Flame Rollout Switch – Troubleshooting Flowchart

December 13, 2019

Start

Low or lack of airflow is the main reason for a Flame Rollout Switch trip

The Flame Rollout Switch trips on a high temperature and the trip setpoint can range from 170° F to 260° F

Is the supply pressure to the gas valve in the correct range listed above?

YES

Is the manifold pressure in the correct range listed above?

YES

NO

Adjust the upstream regulator to dial the supply pressure into the correct range

NO

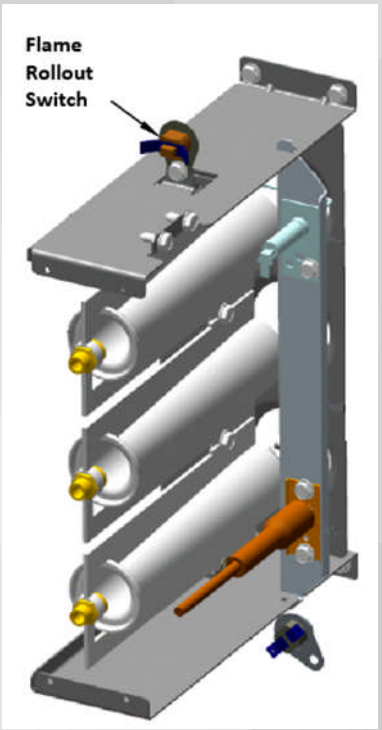
Adjust the unit gas valve to dial the manifold pressure into the correct range

Foundation / Precedent

Natural Gas Pressures should be:
Supply = 4.0 to 14" WC
Manifold High Fire = 3.5" WC
Manifold Low Fire = ~1.8" WC

Foundation / Precedent

Liquid Propane Gas Pressures should be:
Supply = 11 to 14" WC
Manifold High Fire = 10" WC
Manifold Low Fire = 4.8" WC



Is the correct air orifice installed?

YES

NO

Install the correct air orifice

Is the correct gas orifice(s) installed?

YES

NO

Install the correct gas orifice(s)

Is inducer fan motor providing correct airflow at high and low fire?

YES

NO

Troubleshoot motor

Is the heat exchanger or exhaust flue restricted?

YES

YES

Remove restriction

Are the end-shot burners aligned with the heat exchanger tubes?

YES

NO

Adjust end-shot burner alignment

If the heat exchanger has turbulators installed, have they broken and moved down into the Tubes?

NO

YES

Remove turbulators and turbulator pieces in tubing

Are there cracks and holes in the heat exchanger?

NO

YES

Replace heat exchanger

Is there rust or particulates blocking the flame carry over?

NO

YES

Remove rust or particulates so that the flame can travel to next end-shot burner

Is the Flame Rollout Switch touching any hot metal surfaces?

NO

YES

Check to make sure everything is assembled correctly and there are no bent brackets

Change Rollout Switch