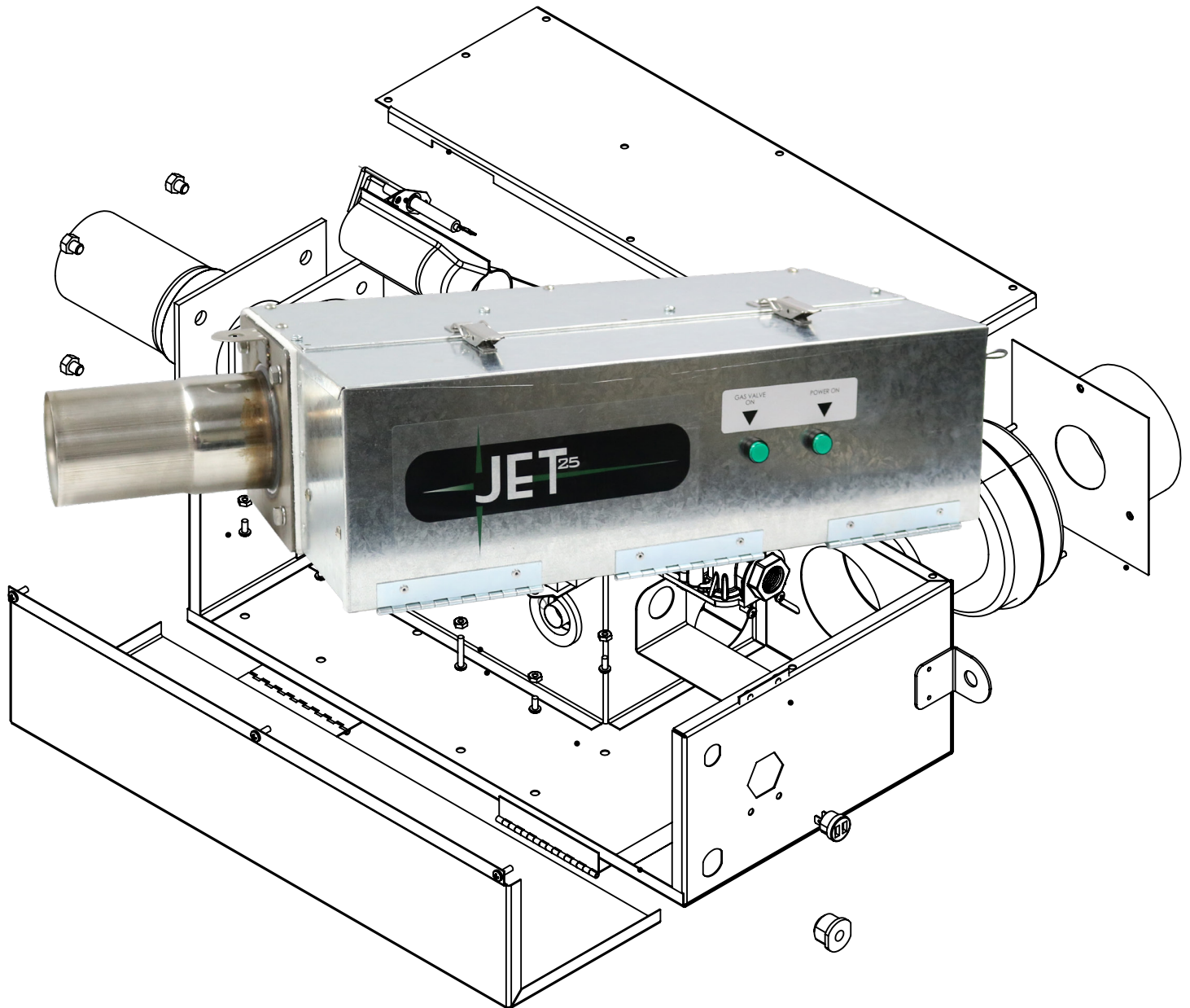
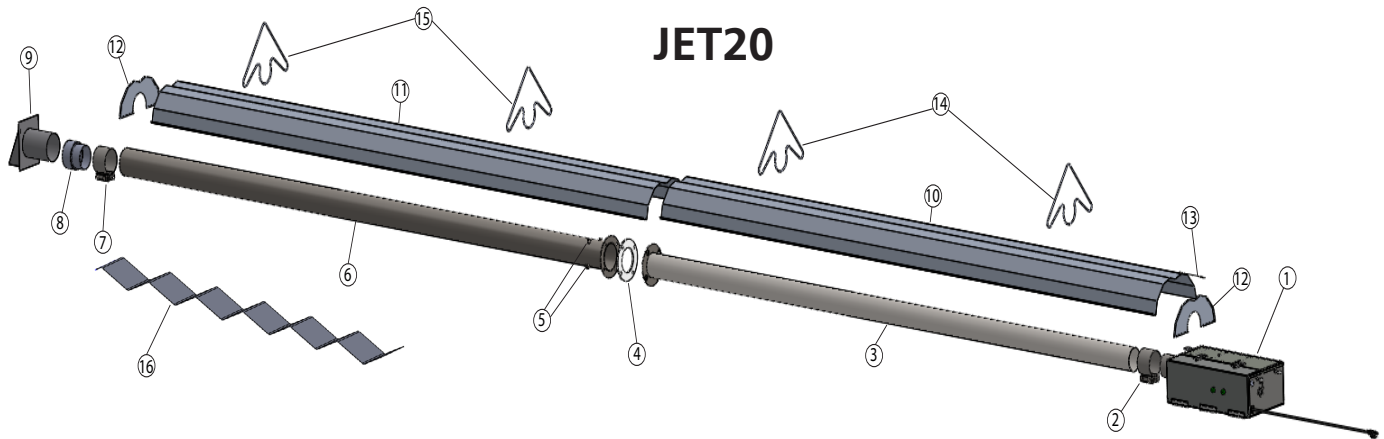


JET20 & JET25 Parts & Service Manual

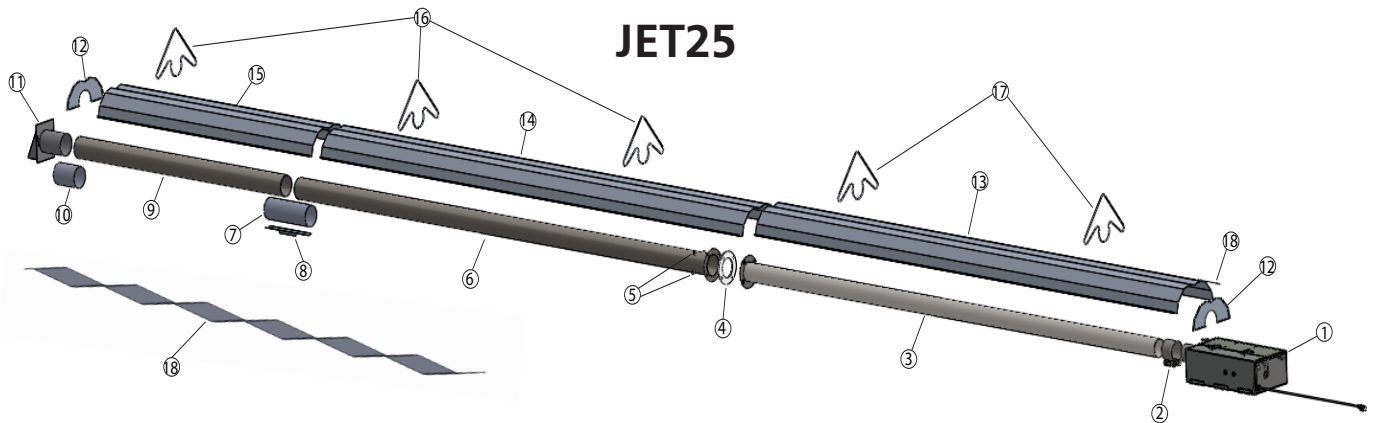


Parts List for Heatstar JET Tube Heaters



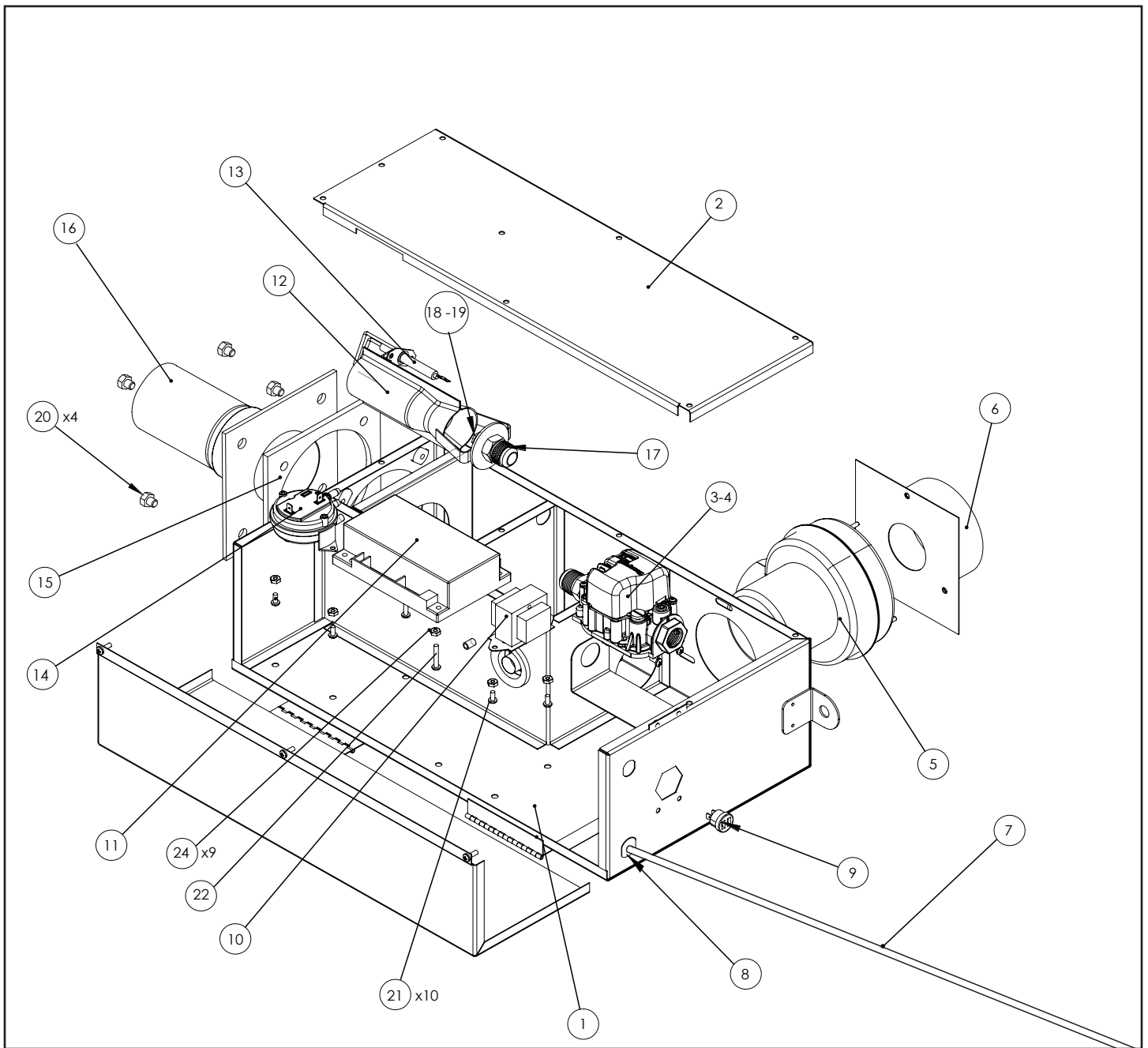
Item	Stock #	Description	QTY
1	F102080	JET 20 Burner Box - NG	1
	F102085	JET 20 Burner Box - LP	
2	02975	3" Tube Coupler	1
3	06454	3" Aluminized Tube	1
4	12394	Tube Flange Gasket	1
5	98014	3/8"-16 Bolts	4
6	06457	3.5" Hot Rolled Steel Tube	1
7	02976	3.5" Tube Coupler	1
8	14582	3.5"-4." Vent Cap Reducer	1

Item	Stock #	Description	QTY
9	19041	4" Vent Cap	1
10	00422	10' Reflector with Steel Wire	1
11	00418A	Standard 10' Reflector	1
12	00419	Reflector End Caps	2
13	19012	Steel Reflector Retention Wire (Included with item 10)	1
14	14572	3" Tube Hangers	2
15	14573	3.5" Tube Hangers	2
16	03444	7' Turbulator (Inside end of tube)	1



Item	Stock #	Description	QTY
1	F102090	JET 25 Burner Box - NG	1
	F102095	JET 25 Burner Box - LP	
2	02976	3.5" Tube Coupler	1
3	06455	3.5" Aluminized Tube w/ Flange	1
4	12396	Tube Flange Gasket	1
5	98014	3/8"-16 Bolts	4
6	06456	4" HRS Tube w/ Flange	1
7	14612	4" Tube Connection Coupler	1
8	14616	4" Tube Coupler Key	1
9	06453	5' Long 4" HRS Tube	1

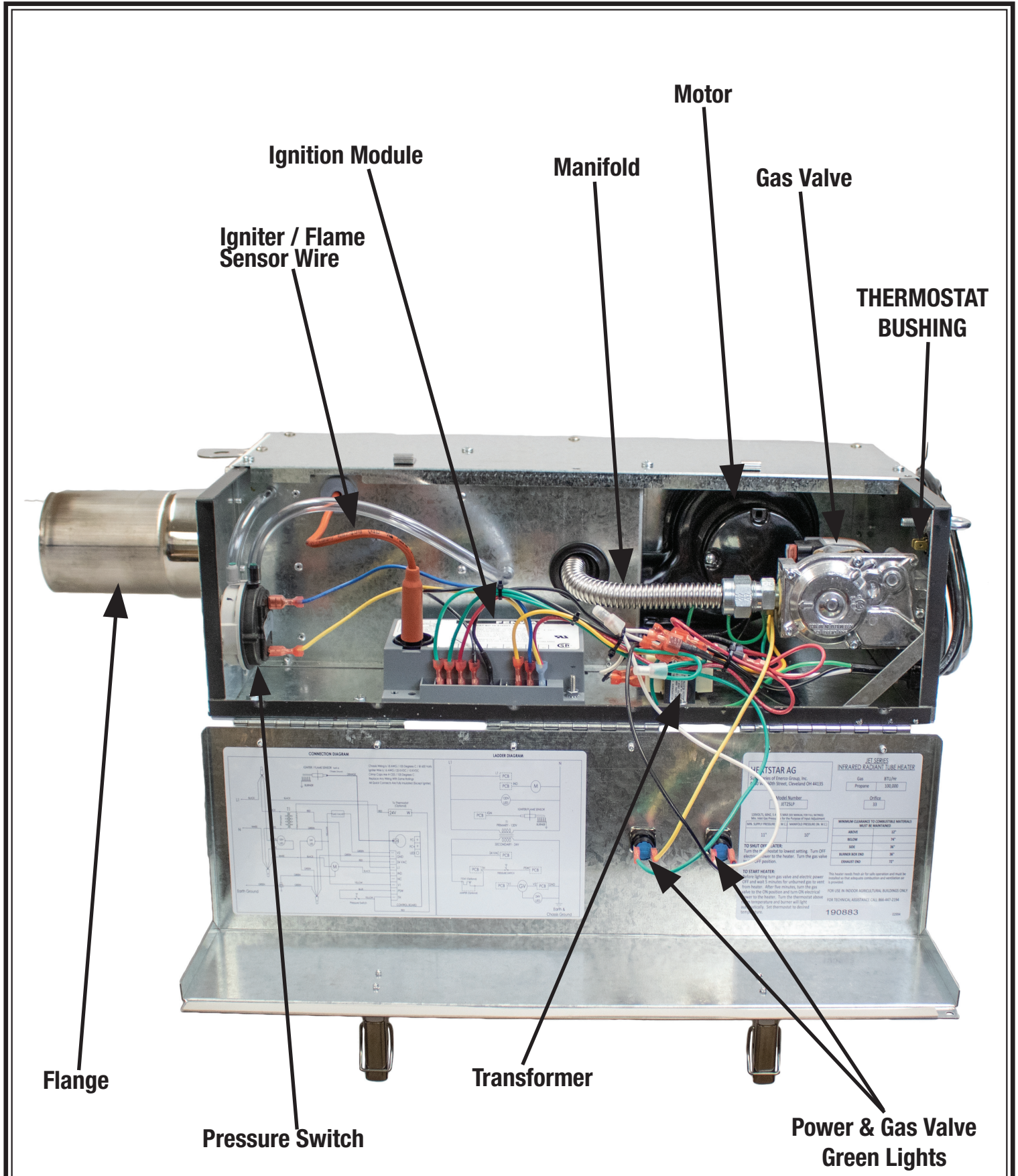
Item	Stock #	Description	QTY
10	19021	4" Vent Adapter	1
11	19041	4" Vent Cap	1
12	00419	Reflector End Caps	2
13	00422	10' Reflector with Steel Wire	1
14	00418A	Standard 10' Reflector	1
15	00417A	Standard 5' Reflector	1
16	14585P	4" Tube Hanger	3
17	14573	3.5" Tube Hanger	2
18	19012	Steel Reflector Retention Wire (Included with item 13)	1
19	03345	10' Turbulator (Inside end of tube)	1



JET 20/25 PARTS LIST

ITEM#	EGI#	DESCRIPTION	QTY
1	02999	ENCLOSURE, AG, TUBE, BOX BURNER	1
2	02963	COVER, AG, TUBE, BOX BURNER	1
3	00055	GAS VALVE NG	1
4	00056	GAS VALVE LP	1
5	07376	MOTOR	1
6	02968	VENT ADAPTER	1
7	02964	POWER CORD	1
8	60889	POWER CORD STRAIN RELIEF	1
9	02721	THERMOSTAT BUSHING	1
10	08364A	TRANSFORMER	1
11	02970	IGNITION MODULE	1
12	02973	BURNER ASSEMBLY	1
13	60729	IGNITER / FLAME SENSOR ELECTRODE	1
14A	02969	JET25 PRESSURE SWITCH	1
14B	02979	JET20 PRESSURE SWITCH	
15	12397	TUBE FLANGE GASKET	1

ITEM#	EGI#	DESCRIPTION	QTY
16A	02967	JET25 3.5" TUBE FLANGE	1
16B	02966	JET20 3" TUBE FLANGE	
17	02720	ORIFICE HOLDER FITTING	1
18A	05712	JET25 NG ORIFICE	1
18B	05718	JET20 NG ORIFICE	
19A	05733	JET25 LP ORIFICE	
19B	05737	JET20 LP ORIFICE	
20	98012	BOLT 5/16" - 18 x 1"	4
21	98902	SCREW #8-32 x 3/8"	10
22	98907	SCREW #8-32 x 1"	2
23	98901	SCREW #8-32 x 1/4"	4
24	98692	NUT #8-32	9
NS	60845	120V "POWER ON" LED LIGHT	1
NS	60846	24V "GAS VALVE ON" LED LIGHT	1
NS	02987	PRESSURE SWITCH TUBE - LONG 10"	1
NS	02933	PRESSURE SWITCH TUBE - SHORT 5"	1



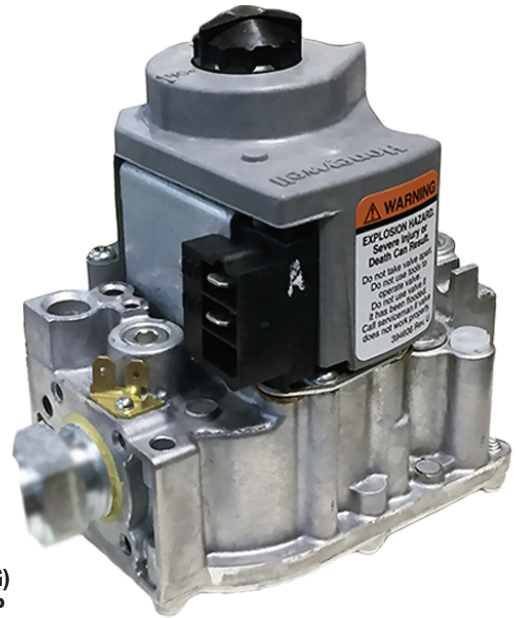
Electrical	Combustion Chamber/ Heat Exchanger	Gas Connection
120 volt-60 Hz Starting Current 5.0 amps Running current 1.0 amps	JET25: 3.5" Aluminized 16 Ga. (1st 10')- 4"HRS 16 Ga. (Last 15') JET20: 3" Aluminized 16 Ga. (1st 10')-3.5" HRS 16 Ga. (last 10')	1/2" NPT

Burner Box: Galvanized Steel Coating

Gas Valve

00055-(NG) Natural Gas Valve

00056-(LP) Liquid Propane Gas Valve

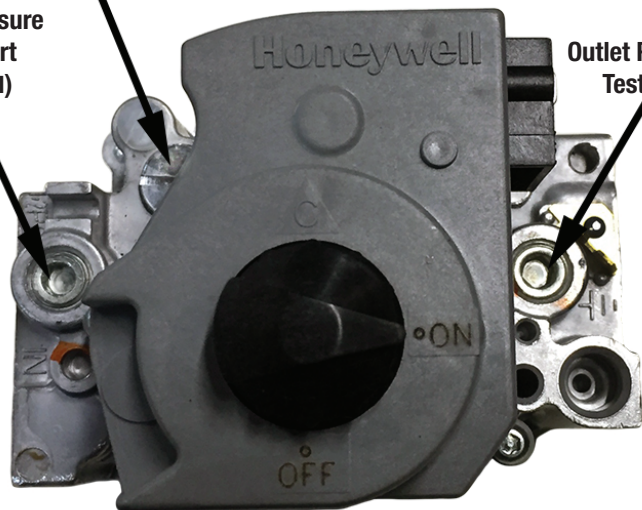


Manifold Pressure Adjustment
(Silver Cap denotes-NG)
(Black Cap denotes-LP)



Inlet Pressure Test Port
(1/2" PSI)

Outlet Pressure Test Port



TOP VIEW GAS VALVE

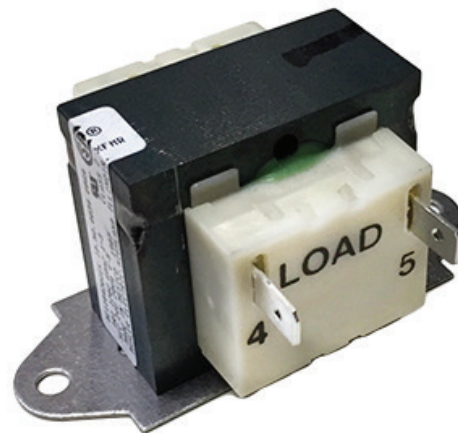
Gas Valve Sticker Information

VR8205M8854
REG 3.5 ADJ 3-5 Range
24V 50/60 HZ TOT Current .5A
USE CLASS 2 TRANSFORMER
1913D2C3
60844604
00055

Transformer

08364-Transformer

(Used for JET20 & JET25)



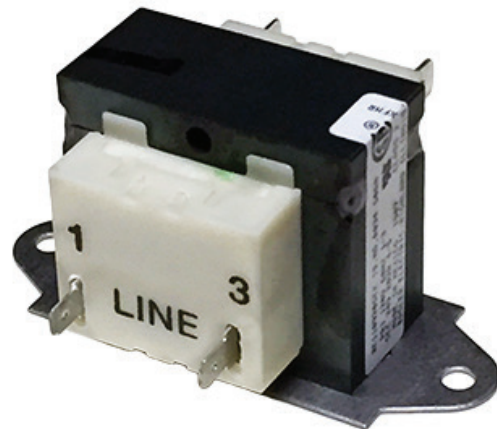
BE110920GEK ID. NO. 0034 G06a

PRI 120v 60HZ 1-3

SEC 24V 20VA 4-5

MADE IN MEXICO 1907 CLASS 2 XFMR

BASLER ELECTRIC, HIGHLAND ILLINOIS



Ignition Module

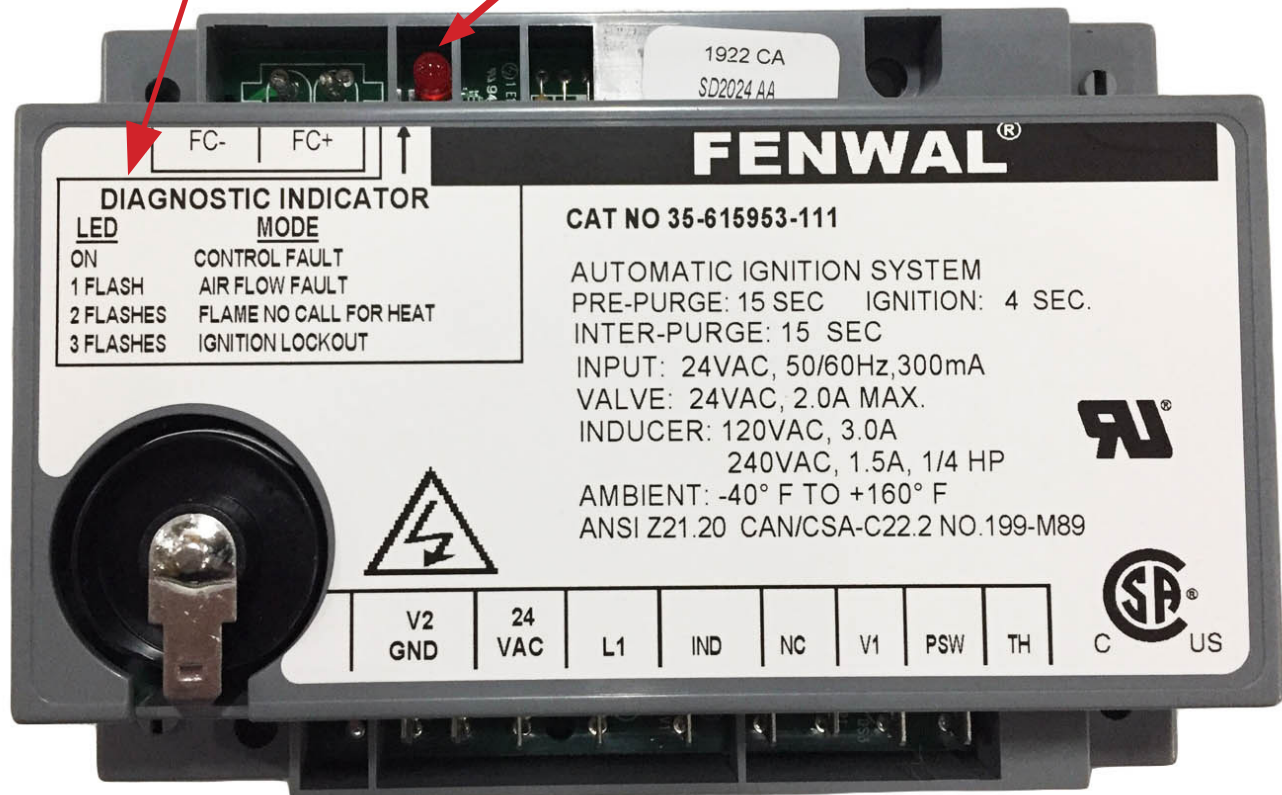
02970-Ignition Module (Fenwal)

-15 sec. pre-purge cycle/15 sec. inter-purge
-4 sec. Ignition

Diagnostic Indicator

LED	MODE
ON	Control Fault
1 Flash	Air Flow Fault
2 Flashes	Flame Call For Heat
3 Flashes	Ignition Lockout

LED(red) Diagnostic Indicator



Pressure Switch

02969-Pressure Switch(JET25)

(.22" W.C-Water Column)



02979-Pressure Switch (JET20)

(0.30" W.C.)

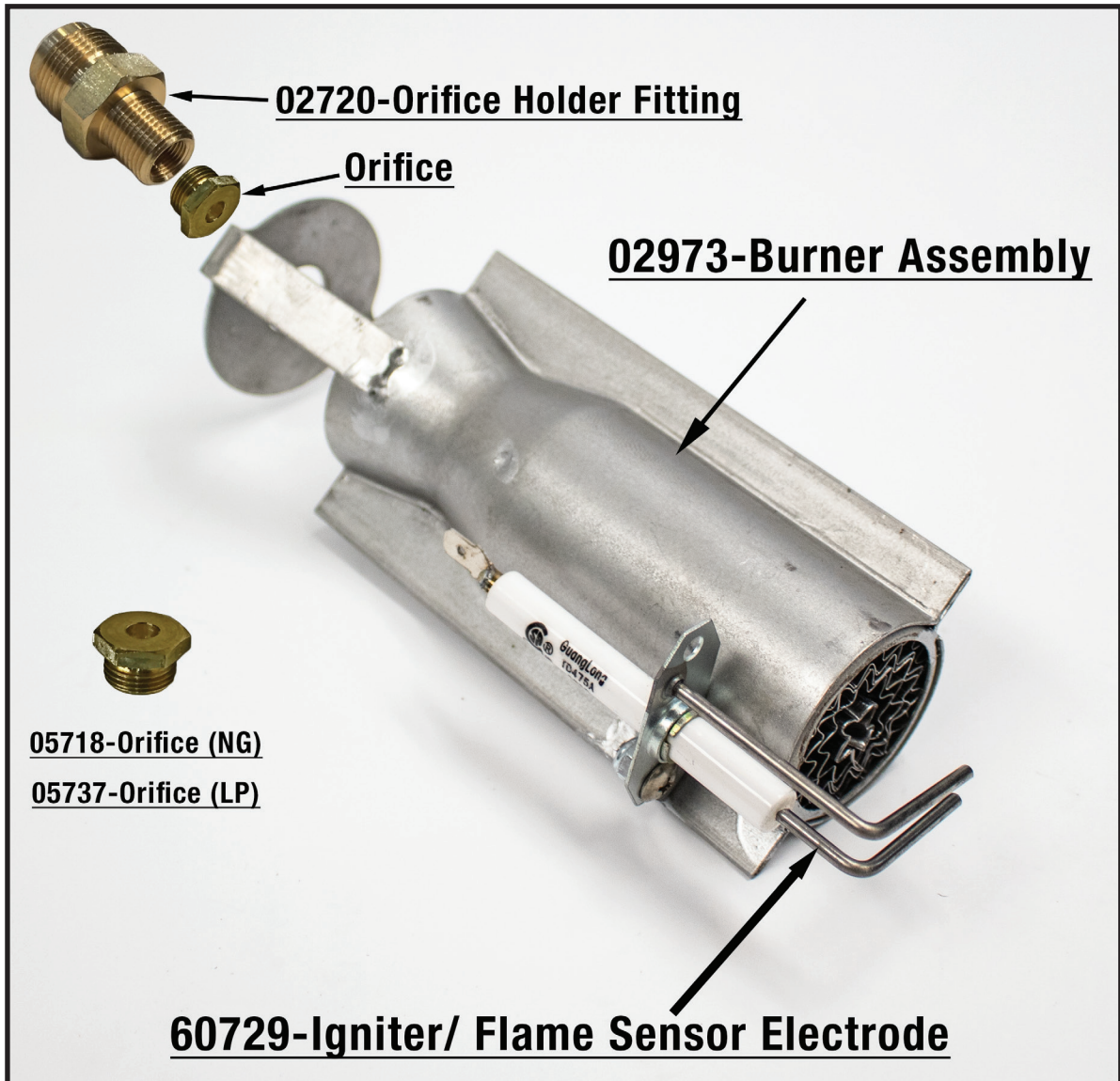


02933-Clear Tube(5" Long) - 1/4"ID x 3/8"OD



02987-Clear Tube(12" Long) - 1/4"ID x 3/8"OD

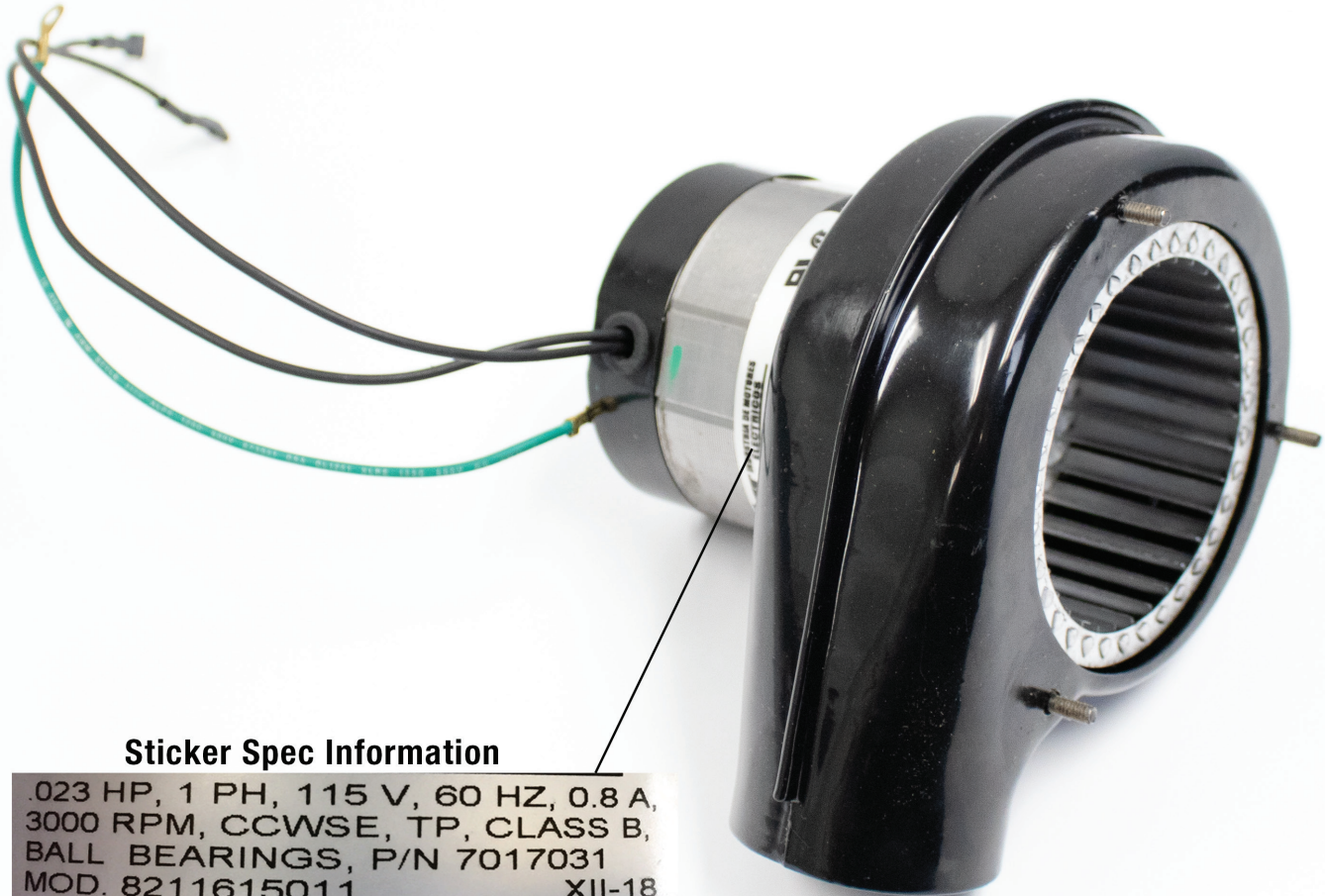
Burner Assembly



Blower Motor Assembly

07376 - Blower Motor

12395 - Blower Motor Gasket



Sticker Spec Information

.023 HP, 1 PH, 115 V, 60 HZ, 0.8 A,
3000 RPM, CCWSE, TP, CLASS B,
BALL BEARINGS, P/N 7017031
MOD. 8211615011 XII-18

.023 HP, 1PH, 115V, 60HZ, 0.8A,
3000 RPM, CCWSE, TP, CLASS B,
BALL BEARINGS, P/N 7017031
MOD. 8211615011 XII-18

Burner Flange

02966-Burner Flange 3"-JET20

02967-Burner Flange 3.5"-JET25

12397-Tube Flange Gasket

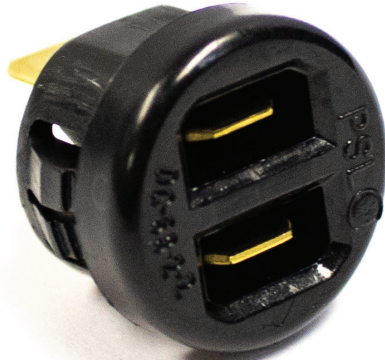


(4)- 9/16 bolts to screw into burner box



Thermostat Terminal

02721-Thermostat Bushing



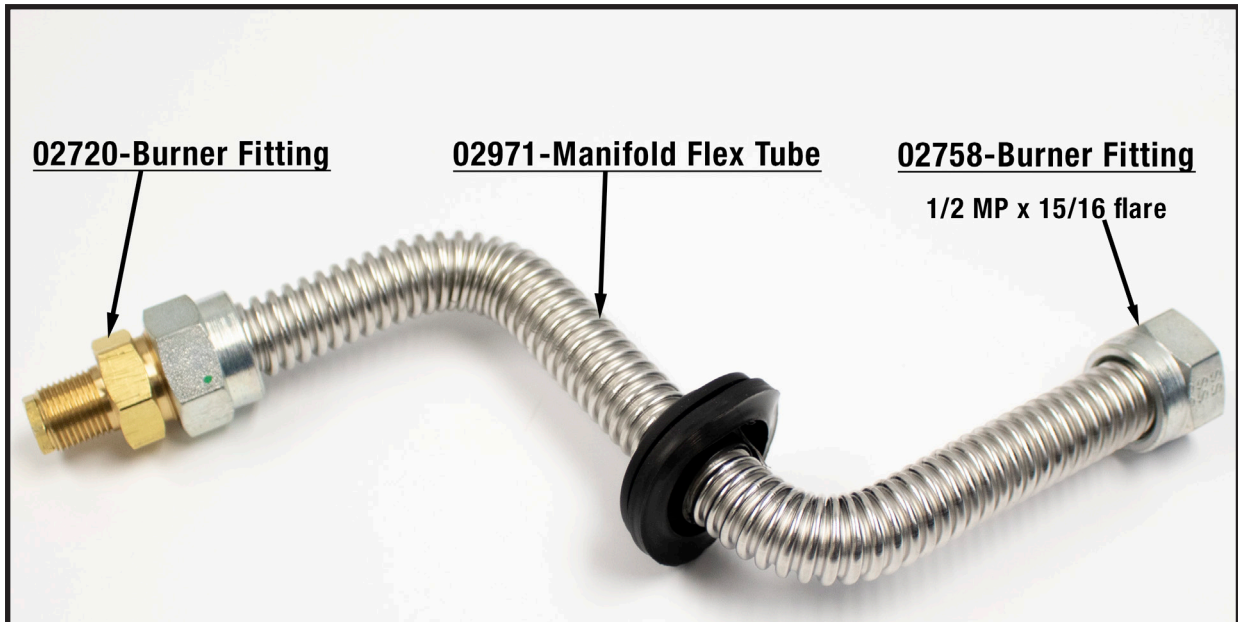
Green Lights

60845-Power Light Indicator=120V

60846-Gas Valve Light Indicator=24V

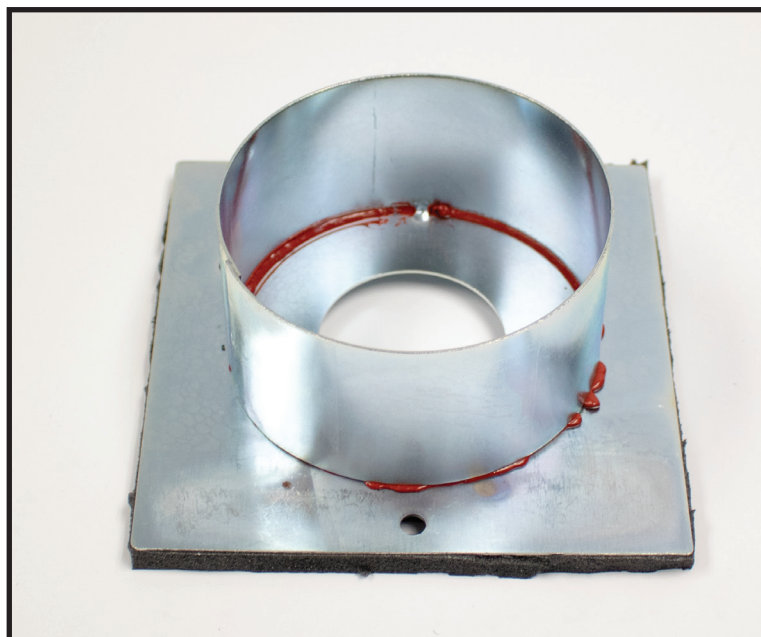


Manifold Assembly



Vent Adapter

02968-Vent Adapter



3-Nuts used to attach to the studs on the motor that slide through burner box

Installion Kit

• 36" Long S/S Connector

• Pipe Sealant

• 1/2" x 4" Nipple (QTY- 2)

1/2" Cap •

1/2" Tee •

1/2" Shutoff Valve •



19061-Included in Tube Sets

- 36" Long S/S Connector w/ 1/2" Male Pipe Thread Fitting
- Pipe Sealant
- 1/2" Shutoff Valve
- 1/2" Cap
- 1/2" x 4" Nipple (QTY- 2)
- 1/2" Tee

Diagnostic Indicator

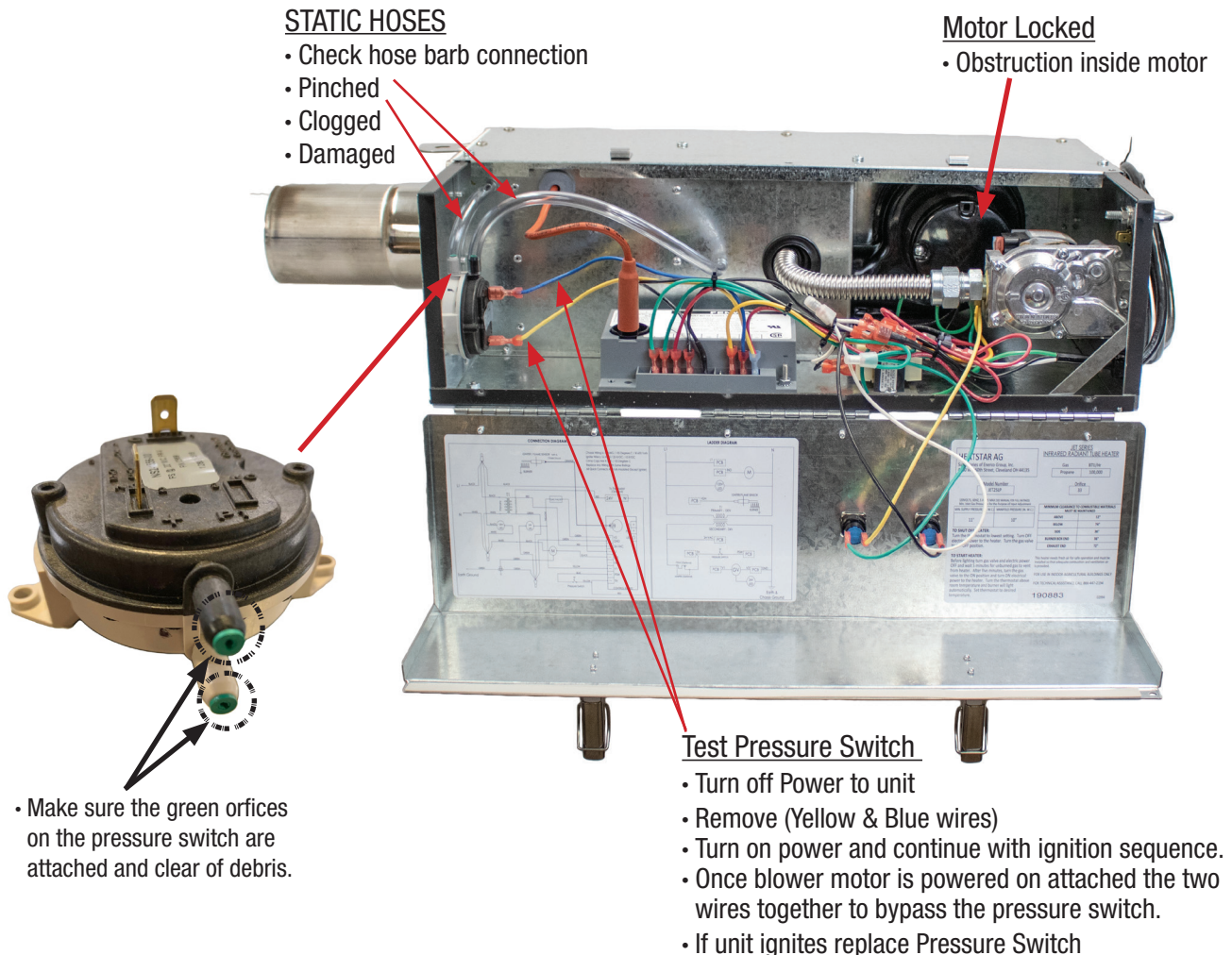
During a fault condition the LED will flash on 1/4 second and off for 1/4 second as needed to indicate the fault code. The code will repeat every 3 seconds. Removing power from the control will clear the fault code and repeat ignition sequence. If the LED flashes the fault code again proceed with diagnostic procedures.

LED (ON-INTERNAL CONTROL FAILURE)

If the control detects a software or hardware error, all outputs are turned off and the LED display is steady ON condition. If this condition persists after an attempt to restart, then the control module must be replaced.

LED (1 FLASH-AIRFLOW FAULT)

- Check the air intake going into the ceiling does not have any obstruction.



LED (2 FLASH-FLAME CALL FOR HEAT)

- Should the main burner fail to light or the flame is not detected during ignition sequence the gas valve is de-energized and flame sense circuit will detect it and turn off blower following the optional post purge period.
- Check electrode position (Refer to Burner Assembly/Electrode on the following page)
- Check green ground wire on gas valve

Diagnostic Indicator

LED (3 FLASH-IGNITION LOCKOUT)

The Ignition Module does not sense a flame during the ignition period.

- Check the ground/polarity of incoming wiring

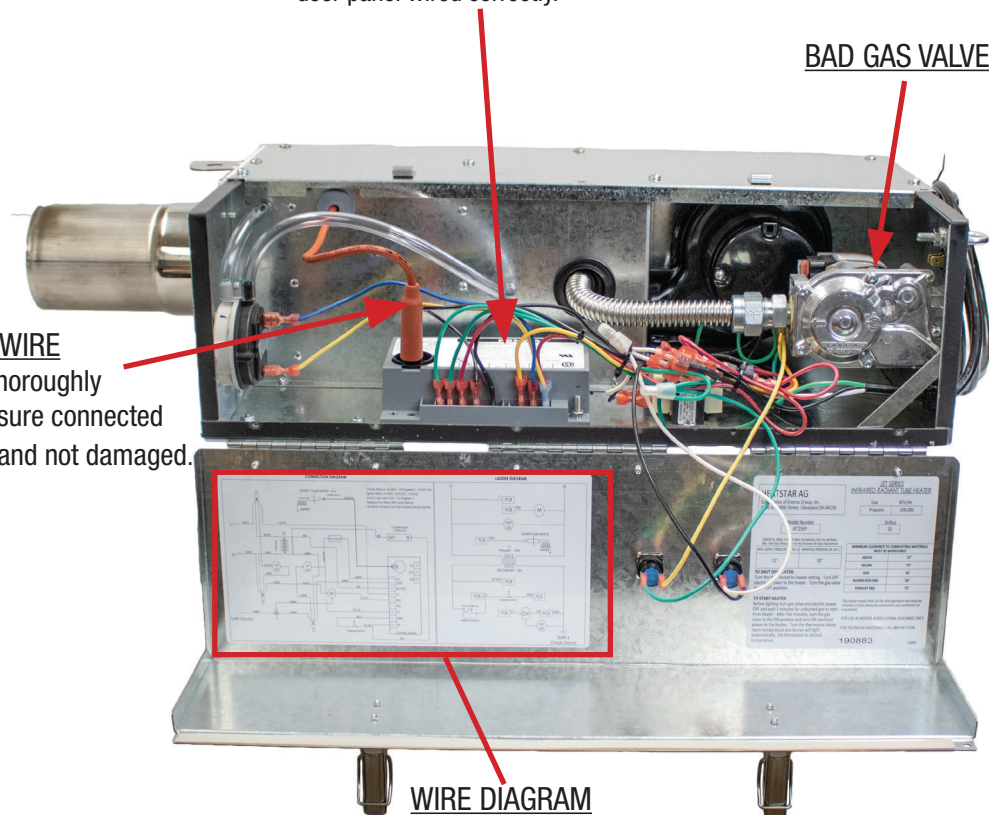
IGNITION MODULE (BOARD)

- Inspect wire connections are tightly connected not loose and check with with wire diagram on door panel wired correctly.

BAD GAS VALVE- (Replace)

IGNITION WIRE

- Inspect thoroughly to make sure connected properly and not damaged.



WIRE DIAGRAM

Burner Assembly / Electrode

CLOGGED BURNER ASSEMBLY

Use compress air to blowout burner and make sure burner orifice does not have any debris.

IGNITOR NOT ARCING

- Inspect Ignitor to make sure wire probes are 1/8" apart.
 - If too close together may create too small of a spark to ignite.
 - If too far may create an weak arc not strong enough to ignite.
- Clean Wire igniter probes with steel wool



Common Install Miscues



- No Gas-Incorrect regulated pressure
- Unit operates on low pressure:
NG: 4.6"WC -14.0" WC
LP: 11"WC-14" W.C.
- Clogged gas line debris

- *Do not puncture a hole in the Air Intake if water has gathered to drain the water. Remove the the air intake to drain the water*

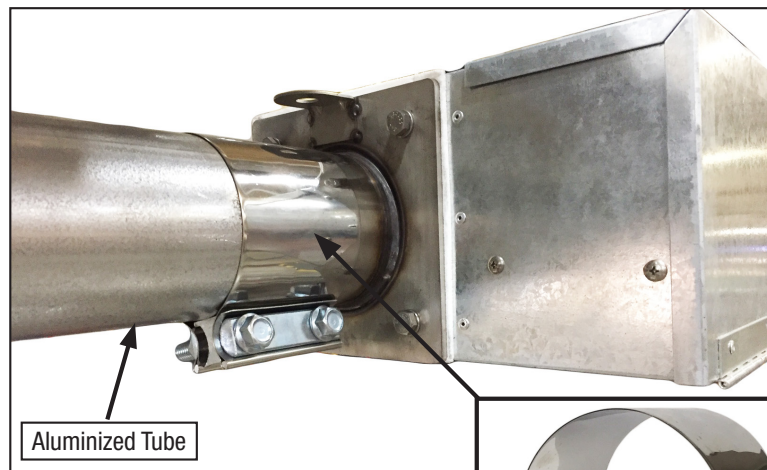
- AIR INTAKE** Blocked from vertical installation into area inwhich insulation or debris clogs the air intake.

** If the motor starts and no opening of gas valve or spark ignition is heard typically it is an airflow fault, it is often a blocked air intake up in the attic area.**

Tube Connection

*Temperature above the tubes can reach 112°-118°

(1st Tube)

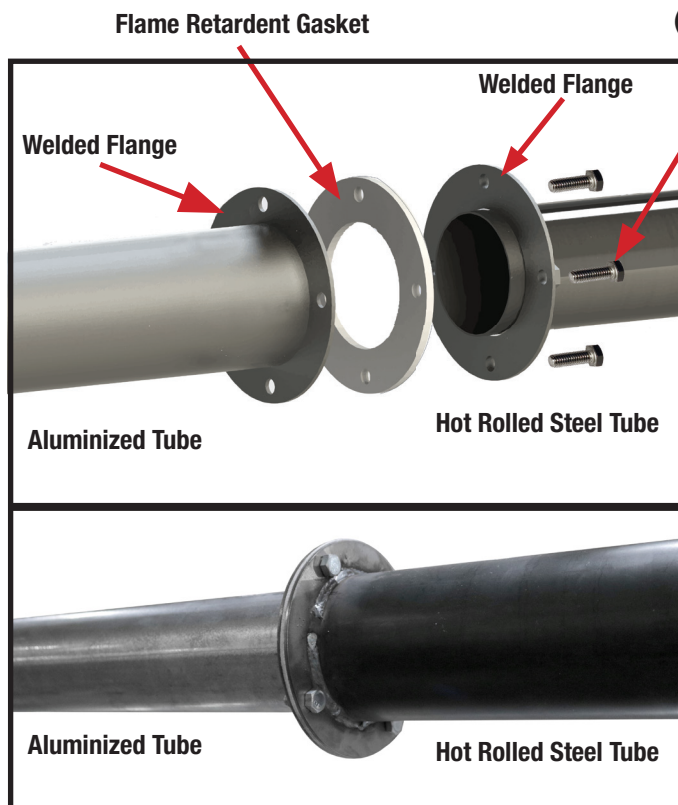


Attaching first tube to burner box, slide Aluminized tube onto the burner box flange then attach the tube couple, tighten with the provided 9/16 bolts and nuts.



Tube Clamp

(2nd Tube)



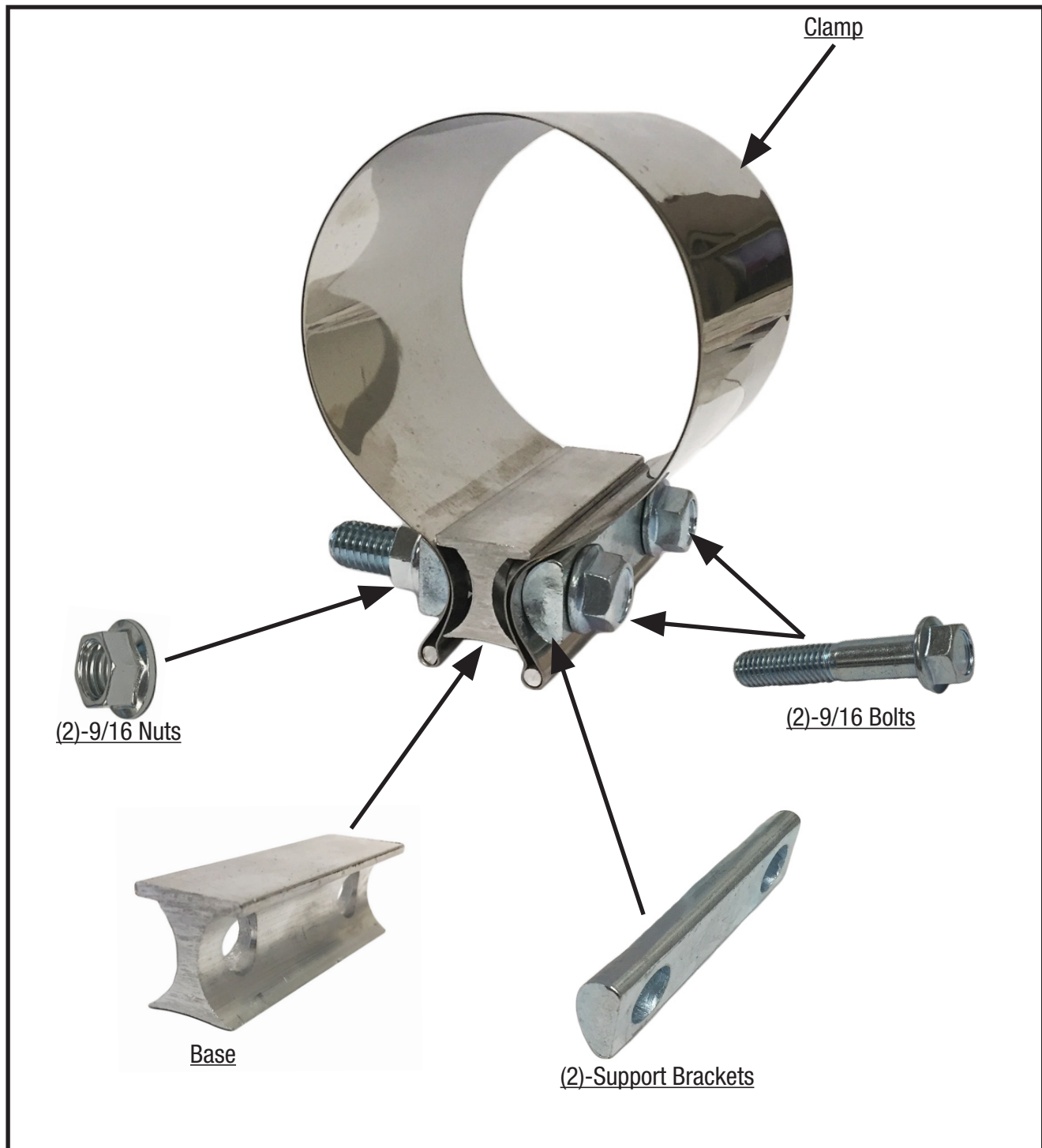
Attaching the first aluminized tube to the second hot rolled steel tube, align the flame retardent gasket between the welded flange and tighten together screwing the 9/16 bolts through the welded flange on both tubes.

JET20 - 3" Aluminized first ten foot length ; 3.5" Hot Rolled Steel second ten foot length.
JET25 - 3.5" Aluminized first ten foot length ; 4" Hot Rolled Steel next fifteen foot length.

Tube Clamp

02975 - (3" Clamp-JET20)

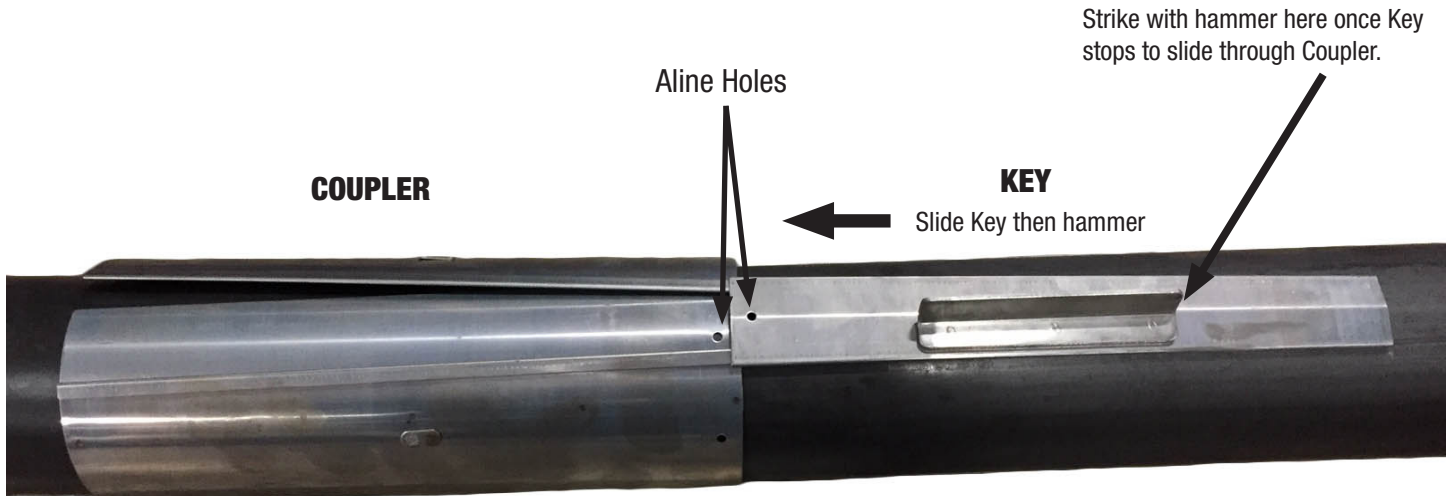
02976 - (3.5" Clamp-JET25)



Tube Connection

(3rd Tube)-JET25 HEATER ONLY

To attached the last 5' section and 10' section of hot rolled steel tubes for the JET25 model use the provided COUPLER & KEY, aline the hole on the KEY with the hole on the COUPLER. Once the holes are alined start by sliding KEY through the COUPLER until the KEY stops sliding then finish with hammering KEY through the COUPLER until tighten.



Hot Rolled Steel Tube

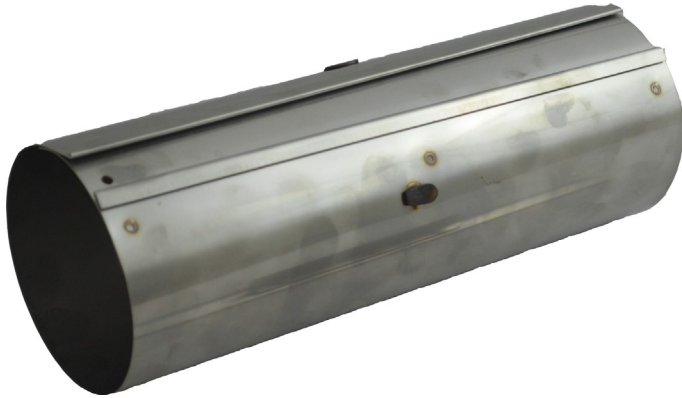
COUPLER and Key

Hot Rolled Steel Tube

COUPLER and KEY properly tighten the two hot rolled steel tube sections.

Coupler & Key

USED ONLY FOR JET25



14612-COUPLER



14616-KEY

Tube Hanger



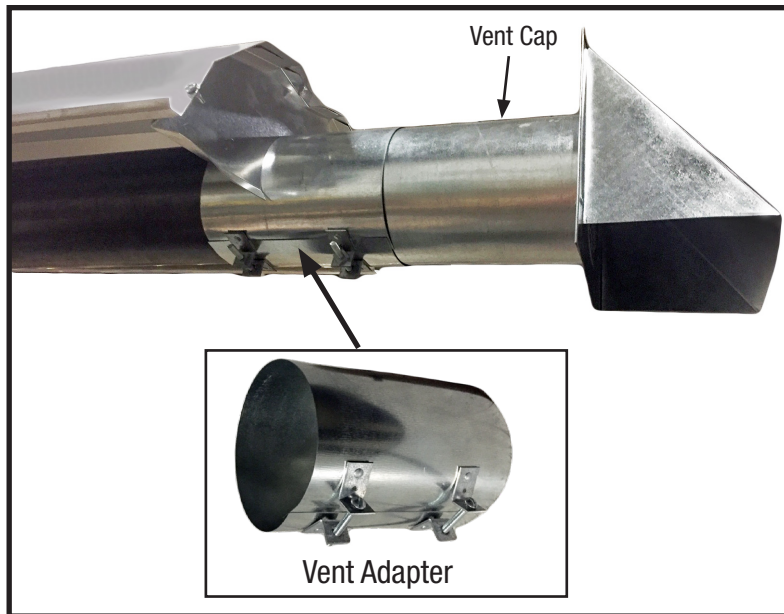
14572-Hanger 3" (JET20)

14573-Hanger 3.5" (JET20/JET25)

14585-Hanger 4" (JET25)

(2) Chrome plated Hangers for every 10' section of tube

Vent Cap

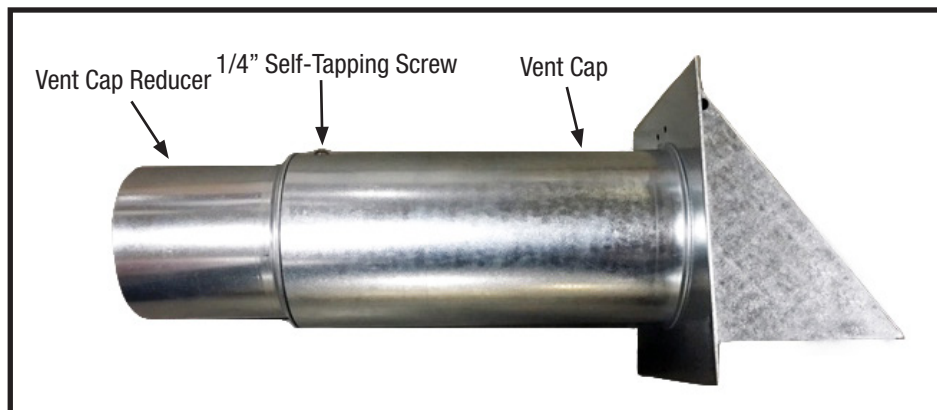


JET25:

Attach the Cap to the last tube which is hot rolled steel using the Vent coupler, using the provided screw and nuts. Holding the screw in place with a flat head screwdriver, while screwing into the nut.

Vent Cap-19041

Vent Adapter-19021



JET20:

Attach the Vent Cap to the Vent Adapter (4" to 3.5") using a self tapping stainless screw then slide the Vent Cap to the last tube using the Vent Adapter . Slide the Vent Cap w/ Vent Adapter over the last tube then attach using the clamp.



Vent Cap-19041

Vent Cap Reducer-14582