

#### TECHNICAL SERVICE DEPARTMENT Technical Service Bulletin 1-800-432-8373



### **RFD DASH ONE MODEL AUTOMATIC FLUE DAMPER**

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Automatic Vent Damper: (redesigned 10-94)

Commencing with first usage in October, '94, the commercial gas water heater product line complied with energy up-grade standards that became effective January 1st, 1995.Commercial gas water heaters were equipped with the latest version of Automatic Flue Damper assembly. This damper assembly has a Honeywell drive motor which is equipped with a series of micro switches. Although still a standing pilot water heater, this product requires the use of 120VAC for the transformer; and 24V to operate the damper motor and gas control valve. In a stand-by condition, 24V is extended through the yellow wire to the damper assembly. The yellow wire causes the damper motor to rotate and close the damper blade. Other switches are activated as the motor rotates turning the shaft to open on a call for heat. When the thermostat operates calling for heat, power is extended through the blue wire, to the damper. The blue wire is also connected to a micro-switch that energizes the damper motor and begins to open the damper blade. When the damper blade is upright, a third micro-switch extends 24V along the red wire to the TH terminal of the gas valve. At this point the damper blade is fully open, allowing for positive vent drafting and verification for the main burner to ignite. The TH terminal of the gas valve controls the main valve. When the TH terminal receives 24V, the main valve opens allowing the burner to ignite. The main burner remains lit until the thermostat is satisfied. After the thermostat is satisfied, power is suspended through the blue wire. Micro-switch relays power from the yellow wire to the damper motor. The damper motor rotates closed. At the same time power is suspended through the red wire, closing the main valve of the gas valve.





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## FIELD MODIFICATION OF ECO WIRING - DASH-1 MODELS

- 1. Disconnect both brown leads from the ECO terminals on the thermostat.
- 2. Move the power supply's yellow wire from the middle terminal to the bottom left terminal.
- 3. Run a jumper wire from the middle terminal to the bottom right terminal.
- 4. Remove the thermocouple adapter and screw the thermocouple straight into the gas valve.
- 5. If the thermocouple will not screw in all the way to make contact, leave the adapter intact and run a jumper between its terminals.

