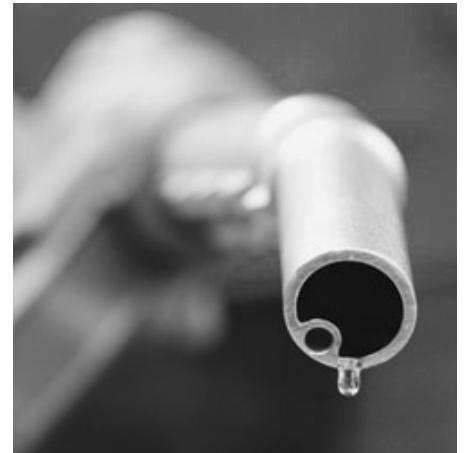


300 Watt Heater Kits

RK 11-2002 (12 VDC) and RK 11-2001 (24 VDC)
For 900FH and 1000FH Turbine Filters

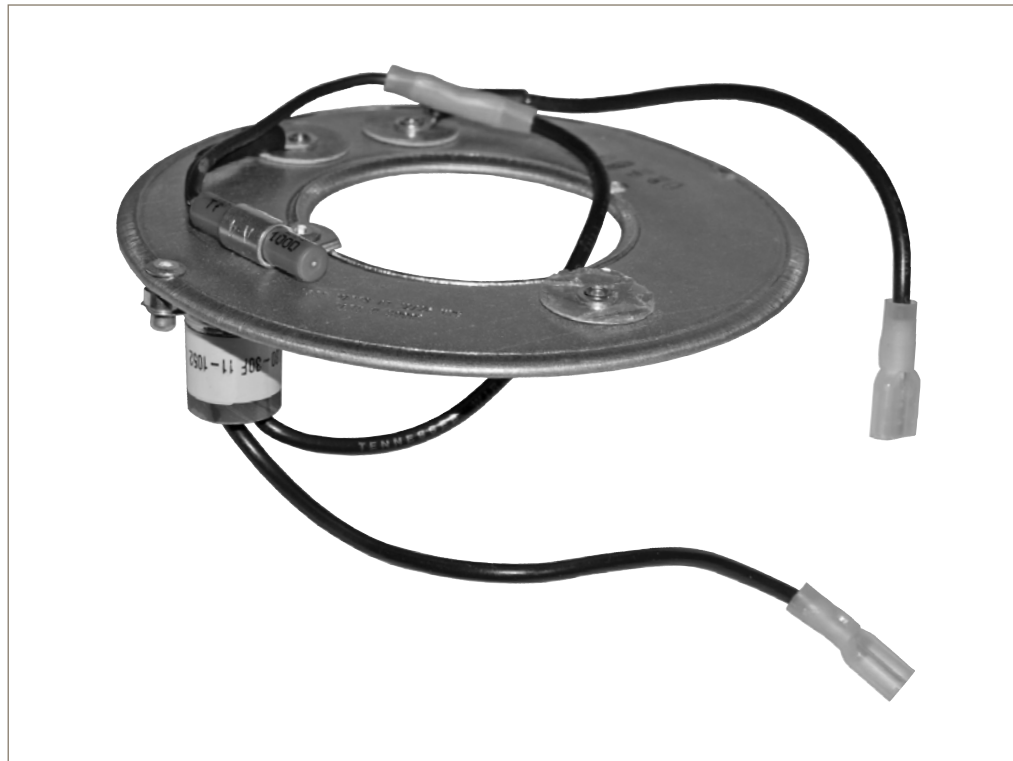
Instruction Part Number 11-2004 Rev -



Please read and understand all instructions prior to installation.

The in-filter heater is a cold weather starting aid with an internal automatic thermostat that turns the heater ON when the fuel temperature drops below 50°F (10°C) and turns OFF when the fuel reaches 80°F (27°C). Heat is supplied in the FH filter assembly just below the replacement filter to melt wax crystals and allow fuel to pass through the filter for quick, easy starting. The 300 watt heater is operated by turning the ignition switch ON for a minimum of five minutes prior to starting the engine.

Note: Racor electrical options are for use with diesel applications **only**.



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As of June 2009, all 900FH and 1000FH Turbine Series heaters are equipped with a thermal cut-off (TCO) switch. This is a running change.

Thermal cut-offs provide protection against overheating conditions, which could lead to fuel filter component damage.

Note: 300 Watt, 12 VDC heaters have two TCO switches and 300 Watt, 24 VDC heaters have only one TCO switch.



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Installation Guidelines

Items Needed

The following customer supplied items are recommended for best results when performing installation:

1. Heater power demand is 25 amps for 12 vdc and 13 amps for 24 vdc. Due to power demand, Racor recommends our relay kit for the safest method of installation. Racor offers two relay kits available from your Racor distributor. Part numbers are RK 11861 (for 12 vdc) and RK 11862 (for 24 vdc). These kits include an in-line fuse holder (and fuse) and the RK 11862 kit also includes a resistor. Use 25 amp fuse with a 12 vdc system and 15 amp fuse (and resistor) with a 24 vdc system.
2. A ON-OFF toggle switch (optional) may be used to control power to heater relay. This allows operator to cut power to heater relay during summer use or servicing procedures.
3. All wires should be 14 AWG (American Wire Gauge) min.
4. New Turbine Series replacement filter (if applicable).

Installation

This procedure may be done with unit on vehicle (if space permits) or on a work bench. When performing procedure on vehicle, remove ground cable from battery as a safety measure before starting.

Note: Use a toothpick to remove old sticking gaskets so the surfaces are not scratched. Clean all sealing surfaces with a clean, dry cloth.

1. Drain all fuel from unit by opening drain valve.

2. Remove T-handle and lid, discarding old T-handle O-ring and lid gasket.
3. Remove filter from unit.
4. Remove the four (4) bowl ring capscrews and pull bowl off base, discarding base gasket.
5. Disconnect old heater terminals, pull heater up and out (if applicable).
6. Slide new heater over center tube, thermostat(s) facing down.
7. Pull heater wires through opening at bottom of base and attach either connector to either feed-thru terminal.
8. Apply silicone grease to new bowl gasket and reattach bowl to base. Tighten capscrews until they fit snugly - about 55-60 in. pounds. Ensure drain valve is closed.
9. Place new filter (if applicable) into housing and prime unit by filling housing slowly with clean fuel.

Replacement Filters (900FH) 2040SM-OR 2040TM-OR 2040PM-OR	2 micron 10 micron 30 micron
Replacement Filters (1000FH) 2020SM-OR 2020TM-OR 2020PM-OR	2 micron 10 micron 30 micron



10. Apply silicone grease to new lid gasket and T-handle O-ring. Reattach lid and T-handle to housing and tighten snugly by hand only.

11. Prime fuel system per manufacturer's instructions, if applicable
12. Reattach battery cable. Start engine and check for fuel system leaks. Correct as necessary with engine off and pressure relieved from filter assembly.
13. Attach external wire feed-thru connections to vehicle wiring loom. See wiring diagram for additional help.

Either heater wire may be used for Hot (+) or Ground (-).

Exterior wire/terminal connections should be soldered and crimped.

Run wires in protected locations. Avoid hot surfaces and places that could pinch or rub on wires.

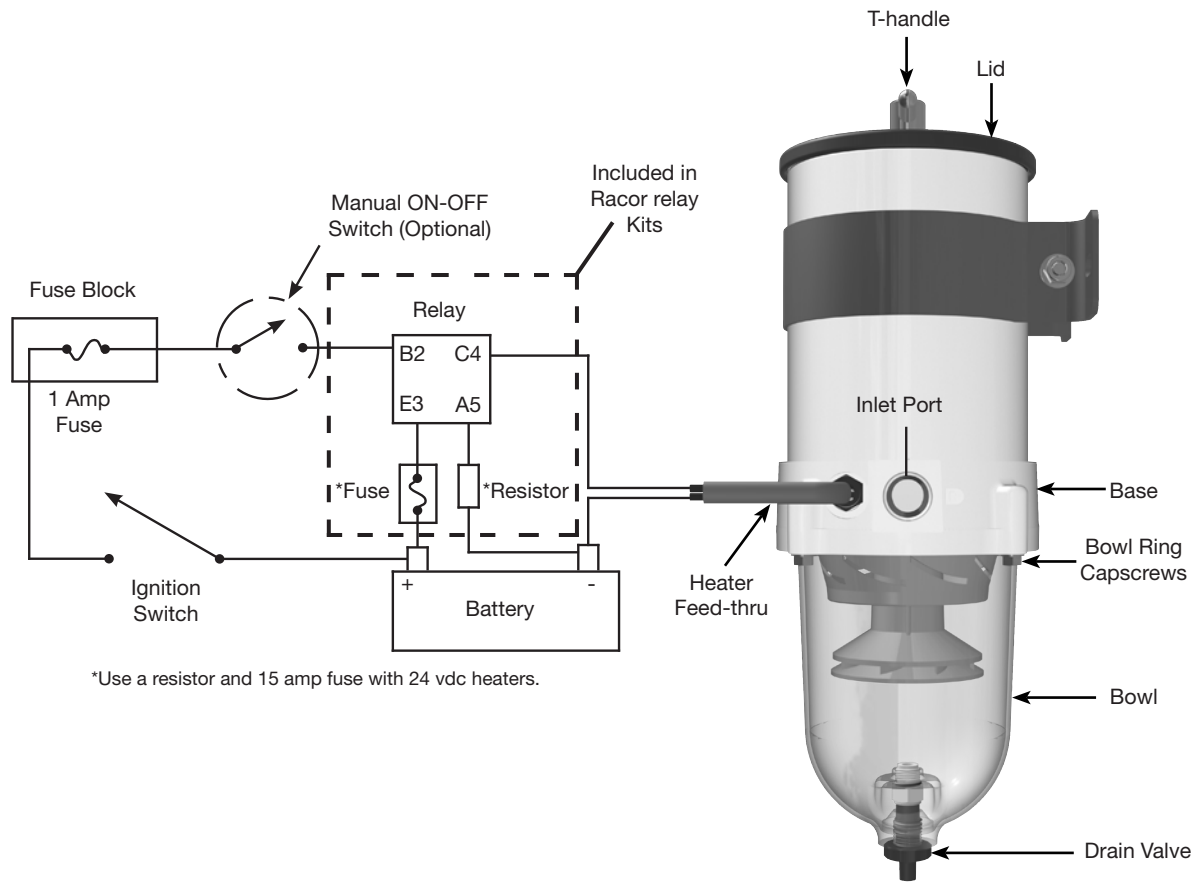
Caution

1. Ensure wiring diagram is closely followed and proper safety fuse is used. If fuse should fail, ensure cause is found and corrected prior to using heater again.
2. Prime filter assembly with fuel before applying power to heater.

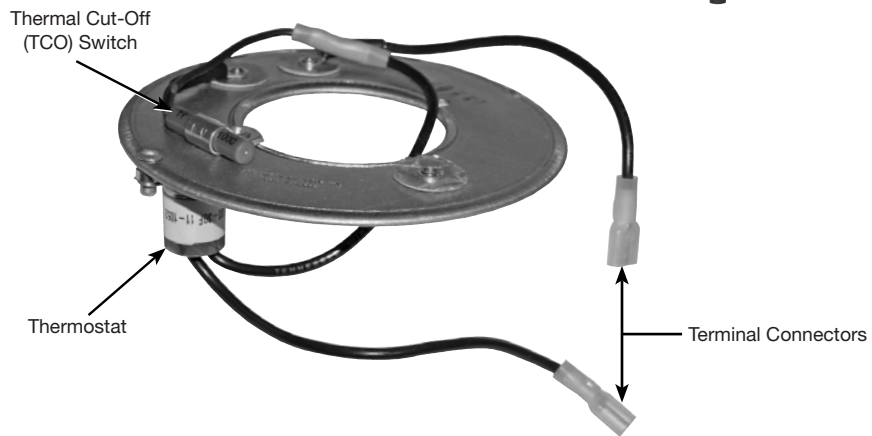
Note: Never power heater on until fuel is fully primed within filter.

3. During vehicle or equipment servicing always ensure power to heater is shut off.
4. Annually, or every 12,000 miles, inspect all wiring for wear or unsafe conditions. Inspect heater for proper operation. At temperatures above 85°F, check continuity (with power off) across power and ground wires (current should be open, no continuity).
5. For questions or assistance, please call Racor Technical Support at (800) 344-3286 or (209) 521-7860 ext 7555.

Wiring Diagram



*Use a resistor and 15 amp fuse with 24 vdc heaters.



24 vdc Heater Shown

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