



Troubleshooting Guide

This guide contains information for identifying and correcting issues that may arise.

Applicable Models:

i200	iQ251
i200P	iQ251D
i250	iQ751
i250P	iQ1001
i200X	iQ1501
i201X	
i250X	
i251X	

** GEN I units have the push-button screen



Product Support / Warranty




If the water heater requires additional service, please use one of the following options for contacting Intellihot Technical Support:

- Call: 309-473-8040 (toll-free 1-877-835-1705), and press 3
- Email: support@intellihot.com

When you contact Technical Support, please have the following information ready:

- Model Number
- Serial Number
- Date purchase / Date installed
- Installation location & application
- Error code (if any) or other problem with the unit

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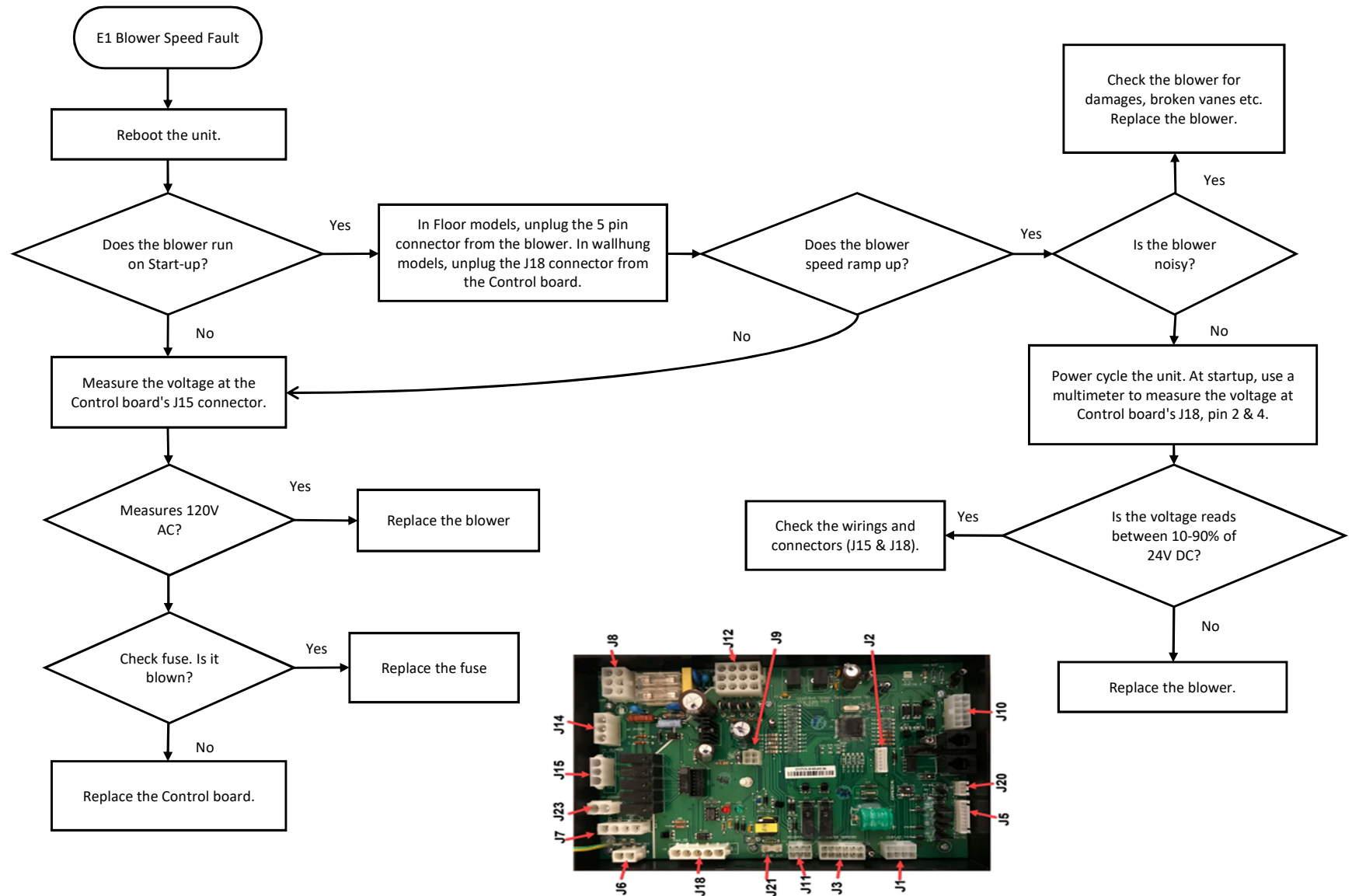
Error Code List

Code	Description	Page
E1	Blower Speed Fault	3
E3	Blocked Flue	4
E7	Ignition Failure	5
E9	Temperature Sensor Shorted	6
EA	Temperature Sensor Open Circuit	7
EC	Flue Temperature Exceeded	8
Ed	Heat Exchanger Outlet Temperature Exceeded	9

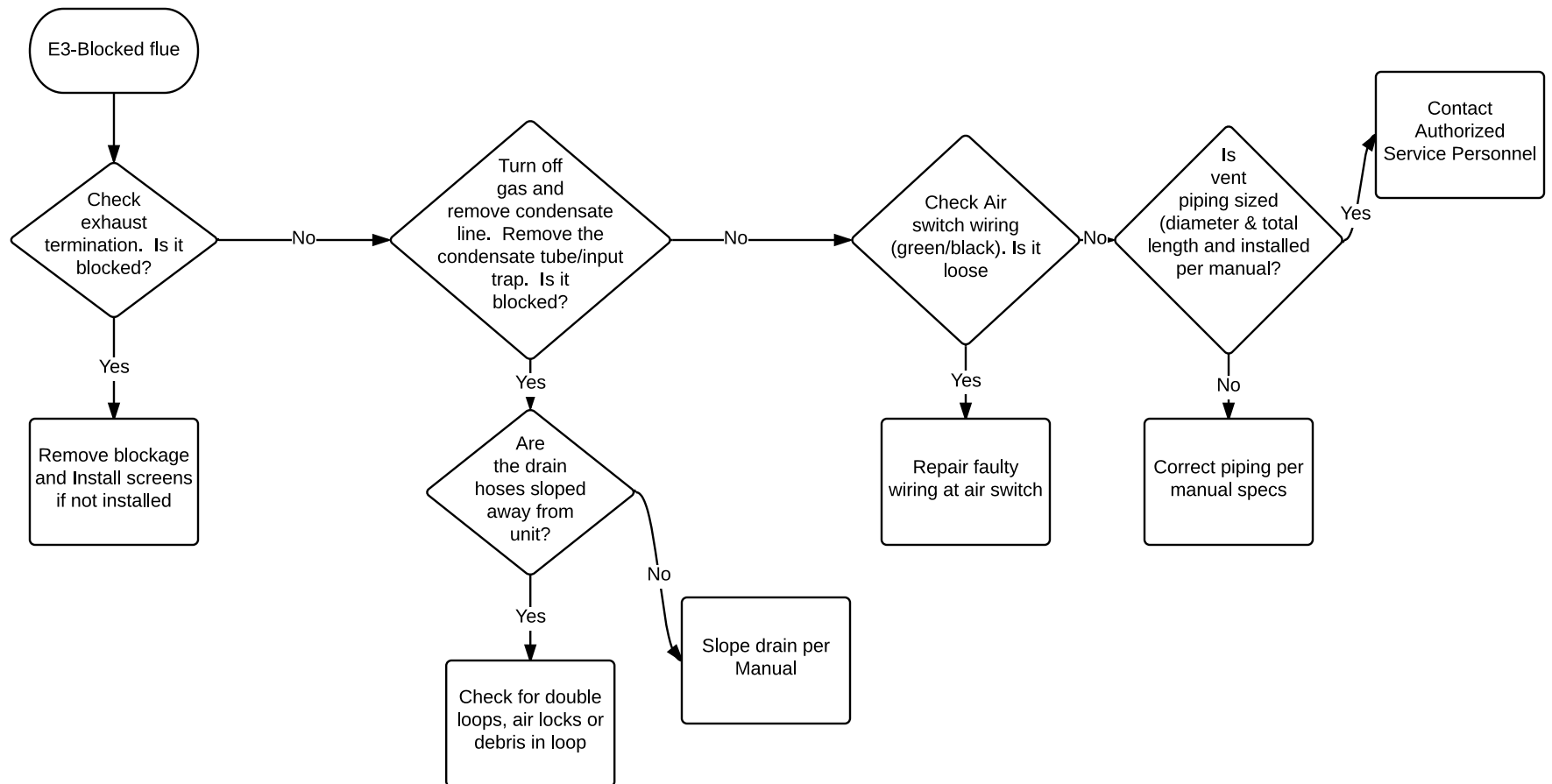
Suggested Tool List

- Digital Manometer
- Electrical Multimeter
- Flue Gas Analyzer (for NO_x & CO₂)
- 7mm Socket & Ratchet
- #1 Phillips Screwdriver
- #2 Phillips Screwdriver
- Instrument Flat Blade Screwdriver
- Pliers
- Adjustable Wrench

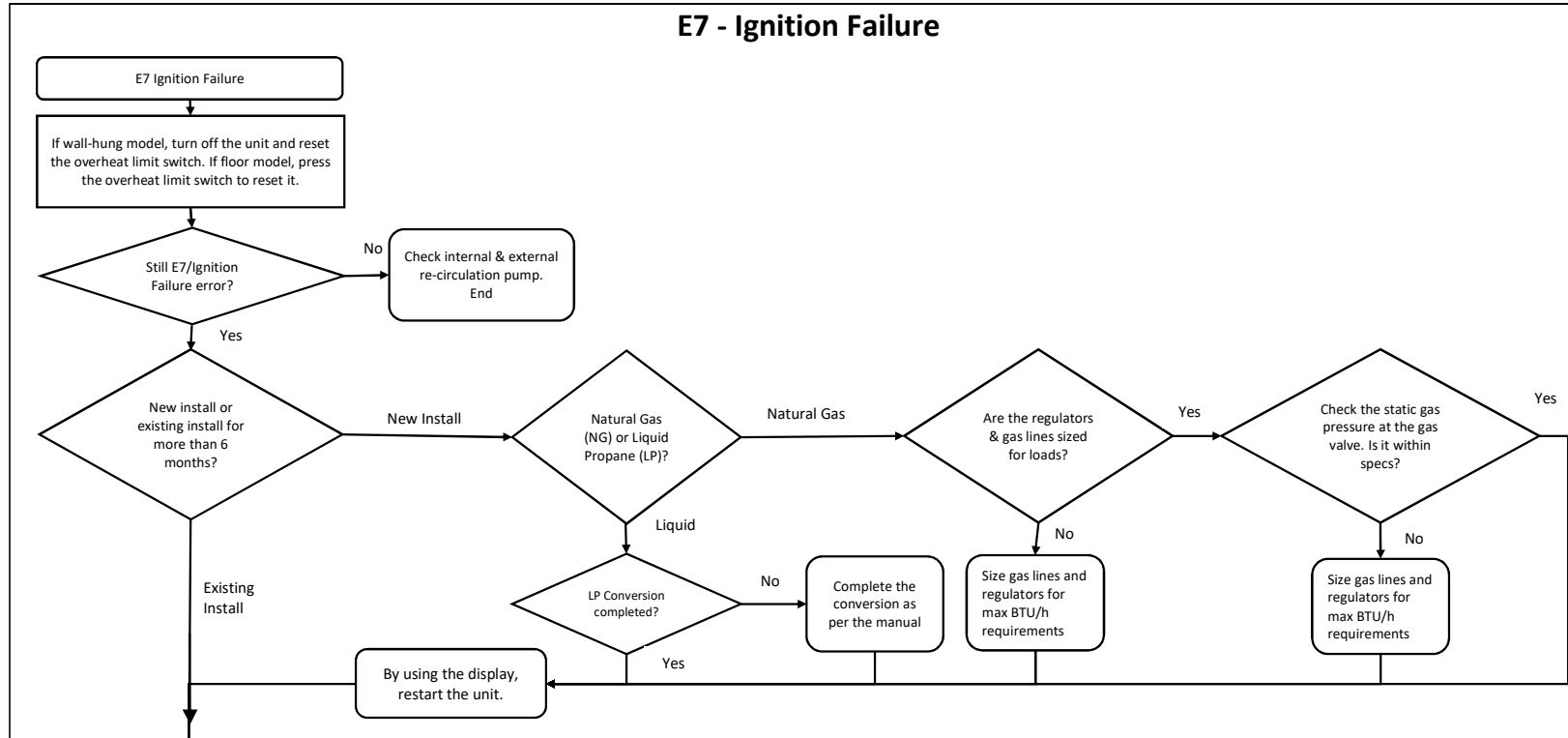
E1 - Blower Speed Fault

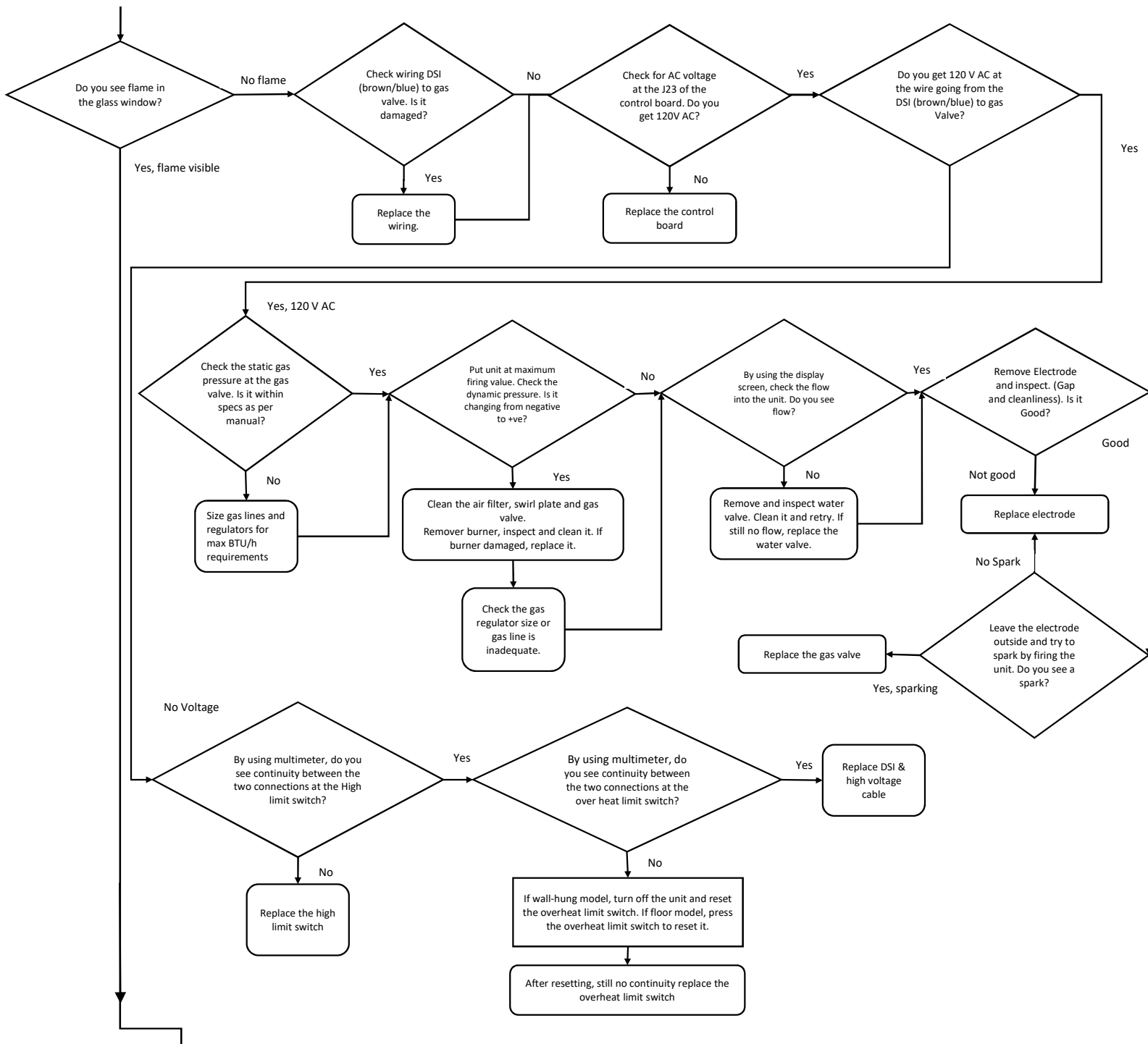


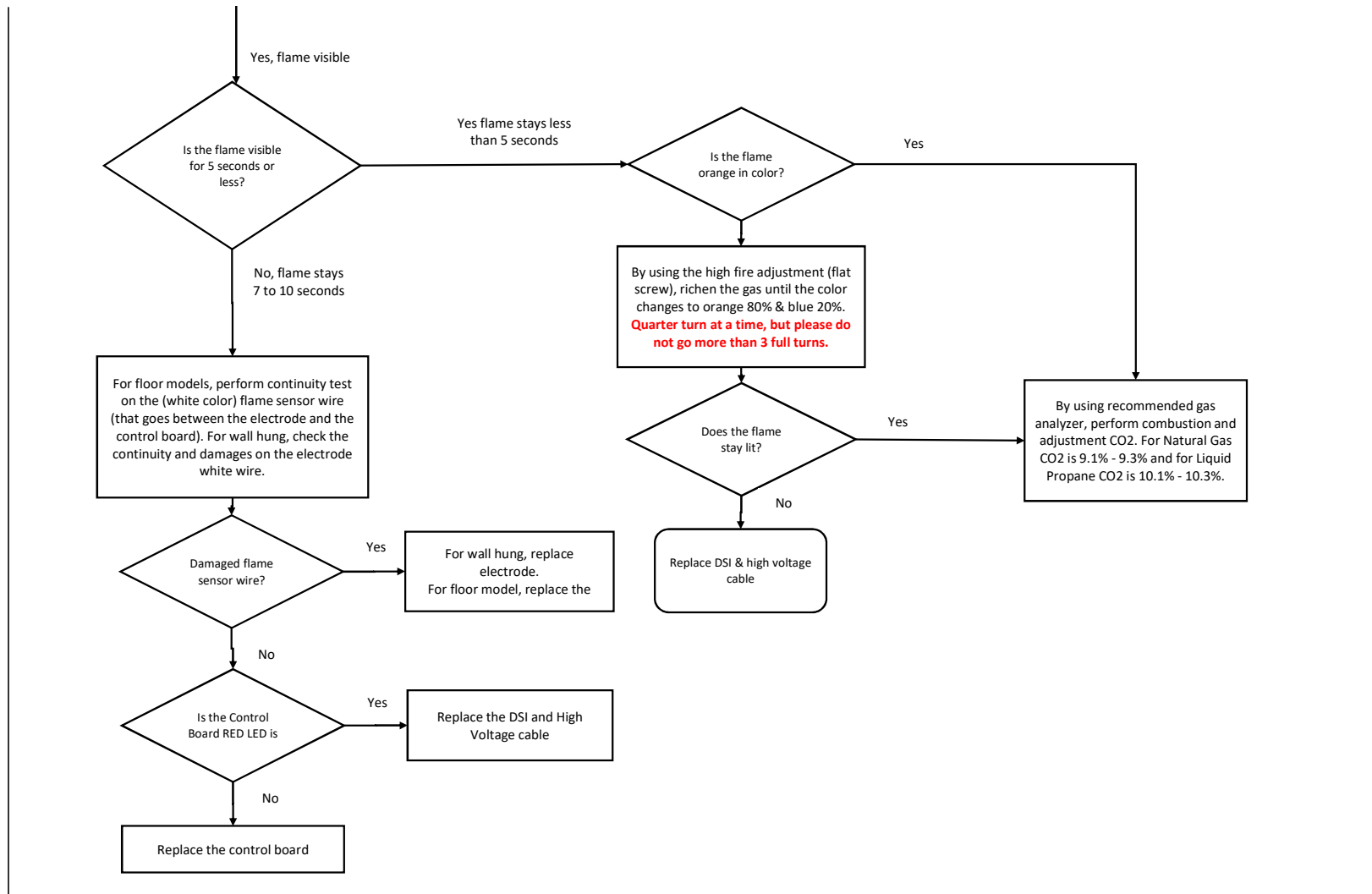
E3-Blocked Flue



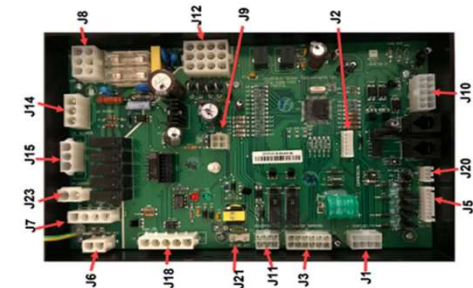
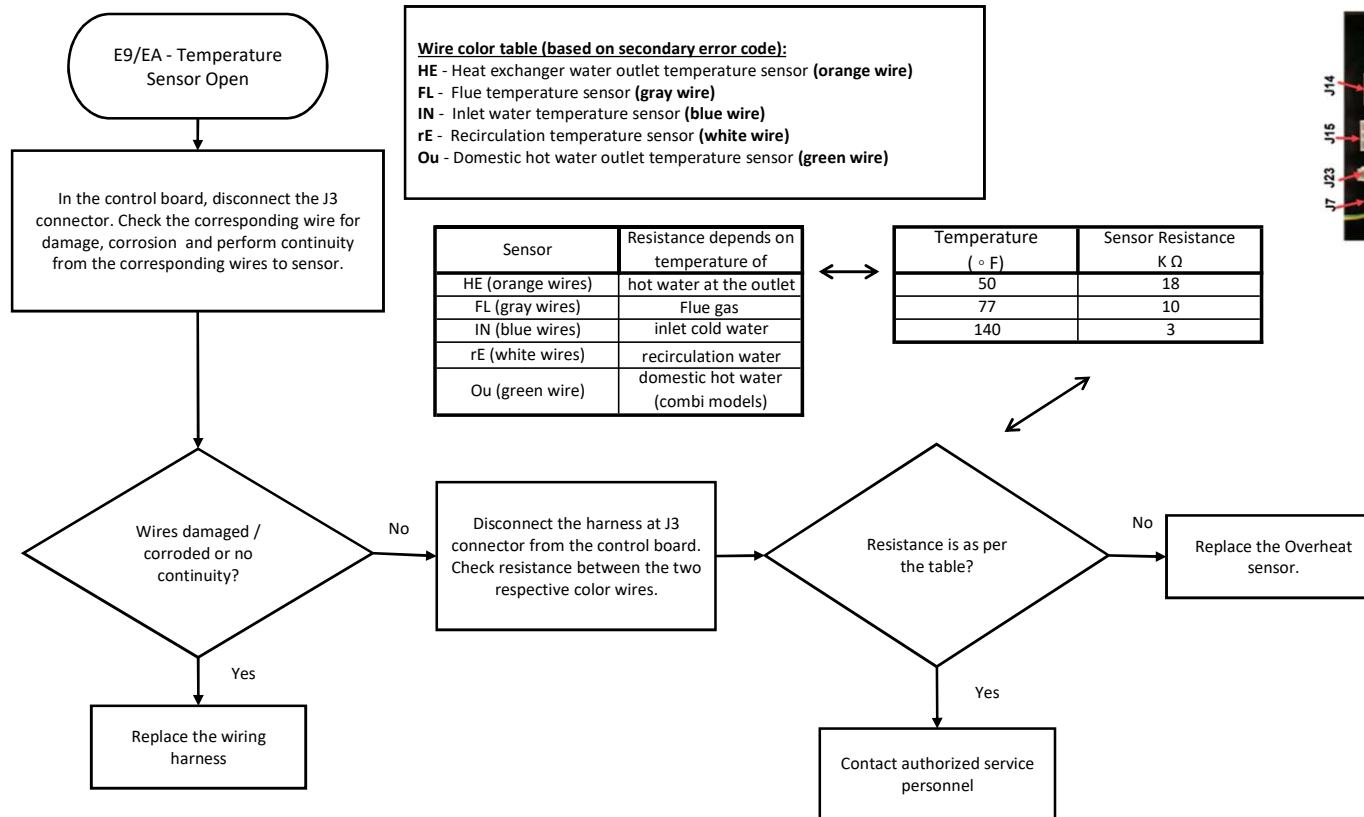
E7 - Ignition Failure



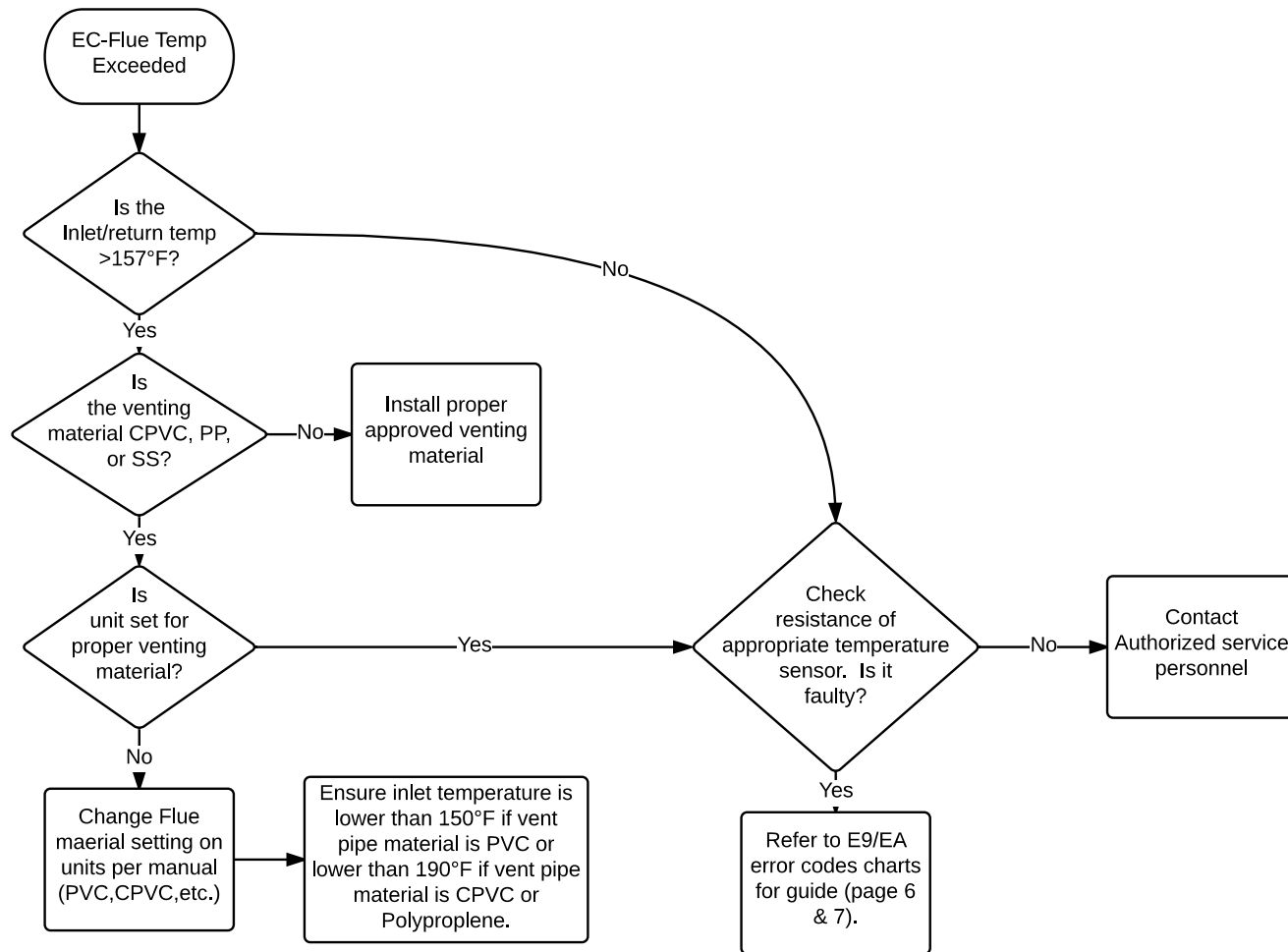




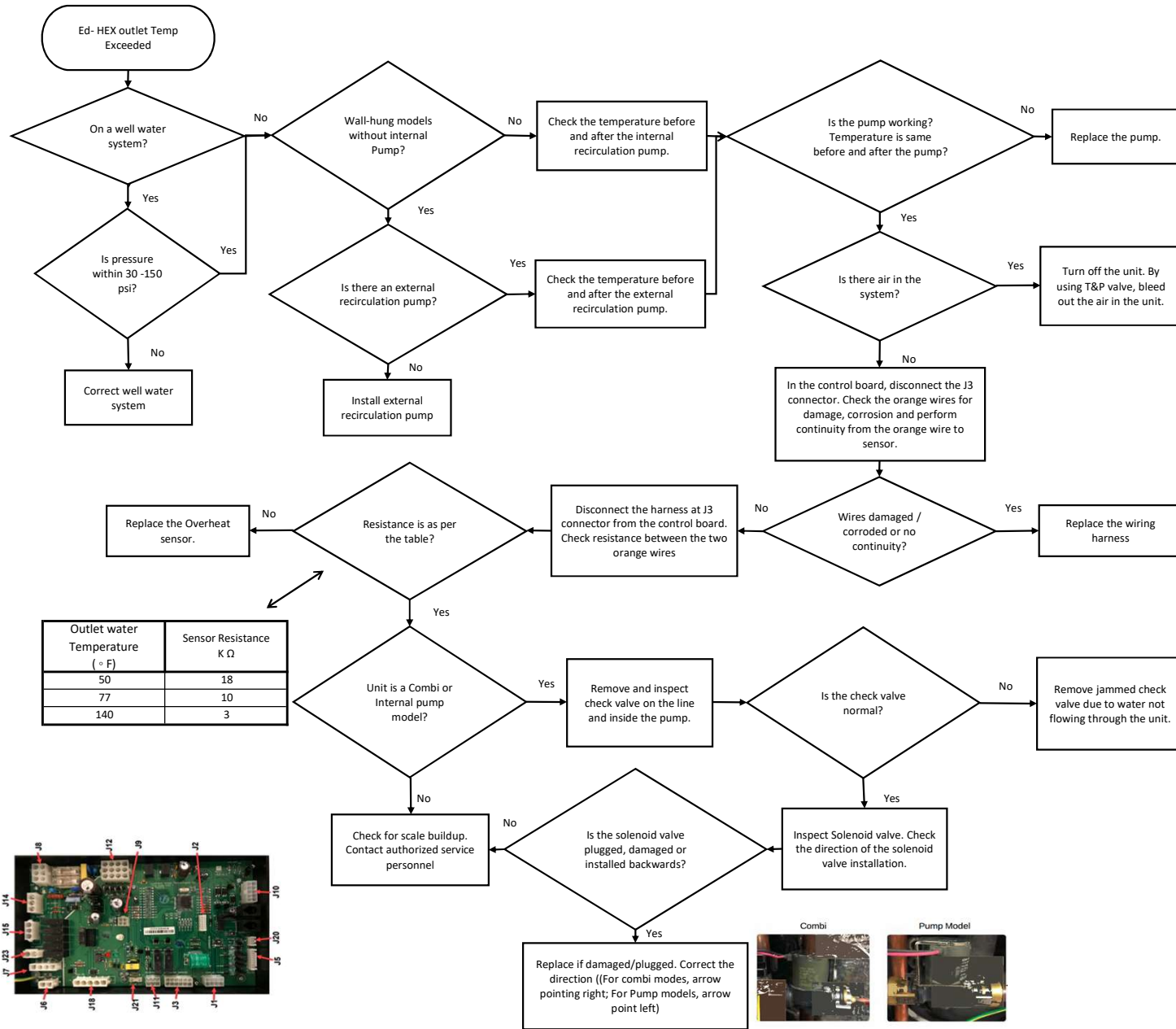
E9 Temperature Sensor Shorted EA - Temperature Sensor Open Circuit



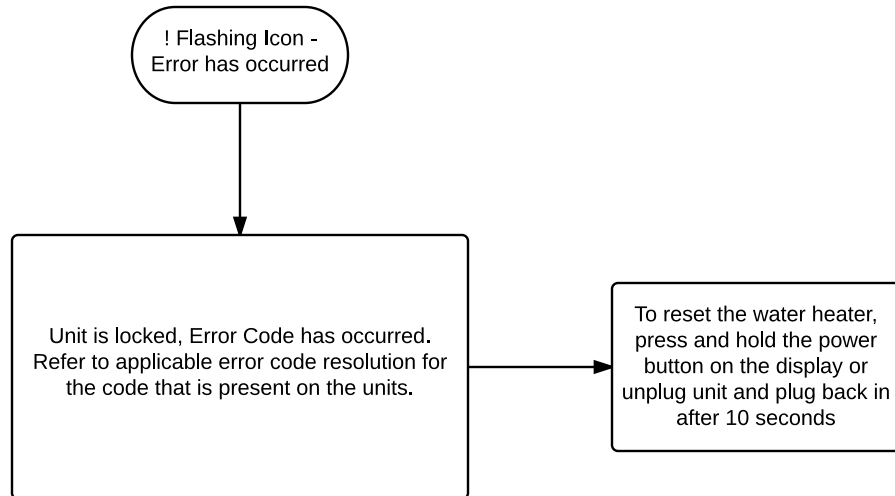
EC-Flue Temperature Exceeded



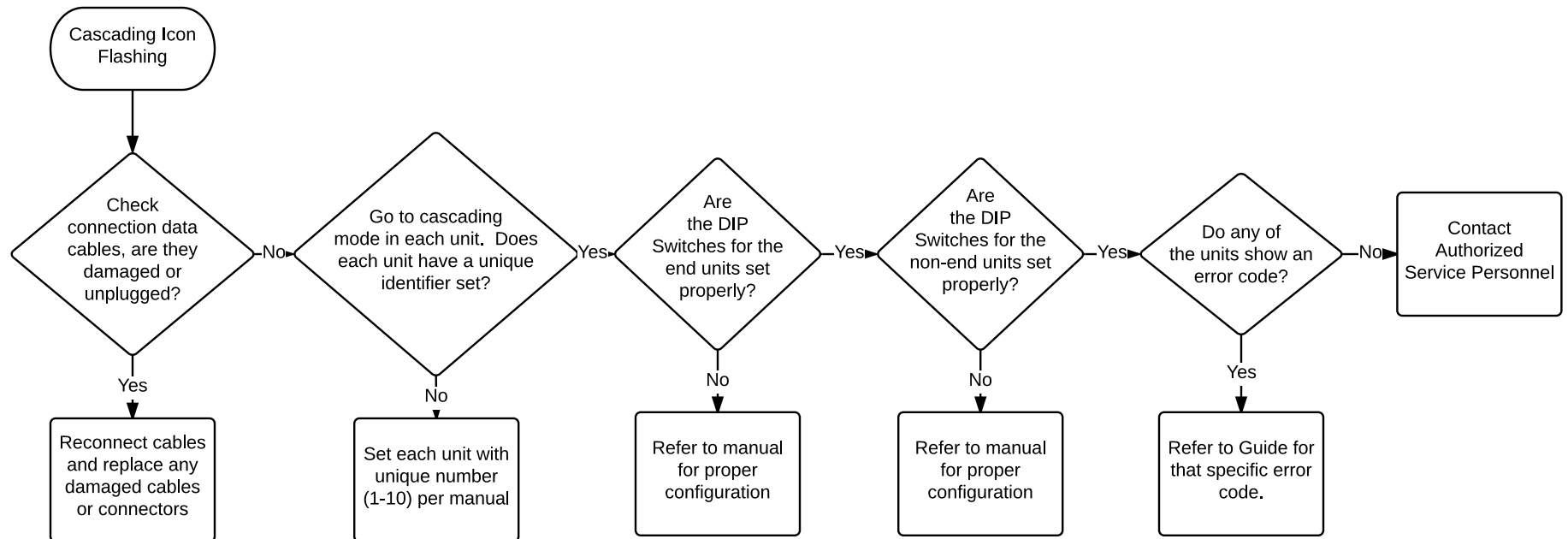
Ed - Heat Exchanger Outlet Temperature Exceeded



Flashing Icon



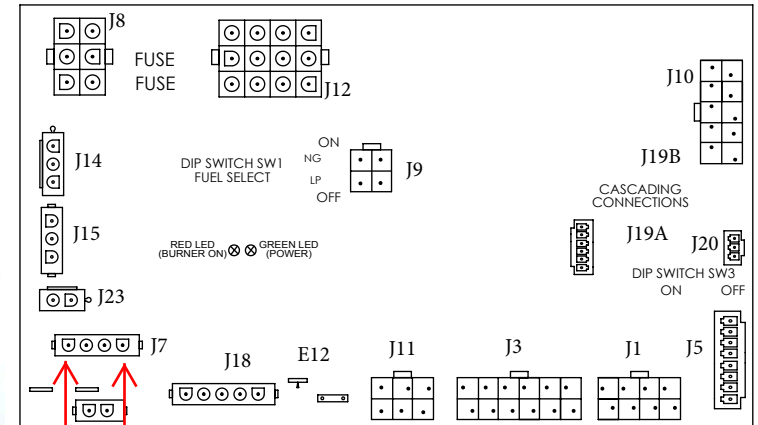
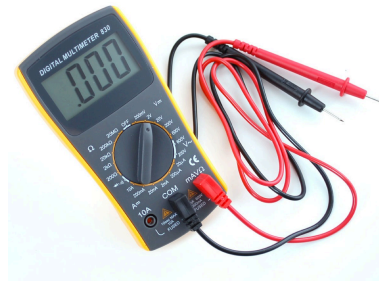
Cascading Icon Flashing



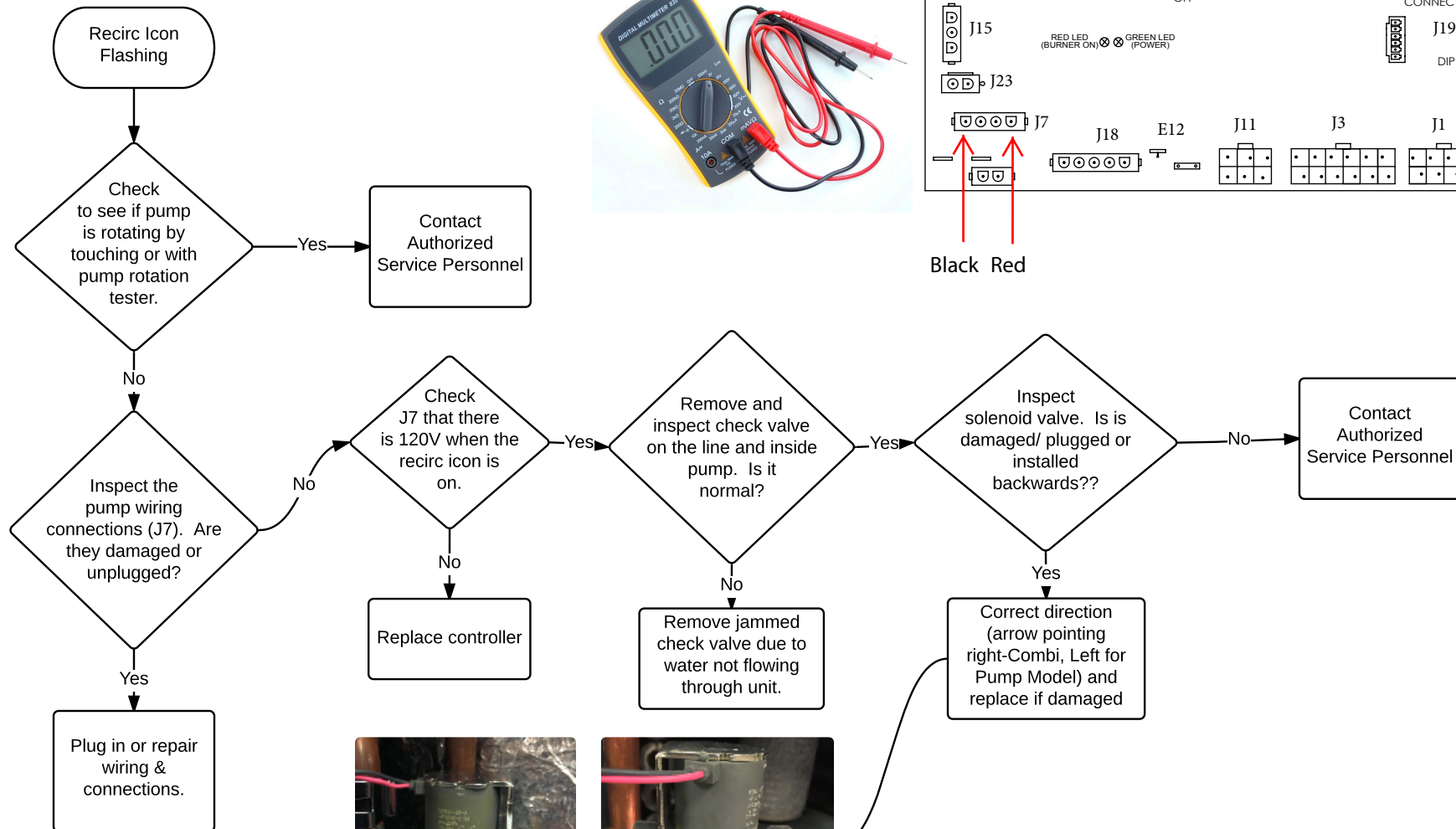


Recirculation Icon Flashing

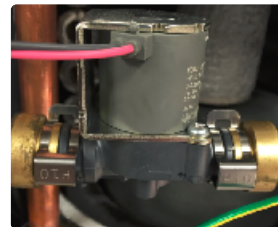
(Pump Models Only)



Black Red

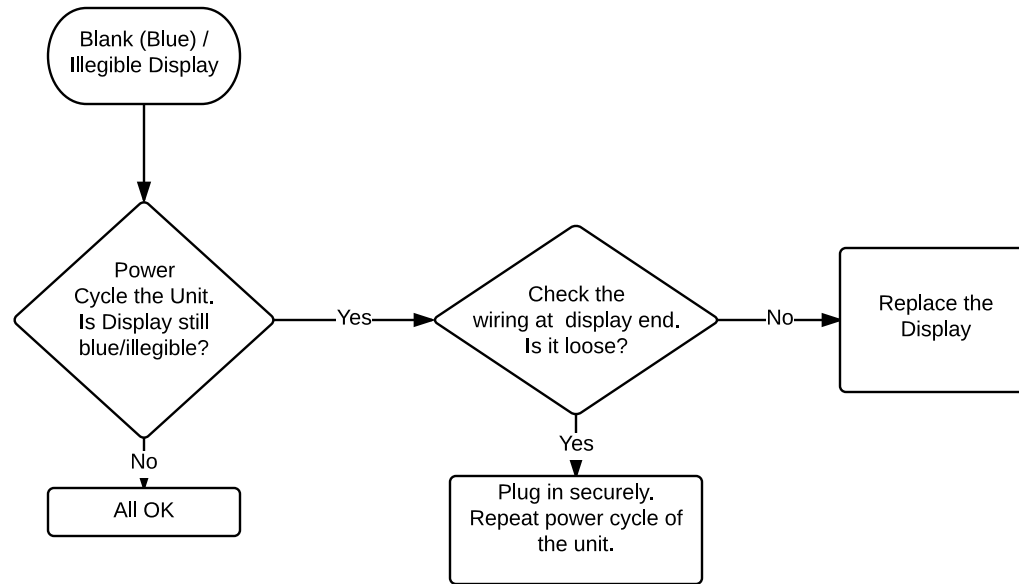


Combi

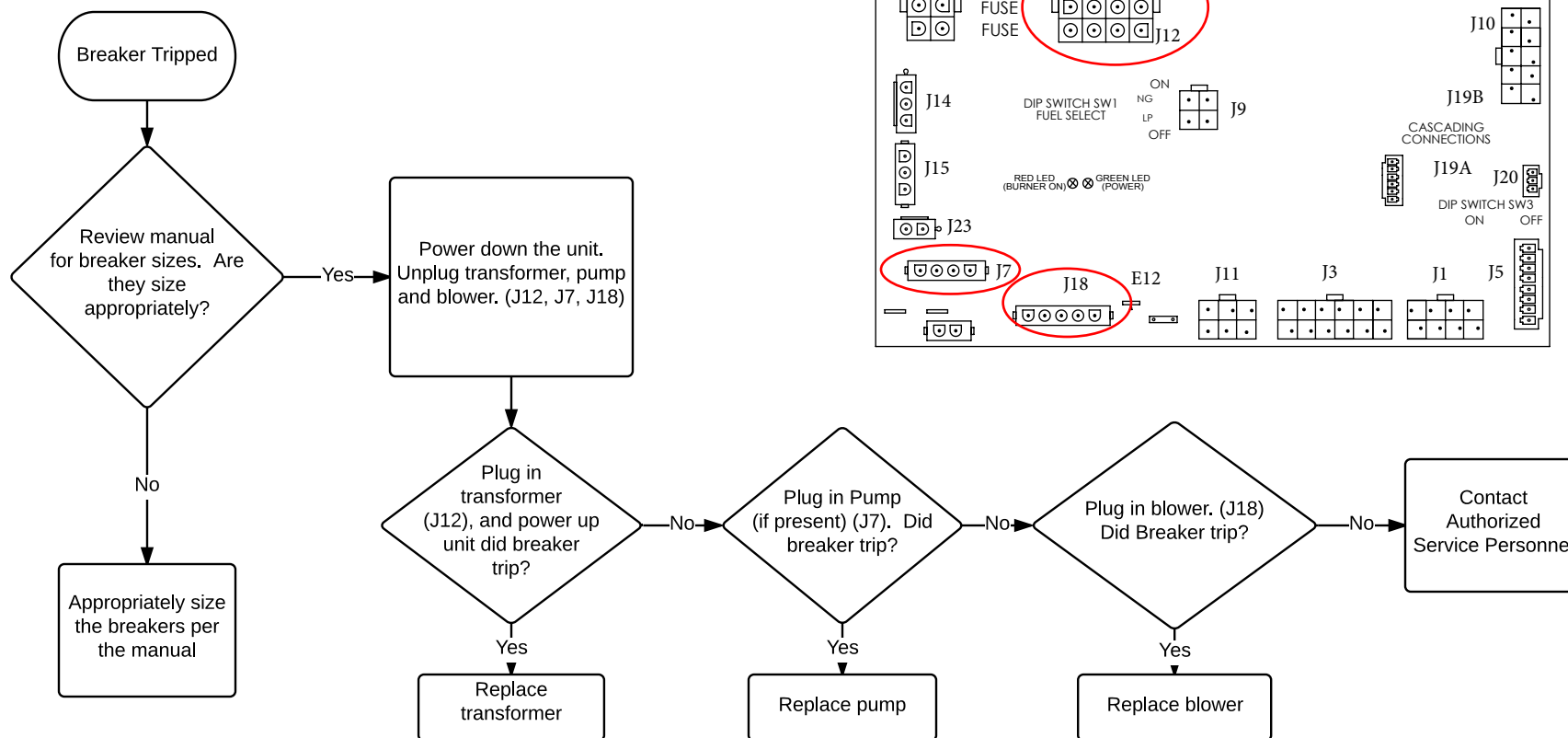


Pump Model

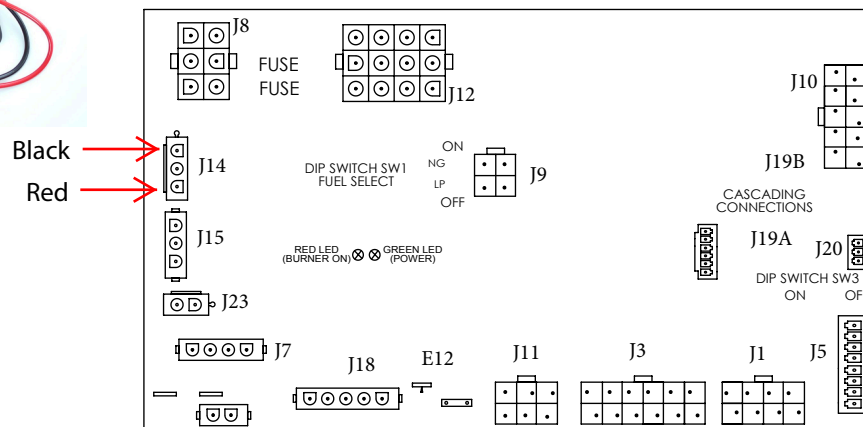
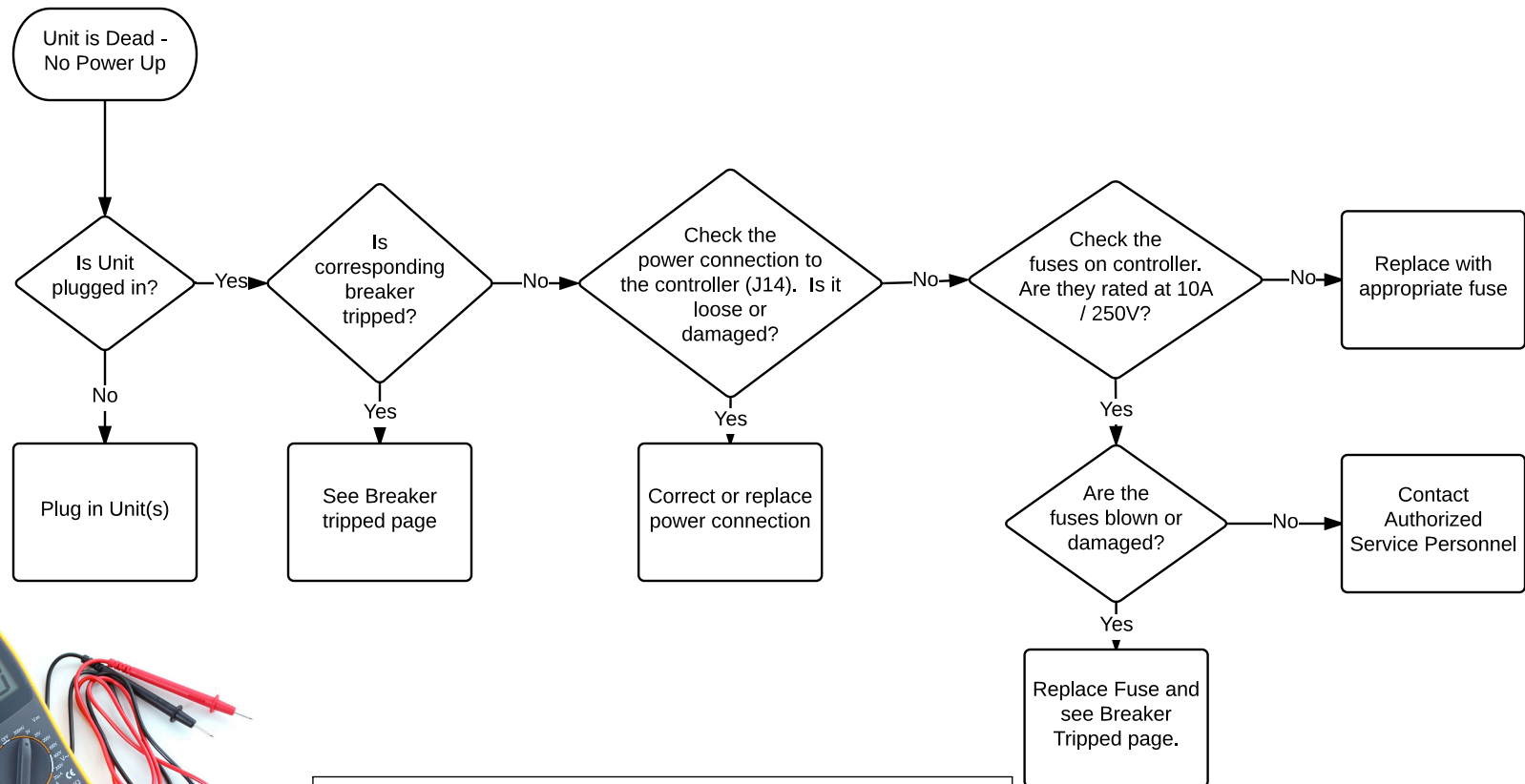
Blank (Blue) / Illegible Display



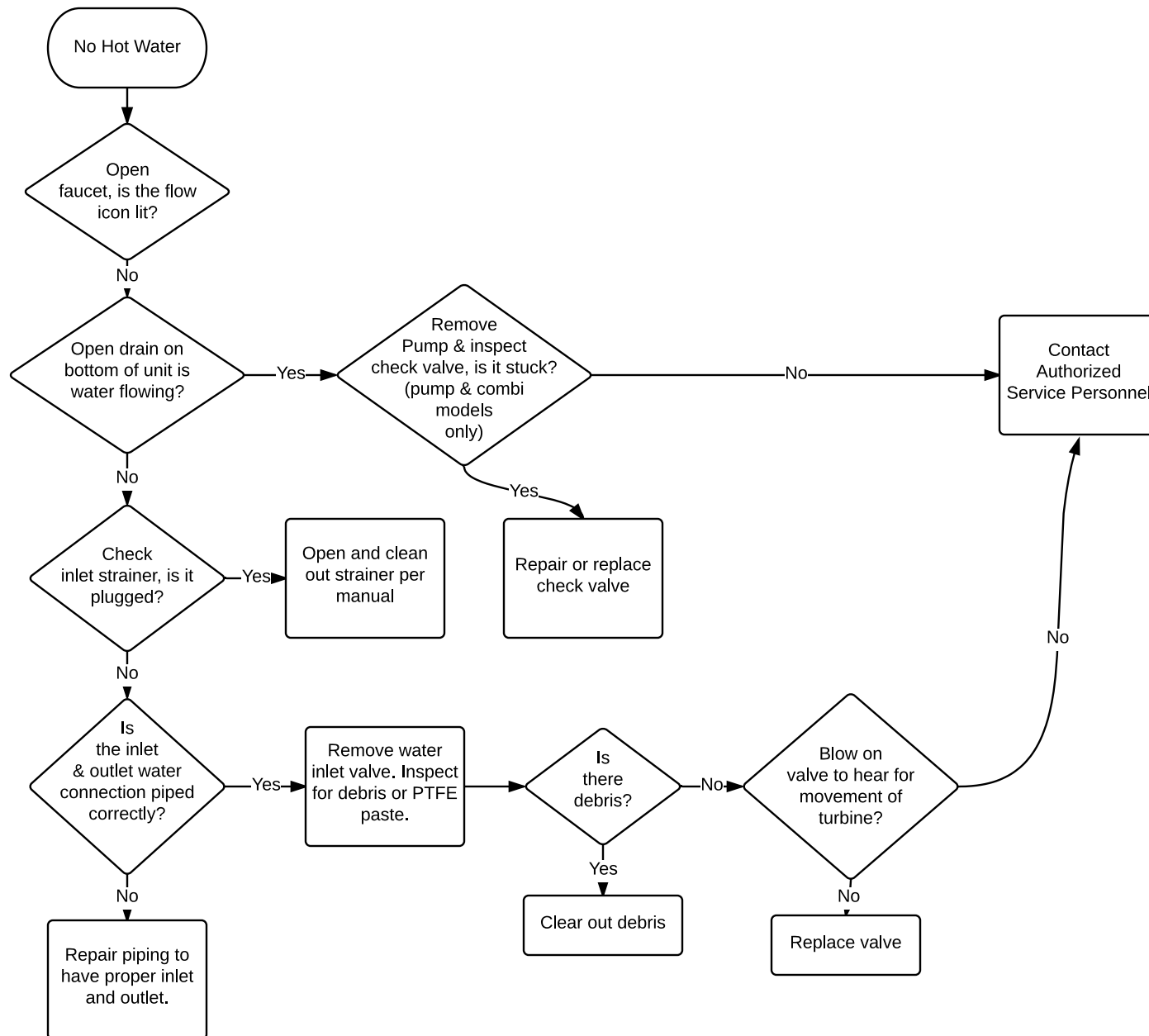
Breaker Tripped (Over-Load)



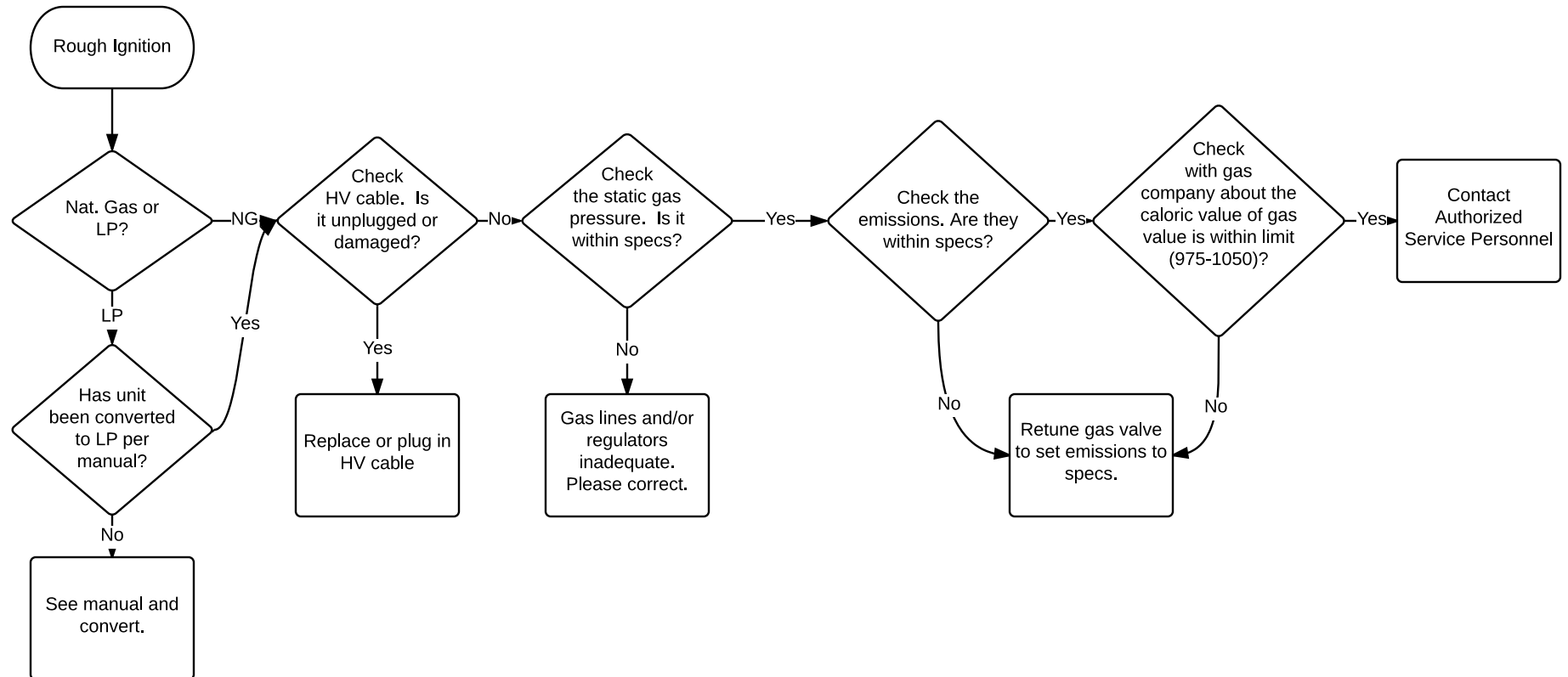
Dead Unit - No Power Up



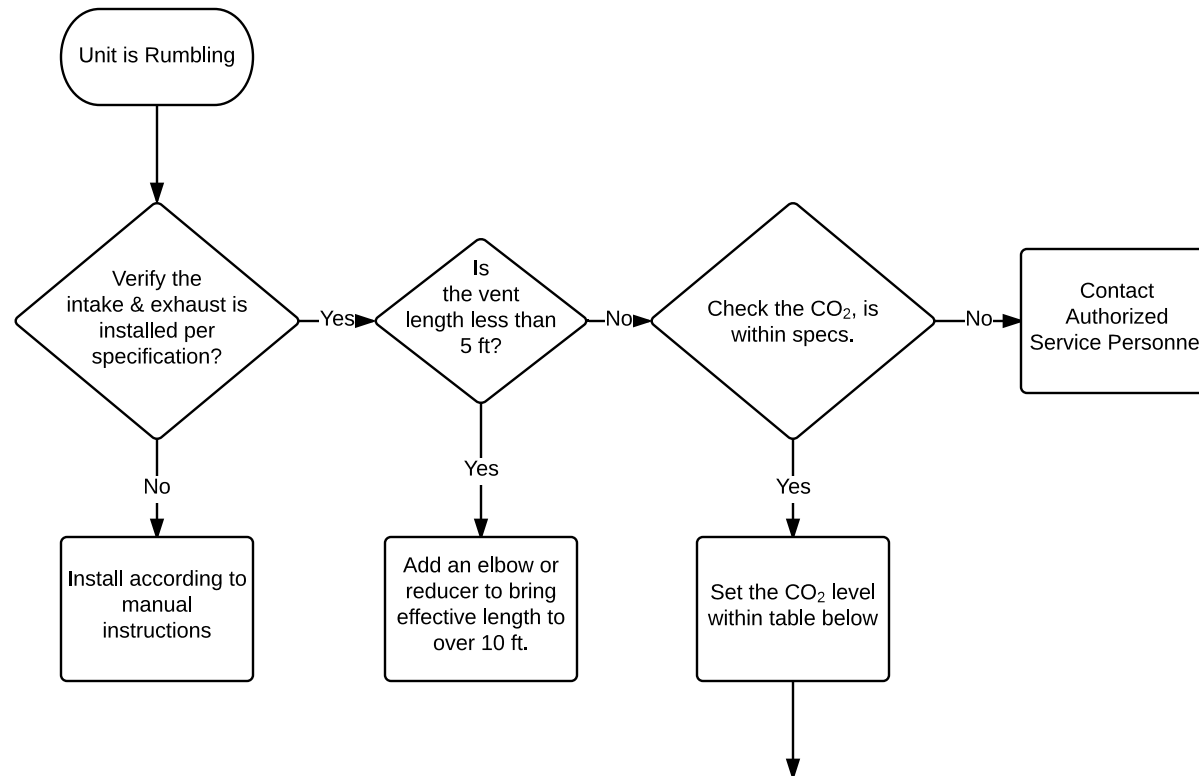
No Hot Water



Rough Ignition

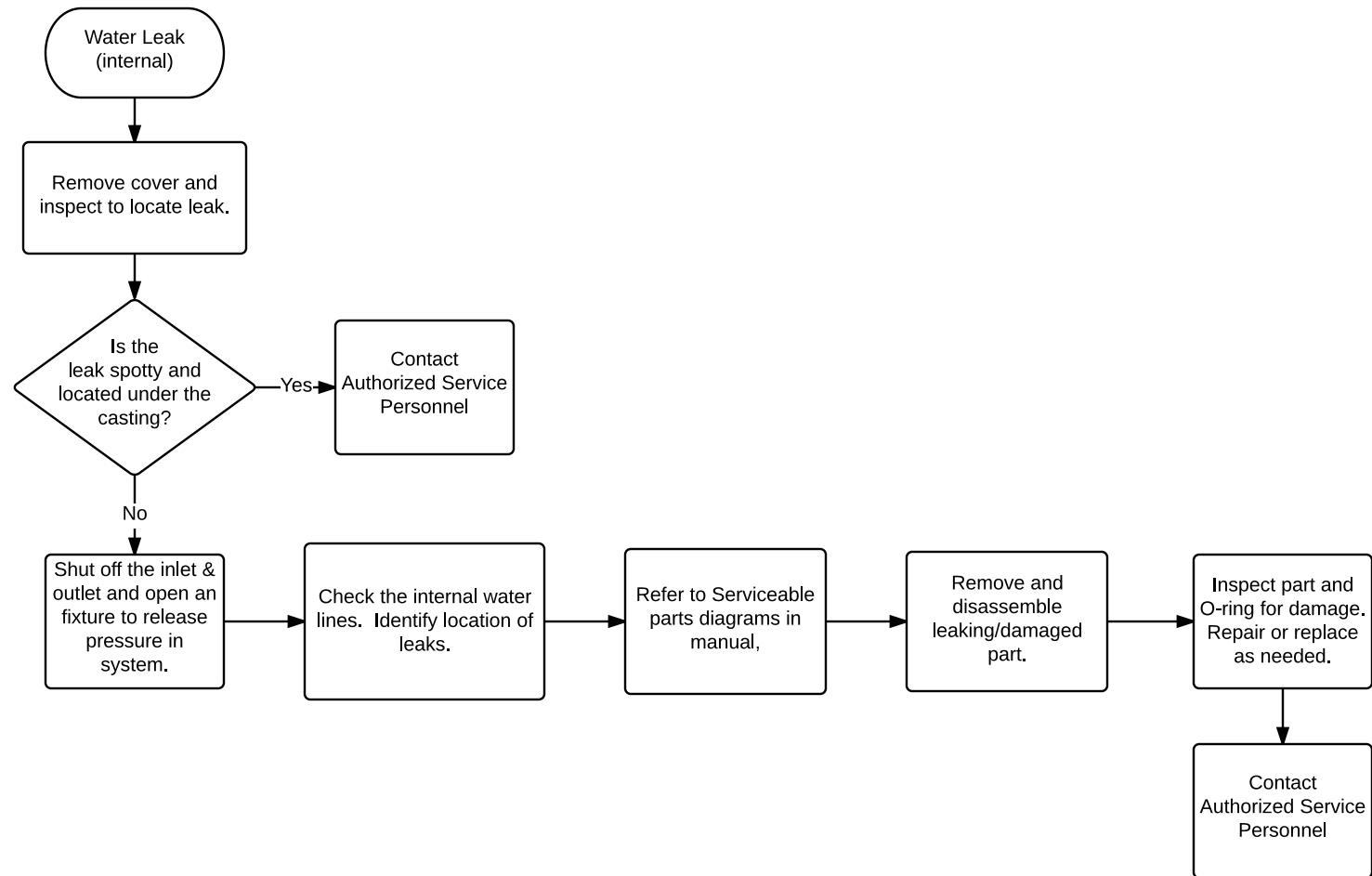


Rumbling



CO ₂ and CO Standards		
Description	CO ₂ Range (%)	Max. CO Level (ppm)
Natural Gas		
High Fire	9.1% to 9.3%	< 200 ppm
Low Fire	9.0% to 9.2%	< 60 ppm
LP Gas		
High Fire	9.0% to 9.8%	< 200 ppm
Low Fire	8.6% to 8.9%	< 60 ppm

Water Leaks



Appendix

BLOWER REPLACEMENT (See Diagram, page 23)

The blower is located on the top of the heat exchanger

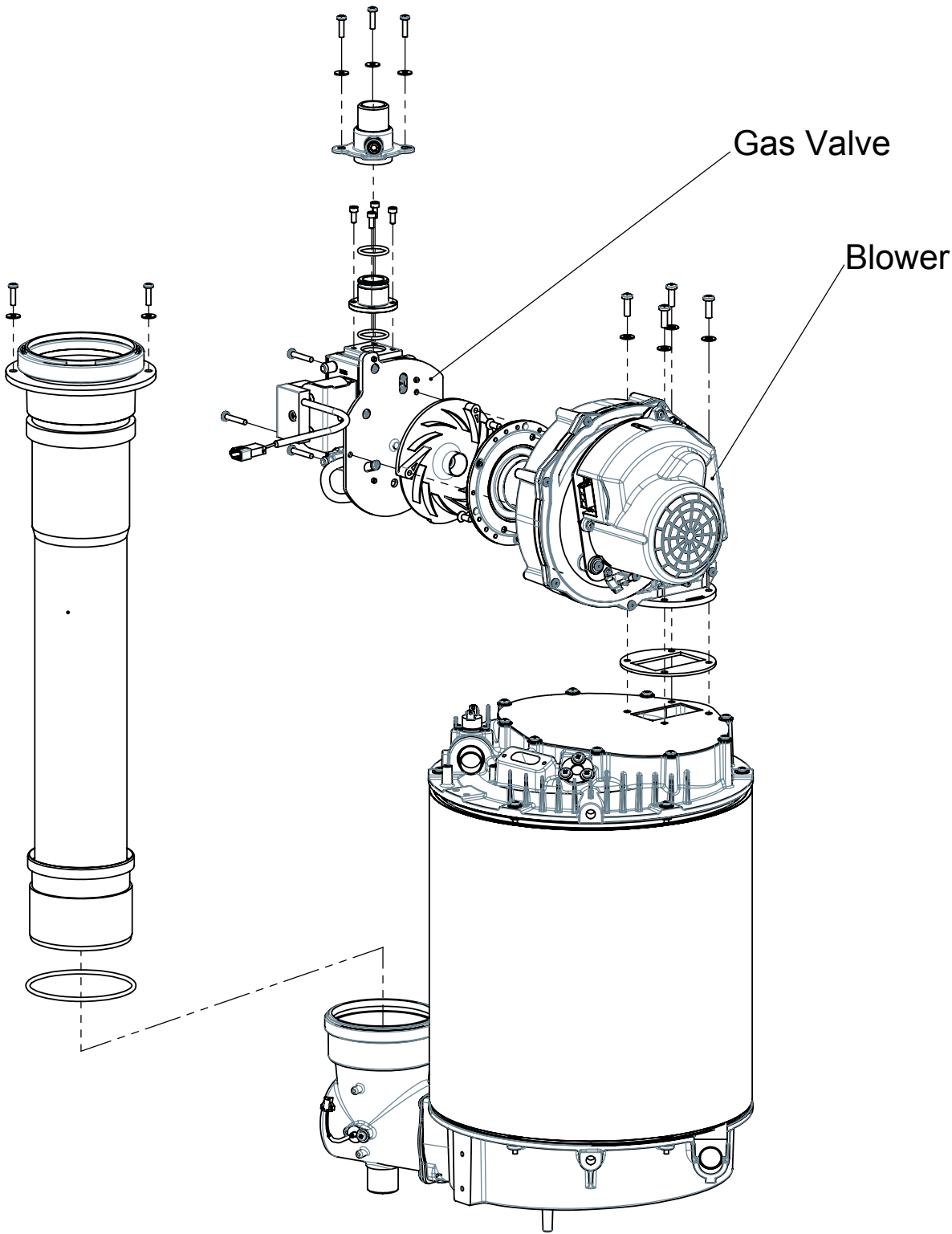
- Shut off the gas to the heater
- Shut off power to the heater by unplugging the unit from the 120 VAC outlet
- remove the front panel (three screws at top and three at bottom)
- Unplug the display cable from the pcb (press plastic tab and pull)
- lift up and remove the front display bracket
- Unplug all the wiring connections from the blower (press the tabs and pull)
- remove the gas valve wiring located behind the blower
- Unplug the HV cable from the DSI
- Remove the gas connection at the top isolating the unit's gas supply from the building
- remove phillips screws to remove the aluminum gas fitting at the top the unit
- remove 4 allen screws to remove the aluminum gas adapter fitting
- remove two plastic taps on top of the cabinet to access the screws securing the blower
- remove 4 screws securing the blower from the top using a long screwdriver
- remove the entire blower gas valve assembly from the unit
- remove the gas valve 3 torx screws
- install the gas valve on the new blower
- reverse process to assemble the blower back to the heater
- ensure the gasket is installed between the blower and the top housing
- Install the blower gas valve using 4 screws and a long screw driver
- Install the aluminum gas adapter on top of the gas valve
- Install the gas fitting and secure it using 4 screws to the cabinet
- Install the building gas supply
- Install the blower wiring, HV cable and gas valve wiring
- turn gas supply back on and check for any gas leaks
- turn water on and plug the heater to the outlet

GAS VALVE REPLACEMENT (See Diagram, page 23)

The blower gas valve assembly is located on the top of the heat exchanger

- Shut off the gas to the heater
- Shut off power to the heater by unplugging the unit from the 120 VAC outlet
- remove the front panel (three screws at top and three at bottom)
- Unplug the display cable from the pcb (press plastic tab and pull)
- lift up and remove the front display bracket
- Unplug all the wiring connections from the blower (press the tabs and pull)
- remove the gas valve wiring located behind the blower
- Unplug the HV cable from the DSI
- Remove the gas connection at the top isolating the unit's gas supply from the building
- remove phillips screws to remove the aluminum gas fitting at the top the unit
- remove 4 allen screws to remove the aluminum gas adapter fitting
- remove two plastic taps on top of the cabinet to access the screws securing the blower
- remove 4 screws securing the blower from the top using a long screwdriver
- remove the entire blower gas valve assembly from the unit
- remove the gas valve 3 torx screws
- install the new gas valve on the blower 3 torx screws
- reverse process to assemble the blower back to the heater
- ensure the gasket is installed between the blower and the top housing
- Install the blower gas valve using 4 screws and a long screw driver
- Install the aluminum gas adapter on top of the gas valve (ensure the o-ring is in place)
- Install the gas fitting and secure it using 4 screws to the cabinet
- Install the building gas supply
- Install the blower wiring, HV cable and gas valve wiring
- turn gas supply back on and check for any gas leaks
- turn water on and plug the heater to the outlet

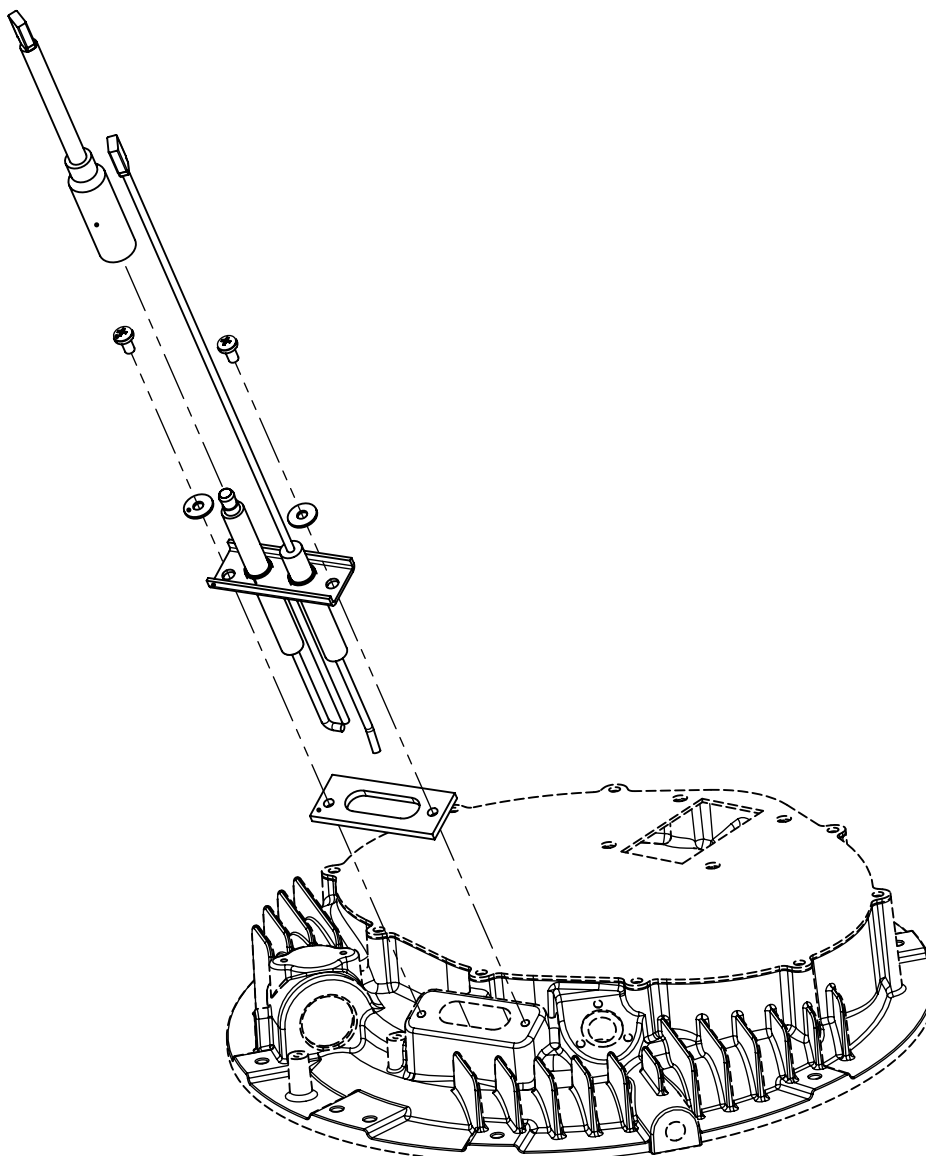
Blower/Gas Valve Exploded View



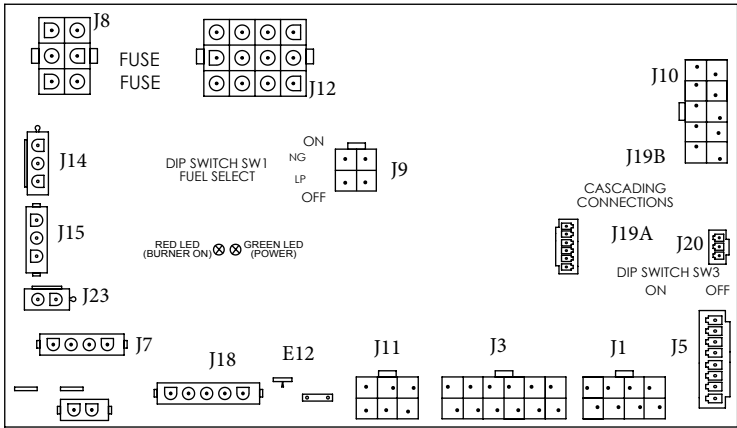
ELECTRODE REPLACEMENT

The electrode is located on the top of the heat exchanger

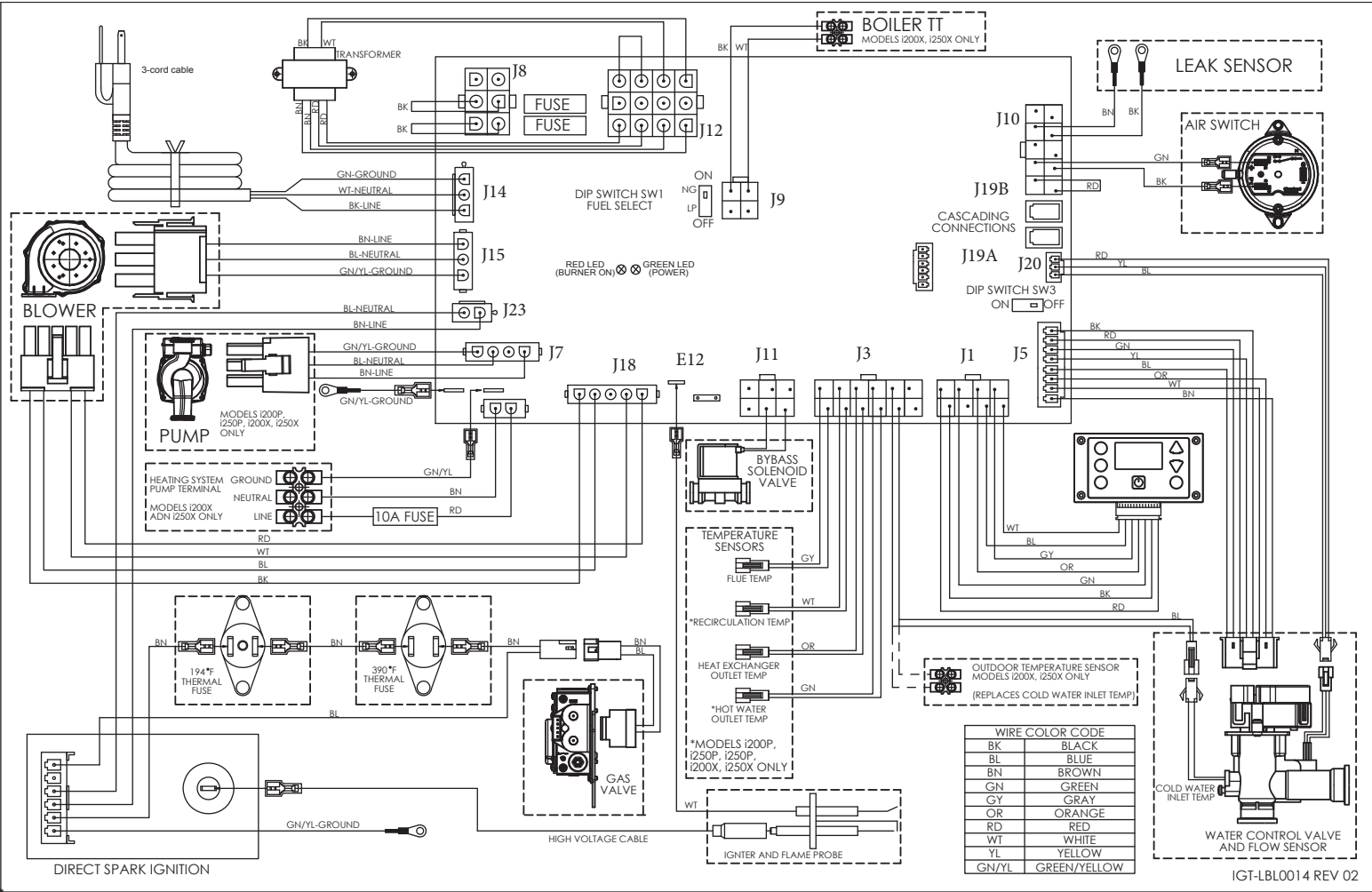
- Shut off the gas to the heater
- Shut off power to the heater by unplugging the unit from the 120 VAC outlet
- remove the front panel (three screws at top and three at bottom)
- Unplug the display cable from the pcb (press plastic tab and pull)
- lift up and remove the front display bracket
- Unplug the HV cable from the electrode
- Unplug the electrode connection from the controller at connection E12
- Remove the 2 screws & washers securing the electrode
- Remove electrode from HEX assembly.
- Insert new electrode into the HEX assembly, careful to use new probe hole seal
- Fasten the electrode with the 2 screws with washers. Verify that the yellow/green wire is attached beneath the right hand screw.
- Connect the electrode to the controller at connection E12
- Connect the HV cable to the electrode
- turn gas supply back on
- turn water on and plug the heater to the outlet



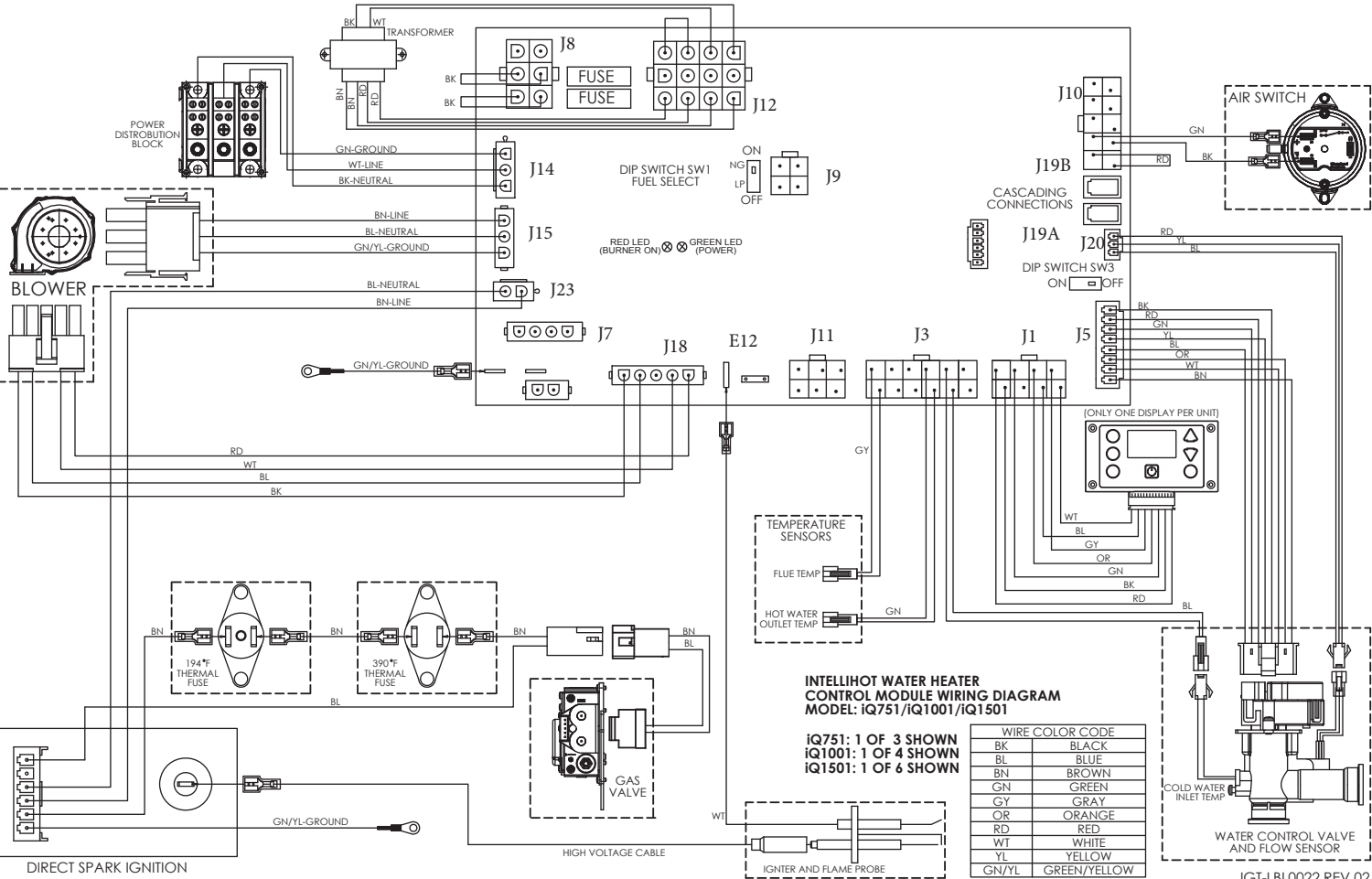
Controller Pin Layout



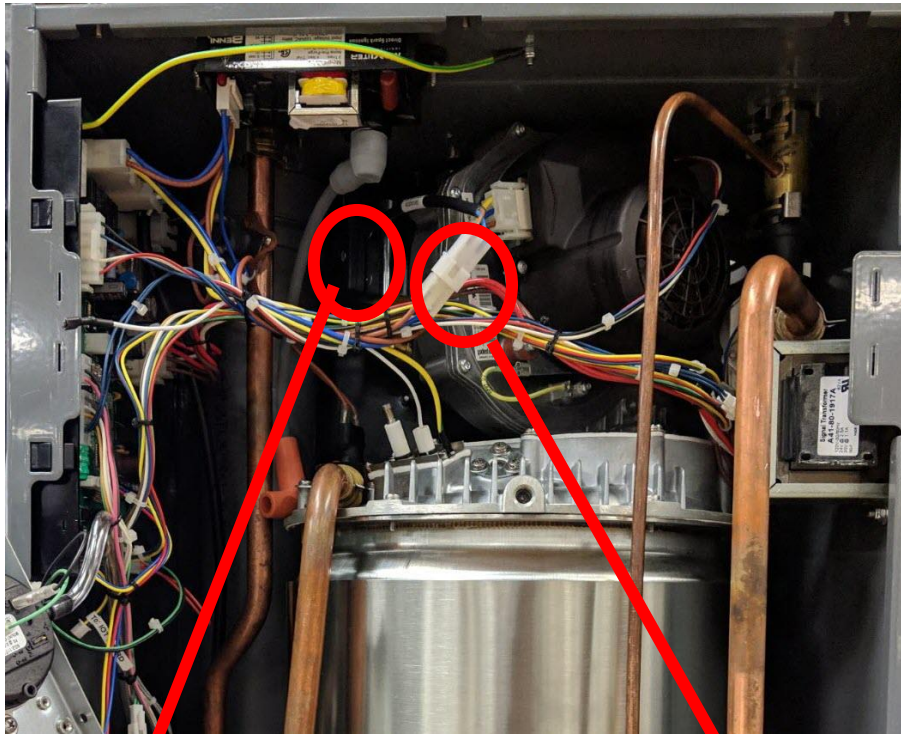
Wiring Diagram (all wall-hung units)



Wiring Diagram (all floor-mount units)



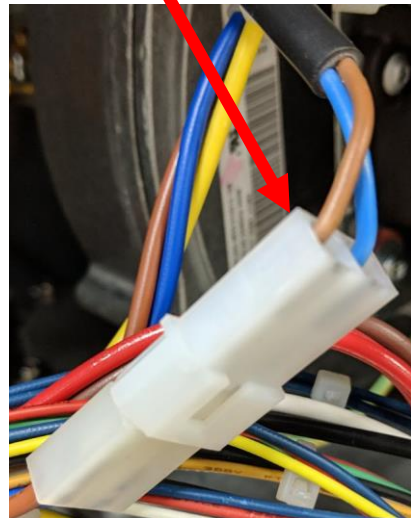
Gas Valve



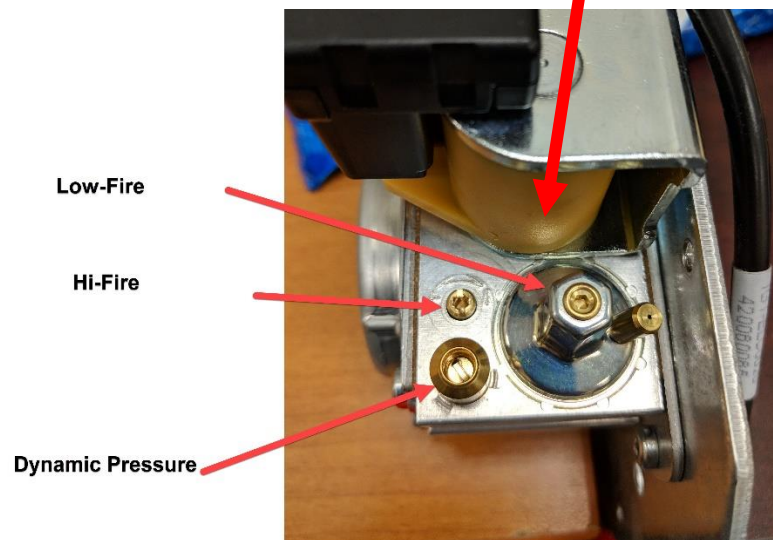
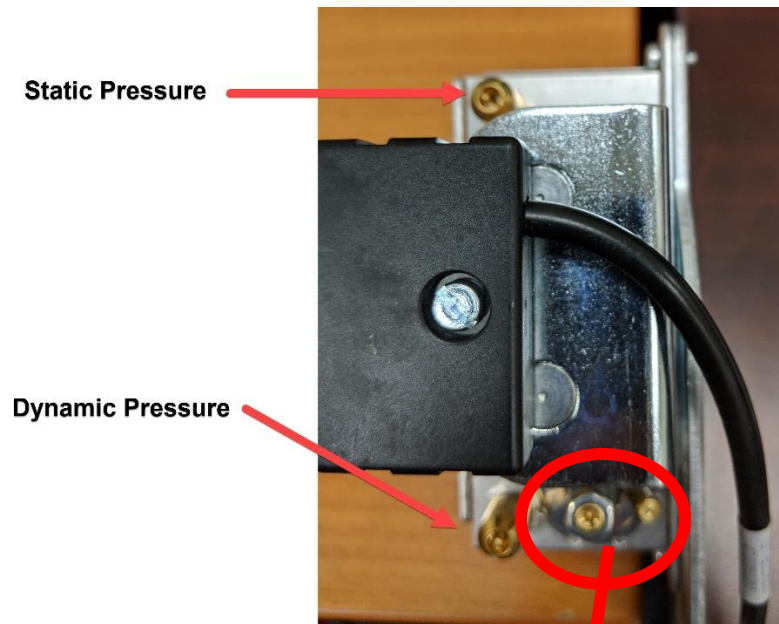
Gas Valve



Blue Gray 120V AC

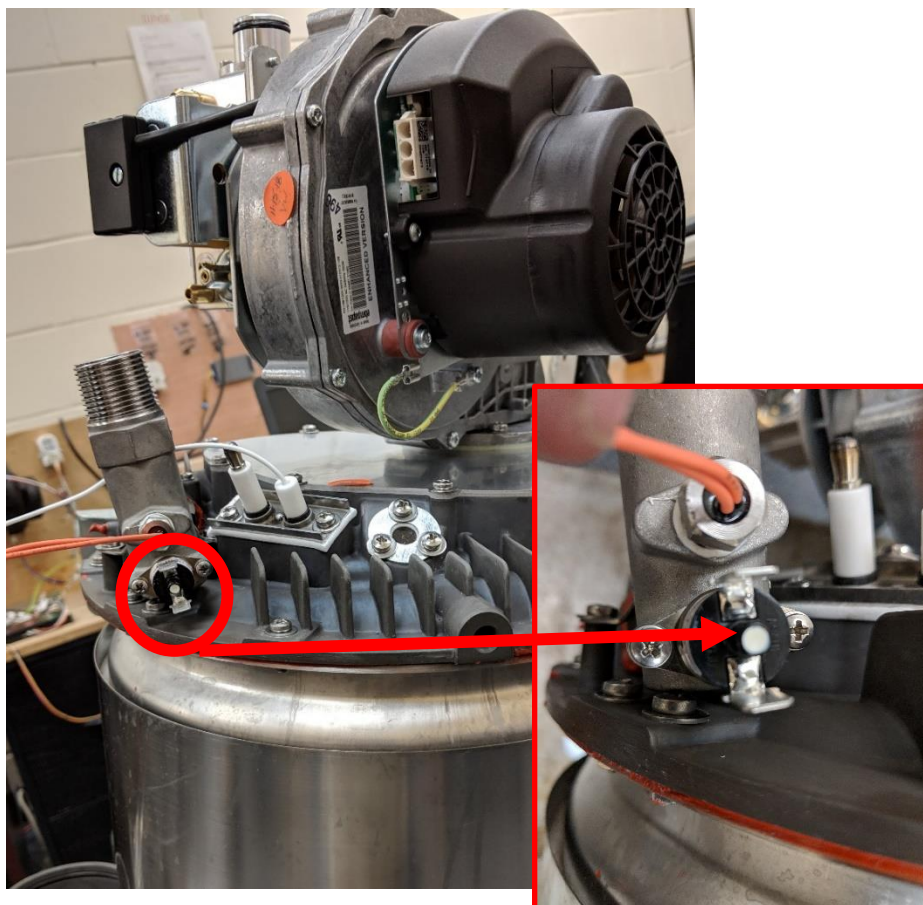
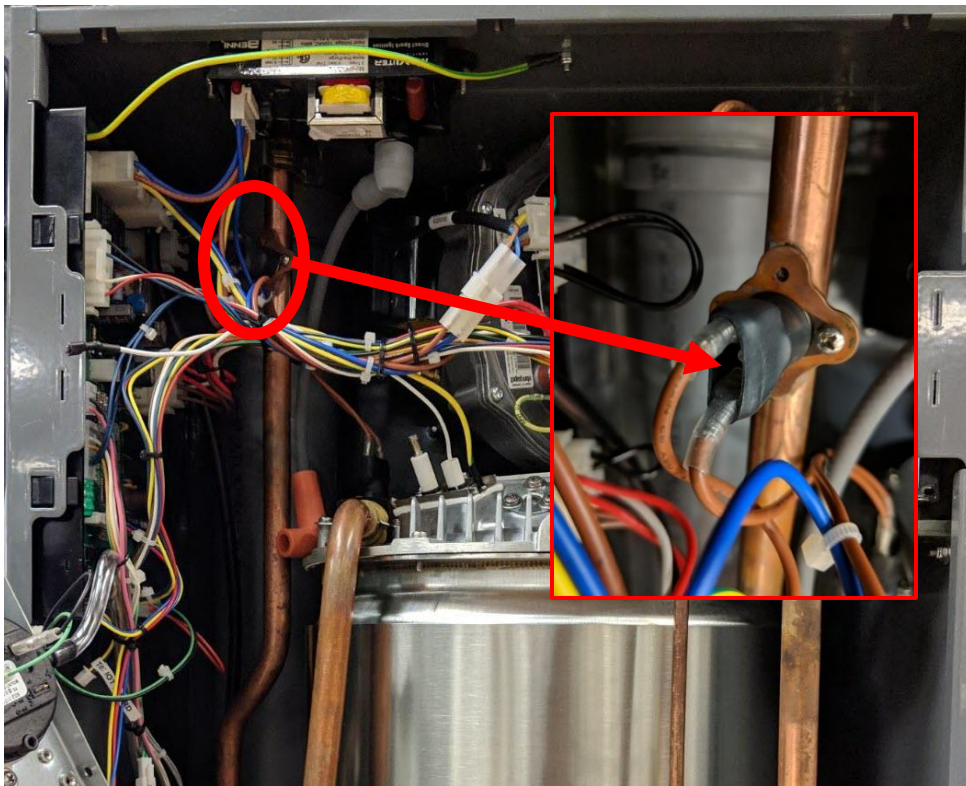


Gas Valve

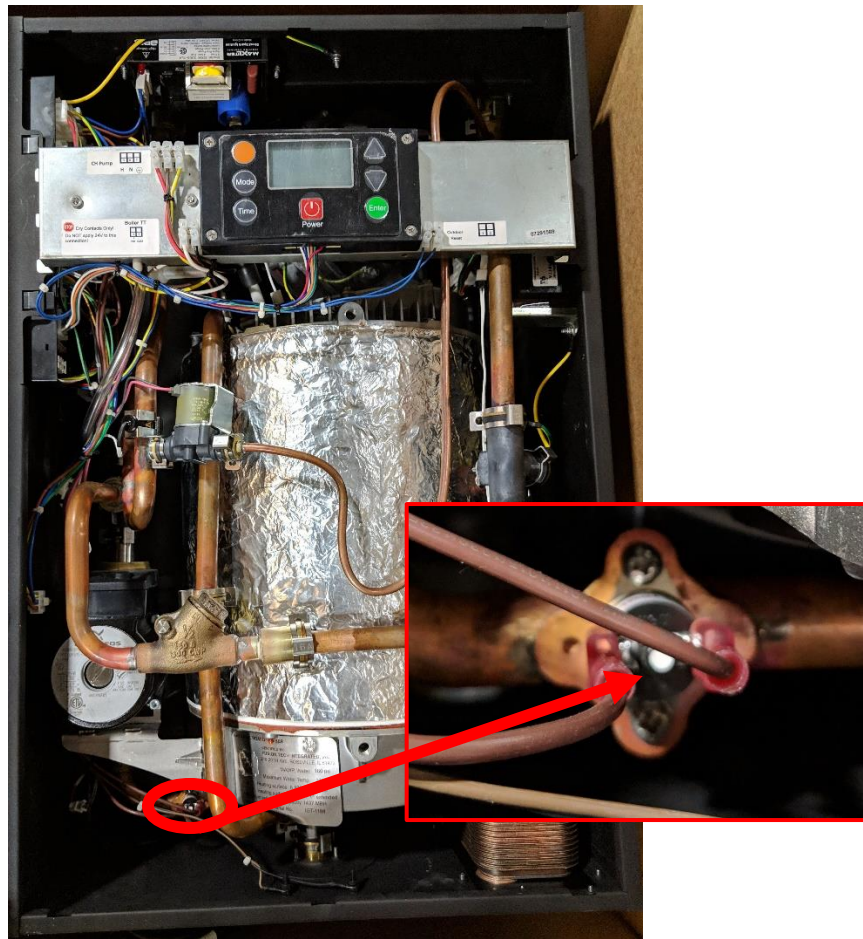


Hi-Fire uses flat screwdriver. Low-fire uses T20 Torx screwdriver.

Resettable overheating switch



Resettable overheating switch





Product Support / Warranty

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