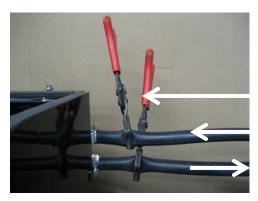


# **Service Bulletin**

RigMaster Power Corp. 11 Diesel Drive Toronto, ON M8W 477

RMP-PS-TS-SB-8FEB2007EG		
Service Update		
N/A	MODEL NO	RMP & RMC 14-6
E. Gaffney	TEAM/SECT/DEPT	Technical Support
Revision 7	EFFECTIVE DATE	30 March, 2007



Clamp the coolant supply and return lines at the bulkhead to prevent draining of the heater core. Clamp the lower radiator hose.

### **Hose Clamps**

#### **Coolant Return from Heater Core**

#### **Coolant Supply to Heater Core**



Remove engine drain plug (use a 3/8 extension) and radiator pressure cap. It is not necessary to drain the entire radiator/coolant system.

### **Engine Coolant Drain Plug**



Remove the air filter housing to create a point of access. Protect the air intake so that no foreign objects are able to fall inside the valve cover.

# Engine Thermostat Assembly Engine Air Intake

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Standard Operating Procedure

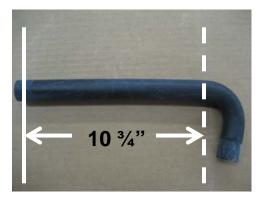
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Remove the upper coolant hose from the engine thermostat housing, leaving it connected to the radiator.

Modify the upper radiator hose [RP5-024] by removing the 90 degree elbow. The straight length of hose should measure 10 ¾ inches long.



Remove the engine thermostat assembly (hardware, housing, thermostat and spring). Discard the spring as it is no longer necessary.

If reusing the engine thermostat see that it is marked 82°C.



Remove the thermostat housing stud from the engine block using vice grips (place them as close to the engine head as possible to avoid breaking the stud). Alternately you may use two jam nuts and a wrench to remove the stud.

### Thermostat Housing Stud

Clean all used gasket material from the thermostat housing and the engine block.

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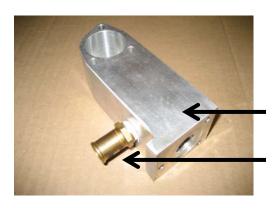
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Use compressed air to clear the housing of any residual aluminium filings. Install the straight brass fitting in the thermostat extension housing using thread sealant.

Thermostat Housing Extension [RP10-001-62]

**Straight Brass Fitting [RP5-011]** 



Install the thermostat extension housing to the engine block using the thermostat housing gasket. Use the three bolts supplied with the kit (M6x60).

Perkins [145996740]

#### **NOTE**

If the thermostat housing gasket is not available, RTV silicone may be substituted as a sealant.

Assemble the thermostat extension kit as follows. <u>Do not use the spring</u> and be sure that only an 82°C thermostat is used during reassembly. It is advisable to test the assembly to ensure that thermostat itself does not leak. To test the thermostat, assemble the kit as described below and pour water into the aluminium extension and see if any water escapes out of the thermostat housing. If water escapes past the thermostat and through the housing the thermostat should be replaced.

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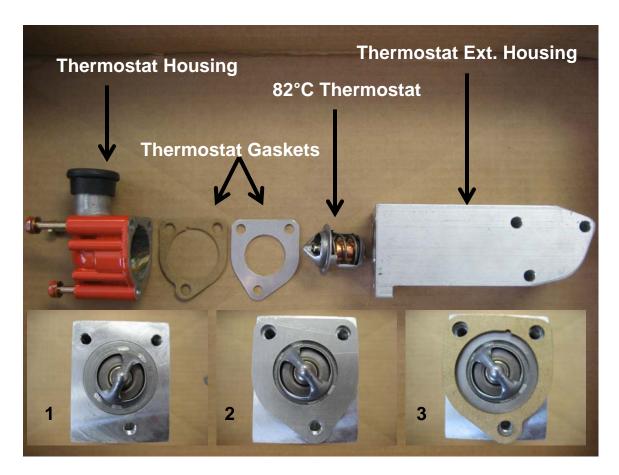


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- 1. Place the 82°C thermostat [145206270] inside the counter bore of the thermostat extension housing.
- 2. Place the metal gasket [RP10-001-64] on top of the 82°C thermostat.
- 3. Place the paper gasket [145996740] on top of the metal gasket.
- 4. Install the thermostat housing and secure it with the M6x50 bolts (Reuse the two original bolts and one supplied with the kit).



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Connect the modified radiator supply hose to the relocated thermostat assembly. The thermostat should be relocated with the housing.

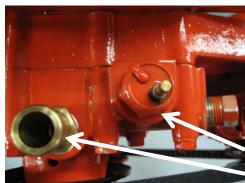
Relocated Thermostat Assembly

**Modified Upper Radiator Supply Hose** 

#### **NOTE**

Reuse all hose clamps. There is one additional #10 hose clamp with the kit.

Remove the coolant supply to heater core hose from the water pump.



Remove the brass coolant fittings from the water pump (you may leave in the 45° fitting). Install the coolant plug in the water pumps supply to Heater core port.

Coolant Plug (Supply to Heater Core)

High Coolant Temperature Switch

High Coolant Temperature Switch Coolant Return from Heater Core



Water Pump Plug [RP12-115]

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Connect the straight brass fitting on the thermostat extension housing to the coolant supply fitting at the bulkhead inside the engine enclosure using the existing hose.

Coolant Supply Hose to Heater Core

Thermostat Extension Housing

#### NOTE

Clean threads if necessary and use a Teflon sealant on all brass fittings.

#### Purging Air from the Heating System

- 1. Replace the air filter assembly.
- 2. Remove temporary hose clamps and fill the radiator system with coolant (premixed 50/50 suitable for aluminium radiators).
- 3. Remove the radiator cap, activate the heating and start the engine.

#### WARNING

Safety goggles must be worn while purging air from the coolant system as engine coolant is under pressure and can be extremely hot.

- 4. Bleed the air from the thermostat housing by partially removing the coolant supply line on the outside of the engine cabinet and allow the air to escape. Secure the hose by tightening the clamp and replace the radiator cap.
- 5. Run the engine for five minutes and see that the copper supply line to the heater core is hot to the touch. Both the supply and return lines should be hot, however, the supply line will heat more quickly than the return. Confirm the coolant hoses have been correctly connected to the HVAC from the engine compartment.

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- If both copper pipes do not become hot to the touch purge the air from the heater core at the water valves return port. Use some rags to contain any coolant that spills.
- 7. Run the engine and add coolant as necessary.

Kit Number RP5-1003K		
<b>Part Numbers</b>		
145996740	Thermostat Gasket	2
145206270	82 °C Engine Thermostat (179.8 °F)	Not Included
RP5-011	3/8" x 5/8" Straight Brass Fitting	1
RP10-001-62	Thermo Ext Housing	1
RP10-001-64	Aluminum Thermostat Gasket	1
RP12-036	Hose Clamp #10	1
RP12-111	M6 x 50 Hex Head Cap Screw	1
RP12-112	M6 x 60 Hex Head Cap Screw	3
RP12-113	M6 Lock-washers	4
RP12-115	3/8" NPT Water Pump Plug	1

RigMaster's Warranty Standard Repair Time for the diagnosis and installation of kit number RP5-1003K is 1.0 hour total. If you have any questions about this service bulletin please contact RigMaster's Technical Support Department toll free at (888) 208-3101.

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