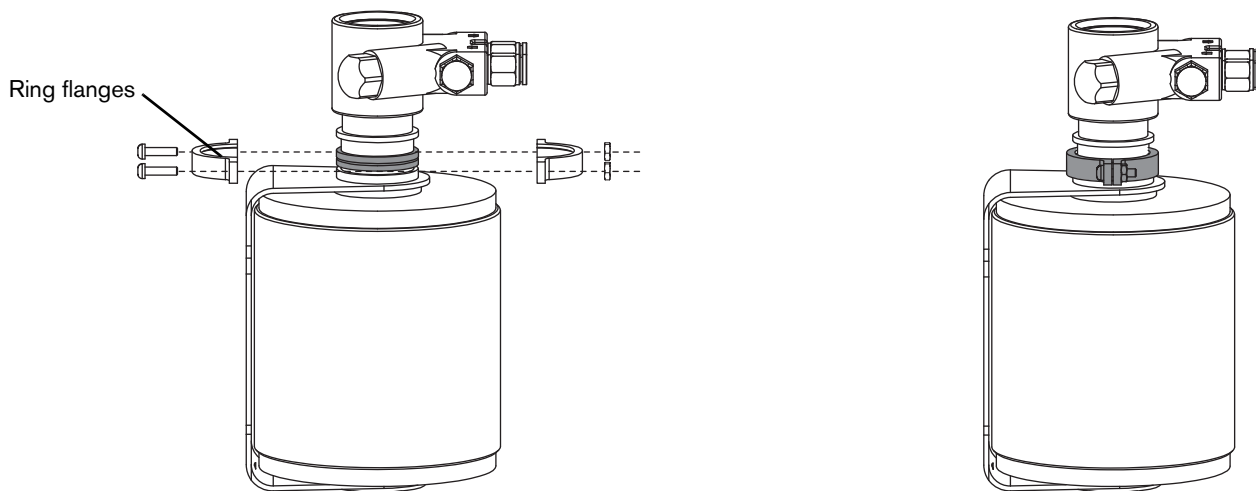
Pump Replacement

6. Align the brass coupler with the slot in shaft of the pump. Install the pump while making sure the brass coupler fits into the slot in the shaft. Orient the pump as shown below. The coolant IN and OUT ports on the pump should be facing the opposite direction of the motor mounting bracket.



1	Brass coupler
2	Motor mounting bracket
3	Coolant In and OUT ports

7. Make sure that the ring flange on the pump and the motor are flush against each other and attach the 129471 clamp around the entire circumference of the pump and motor flanges. Secure the clamp bolts using 3.3 N-m (29 inch-pounds) of torque.



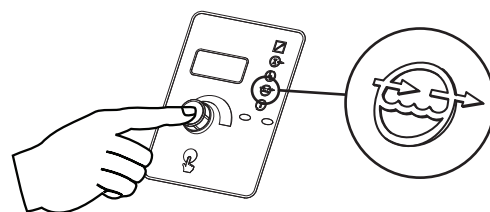
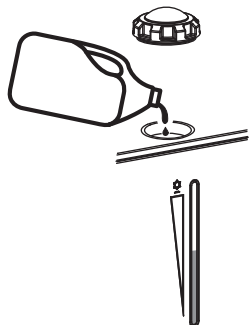
8. Reinstall the pump/motor assembly into the power supply. Torque the pump/motor assembly mounting screws to 9.6 N-m (85 inch pounds).
9. Reconnect the coolant hoses.

10. Reconnect the pump motor wire marked 21 to the power supply wire harness at connector J15.
11. After filling the power supply with coolant as shown below, turn on the power to the system and check the coolant hoses for leaks before you replace the right side panel to complete the installation.

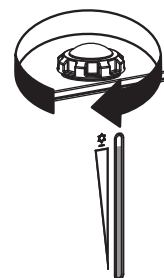
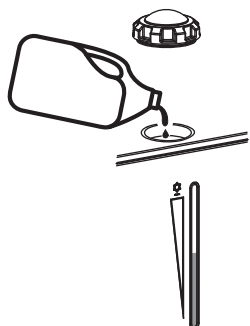
Fill the power supply with coolant

The system will take 14.2 liters to 17.0 liters (3.75 to 4.5 gallons) of coolant depending on the length of the torch leads.

1. Add coolant to the power supply until the tank is full.
2. Turn ON the power supply, then press and release the amps selector knob as many times as needed until the flow symbol is selected. The flow rate will be shown in the three digit display. There is a 45 second delay before the system will report a low coolant flow error. If the flow rate has not reached 1.9 liters per minute (lpm) (0.5 gallons per minute [gpm]) the system will turn off the pump.



3. If the system displays an error, turn OFF the power to the system and add coolant to the tank until it is full again. Repeat steps 2 and 3 until no error is displayed.
4. Add coolant to the power supply until the tank is full and replace the filler cap.



Turn on the power to the system and check the coolant hoses for leaks before you replace the right side panel to complete the installation.