

## Troubleshooting Procedure

Subject:  
E11 – DC Motor Failure



### Applicable Models:

501[11,12,21,22]1261 – GU26  
501[11,12,21,22]1321 – GU32

### Description:

Unit stops providing hot water and displays E11. In rare cases, unit will not turn on at all and the fuse inside the breaker box will have been burned out; new fuses burn instantly upon replacement.

### Causes:

1. DC Motor Fan has a maximum allowable working voltage of 5A; however, spikes in electricity can pass through the PCB controller and burns out the fan motor
2. Fan housing is distorted during exhaust collar installation and the fan blades can rub against the housing causing motor to burn out
3. Abnormal venting conditions, i.e. blockage, strong winds etc... in which the back pressure can overload the fan and cause motor burn out

### Reset Procedure:

1. Power off the unit and unplug from electrical outlet and let unit rest for 1 minute
2. Plug the power cord into the electrical outlet and power on the unit

### If Reset Fails to Clear Error:

1. Replace DC Motor Assembly
2. Replace PCB Main Controller
3. Replace Leakage Breaker

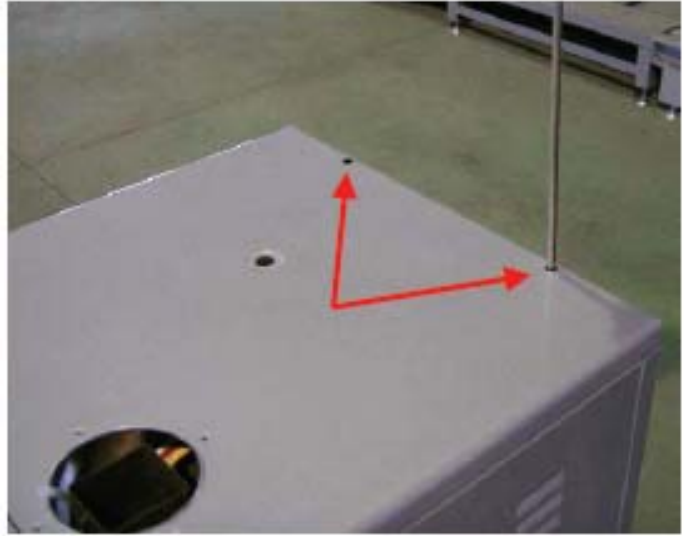
### Note:

It is important that all 3 components are replaced, as electronically shorted components can further damaged connected parts. For example, if only the fan motor is replaced but the PCB isn't, the new replacement motor is at risk of being burned out by the old PCB that has already been damaged from voltage spikes.

## DC Motor Replacement Procedure:

### Remove Top Panel:

- a. Loosen two screw
- b. Push top panel towards rear and lift

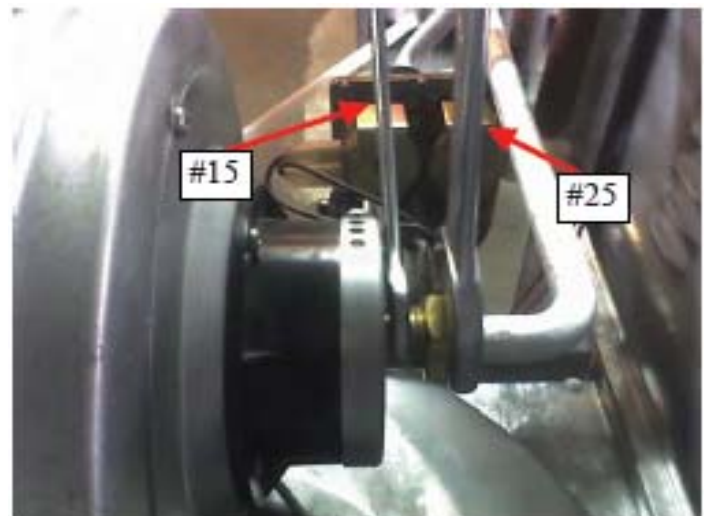


### Remove Front Panel:

- a. Loosen two screws
- b. Push the front panel downward to remove

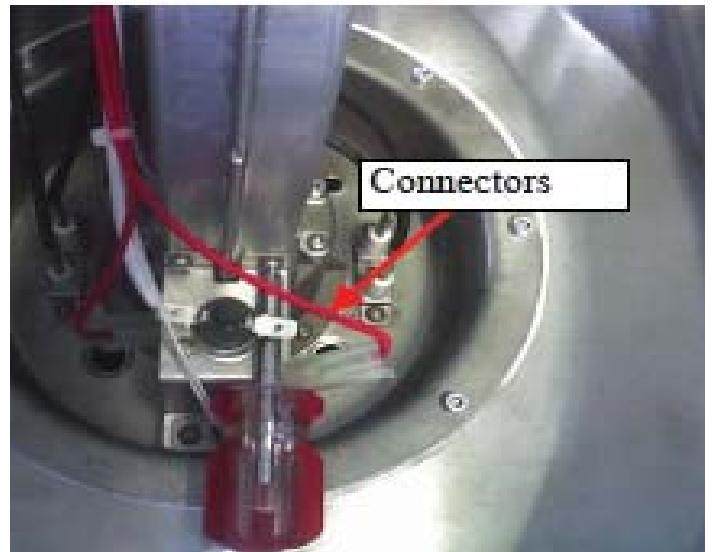


Use a #15 wrench to hold nozzle while turning the nut securing the gas tube counter clockwise with # 25 wrench to loosen

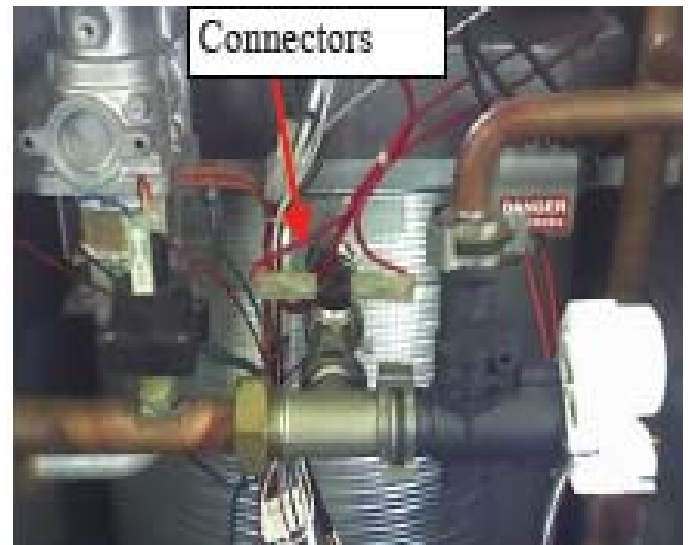


Loosen two screws to remove the heat exchanger thermostat switch

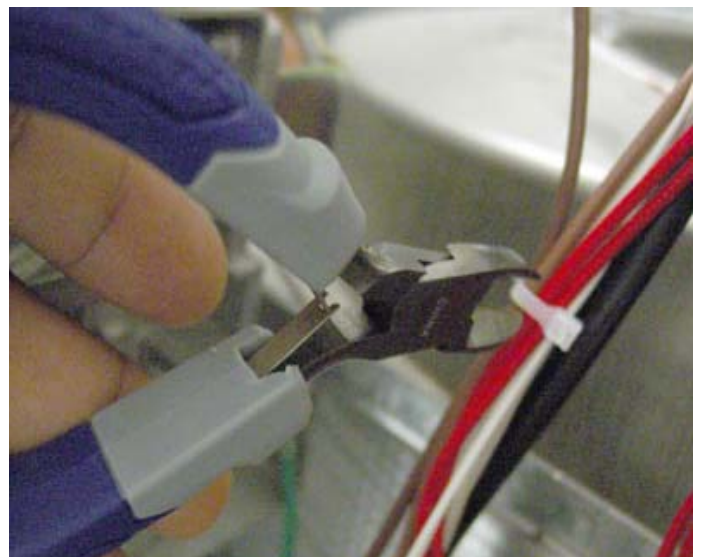
Disconnect wires from the heat exchanger thermostat switch



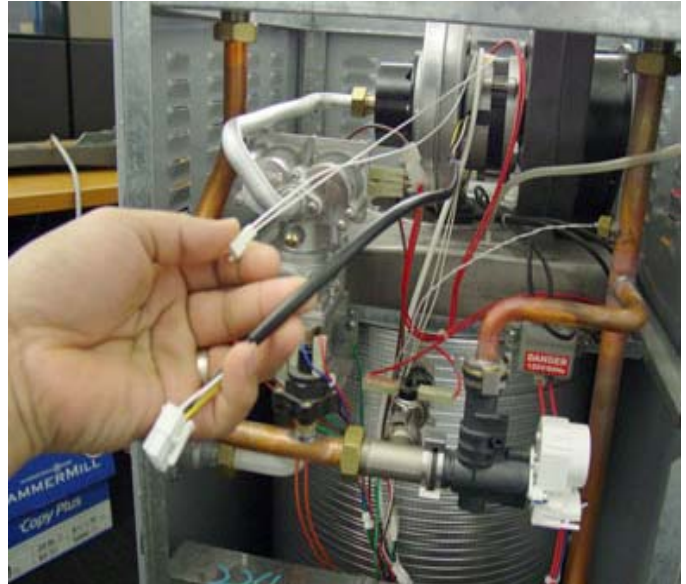
Disconnect wires from hot outlet thermostat switch



Cut all plastic wire ties to loosen wire bundles



Disconnect the fan's 4-pin wiring male connector and the burner thermistor 2-pin wiring male connector from female wiring connectors



Disconnect the flame rod wire  
Disconnect the igniter wires  
Loosen 4 screw on the injection blower  
Loosen 5 screws on the exhaust duct



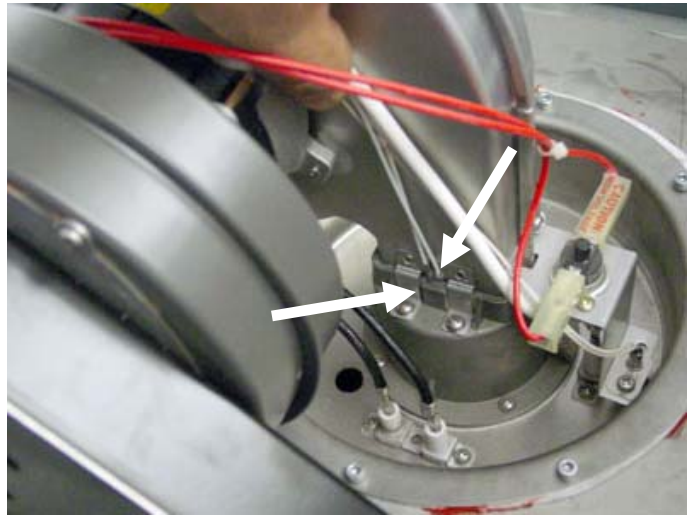
Gently remove the dual blower assembly; the injection blower is secured by silicone sealant so some force may be required



**WARNING!**

When installing the replacement blower, make sure that the burner thermistor wires are securely set in burner collar slot

**DAMAGE** to the burner themistor wire will cause E17 and a new burner assembly will need to be replaced!



**Consumer Notice:** The information and instruction in this bulletin are intended for use by skilled professionals. These instructions should not be performed by consumers. Call your professional person for help.