**Troubleshooting**

**If the error code is indicated on the 7-seg LED on the PCB (Part #702) in the water heater (and/or the remote controller), refer to Section B.**

**It takes long time to get hot water at the fixtures**

- The fan motor is blowing cold air. The water temperature in your fixtures depends on the length of piping between the two. The longer the distance or the bigger the pipes, the longer it will take to get hot water.
- If you would like to receive hot water to your fixtures quicker, you may want to consider a hot water recirculation system.

**The water is not hot enough or turns cold and stays cold**

- Compare the flow and temperature. Refer to the "Output temperature chart" of the installation manual.
- Check cross-plumbing between cold water lines and hot water lines.
- Check if the gas supply is fully opened, the gas line sized properly and the gas supplies pressure enough. Refer to the "Gas supply and gas piping size" of the installation manual.
- Check gas temperature, and change the dipswitch setting. Refer to Section D.
- Refer to "Water circuit" in this section.

**The water is too hot**

- Check the water temperature, lowering the setting temperature.

**The water is not available if a fixture is open**

- Refer to the "Power supply circuit" and "Water circuit" in this section.
- If you use the remote controller, turn the push button on and then the green LED will light up.
- Open all hot water faucets, and make sure that there is enough water flow. The water heater needs at least 0.5 GPM water flow to operate.
- Check for reverse connection and cross connection.
- Check if the filter on the cold intake is cleaned. (Part #415)
- Refer to "Walker thermistor" in this section on the PCB.
- Check if water ways in the water heater are frozen. If so, unfreeze them. And refer to installation manual to protect your water heater from freezes.
- Check if the inlet water pressure is higher than 40 psi. And if it’s lower than 40 psi, need to increase the pressure.
- Check for connections and breakages of wires (Part #418, #421)

**Remote controller**

- Check if you set the remote controller, the push button on and then the green LED will light up.
- Check if the filter on the cold intake is cleaned. (Part #437)
- Refer to "Water circuit" in this section.

**Error codes**

631: Incoordinate switch setting

- Check the dipswitch settings on the PCB. Refer to Section D.

101: Warning for the "991" error code

- Check the gas type of the unit. If it’s wrong gas type model, replace the water heater to correct one.
- Check if there is any blockage (For example, Damper sticking, Vent Flaps installed on the terminator, Snow build up around terminator, installed in a closet (No ventilation or lack of combustion air) in the intake air and exhaust. Refer to the "Venta termiination clearance" of the installation manual.
- If the water heater is installed as a direct-vent system, check whether there is enough distance between the intake air terminal and the heat exchanger.
- Check the altitude/elevation of area of the water heater installed.
- Check if there is a pressure drop of the gas (Part #41b) and the fan motor (Part #44b), especially if the water heater has been installed in a contaminated area.
- Check if there is dust and lint in heat exchanger.

111: Ignition failure

- Check if gas supply and leak gas pressure.
- Check if the hi-limit switch (Part #403) is properly functioning.
- Check if current flows to the igniter (Part #111, 707), mark bros on the computer board (Part #701), and/or on the flame rod (Part #103). And then if O.H.C.F (Part #402) is breakage. Consult the manufacturer.
- Check if there is a buzzing sound doesn’t exceed 200 Hz and the # of elbows is less than 6.
- Check if there is heating from leak exchanger (Part #402 or #44b).
- Check if current flows to the igniter (Part #111, 707)
- Check if current flows on the flame rod (Part #103). Refer to the "Appendix A" in Section C.

121: Loss of flame

- Check if gas supply and leak gas pressure.
- Check if the flame detection (Part #403) is properly functioning.
- Check for connection/breakage of wires (Part #111, 402, 705, 707), mark bros on the computer board (Part #701), and/or on the flame rod (Part #103). And then if O.H.C.F (Part #402) is breakage. Consult the manufacturer.
- Check if there is ignition from heat exchanger (Part #403 or #44b).
- Check if current flows to the igniter (Part #111, 707)
- Check if current flows on the flame rod (Part #103). Refer to the "Appendix A" in Section C.

391: Air-fuel Ratio Rod failure

- Check for connection/breakage of wires (Part #705) and/or on the AFR rod (Part #701).

441: Flow Sensor failure (Only Easy-link system)

- Check if connecting/breakage of wires (Part #705) on the flow sensor impeller (Part #442).

510:551: Abnormal Main and Gas Solenoid Valve

- Check for connection/breakage of wires (Part #705) and/or burn mark on the computer board (Part #901) and/or on the flame rod (Part #103) and/or on the gas solenoid valve (Part #41b).
- Reset power supply of the water heater.
- Check voltage on the valve.
- Check voltage on the valve on the gas valves assembly (Part #114). Refer to the "Appendix C" in Section C.

611: Fan motor fault

- Check for connection/breakage of wires, dust build up in the fan motor (Part #446) and/or burn mark on the computer board (Part #901).
- Check for blown fuse of the manufacturer for the "Vent termination clearance" of the installation manual.
- Check voltage between blue wire and red wire of the fan motor (Part #446), and check if the contact is normal.
- Check voltage between blue wire and red wire on the flame rod (Part #103).

631: External pump failure

- Check whether the pump connected to central computer board works properly.

651:661: Abnormal Main and Gas Solenoid Valve

- Check the control valve (Part #414), connection/breakage of wires (Part #418), and/or breakage of the gas solenoid valve.
- Check voltage between blue wire and black wire and red wire. Refer to the "Appendix B" in Section C.

681: External fan motor failure

- Check whether the external fan motor connected to central computer board works properly.

701: Computer board fault

- Check for connection/breakage of wires (Part #705) and/or burn mark on the computer board (Part #701).

721: False flame detection

- Check if cleaning the flame rod (Part #403).
- For indoor models, check if condensate drain is installed on the vent collar of the water heater.
- Check if the valve is leaking from heat exchanger (Part #402)

741: Communication between water heater and remote controller

- Check the model type of the remote controller. Model No. 100103060 (TM-8320) is the connection point.
- Check the connections between the water heater and remote controller. Refer to the "Remote controller connection point table" of the installation manual.
- Check the power supply of the water heater.
- If this error code appears both the PCB (Part #702) and the remote controller, replace the remote controller.

761: Communication between Parent unit and Child units for Easy-link system

- Check if the connections between the parent unit and the child units are correct. Refer to the "Easy-link system" section in the Installation manual.

991: Imperfect combustion

- Refer to the "153" error code in this section.