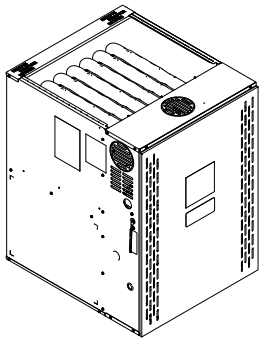
Service Facts

Upflow/Downflow/Horizontal Left/Right Gas-Fired, Single Stage Induced Draft Furnaces with High Efficiency Motor

Upflow, Downflow, Horizontal Right/Left

Single Stage
A801X026AM2SC
A801X040AM3SC
A801X040BM2SC
A801X060BM4SC
A801X080BM4SC
A801X080CM5SC
A801X100CM5SC
A801X120DM5SC

Note: *Models may have a "T" in the 12th digit designating they meet California less than 40 ng/J (NOx) emissions requirements.*



Note: *Graphics in this document are for representation only. Actual model may differ in appearance.*

A801X-SF-3B-EN

⚠ SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

May 2021 **A801X-SF-3B-EN**

SAFETY SECTION NON-CONDENSING FURNACES

Important: *— This document pack contains a wiring diagram and service information. This is customer property and is to remain with this unit. Please return to service information pack upon completion of work.*

⚠ WARNING

FIRE OR EXPLOSION HAZARD!

Failure to follow safety warnings exactly could result in a fire or explosion causing property damage, personal injury or loss of life.

— Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance. — WHAT TO DO IF YOU SMELL GAS

- **Do not try to light any appliance.**
- **Do not touch any electrical switch;do not use any phone in your building.**
- **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
- **If you cannot reach your gas supplier, call the fire department.**

— Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

⚠ WARNING

EXPLOSION HAZARD!

Failure to follow this Warning could result in property damage, personal injury or death.

Install a gas detecting warning device in case of a gas leak. *NOTE: The manufacturer of your furnace does not test any detectors and makes no representations regarding any brand or type of detector.*

⚠ WARNING

FIRE OR EXPLOSION HAZARD!

Failure to follow the safety warnings exactly could result in serious injury, death, or property damage.

Never test for gas leaks with an open flame. Use a commercially available soap solution made specifically for the detection of leaks to check all connections. A fire or explosion may result causing property damage, personal injury, or loss of life.

⚠ WARNING

ELECTRICAL SHOCK, FIRE, OR EXPLOSION HAZARD!

Failure to follow this Warning could result in dangerous operation, property damage, severe personal injury, or death.

Improper servicing could result in dangerous operation, property damage, severe personal injury, or death.

- **Before servicing, disconnect all electrical power to furnace.**
- **When servicing controls, label all wires prior to disconnection. Reconnect wires correctly.**
- **Verify proper operation after servicing.**

⚠ WARNING

CARBON MONOXIDE POISONING HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.

To ensure furnace is vented properly, do not replace factory supplied venting components with field fabricated parts. Fabricating parts can result in damaged vents and components allowing carbon monoxide to escape the venting system.

⚠ WARNING

CARBON MONOXIDE HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.

When replacing a furnace, ensure the venting system is adequate for the new furnace.

⚠ WARNING

FIRE HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.

Do not install the furnace directly on carpeting, tile or other combustible material other than wood flooring. For vertical downflow applications, subbase (BAYBASE205) must be used between the furnace and combustible flooring. When the downflow furnace is installed vertically with a cased coil, a subbase is not required.

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⚠ WARNING

WARNING!

This product can expose you to chemicals including lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm.
For more information go to www.P65Warnings.ca.gov.

⚠ WARNING

EXPLOSION HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.
Propane gas is heavier than air and may collect in any low areas or confined spaces. In addition, odorant fade may make the gas undetectable except with a warning device. If the gas furnace is installed in a basement, an excavated areas or a confined space, it is strongly recommended to contact a gas supplier to install a gas detecting warning device in case of leak. The manufacturer of your furnace does not test any detectors and makes no representations regarding any brand or type of detector.

⚠ WARNING

ELECTRICAL SHOCK HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.
Do not bypass the door switch or panel loop by any permanent means.

⚠ WARNING

ELECTRICAL SHOCK HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.
Do not touch any components other than the Menu and Option buttons on the IFC when setting up the system or during fault code recovery.

⚠ WARNING

FIRE OR EXPLOSION HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.
Do NOT attempt to manually light the furnace.

⚠ WARNING

CARBON MONOXIDE POISONING HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.
Follow the service and/or periodic maintenance instructions for the Furnace and venting system.

⚠ WARNING

CARBON MONOXIDE POISONING HAZARD!

Failure to follow this Warning could result in serious personal injury or death.
Make sure that the blower door is in place and not ajar. Dangerous fumes could escape an improperly secured door.

⚠ WARNING

ELECTRICAL SHOCK HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.
Disconnect power to the unit before removing the blower door. Allow a minimum of 10 seconds for IFC power supply to discharge to 0 volts.

⚠ WARNING

SAFETY HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.
These furnaces are not approved or intended for installation in manufactured (mobile) housing, trailers, or recreational vehicles.

⚠ WARNING

EXPLOSION HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.
In the event that electrical, fuel, or mechanical failures occur, shut gas supply off at the manual gas valve located on the supply gas piping coming into the furnace before turning off the electrical power to the furnace. Contact the service agency designated by your dealer.

⚠ WARNING

EXPLOSION HAZARD!

Failure to follow this Warning could result in property damage, serious personal injury, or death.

Do not store combustible materials, gasoline, or other flammable vapors or liquids near the unit.

⚠ WARNING

SAFETY HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.

Do not use semi-rigid metallic gas connectors (flexible gas lines) within the furnace cabinet.

⚠ WARNING

INSTALLATION WARNING — HIGH VOLTAGE MOVING PARTS!

Failure to follow this Warning could result in property damage, severe personal injury, or death.

Bodily injury can result from high voltage electrical components, fast moving fans, and combustible gas. For protection from these inherent hazards during installation and servicing, the main gas valve must be turned off and the electrical supply must be disconnected. If operating checks must be performed with the unit operating, it is the technician's responsibility to recognize these hazards and proceed safely.

⚠ WARNING

SAFETY HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.

Do not install the filter in the return duct directly above the furnace in horizontal applications. Install the filter remotely.

⚠ WARNING

SAFETY HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.

Turn the power to the furnace off before servicing filters to avoid contact with moving parts.

⚠ WARNING

CARBON MONOXIDE HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.

Furnace venting into an unlined masonry chimney or concrete chimney is prohibited.

⚠ WARNING

CARBON MONOXIDE HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.

The chimney liner must be thoroughly inspected to insure no cracks or other potential areas for flue gas leaks are present in the liner. Liner leaks will result in early deterioration of the chimney.

⚠ WARNING

SHOCK HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.

If a disconnect switch is present, it must always be locked in the open position before servicing the unit.

⚠ WARNING

OVERHEATING AND EXPLOSION HAZARD!

Failure to follow this Warning could result in property damage, personal injury or death.

Should overheating occur, or the gas supply fail to shut off, shut off the gas valve to the unit before shutting off the electrical supply.

⚠ CAUTION

IMPROPER VOLTAGE CONNECTION!

Failure to follow this Caution could result in property damage.

Do NOT connect the furnace line voltage to a GFCI protected circuit.

⚠ CAUTION

CORROSION WARNING!

Failure to follow this Caution could result in property damage or personal injury.

Do not install the furnace in a corrosive or contaminated atmosphere.

⚠ CAUTION

SHARP EDGE HAZARD!

Failure to follow this Caution could result in property damage or personal injury.

Be careful of sharp edges on equipment or any cuts made on sheet metal while installing or servicing.

⚠ CAUTION

BACKUP WRENCH REQUIRED!

Failure to follow this Caution could result in property damage or personal injury.

Use a backup wrench on the gas valve when installing gas piping to prevent damage to the gas valve and manifold assembly.

⚠ CAUTION

FREEZE CAUTION!

Failure to follow this Caution could result in property damage or personal injury.

If complete furnace shutdown is done during the cold weather months, provisions must be taken to prevent freeze-up of all water pipes and water receptacles.

⚠ CAUTION

FREEZE CAUTION!

Failure to follow this Caution could result in property damage or personal injury.

Whenever your house is to be vacant, arrange to have someone inspect your house for proper temperature. This is very important during freezing weather. If for any reason your furnace should fail to operate damage could result, such as frozen water pipes.

⚠ CAUTION

IGNITION FUNCTION!

Failure to follow this Caution may result in poor ignition characteristics.

Maintain manifold pressure in high altitude installations.

⚠ CAUTION

WATER DAMAGE!

Failure to follow this Caution could result in property damage or personal injury.

It is recommended that an external overflow drain pan be installed in all applications over a finished ceiling to prevent property damage or personal injury from leaking condensate.

⚠ CAUTION

HOT SURFACE!

Failure to follow this Caution could result in personal injury.

Do NOT touch igniter. It is extremely hot.

⚠ CAUTION

FURNACE SERVICE CAUTION!

Failure to follow this Caution could result in property damage or personal injury.

Label all wires prior to disconnection when servicing controls. Verify proper operation after servicing. Wiring errors can cause improper and dangerous operation.

⚠ CAUTION

DO NOT USE AS CONSTRUCTION HEATER!

Failure to follow this Caution could result in property damage or personal injury.

In order to prevent shortening its service life, the Furnace should NOT be used as a "Construction Heater" during the finishing phases of construction until the requirements listed in the furnace installation guidelines of the Installer's Guide have been met. Condensate in the presence of chlorides and fluorides from paint, varnish, stains, adhesives, cleaning compounds, and cement create a corrosive condition which may cause rapid deterioration of the heat exchanger.

⚠ CAUTION

WIRING INFORMATION!

Failure to follow this Caution could result in property damage or personal injury.

The integrated furnace control is polarity sensitive. The hot leg of the 120 VAC power must be connected to the BLACK field lead.

⚠ CAUTION

EQUIPMENT DAMAGE!

UV light exposure can cause the plastic blower material to deteriorate which could lead to Blower Housing Damage.

For units containing a plastic Blower Housing, Do NOT install third party Ultra-Violet Air Cleaners where the Blower Housing can be exposed to UV light.

For more information, visit www.trane.com and www.americanstandardair.com or contact your installing dealer.
6200 Troup Highway
Tyler, TX 75707

⚠ WARNING

CARBON MONOXIDE POISONING HAZARD!

Failure to follow the steps outlined below for each appliance connected to the venting system being placed into operation could result in carbon monoxide poisoning or death.

The following steps shall be followed for each appliance connected to the venting system being placed into operation, while all other appliances connected to the venting system are not in operation:

- **Inspect the venting system for proper size and horizontal pitch as required in the National Fuel Gas Code, ANSI Z223.1/NFPA 54 and these instructions. Determine there is no blockage or restriction, leakage, corrosion or other deficiencies which could cause an unsafe condition.**
- **Close all doors and windows between the space in which the appliance(s) connected to the venting system are located. Also close fireplace dampers.**
- **Turn on clothes dryers and any appliance not connected to the venting system. Turn on any exhaust fans such as range hoods so they are operating at maximum speed. Do not operate a summer exhaust fan.**
- **Follow the lighting instructions. Place the appliance being inspected into operation. Adjust the thermostat so appliance is operating continuously.**
- **Test for spillage from draft hood equipped appliances at the draft hood relief opening after 5 minutes of main burner operation. Use the flame of a match or candle.**
- **If improper venting is observed during any of the above tests, the venting system must be corrected in accordance with the National Fuel Gas Code, ANSI Z221.1/NFPA 54.**
- **After it has been determined that each appliance connected to the venting system properly vents when tested, return all doors, windows, exhaust fans, etc. to their previous condition of use.**

Product Specifications

MODEL	A801X026AM2SC [a]	A801X040AM3SC [a]	A801X040BM2SC [a]
Type	Upflow / Horizontal / Downflow	Upflow / Horizontal / Downflow	Upflow / Horizontal / Downflow
RATINGS [b]			
Input BTUH	26,000	40,000	40,000
Capacity BTUH (ICS) [c]	21,000	32,300	32,500
Temp. Rise (Min. - Max.) °F	25 - 55	30 - 60	30 - 60
AFUE - Rating [c]	80	80	80
Return Air Temp. (Min. - Max.) °F	55°F - 80°F	55°F - 80°F	55°F - 80°F
BLOWER DRIVE	DIRECT	DIRECT	DIRECT
Diameter - Width (in.)	11 X 8	11 X 8	11 X 8
No. Used	1	1	1
Speeds (No.) [d]	CTM - 9	CTM - 9	CTM - 9
CFM vs. in. w.g.	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table
Motor HP	1/3	1/2	1/3
R.P.M.	1050	1050	1050
Volts / Ph / Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	4.1	6.4	4.1
COMBUSTION FAN - Type	SP	PSC	PSC
Drive - No. Speeds	Direct - 1	Direct - 1	Direct - 1
Motor RPM	3300	3300	3300
Volts/Ph/Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	1.39	0.30	0.30
Inducer Orifice	0.90	1.20	1.15
FILTER - Furnished?	No	No	No
Type Recommended	High Velocity	High Velocity	High Velocity
Hi Vel. (No.-Size-Thk.)	1 - 14 X 25 - 1 in.	1 - 14 X 25 - 1 in.	1 - 16 X 25 - 1 in.
VENT PIPE DIAMETER - Min. (in.) [e]	4 Round	4 Round	4 Round
HEAT EXCHANGER - Type	Aluminized Steel	Aluminized Steel	Aluminized Steel
Gauge (Fired)	20 - 19	20 - 19	20 - 19
ORIFICES - Main			
Nat. Gas Qty. - Drill Size	2 - 51	2 - 45	2 - 45
L.P. Gas Qty. - Drill Size	2 - 59	2 - 56	2 - 56
GAS VALVE	Redundant - Single Stage	Redundant - Single Stage	Redundant - Single Stage
PILOT SAFETY DEVICE - Type	120 V SiNi Igniter	120 V SiNi Igniter	120 V SiNi Igniter
BURNERS - QTY	2	2	2
POWER CONN. - V/Ph/HZ [f]	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
Ampacity (Amps)	6.7	8.5	5.6
Max. Overcurrent Protection (Amps)	15	15	15
PIPE CONN. SIZE (IN.)	1/2	1/2	1/2

[a] Central Furnace heating designs are certified to ANSI Z21.47 - latest edition.
[b] For U.S. applications, above input ratings (BTUH) are up to 2,000 feet, derate 4% per 10,000 feet for elevations above 2,000 feet above sea level.
[c] Based on U.S. government standard tests
[d] 9 Speed constant torque ECM Blower Motor.
[e] Refer to the Installer's Guide.
[f] The above wiring specifications are in accordance with National Electric Code, however, installations must comply with local codes.

MODEL	A801X060BM4SC [a]	A801X080BM4SC [a]	A801X080CM5SC [a]
Type	Upflow / Horizontal / Downflow	Upflow / Horizontal / Downflow	Upflow / Horizontal / Downflow
RATINGS [b]			
Input BTUH	60,000	80,000	80,000
Capacity BTUH (ICS) [c]	48,700	65,100	64,700
Temp. Rise (Min. - Max.) °F	30 - 60	30 - 60	30 - 60
AFUE - Rating [c]	80	80	80
Return Air Temp. (Min. - Max.) °F	55°F - 80°F	55°F - 80°F	55°F - 80°F
BLOWER DRIVE	DIRECT	DIRECT	DIRECT
Diameter - Width (in.)	11 X 8	11 X 8	11 X 11
No. Used	1	1	1
Speeds (No.) [d]	CTM - 9	CTM - 9	CTM - 9
CFM vs. in. w.g.	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table
Motor HP	3/4	3/4	1
R.P.M.	1050	1050	1050
Volts / Ph / Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	9.2	9.2	10.9
COMBUSTION FAN - Type	PSC	PSC	PSC
Drive - No. Speeds	Direct - 1	Direct - 1	Direct - 1
Motor RPM	3300	3300	3300
Volts/Ph/Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	0.30	0.29	0.30
Inducer Orifice	1.40	1.75	1.80
FILTER - Furnished?	No	No	No
Type Recommended	High Velocity	High Velocity	High Velocity
Hi Vel. (No.-Size-Thk.)	1 - 16 X 25 - 1 in.	1 - 16 X 25 - 1 in.	1 - 20 X 25 - 1 in.
VENT PIPE DIAMETER - Min. (in.) [e]	4 Round	4 Round	4 Round
HEAT EXCHANGER - Type	Aluminized Steel	Aluminized Steel	Aluminized Steel
Gauge (Fired)	20 - 19	20 - 19	20 - 19
ORIFICES - Main			
Nat. Gas Qty. - Drill Size	3 - 45	4 - 45	4 - 45
L.P. Gas Qty. - Drill Size	3 - 56	4 - 56	4 - 56
GAS VALVE	Redundant - Single Stage	Redundant - Single Stage	Redundant - Single Stage
PILOT SAFETY DEVICE - Type	120 V SiNi Igniter	120 V SiNi Igniter	120 V SiNi Igniter
BURNERS - QTY	3	4	4
POWER CONN. - V/Ph/HZ [f]	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
Ampacity (Amps)	12.0	12.0	14.1
Max. Overcurrent Protection (Amps)	15	15	15
PIPE CONN. SIZE (IN.)	1/2	1/2	1/2

[a] Central Furnace heating designs are certified to ANSI Z21.47 - latest edition.
[b] For U.S. applications, above input ratings (BTUH) are up to 2,000 feet, derate 4% per 10,000 feet for elevations above 2,000 feet above sea level.
[c] Based on U.S. government standard tests
[d] 9 Speed constant torque ECM Blower Motor.
[e] Refer to the Installer's Guide.
[f] The above wiring specifications are in accordance with National Electric Code, however, installations must comply with local codes.

MODEL	**A801X100CM5SC** [a]	**A801X120DM5SC** [a]
Type	Upflow / Horizontal / Downflow	Upflow / Horizontal / Downflow
RATINGS [b]		
Input BTUH	100,000	120,000
Capacity BTUH (ICS) [c]	80,700	98,000
Temp. Rise (Min. - Max.) °F	30 - 60	35 - 65
AFUE - Rating [c]	80	80
Return Air Temp. (Min. - Max.) °F	55°F - 80°F	55°F - 80°F
BLOWER DRIVE	DIRECT	DIRECT
Diameter - Width (in.)	11 X 11	11 X 11
No. Used	1	1
Speeds (No.) [d]	CTM - 9	CTM - 9
CFM vs. in. w.g.	See Fan Performance Table	See Fan Performance Table
Motor HP	3/4	1
R.P.M.	1050	1050
Volts / Ph / Hz	120 / 1 / 60	120 / 1 / 60
FLA	10.9	10.9
COMBUSTION FAN - Type	PSC	PSC
Drive - No. Speeds	Direct - 1	Direct - 1
Motor RPM	3300	3300
Volts/Ph/Hz	120 / 1 / 60	120 / 1 / 60
FLA	0.33	0.33
Inducer Orifice	2.50	2.15
FILTER - Furnished?	No	No
Type Recommended	High Velocity	High Velocity
Hi Vel. (No.-Size-Thk.)	1 - 20 X 25 - 1 in.	1 - 24 X 25 - 1 in.
VENT PIPE DIAMETER - Min. (in.) [e]	4 Round	4 Round
HEAT EXCHANGER - Type	Aluminized Steel	Aluminized Steel
Gauge (Fired)	20 - 19	20 - 19
ORIFICES - Main		
Nat. Gas Qty. - Drill Size	5 - 45	6 - 45
L.P. Gas Qty. - Drill Size	5 - 56	6 - 56
GAS VALVE	Redundant - Single Stage	Redundant - Single Stage
PILOT SAFETY DEVICE - Type	120 V SiNi Igniter	120 V SiNi Igniter
BURNERS - QTY	5	6
POWER CONN. - V/Ph/HZ [f]	120 / 1 / 60	120 / 1 / 60
Ampacity (Amps)	14.1	14.1
Max. Overcurrent Protection (Amps)	15	15
PIPE CONN. SIZE (IN.)	1/2	1/2

[a] Central Furnace heating designs are certified to ANSI Z21.47 - latest edition.
[b] For U.S. applications, above input ratings (BTUH) are up to 2,000 feet, derate 4% per 10,000 feet for elevations above 2,000 feet above sea level.
[c] Based on U.S. government standard tests
[d] 9 Speed constant torque ECM Blower Motor.
[e] Refer to the Installer's Guide.
[f] The above wiring specifications are in accordance with National Electric Code, however, installations must comply with local codes.

Sequence of Operation

Note: *The seven-segment LED readout is based on thermostat input.*

Gas Heating

1. R – W1 contacts close on the thermostat sending 24VAC to the W1 low voltage terminal of the IFC. Technician should read 24VAC from W1 to B/C. The seven segment LED will read: .

- HE

2. The IFC performs a self-check routine and then confirms:
   a. Flame roll-out switches (FRS) 1 & 2, main thermal limit (TCO), and any reverse air flow (RAF) switches are closed by sending 24VAC out the HLO terminal and monitoring the HLI input.
   b. The pressure switch is opened by sending 24VAC out the HLO terminal, through the limit switch, and monitoring the PS input.

   Note: *If a thermal limit is open, 24VAC <u>will not</u> be present at the pressure switch.*
3. After steps a & b are confirmed, the inducer relay is closed, energizing the inducer motor.
4. As the inducer ramps up, PS will close.
5. When PS closes, the igniter relay on the IFC will close. The igniter is energized. The igniter warm up is approximately 17 seconds.
6. After the igniter warm up, the gas valve relay is closed, which energizes the gas valve solenoid to allow ignition.
7. The first burner will ignite, and flame will crossover to the remaining burners establishing current to the flame sensor. Flame sensing must be established within 4 seconds.

Note: *There are two flame sense pads located on the IFC marked as "FP". To measure the flame current, use a VOM set to DC volts. 1VDC = 1 micro-amp. Flame current will vary depending on the type of meter used. Typical flame current ranges from 0.75 – 3.0 micro-amps (0.75 – 3 VDC).*

8. Once the flame sense has been established, a timer on the IFC starts and the indoor blower will energize after the blower "Heat On Delay" has completed. The seven-segment LED for <u>example</u> will alternately read:

- HE = Gas heating
- tP5= Tap 5

9. When the temperature raises enough to satisfy the thermostat setting, contacts R-W1 will open.
10. The gas valve relay will open, closing the gas valve. The inducer will continue to run for approximately 5 seconds to remove any combustion byproducts from inside the furnace.
11. The indoor blower continues to run to remove heat from the heat exchangers. The "blower off" time is field adjustable through the IFC menu setup option. The seven-segment LED will read "IdL" = Idle, no thermostat demand.

Cooling / Heat Pump

1. R-Y1-G contacts on the thermostat close sending 24VAC to the Y1 and G low voltage terminals on the IFC. Technician should read 24VAC between Y1-B/C and between G-B/C.
2. 24VAC is sent to the OD unit via thermostat wiring.
3. The indoor blower ramps to the cooling airflow. The seven-segment LED for <u>example</u> will alternately read:

- CPI = Cooling / Heat Pump
- tP7 = Tap 7

4. When the temperature is lowered / raised (HP mode) enough to satisfy the thermostat setting, contacts R-Y-G will open.
5. The OD unit shuts off and the indoor blower shuts off, unless a blower "Cool Off Delay" has been enabled in the IFC setup menu options. The seven-segment LED will read "IdL" = Idle, no thermostat demand.

Periodic Servicing Requirements

1. GENERAL INSPECTION – ***Examine the furnace installation annually for the following items:***
   a. All flue product carrying areas external to the Furnace (i.e. chimney, vent connector) are clear and free of obstruction. A vent screen in the end of the Vent (flue) Pipe must be inspected for blockage annually, if applicable.
   b. The vent connector is in place, slopes upward and is physically sound without holes or excessive corrosion.
   c. The return air duct connection(s) is physically sound, is sealed to the Furnace and terminates outside the space containing the Furnace.
   d. The physical support of the Furnace should be sound without sagging, cracks, gaps, etc., around the base so as to provide a seal between the support and the base.
2. FILTERS – Filters should be cleaned or replaced (with high velocity filters only), monthly and more frequently during high use times of the year such as midsummer or midwinter.
3. BLOWERS – The Blower size and speed determine the air volume delivered by the Furnace. The Blower motor bearings are factory lubricated and under normal operating conditions do not require servicing. Annual cleaning of the Blower wheel and housing is recommended for maximum air output, and this must be performed only by a qualified servicer or service agency.
4. IGNITER – This unit has a special hot surface direct ignition device that automatically lights the burners. Please note that it is very fragile and should be handled with care. ! CAUTION Do NOT touch igniter. It is extremely hot.
5. BURNER – Gas burners do not normally require scheduled servicing, however, accumulation of foreign material may cause a yellowing flame or delayed ignition. Either condition indicates that a service call is required. For best operation, burners must be cleaned annually using brushes and vacuum cleaner. Turn off gas and electric power supply. To clean burners, remove burner bottom plate (2 screws) and bottom burner bracket (2 screws). Twist burner towards slot, lift, and push forward away from orifice. Remove burners.

Alternate method — Remove manifold assembly, bottom burner plate, and bottom burner bracket. Remove burners.

Note: *Be careful NOT to break igniter when removing burners.*

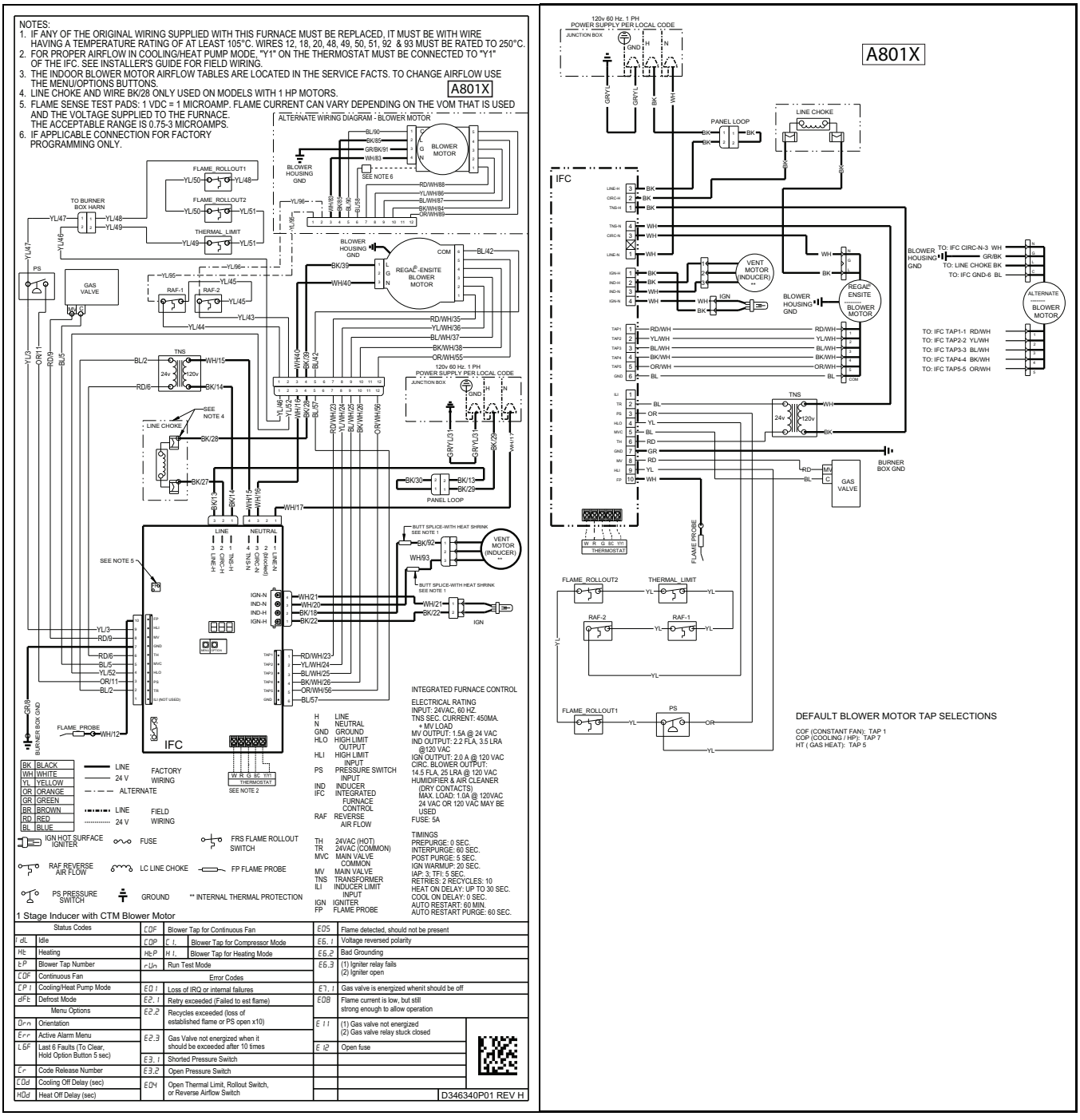
Clean burners with brush and/ or vacuum cleaner. Reassemble parts by reversal of the above procedure.

Note: *Natural gas units should not have any yellow tipped flames. This condition indicates that a service call is required. For best operation, burners must be cleaned annually using brushes and vacuum cleaner*

Note: *On Propane units, due to variations in BTU content and altitude, servicing may be required at shorter intervals.*

6. HEAT EXCHANGER/ FLUE PIPE – These items must be inspected for signs of corrosion, and/ or deterioration at the beginning of each heating season by a qualified service technician and cleaned annually for best operation. To clean flue gas passages, follow recommendations below:
   a. Turn off gas and electric power supply.
   b. Inspect flue pipe exterior for cracks, leaks, holes or leaky joints. Some discoloration of PVC pipe is normal.
   c. Remove door from Furnace.
   d. Inspect around insulation covering flue collector box. Inspect induced draft Blower connections from recuperative cell and to the flue pipe connection.
   e. Remove burners. (See 5. Burner)
   f. Use a mirror and flashlight to inspect interior of Heat Exchanger, be careful not to damage the Igniter, Flame Sensor or other components.
   g. If any corrosion is present, the Heat Exchanger should be cleaned by a qualified service technician.
   h. After inspection is complete replace burners and Furnace door.
   i. Restore gas supply. Check for leaks using a soap solution. Restore electrical supply. Check unit for normal operation.
7. COOLING COIL CONDENSATE DRAIN - If a cooling coil is installed with the Furnace, condensate drains should be checked and cleaned periodically to assure that condensate can drain freely from coil to drain. If condensate cannot drain freely water damage could occur. (See Condensate Drain in Installer's Guide.)

Wiring Diagrams



Airflow Tables

Furnace Airflow (CFM) Vs. External Static Pressure (in. W.C.)							
Model	**Tap**	**Static**	**0.1**	**0.3**	**0.5**	**0.7**	**0.9**
A801X026AM2SC	**1**	**SCFM**	437				
		Watts	29				
	2	**SCFM**	600	359	119		
		Watts	42	48	54		
	3	**SCFM**	650	435	219		
		Watts	47	56	65		
	4	**SCFM**	721	533	344	155	
		Watts	59	69	79	89	
	5	**SCFM**	936	782	629	475	321
		Watts	104	116	128	140	152
	6	**SCFM**	997	854	720	586	452
		Watts	123	136	149	162	175
	7	**SCFM**	1037	906	776	646	516
		Watts	137	151	165	178	192
	8	**SCFM**	1117	1000	883	766	650
		Watts	168	183	199	214	230
	9	**SCFM**	1251	1149	1048	946	845
		Watts	231	248	266	283	301

Furnace Airflow (CFM) Vs. External Static Pressure (in. W.C.)							
Model	**Tap**	**Static**	**0.1**	**0.3**	**0.5**	**0.7**	**0.9**
A801X040AM3SC	**1**	**SCFM**	592	342	93		
		Watts	40	43	46		
	2	**SCFM**	666	467	268	70	
		Watts	48	56	65	74	
	3	**SCFM**	687	493	299	105	
		Watts	49	59	69	78	
	4	**SCFM**	938	788	638	488	338
		Watts	100	111	123	134	146
	5	**SCFM**	1006	870	733	597	461
		Watts	119	131	144	156	169
	6	**SCFM**	1068	944	820	696	573
		Watts	140	154	167	181	194
	7	**SCFM**	1174	1066	957	848	740
		Watts	181	196	211	226	241
	8	**SCFM**	1167	1098	1029	960	891
		Watts	194	219	244	269	294
	9	**SCFM**	1556	1474	1392	1310	1228
		Watts	398	416	435	453	471

Airflow Tables

Furnace Airflow (CFM) Vs. External Static Pressure (in. W.C.)							
Model	**Tap**	**Static**	**0.1**	**0.3**	**0.5**	**0.7**	**0.9**
A801X040BM2SC	**1**	**SCFM**	526				
		Watts	34				
	2	**SCFM**	744	533	322	110	
		Watts	54	63	72	81	
	3	**SCFM**	820	662	504	346	188
		Watts	68	81	94	106	119
	4	**SCFM**	967	811	654	498	341
		Watts	97	110	122	135	148
	5	**SCFM**	997	840	687	533	380
		Watts	104	116	129	142	154
	6	**SCFM**	1052	911	771	630	490
		Watts	119	133	148	162	176
	7	**SCFM**	1099	968	837	706	575
		Watts	134	150	165	180	196
	8	**SCFM**	1168	1047	926	805	684
		Watts	157	174	191	208	225
	9	**SCFM**	1303	1196	1088	981	874
		Watts	214	233	252	271	290

Furnace Airflow (CFM) Vs. External Static Pressure (in. W.C.)							
Model	**Tap**	**Static**	**0.1**	**0.3**	**0.5**	**0.7**	**0.9**
A801X060BM4SC	**1**	**SCFM**	596	287			
		Watts	38	42			
	2	**SCFM**	851	667	483	299	115
		Watts	70	81	92	102	113
	3	**SCFM**	1142	1018	893	769	644
		Watts	141	156	172	187	203
	4	**SCFM**	1196	1079	961	844	726
		Watts	160	176	192	208	224
	5	**SCFM**	1362	1258	1154	1050	946
		Watts	220	239	257	276	294
	6	**SCFM**	1416	1319	1221	1124	1026
		Watts	250	269	288	307	327
	7	**SCFM**	1495	1402	1309	1216	1123
		Watts	287	307	327	347	367
	8	**SCFM**	1574	1487	1401	1314	1228
		Watts	337	357	378	399	420
	9	**SCFM**	1983	1899	1815	1730	1646
		Watts	659	670	680	691	701

Furnace Airflow (CFM) Vs. External Static Pressure (in. W.C.)							
Model	**Tap**	**Static**	**0.1**	**0.3**	**0.5**	**0.7**	**0.9**
A801X080BM4SC	**1**	**SCFM**	552	160			
		Watts	34	34			
	2	**SCFM**	891	720	549	378	207
		Watts	82	93	105	117	129
	3	**SCFM**	1123	996	869	742	615
		Watts	141	157	173	189	205
	4	**SCFM**	1344	1240	1136	1033	929
		Watts	224	244	263	283	302
	5	**SCFM**	1479	1384	1290	1196	1102
		Watts	290	312	333	354	375
	6	**SCFM**	1583	1496	1408	1321	1234
		Watts	354	376	398	420	442
	7	**SCFM**	1654	1572	1491	1409	1327
		Watts	405	428	451	474	496
	8	**SCFM**	1818	1739	1661	1582	1503
		Watts	542	561	581	600	619
	9	**SCFM**	1926	1841	1756	1670	1585
		Watts	645	656	667	679	690

Furnace Airflow (CFM) Vs. External Static Pressure (in. W.C.)							
Model	**Tap**	**Static**	**0.1**	**0.3**	**0.5**	**0.7**	**0.9**
A801X080CM5SC	**1**	**SCFM**	728	358			
		Watts	44	49			
	2	**SCFM**	809	540	271		
		Watts	53	63	74		
	3	**SCFM**	1440	1273	1105	938	770
		Watts	185	201	218	234	250
	4	**SCFM**	1536	1385	1233	1081	929
		Watts	220	238	257	275	293
	5	**SCFM**	1689	1552	1414	1277	1140
		Watts	278	299	320	342	363
	6	**SCFM**	1792	1661	1530	1400	1269
		Watts	326	348	371	394	417
	7	**SCFM**	1899	1771	1643	1515	1387
		Watts	373	397	422	446	471
	8	**SCFM**	2094	1985	1875	1766	1656
		Watts	500	527	554	582	609
	9	**SCFM**	2533	2414	2295	2176	2058
		Watts	931	932	933	933	934

Airflow Tables

Furnace Airflow (CFM) Vs. External Static Pressure (in. W.C.)							
Model	**Tap**	**Static**	**0.1**	**0.3**	**0.5**	**0.7**	**0.9**
A801X100CM5SC	**1**	**SCFM**	821	442			
		Watts	55	55			
	2	**SCFM**	1359	1195	1031	868	704
		Watts	163	180	198	215	233
	3	**SCFM**	1602	1461	1321	1180	1040
		Watts	246	268	290	312	334
	4	**SCFM**	1807	1678	1550	1421	1292
		Watts	336	362	388	414	440
	5	**SCFM**	1827	1700	1572	1444	1317
		Watts	345	371	398	425	451
	6	**SCFM**	1925	1800	1675	1550	1425
		Watts	395	423	451	479	508
	7	**SCFM**	2102	1985	1869	1752	1635
		Watts	503	534	566	597	628
	8	**SCFM**	2222	2115	2008	1901	1794
		Watts	602	635	667	700	732
	9	**SCFM**	2458	2351	2245	2138	2032
		Watts	896	913	930	947	964

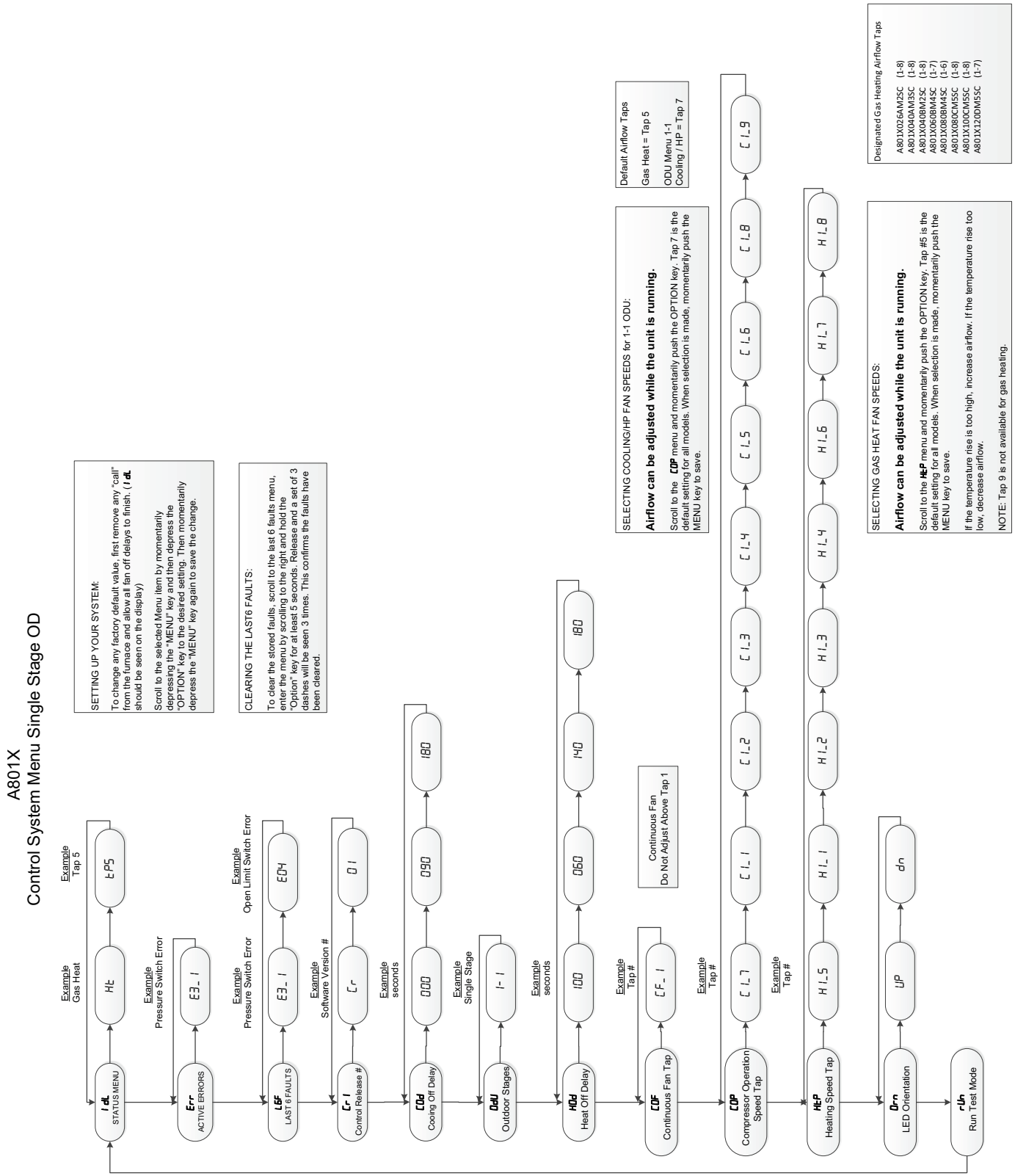
Furnace Airflow (CFM) Vs. External Static Pressure (in. W.C.)							
Model	**Tap**	**Static**	**0.1**	**0.3**	**0.5**	**0.7**	**0.9**
A801X120DM5SC	**1**	**SCFM**	1469	912	355		
		Watts	184	126	68		
	2	**SCFM**	1429	1165	900	636	371
		Watts	175	171	168	164	160
	3	**SCFM**	1567	1401	1235	1069	903
		Watts	215	232	248	264	280
	4	**SCFM**	1858	1731	1605	1478	1351
		Watts	334	361	388	415	441
	5	**SCFM**	2004	1890	1776	1662	1548
		Watts	418	447	476	505	534
	6	**SCFM**	2110	2004	1898	1792	1686
		Watts	488	518	549	580	611
	7	**SCFM**	2245	2148	2052	1956	1860
		Watts	596	629	662	695	729
	8	**SCFM**	2440	2345	2250	2155	2060
		Watts	765	794	824	854	884
	9	**SCFM**	2536	2431	2325	2220	2114
		Watts	882	904	927	949	972

CFM Versus Temperature Rise

Table 1. A801X

Model	CFM Versus Temperature Rise																				
	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
A801X026AM2SC	48	39	32																		
A801X040AM3SC		59	49	42	37	33	30	27													
A801X040BM2SC		59	49	42	37	33	30	27													
A801X060BM4SC					56	49	44	40	37	34	32										
A801X080BM4SC							59	54	49	46	42	40	37	35	33						
A801X080CM5SC							59	54	49	46	42	40	37	35	33						
A801X100CM5SC										57	53	49	46	44	41	39	37	35	34	32	31
A801X120DM5SC												59	56	52	49	47	44	42	40	39	37

Integrated Furnace Control Menu



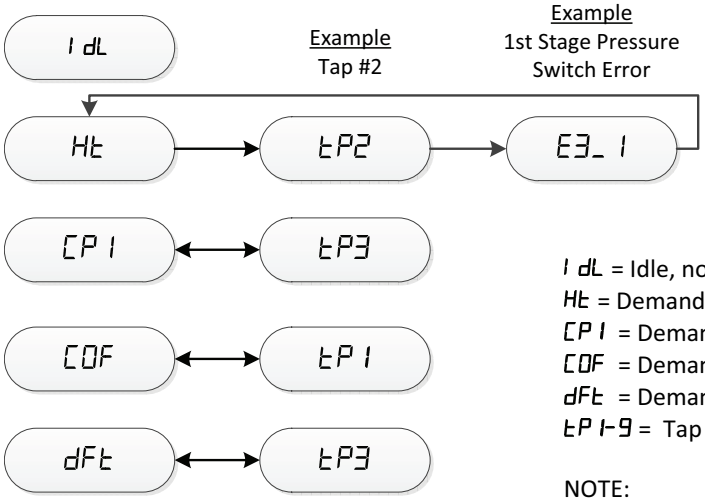
A801X
Run Test Mode

Run Test Mode:
To enter Run Test Mode, scroll to rUn using the Menu key, then push the option key. The LED will flash rUn three times, then begin the test.
To exit the test mode, momentarily push the Menu key, cycle power to the furnace, or make a valid thermostat call for capacity or fan.

Sequence of Run Test Mode
rU1 -Turns the inducer on in 1st stage for 30 seconds
rU2 – Not applicable
rU3 – Turns the igniter on for 10 seconds
rU4 – Turns the circulating blower on 1st stage compressor speed for 10 seconds
rU5 – Not applicable
rU6 – Turns the circulating blower on 1st stage gas heat speed for 10 seconds
rU7 – Not applicable
The above sequence will repeat two more times unless the Run Test Mode is exited, see above.

Important: The Run Test Mode does not test fire the furnace or bring the outdoor unit on. It is designed to allow the technician to observe each mode to ensure the IFC, inducer, and circulating blower are performing as intended.

A801X
System Status Menu

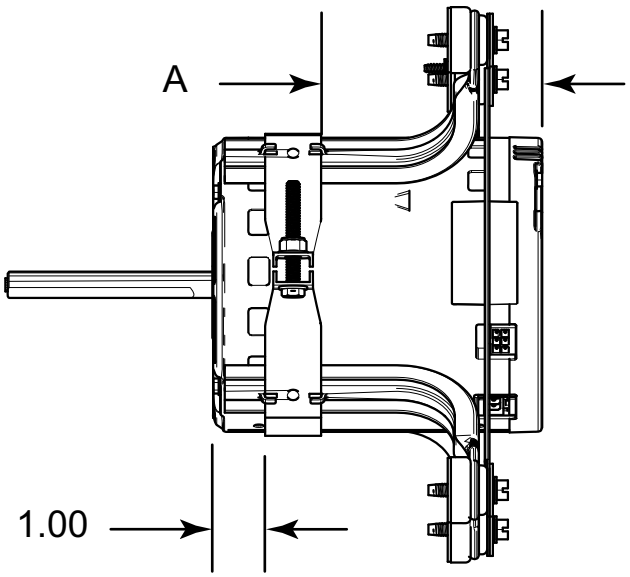


I dL = Idle, no demand for cooling, heating, or fan
HE = Demand for stage gas heat
CP1 = Demand for cooling/heatpump
COF = Demand for continuous fan
dFt = Demand for outdoor unit defrost, furnace running in gas heat mode
tP1-9 = Tap selected for airflow

NOTE:
(1) The menu status displayed is solely dependent on the input of 24VAC that is applied to the low voltage terminal strip.
(2) The status will alternate between the system mode and the airflow request every 2 seconds.
(3) If an error occurs, an E*.* will alternately flash with the system mode and airflow request. See first example

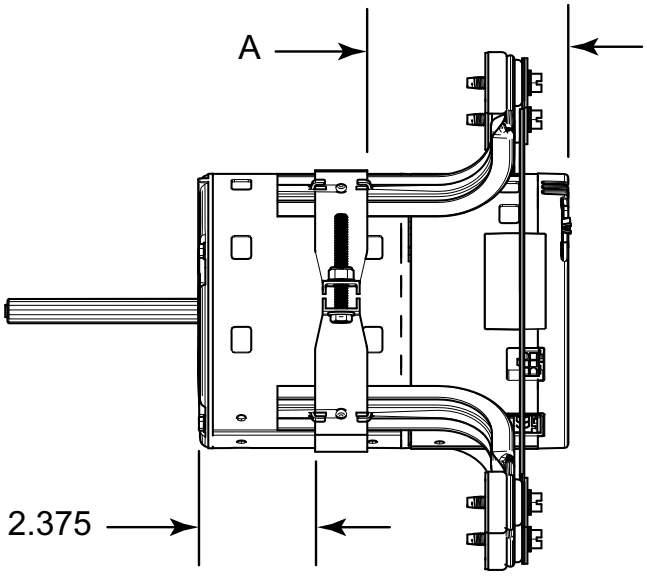
Belly Band Location

Distance from belly band to the front face of motor for minimum vibration



Blower housing and wheel removed from view for clarity.

Furnace Model	Dimension "A" (inches)
A026	3.5 (3–1/2)
A040	3.75 (3–3/4)
B040	3.5 (3–1/2)
B060 4 ton	4.25 (4–1/4)
B080	4.25 (4–1/4)



Blower housing and wheel removed from view for clarity.

Furnace Model	Dimension "A" (inches)
C080	4.125 (4–1/8)
C100	4.125 (4–1/8)
D120	4.125 (4–1/8)

Troubleshooting

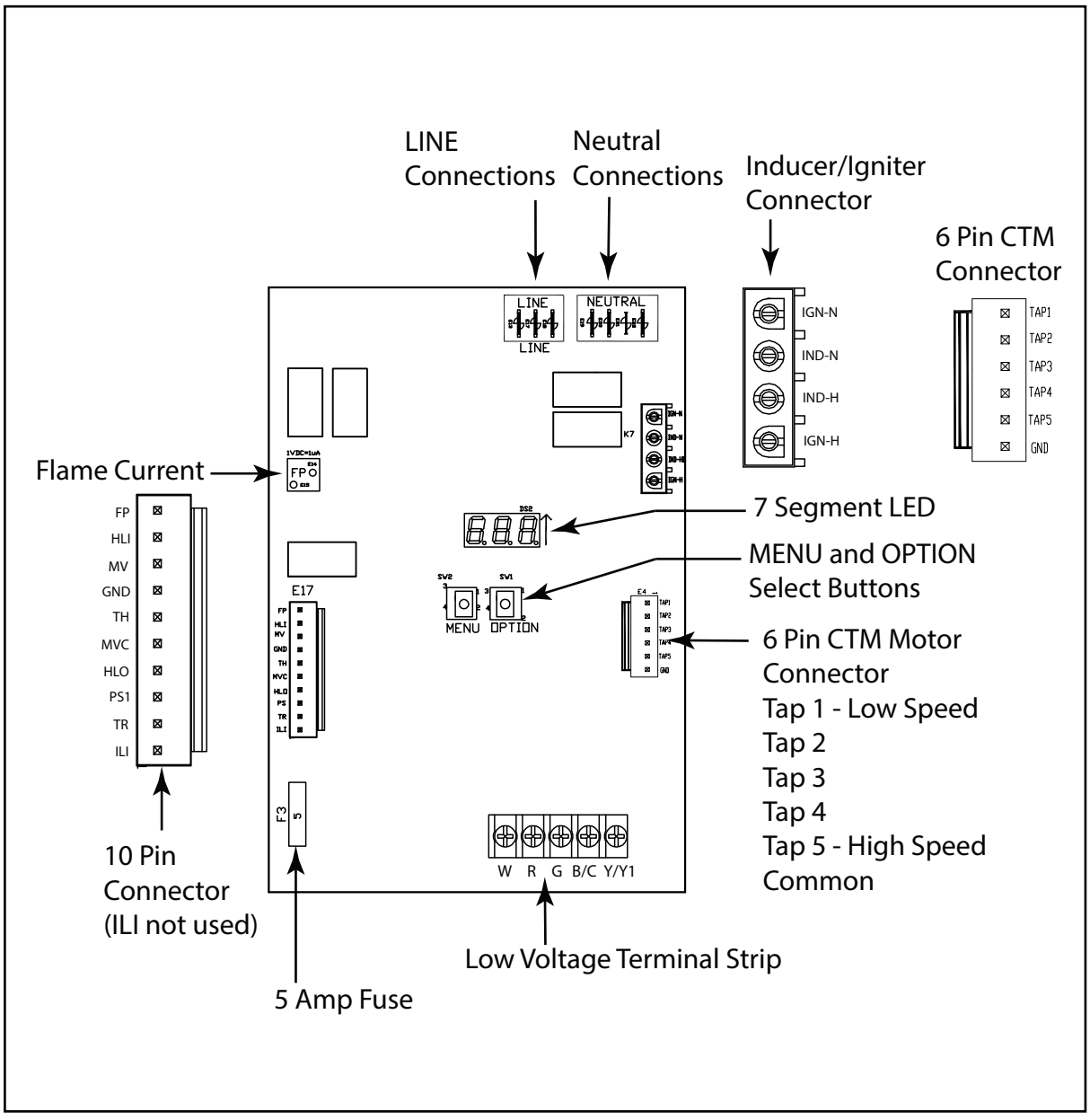
The following pages include troubleshooting flowcharts in reference for the Single Stage A801X family of furnaces only.
The information contained is for reference only and does not cover all scenarios or problems that may be encountered.
ONLY qualified technicians should attempt to install, troubleshoot, or repair this appliance. Failure to follow all cautions and /or warnings could result in personal or property damage, including death.

Troubleshooting Flowchart Index

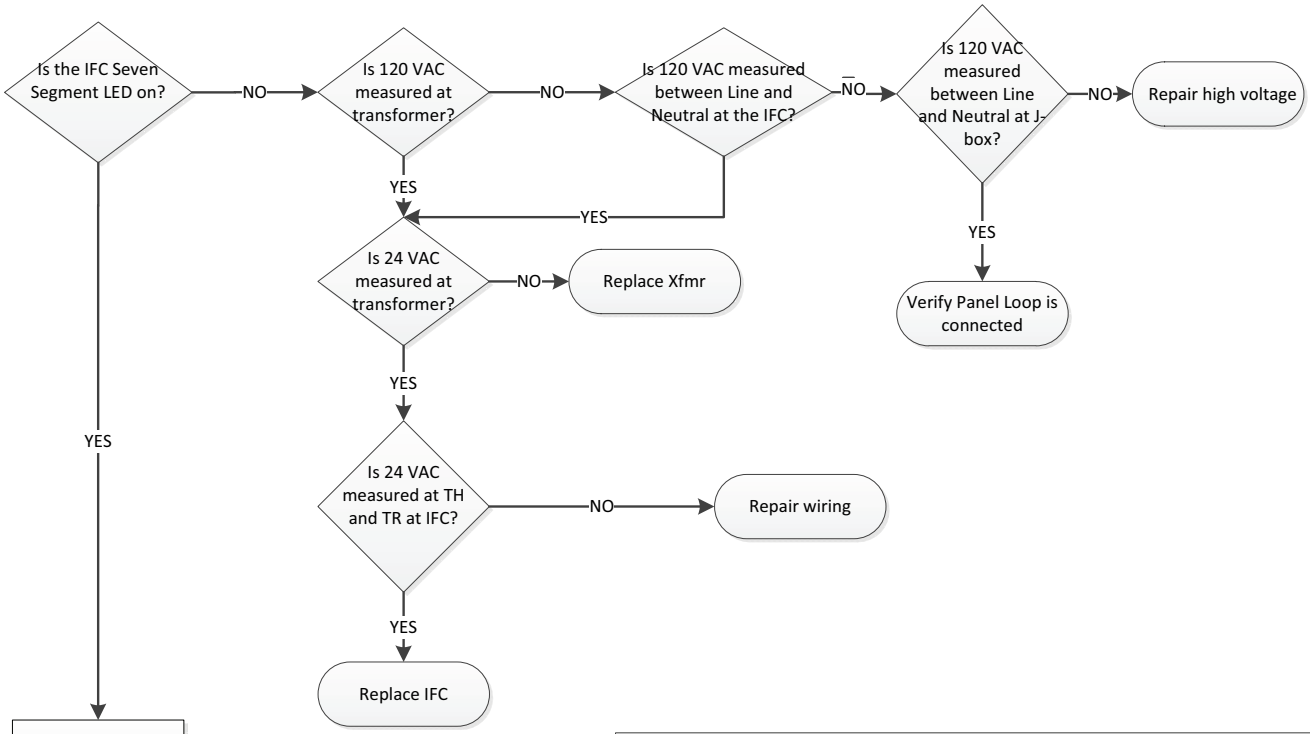
IFC Component Layout
Getting Started

Error Codes
E0 – Internal Failure
E2.1 – Retries Exceeded (flame never sensed)
E2.2 – Recycles Exceeded (loss of flame after being sensed)
E2.3 – 1 st Stage Gas Valve energized when it should not be (10 times)
E3.1 – Shorted Pressure Switch
E3.2 – Open Pressure Switch
E04 – Open Thermal Limit
E04 – Flame Rollout
E05 – Flame Detected , should not be present
E6.1 – Reversed Polarity (High Voltage)
E6.2 – Faulty Ground
E6.3 – Igniter Circuit
E7.1 – Gas Valve (MVL) energized when it should not be
E08 – Flame Current Low, operation allowed
E11 – See troubleshooting Instructions
E12 – Open Fuse

A801X IFC Component Layout



GETTING STARTED



Refer to Gas Furnace Silicon Nitride igniter Models Service Manual to supplement this information. Publication Number 34-3405-09

DEFINITION :

Internal Failure of the Control Board

E01 Fault Code

Replace IFC

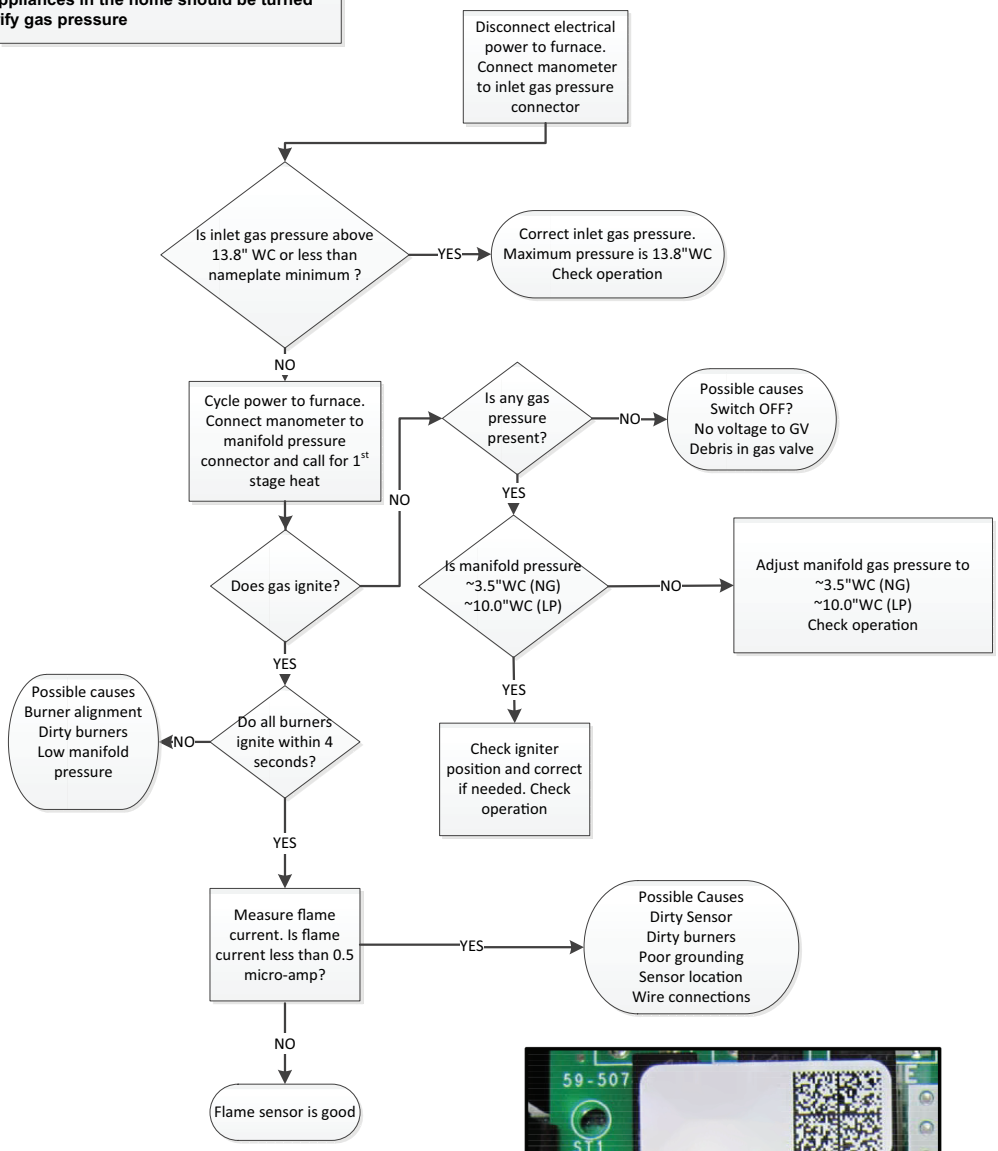
DEFINITION

RECYCLE Lock Out = 10 recycles within a single call for heat. Lockout period is for one hour.

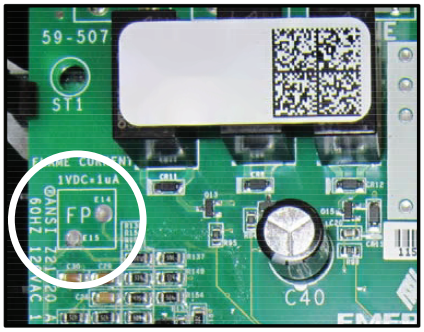
Flame is sensed & then lost

All gas appliances in the home should be turned on to verify gas pressure

2.1 Fault Code



There are two flame sense pads located on the IFC, marked “FP”. To measure flame current, use a VOM set to DC volts. Flame current will vary depending on the type of meter used. Typical flame current ranges from 0.75 – 3.0 micro-amps (0.75 – 3.0 VDC)



DEFINITION

RECYCLE Lock Out = 10 recycles within a single call for heat. Lockout period is for one hour.

Flame is sensed & then lost

All gas appliances in the home should be turned on to verify gas pressure

2.2 Fault Code

Disconnect electrical power to furnace. Connect manometer to manifold pressure connector

NO

Cycle power to furnace and call for 1st stage heat

Is manifold pressure ~3.5"WC (NG) ~10.0" WC (LP)

YES

Measure flame current. Is flame current greater than 0.75 micro-amp? (0.75-3 µA = Normal)

NO

Adjust manifold gas pressure to ~3.5"WC (NG) ~10.0" WC (LP) Check operation

YES

Is minimum outlet gas manifold pressure maintained?

YES

Possible Causes
Plugs
Blower door
Wind gust
Power interrupt

NO

Possible Causes
Dirty Sensor
Dirty burners
Poor grounding
Sensor location
Wire connections

Disconnect electrical power to furnace. Connect manometer to inlet gas pressure connector

Cycle power to furnace and call for 1st stage heat

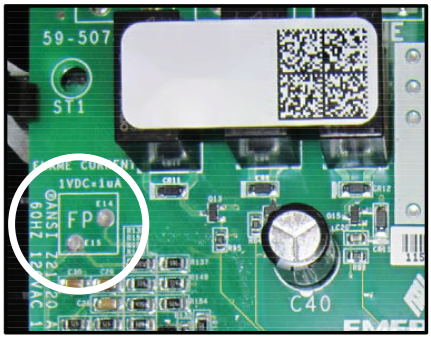
Is minimum inlet gas manifold pressure maintained?

YES

Possible Causes
Plugs
Blower door
Wind gust
Power interrupt

NO

Correct incoming gas supply pressure



There are two flame sense pads located on the IFC, marked "FP". To measure flame current, use a VOM set to DC volts. Flame current will vary depending on the type of meter used. Typical flame current ranges from 0.75 – 3.0 micro-amps (0.75 – 3.0 VDC)

DEFINITION

1st Stage Gas Valve not energized when it should be 10 times within the same call for heat .

24VAC not sensed on MVL 10 times

2.3 Fault Code

Replace IFC

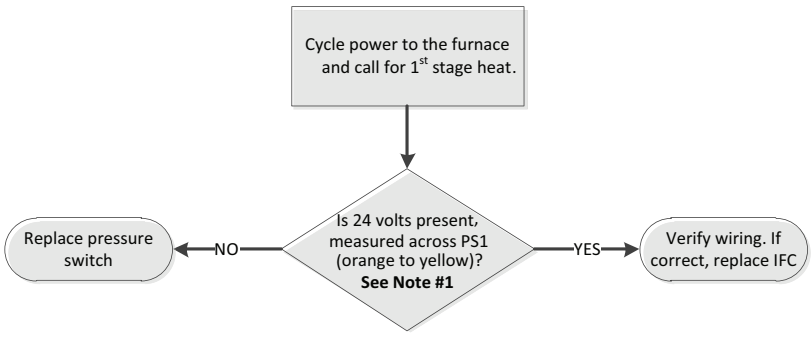
DEFINITION
An error has occurred with the PS1, indicating that the pressure switch is closed when it should be open.

In most cases, the pressure switch is not the problem.

NOTE: Verify pressure switch wiring and tube routing are correct.

Note #1
24 volts = Open Switch
0 volts = Closed Switch

3.1 Fault Code



DEFINITION
An error has occurred with the PS1 indicating that the pressure switch is either open when it should be closed.

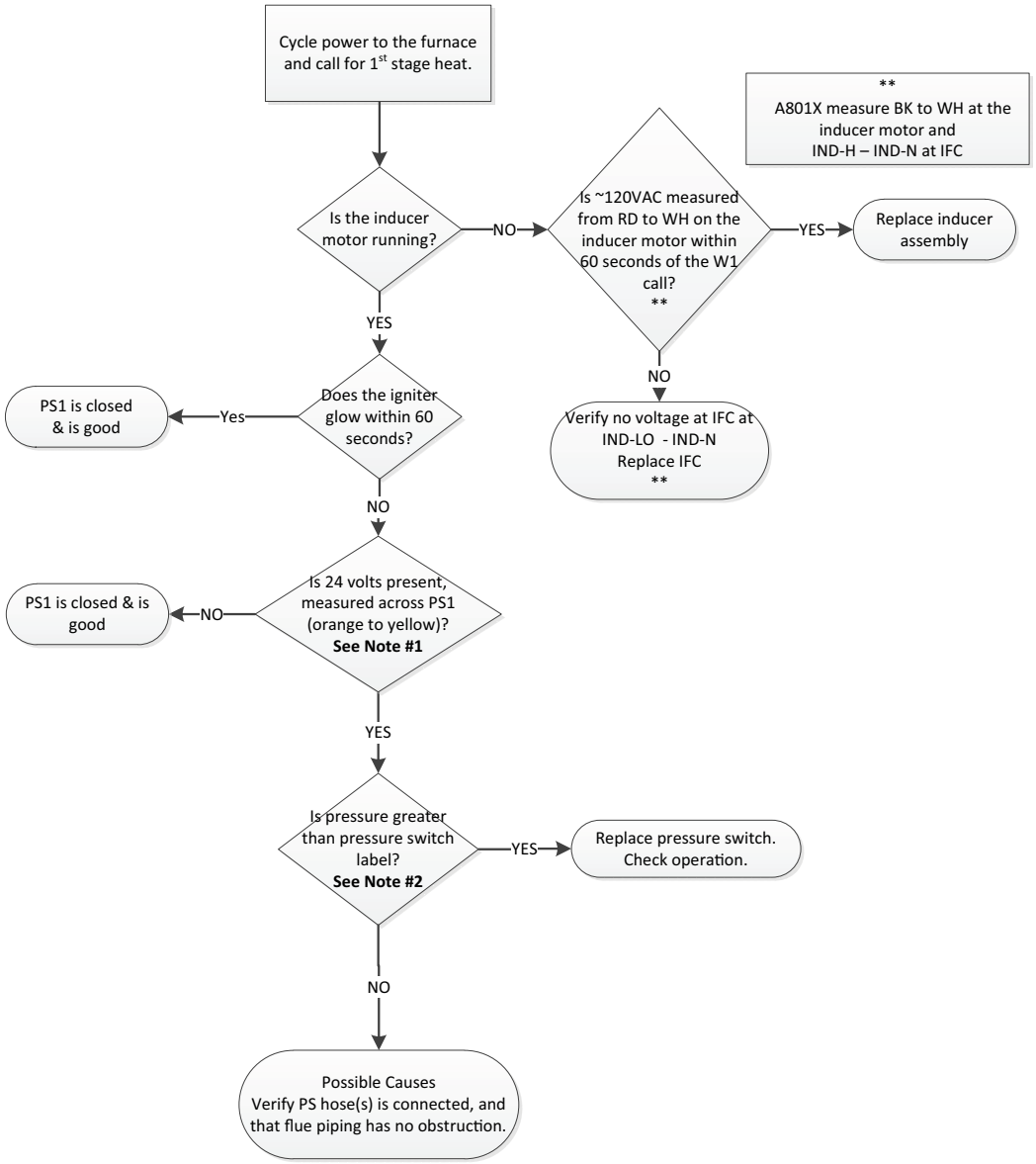
In most cases, the pressure switch is not the problem.

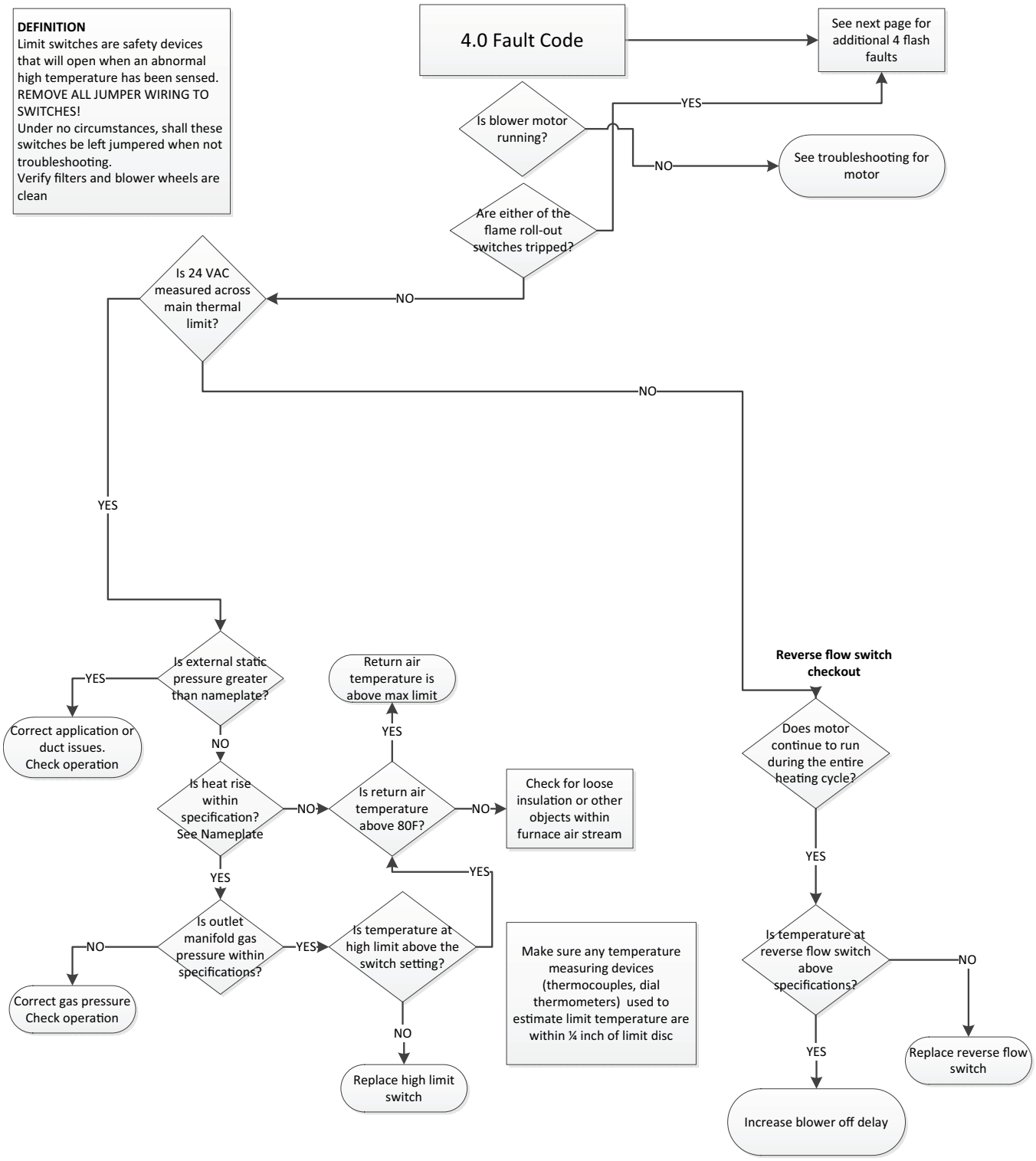
NOTE: Verify pressure switch wiring and tube routing are correct.

3.2 Fault Code

Note #1
24 volts = Open Switch
0 volts = Closed Switch

Note #2
Measured pressure is negative, greater than refers to magnitude only.

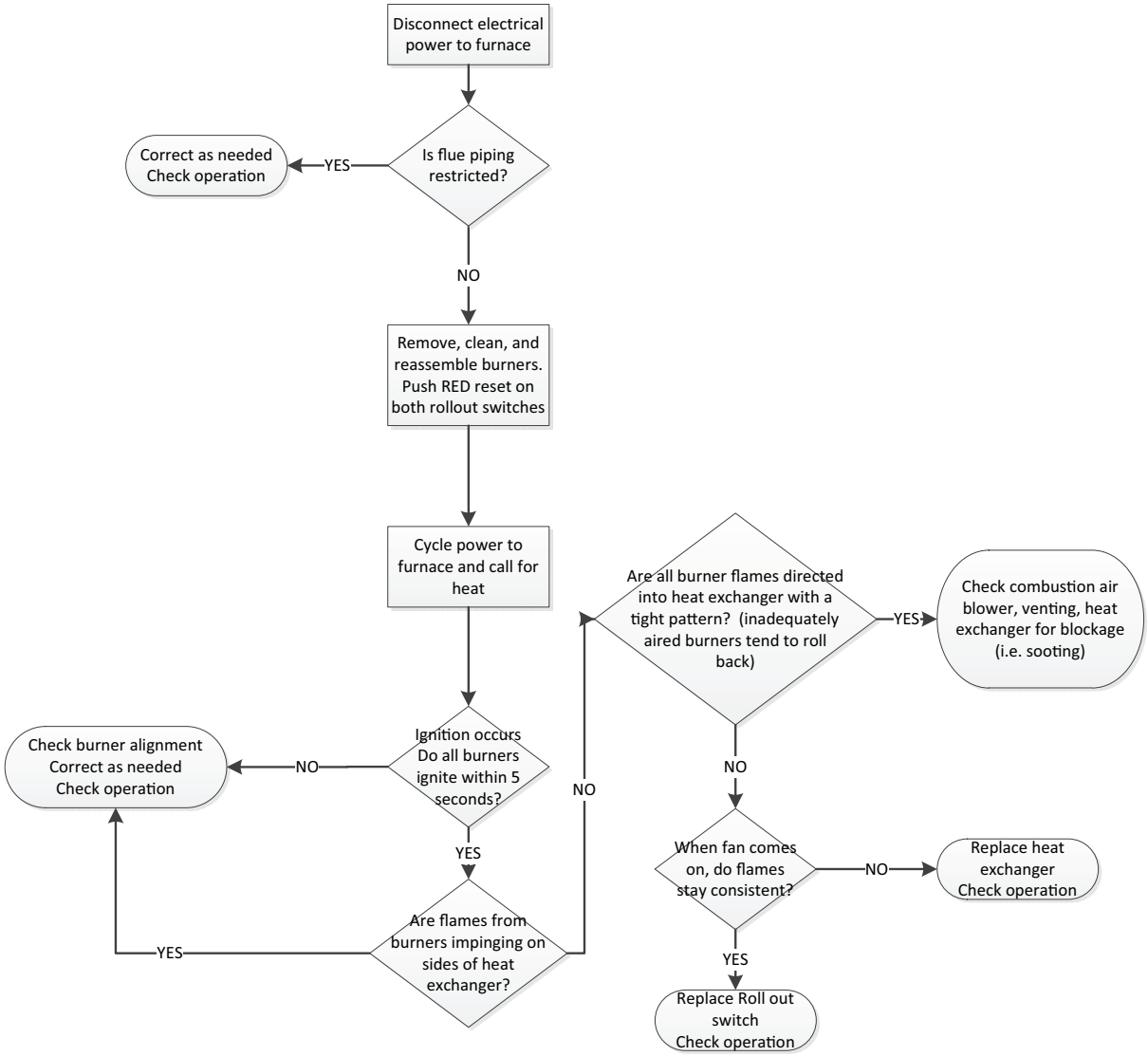



DEFINITION
Limit switches are safety devices that will open when an abnormal high temperature has been sensed.
REMOVE ALL JUMPER WIRING TO SWITCHES!
Under no circumstances, shall these switches be left jumpered when not troubleshooting.
Verify filters and blower wheels are clean
4.0 Fault Code
See next page for additional 4 flash faults
Is blower motor running?
YES
NO
See troubleshooting for motor
Are either of the flame roll-out switches tripped?
Is 24 VAC measured across main thermal limit?
NO
YES
NO
YES
Is external static pressure greater than nameplate?
YES
Correct application or duct issues. Check operation
NO
Is heat rise within specification? See Nameplate
NO
Is return air temperature above 80F?
NO
Check for loose insulation or other objects within furnace air stream
YES
Return air temperature is above max limit
YES
YES
Is outlet manifold gas pressure within specifications?
NO
Correct gas pressure Check operation
YES
Is temperature at high limit above the switch setting?
NO
Replace high limit switch
Make sure any temperature measuring devices (thermocouples, dial thermometers) used to estimate limit temperature are within ¼ inch of limit disc
Reverse flow switch checkout
Does motor continue to run during the entire heating cycle?
YES
Is temperature at reverse flow switch above specifications?
NO
Replace reverse flow switch
YES
Increase blower off delay

DEFINITION:

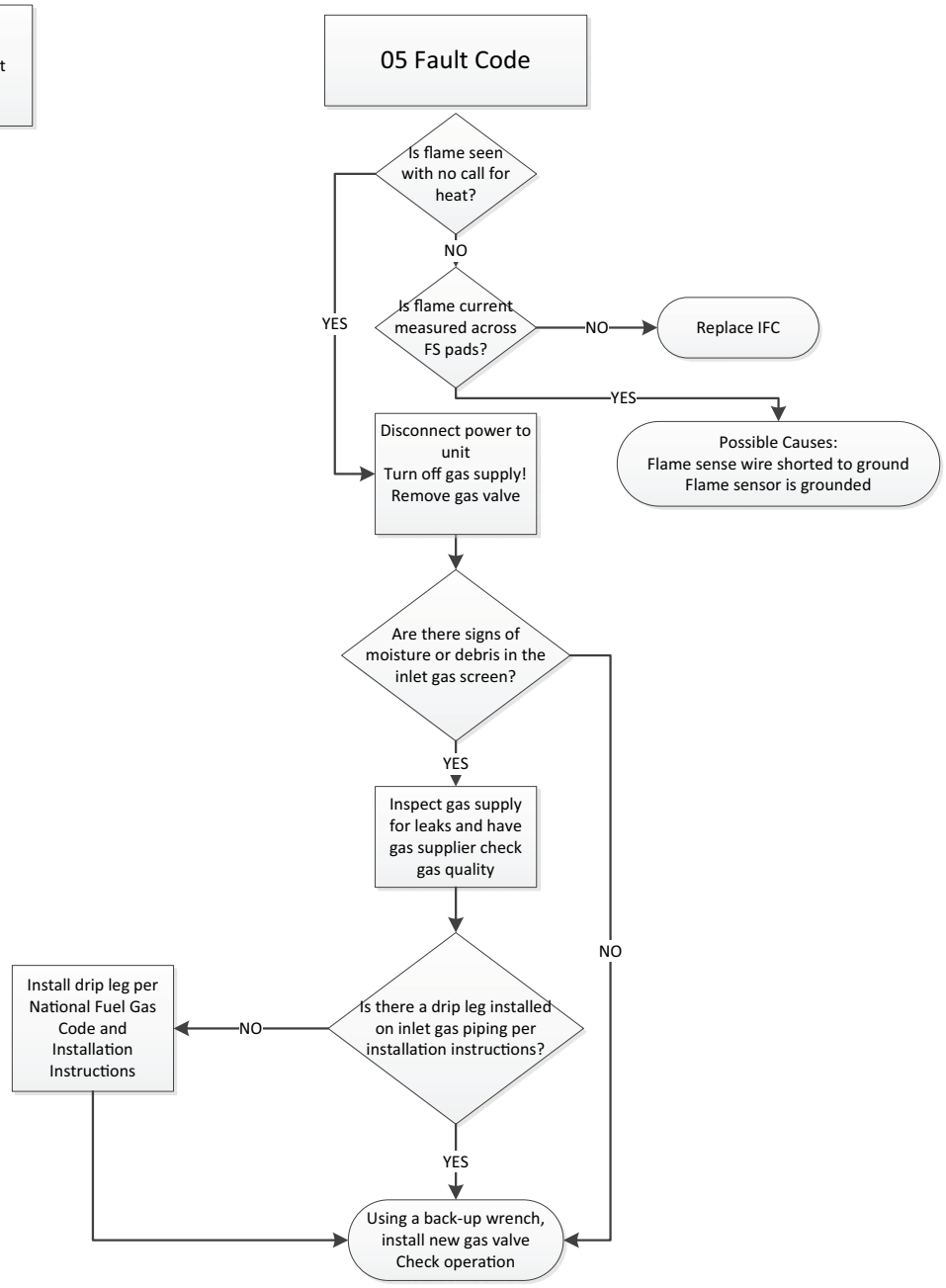
Limit switches are safety devices that will open when an abnormal high temperature has been sensed.
REMOVE ALL JUMPER WIRING TO SWITCHES!
Under no circumstances, shall these switches be left jumpered when not troubleshooting.

4.0 Fault Code
Flame Rollout

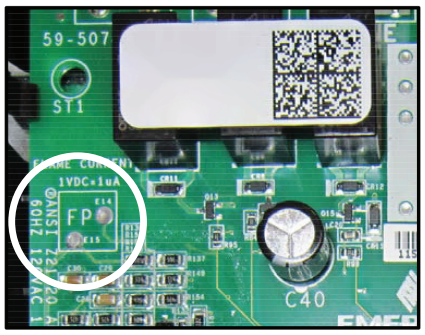


DEFINITION:

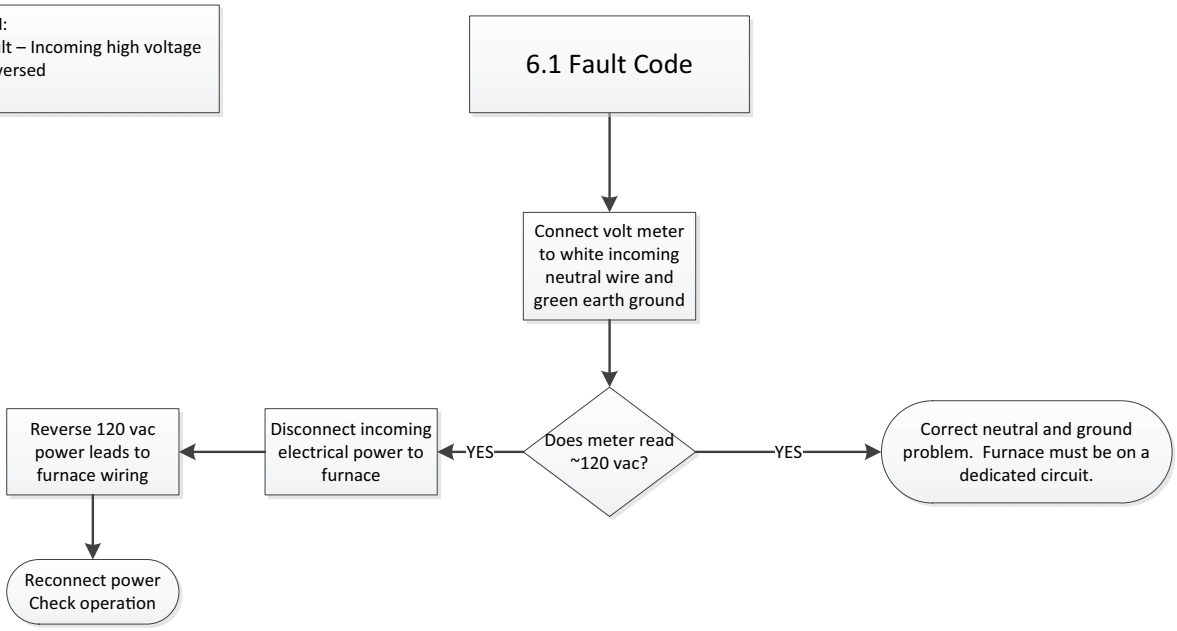
Flame is sensed when it should not be.



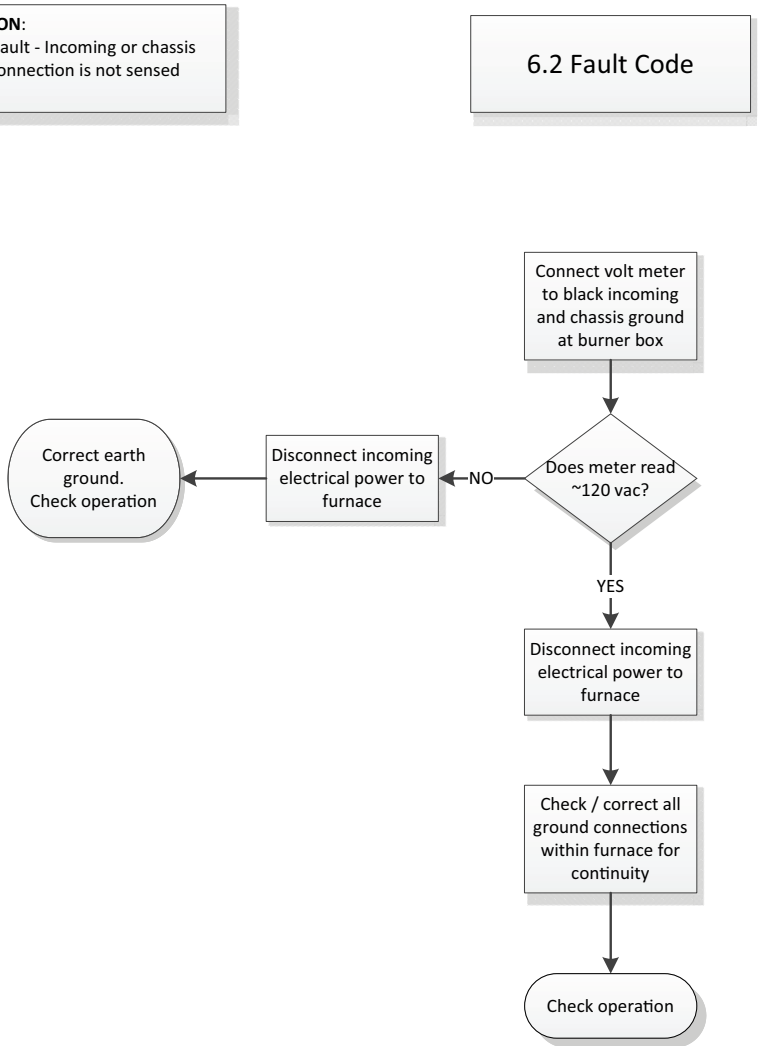
There are two flame sense pads located on the IFC, marked “FP”. To measure flame current, use a VOM set to DC volts. Flame current will vary depending on the type of meter used. Typical flame current ranges from 0.75 – 3.0 micro-amps (0.75 – 3.0 VDC)



DEFINITION:
Polarity Fault – Incoming high voltage wiring is reversed



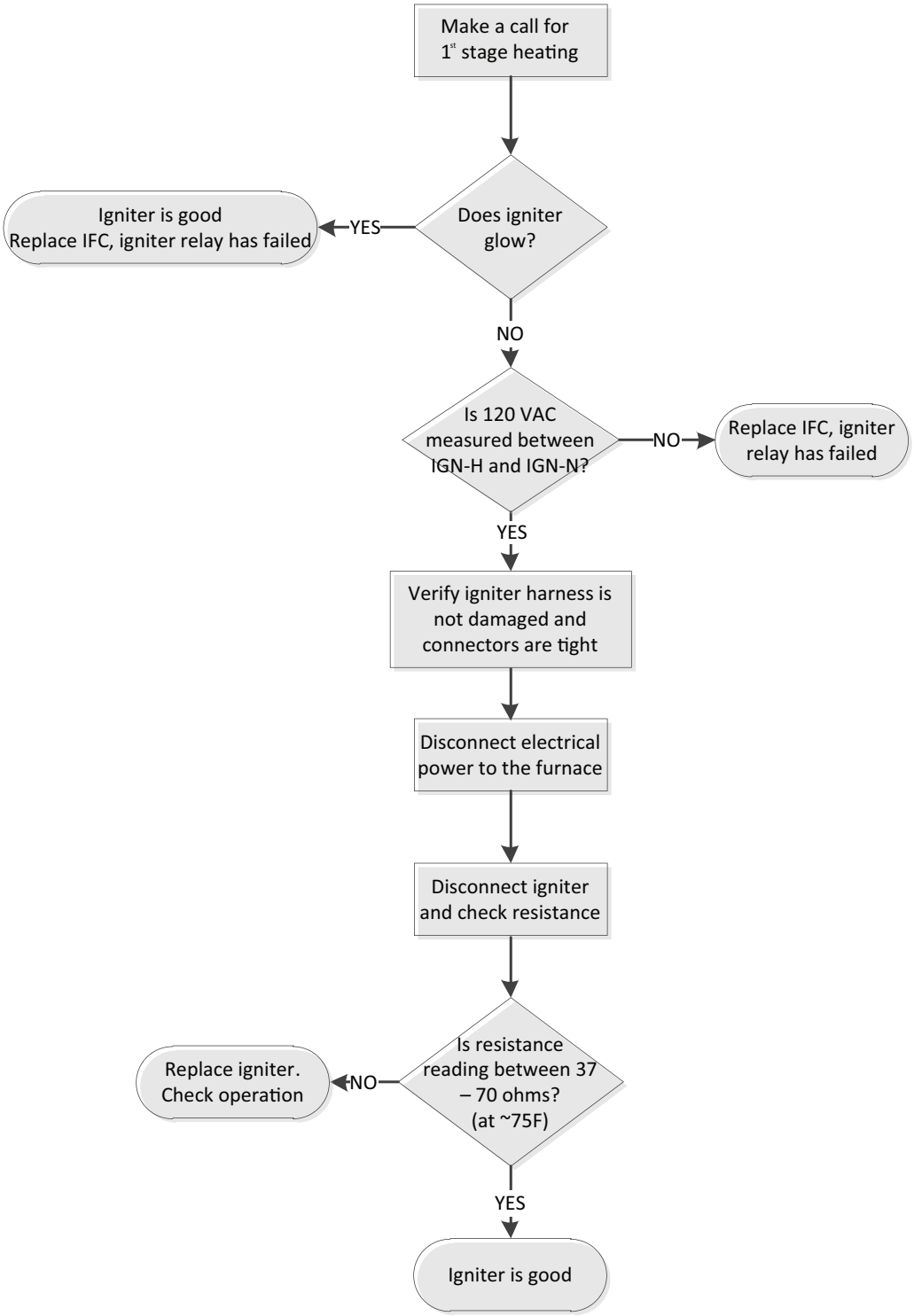
DEFINITION:
Ground Fault - Incoming or chassis ground connection is not sensed



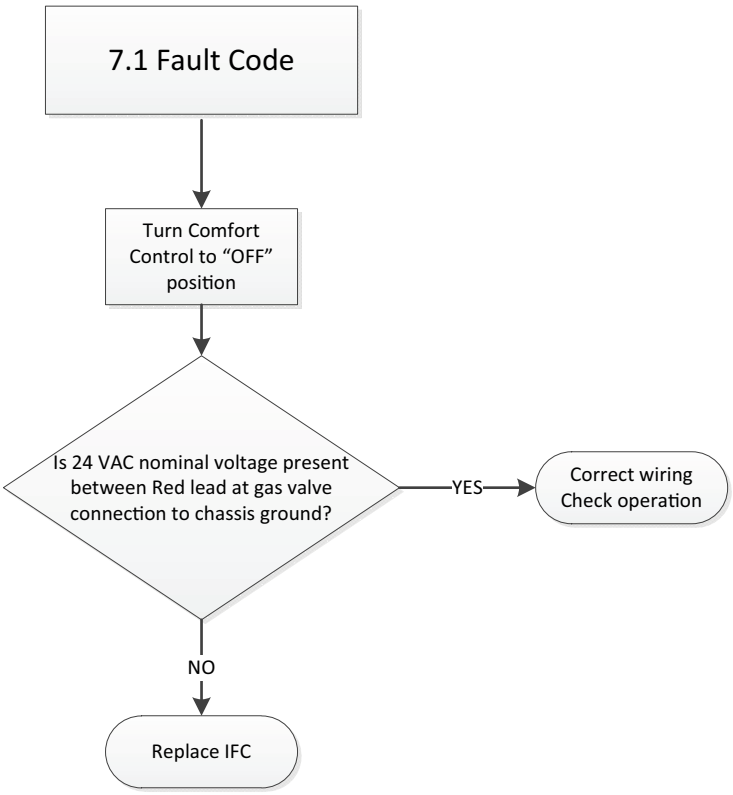
DEFINITION:
Igniter Relay Fault – The control board has sensed that the igniter relay has stuck closed

igniter Fault – The control board has sensed that the igniter circuit is open or shorted.

6.3 Fault Code

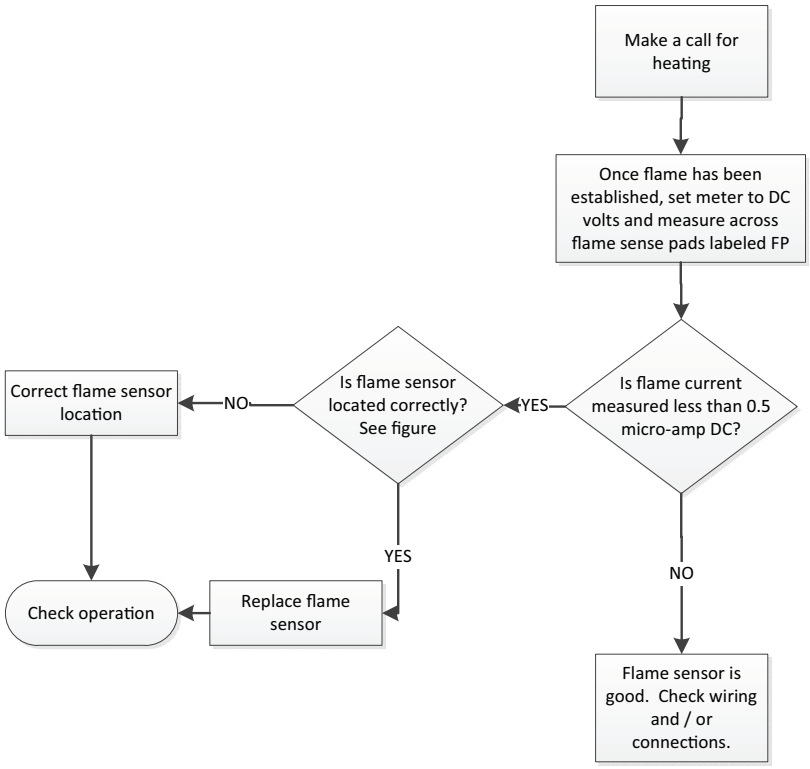


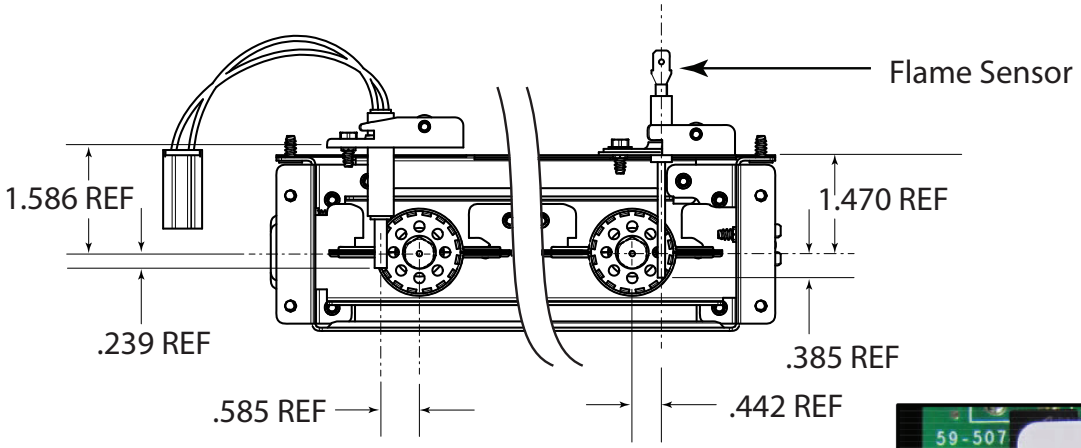
DEFINITION: External Gas Valve Circuit Error (24 volts is present when it should not be present)



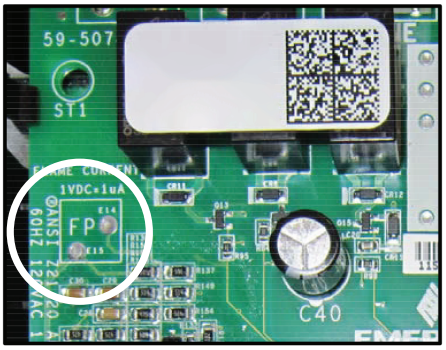
DEFINITION:
The flame sense current is less than 0.5 micro-amp DC

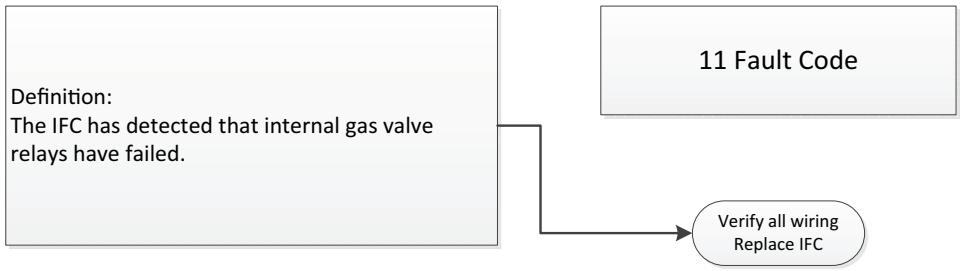
08 Fault Code

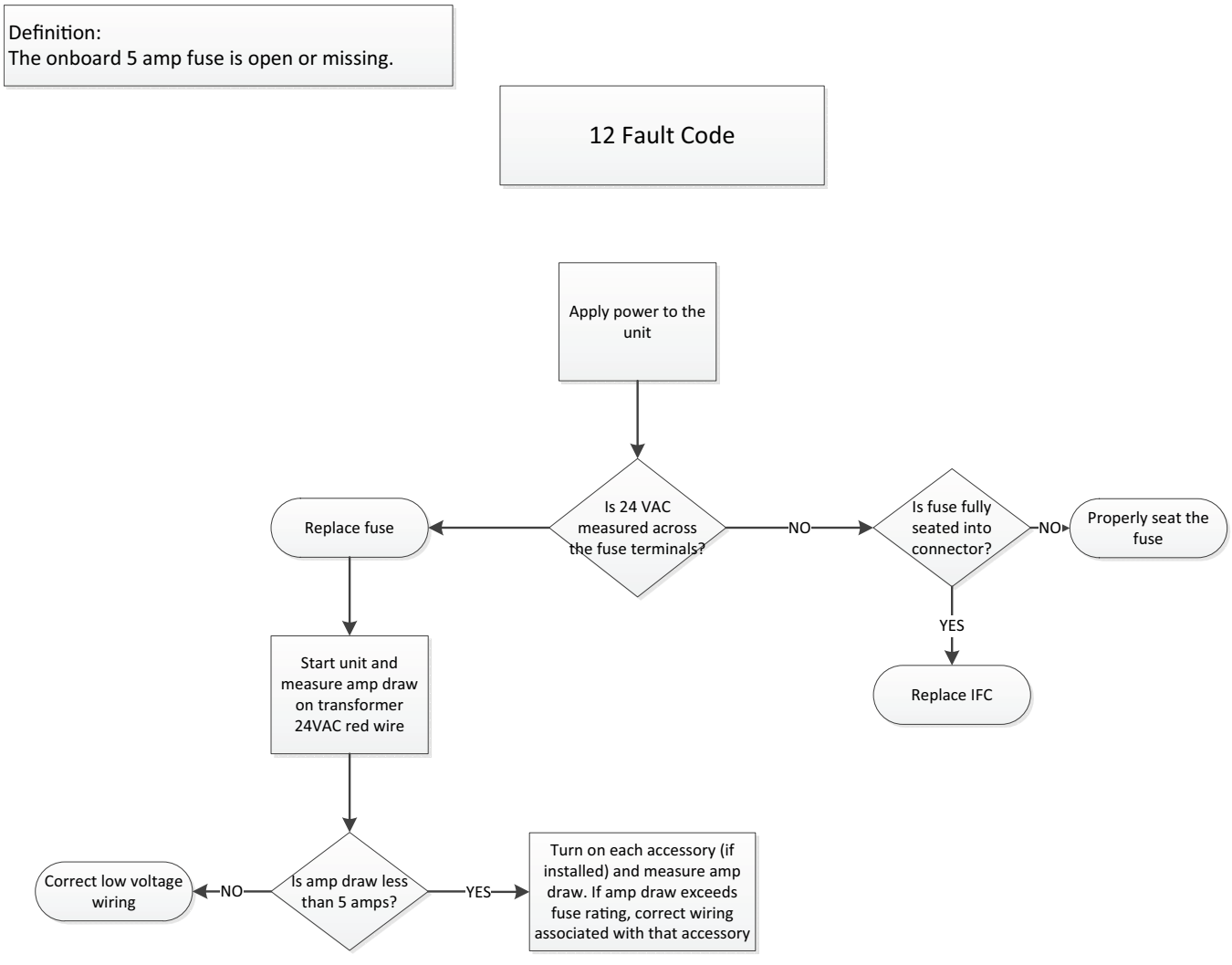




There are two flame sense pads located on the IFC, marked “FP”. To measure flame current, use a VOM set to DC volts. Flame current will vary depending on the type of meter used. Typical flame current ranges from 0.75 – 3.0 micro-amps (0.75 – 3.0 VDC)




Definition:
The IFC has detected that internal gas valve relays have failed.
11 Fault Code
Verify all wiring
Replace IFC


Definition:
The onboard 5 amp fuse is open or missing.
12 Fault Code
Apply power to the unit
Is 24 VAC measured across the fuse terminals?
NO
Is fuse fully seated into connector?
NO
Properly seat the fuse
YES
Replace IFC
Replace fuse
Start unit and measure amp draw on transformer 24VAC red wire
Is amp draw less than 5 amps?
NO
Correct low voltage wiring
YES
Turn on each accessory (if installed) and measure amp draw. If amp draw exceeds fuse rating, correct wiring associated with that accessory

Continuous FAN on this unit is limited to TAP 1 only. No field adjustment can be made. If troubleshooting other speed taps, use the method as outlined below using the voltages listed for the tap number being used

Constant Torque Motor Troubleshooting

Ensure power is applied to the unit and Seven Segment LED's are ON with no active error codes

Turn fan to ON at thermostat and verify that COF and TP1 alternately appear on the seven segment display

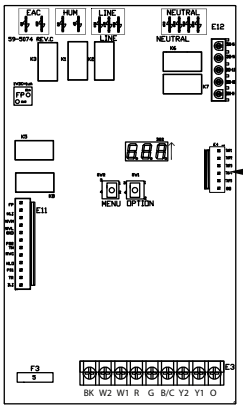
Does motor run?

YES → Motor & IFC are good

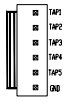
NO → Verify voltage(s) listed

If voltage is not present, remove 6 pin connector from IFC and re-check. If voltage is present, verify voltage at panel connectors and at motor. If voltage is present at the motor, replace motor

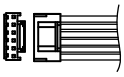
1. Remove the 6-pin low voltage connector from the IFC
2. Apply 24 VAC to Common tap (Blue) and any speed tap on the CTM motor 6-pin plug. The motor should run.



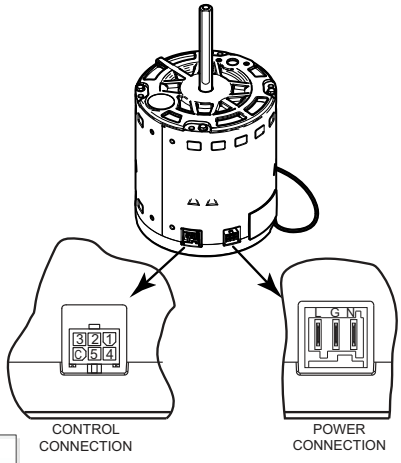
6 Pin CTM Connector



6-Pin low volltage CTM motor connector plug



6 Pin CTM Motor Connector
Tap 1 - Low Speed
Tap 2
Tap 3
Tap 4
Tap 5 - High Speed
Common



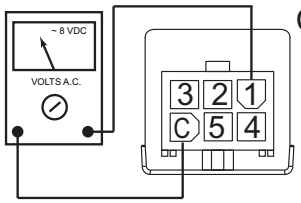
A801X CTM Output Voltage

RD/W	Tap 1
YL/W	Tap 2
BL/W	Tap 3
BK/W	Tap 4
OR/W	Tap 5
BLUE	24v C

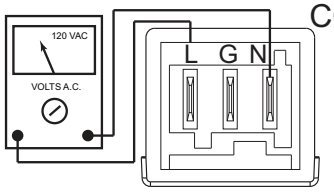
Tap 1	~ 8vdc	
Tap 2	~ 8vdc	
Tap 3	~ 18vdc	
Tap 4	~ 8vdc	
Tap 5	~ 18vdc	
Tap 6 (1+2)	~ 8vdc	~ 8vdc
Tap 7 (1+3)	~ 8vdc	~ 18vdc
Tap 8 (1+4)	~ 8vdc	~ 8vdc
Tap 9 (1+5)	~ 8vdc	~ 18vdc

All Voltages Reference Ground

CONTROL CONNECTION



POWER CONNECTION



Part List

• Igniter • Flame Sensor • In-shot Burner(s) • Gas Valve	• Inducer Assembly • Blower Motor • Blower Wheel • IFC (Integrated Furnace Control)	• Pressure Switch(es) • Main Thermal Limit • Roll-Out Switch(es) • Reverse Air Switch(es)

Notes

About Trane and American Standard Heating and Air Conditioning

Trane and American Standard create comfortable, energy efficient indoor environments for residential applications. For more information, please visit www.trane.com or www.americanstandardair.com.

The manufacturer has a policy of continuous data improvement and it reserves the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.

A801X-SF-3B-EN 03 May 2021
Supersedes A801X-SF-3A-EN (September 2020)

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