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## 83949 (85053) Cast Aluminum Burner Door

### Applicable Boiler Models

- Ti400
- Lx300
- Lx400
- Ts80

### Kit Contents

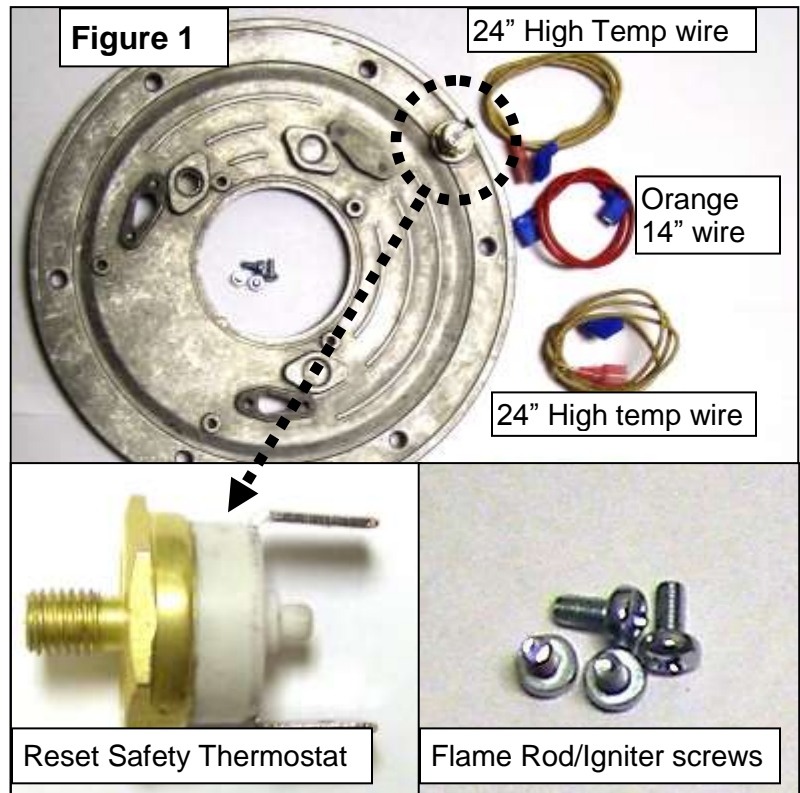
- 82767 burner door
- 84993 M5 Reset Safety Thermostat
- 24" high temperature wires (2)
- 82803 M4 flame rod/igniter screws (4)
- 14" Orange wire

### Tools Required

- Torx T25 screwdriver
- 5/16" nut driver or wrench
- 10mm wrench
- Pipe wrench
- 9/16" wrench
- 1/2" wrench

### Burner door replacement Instructions

- 1) Turn off power and gas to the boiler.
- 2) Remove the gas line from the gas valve.
- 3) **Lx 300 - 400 only:** Disconnect the metallic tubing between the blower and high-vent pressure switch, by loosening the compression fitting at the high-vent pressure switch and blower. Support the brass fitting on the blower with a 1/2" wrench while loosening the compression fitting nut with a 9/16" wrench. Remove the tubing assembly from the blower.
- 4) Remove all electrical connectors attached to the burner door, gas valve, and blower motor.
- 5) Remove the flame rod and igniter.
- 6) Remove the burner door, gas valve and blower as an assembly.
- 7) Remove the 5 screws securing the extended air tube to the burner door, 3 screws for Ts80. **See figure 2**
- 8) Carefully remove the ceramic refractory and the burner from the door and set aside, these will be reused during reassembly.
- 9) Inspect the burner, burner door gasket, and ceramic burner door disk, for damage or excessive wear replace any damaged items prior to reassembly.
- 10) **See wiring modification instructions below. For Ts80 boilers skip to step 11.**
- 11) Reassembly is the reverse of disassembly.



**Flue gas leakage-** Failure to properly reseal the burner door gasket will result in flue gas leakage which may lead to serious injury or death.



**Gas leakage –** The metallic tubing attached to the blower on the Lx300-400 boilers contains air and fuel while the burner is operating. Failure to reattach this tubing correctly will result in gas leakage which may lead to fire, explosion, serious injury, or death.



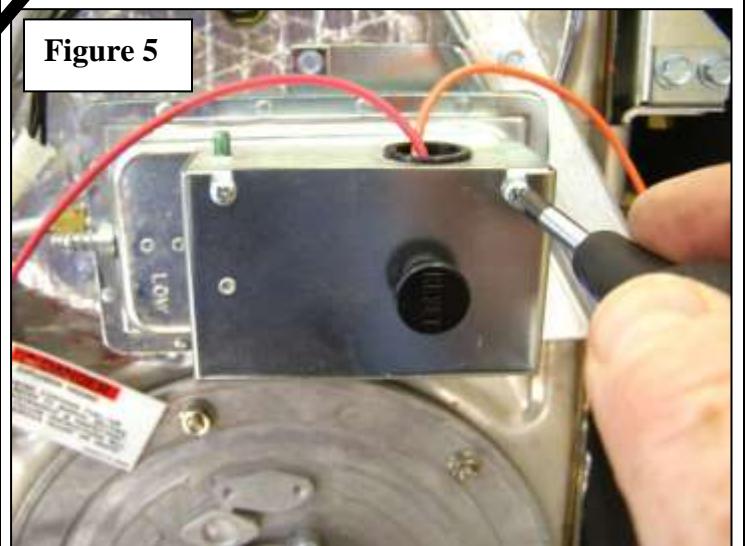
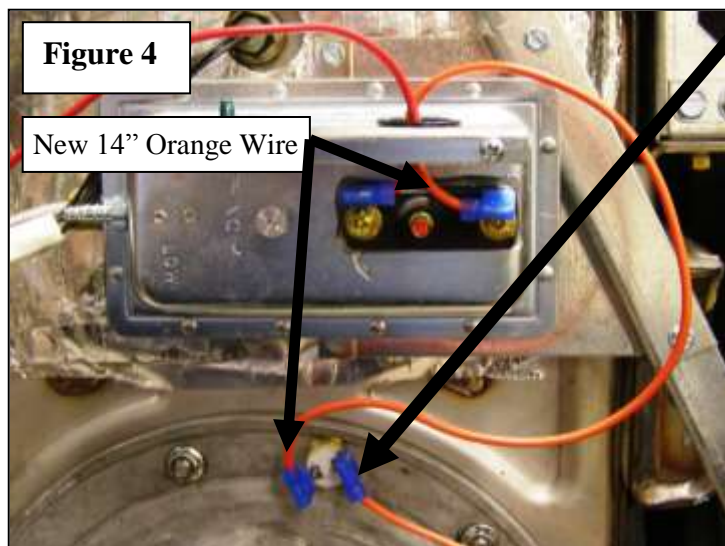
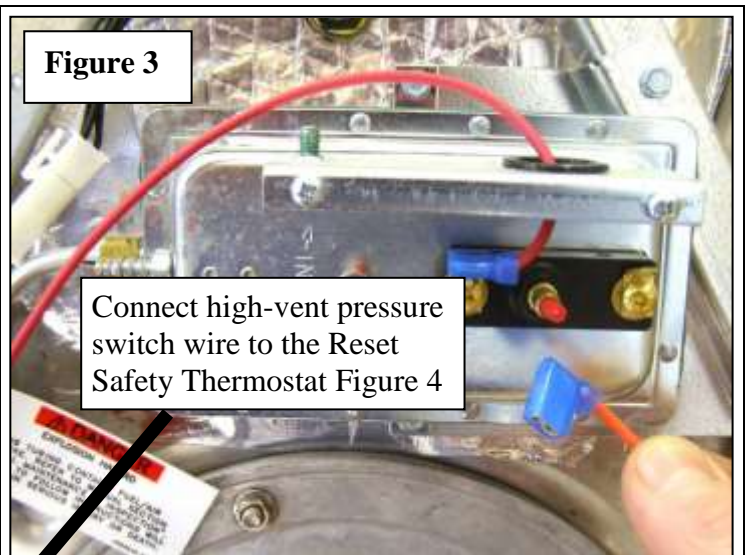
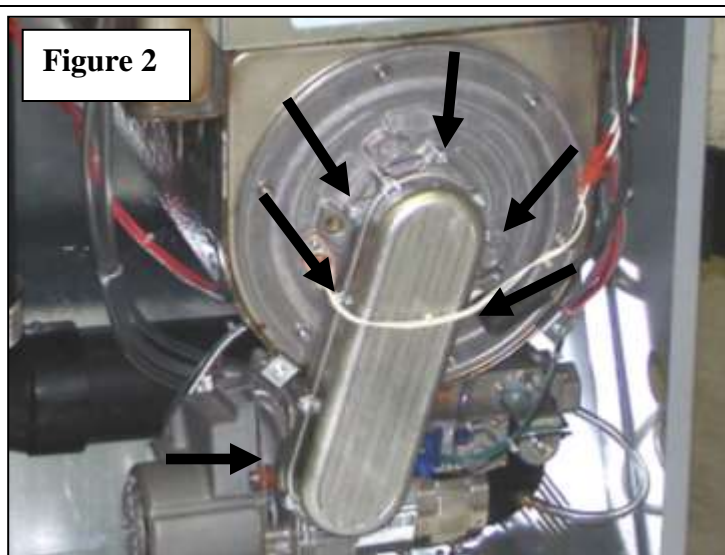
**Refractory Ceramic Fibers (RFC) -** Read handling instructions and warnings on pages 3 and 4.

**Wiring Modification Ti400 and Lx300-400 only**

Boilers originally equipped with the Reset Safety Thermostat do not require any modification. Ti400 and Lx300-400 boilers **not** originally equipped with the Reset Safety Thermostat **require** the wiring modifications shown below.

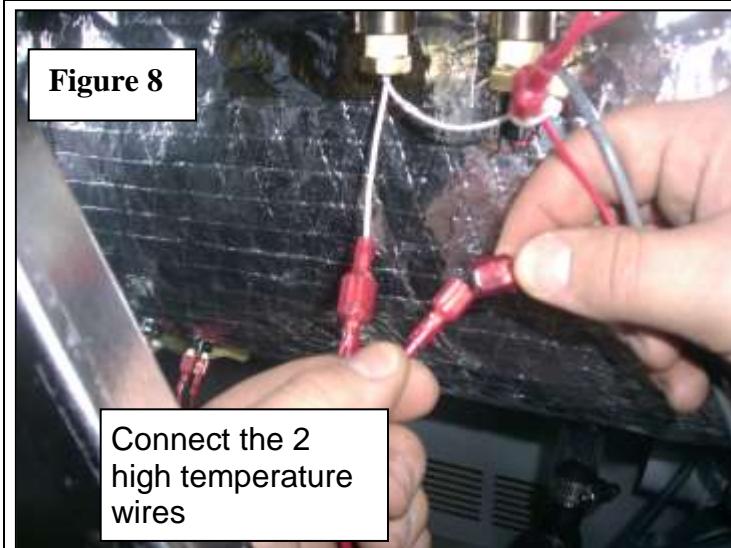
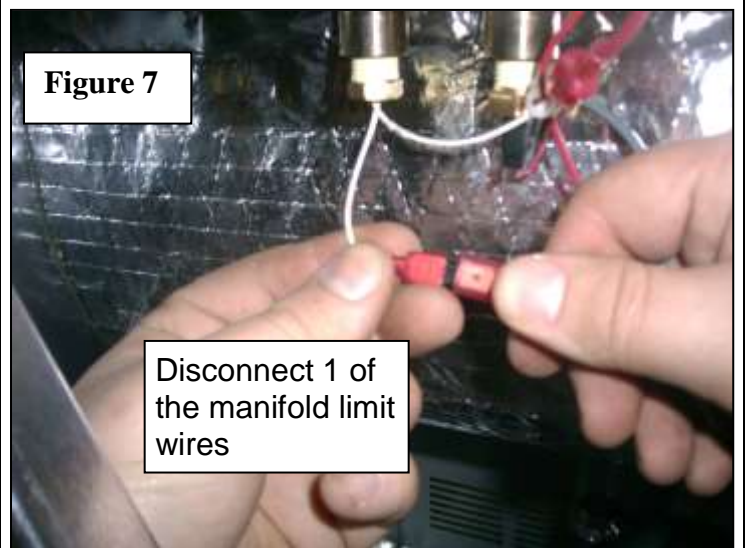
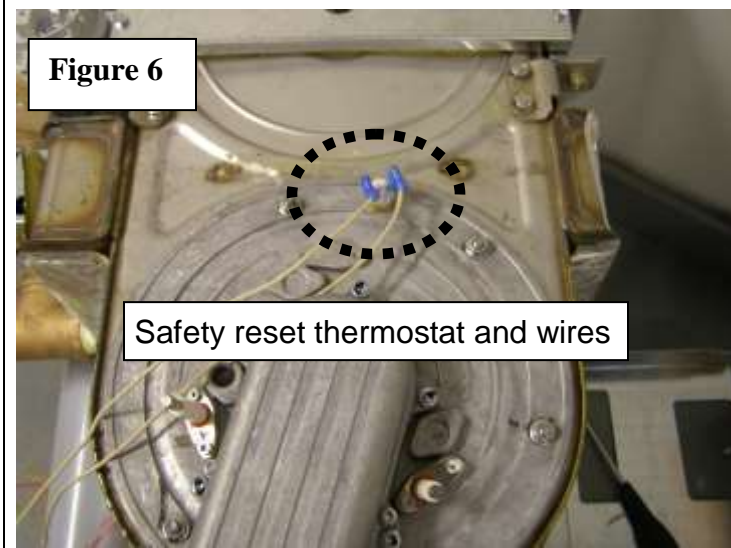
**Reset Safety Thermostat Wiring for Lx300 and Lx400 boilers:**

- 1) Remove the cover from the high vent pressure switch, then remove the right hand electrical connector. **See Figures 3 and 5**
- 2) Connect the 14" orange wire provided in the burner door kit to the Safety Reset Thermostat, then pull the other end through the high vent pressure switch wire grommet and connect it to the Reset Safety Thermostat. **See Figure 4**
- 3) Connect the wire that was removed from the high vent pressure switch to the Safety Reset Thermostat. **See Figures 3 and 4**
- 4) Reinstall the high vent pressure switch cover.



**Reset Safety Thermostat Wiring for Ti400**

- 1) Install the reset safety thermostat in the burner door and attach the two 24" high temperature wires using the blue flag connectors. **See Figure 6.**
- 2) Unplug one of the quick-connect wiring connections of the high temperature limit switch (closer to the back of the boiler) and connect the two 24" high temperature wire leads from the Reset Safety Thermostat. **See Figures 7 and 8.**



**Refractory Ceramic Fibers (RFC)**

**IMPORTANT** **Personal Protective Equipment Recommended** - Read the following warnings and handling instructions carefully before commencing any service work in the combustion chamber. The insulating material on the inside of the burner door and at the back of the combustion chamber contain *Refractory Ceramic Fibers* and should not be handled without personal protective equipment.

**WARNING** **Potential Carcinogen** - Use of *Refractory Ceramic Fibers* in high temperature applications (above 1000°C) can result in the formation of Crystalline Silica (cristobalite), a respirable silica dust. Repeated airborne exposure to crystalline silica dust may result in chronic lung infections, acute respiratory illness, or death. Crystalline silica is listed as a (potential) occupational

carcinogen by the following regulatory organizations: International Agency for Research on Cancer (IARC), Canadian Centre for Occupational Health and Safety (CCOHS), Occupational Safety and Health Administration (OSHA), and National Institute for Occupational Safety and Health (NIOSH). Failure to comply with handling instructions in Table 16-1 may result in serious injury or death.

**WARNING** **Crystalline Silica** - Certain components confined in the combustion chamber may contain this potential carcinogen. Improper installation, adjustment, alteration, service or maintenance can cause property damage, serious injury (exposure to hazardous materials) or death. Refer to Table 16-1 for handling instruction and recommended personal protective equipment. Installation and service must be performed by a qualified installer, service agency or the gas supplier (who must read and follow the supplied instructions before installing, servicing, or removing this appliance. This appliance contains materials that have been identified as carcinogenic, or possibly carcinogenic, to humans).

**Table 17-1 Handling Instructions for Refractory Ceramic Fibers (RCF)**

Reduce the Risk of Exposure	Precautions and Recommended Personal Protective Equipment
Avoid contact with skin and eyes	<ul style="list-style-type: none"> <li>Wear long-sleeved clothing, gloves, and safety goggles or glasses.</li> </ul>
Avoid breathing in silica dust	<ul style="list-style-type: none"> <li>Wear a respirator with a N95-rated filter efficiency or better. <sup>1</sup></li> <li>Use water to reduce airborne dust levels when cleaning the combustion chamber.</li> <li>Do not dry sweep silica dust. Pre-wet or use a vacuum with a high efficiency filter.</li> </ul>
Avoid transferring contamination	<ul style="list-style-type: none"> <li>When installing or removing RCFs, place the material in a sealable plastic bag.</li> <li>Remove contaminated clothing after use. Store in sealable container until cleaned.</li> <li>Wash contaminated clothing separately from other laundry.</li> </ul>
First Aid Measures	<p>If irritation persists after implementing first aid measures consult a physician.</p> <ul style="list-style-type: none"> <li><b>Skin</b> - Wash with soap and water.</li> <li><b>Eyes</b> - Do not rub eyes; flush with water immediately.</li> <li><b>Inhalation</b> – Breathe in fresh air; drink water, sneeze or cough to clear irritated passage ways.</li> </ul>

**Notes:**

<sup>1</sup> Respirator recommendations based on CCOHS and OSHA requirements at the time this document was written. Consult your local regulatory authority regarding current requirements for respirators, personal protective equipment, handling, and disposal of RCFs.

For more information on Refractory Ceramic Fibers, the risks, recommended handling procedures and acceptable disposal practices contact the organization(s) listed below:

**Canada (CCOHS):** Telephone directory listing under Government Blue Pages Canada—Health and Safety—Canadian Centre for Occupational Health and Safety; or website <http://www.ccohs.ca>.

**United States (OSHA):** Telephone directory listing under United States Government—Department of Labor—Occupational Safety and Health Administration; or website <http://www.osha.gov>.