ACCESSORY KIT INSTALLATION MANUAL

GAS VALVE & PRESSURE TEST KIT (S1-1PK0601 & S1-1PK0602)

FOR USE WITH MODELS: ALL SINGLE STAGE 40” & 45” FURNACES

GENERAL INFORMATION

This kit is used to test gas valves and pressure switches on Residential & Commerical applications.

CONTENTS

These kits consists of:

Qty.	1PK0601	Qty.	1PK0602
1 each	Case Analyzer	1 each	Case Analyzer
1 each	Installation Manual	1 each	Installation Manual
1 each	Pressure Tap Fitting	1 each	Pressure Tap Fitting
1 each	Silicon Tube	1 each	Silicon Tube
1 each	Reducer Connector	1 each	Reducer Connector
2 each	1/8” Tee, Barbed	2 each	1/8” Tee, Barbed
2 ft.	Tubing	2 ft.	Tubing
		1 each	Manometer, Dwyer
		1 each	Service Wrench w/ Adapter
		1 each	Allen Wrench, 3/16”
		1 each	Allen Wrench, 3/32”

CHECKING GAS VALVE PRESSURES

WHITE RODGERS 36E SERIES VALVES

Inlet / Supply

1. Turn off gas at external manual shutoff valve. See Figure 1.

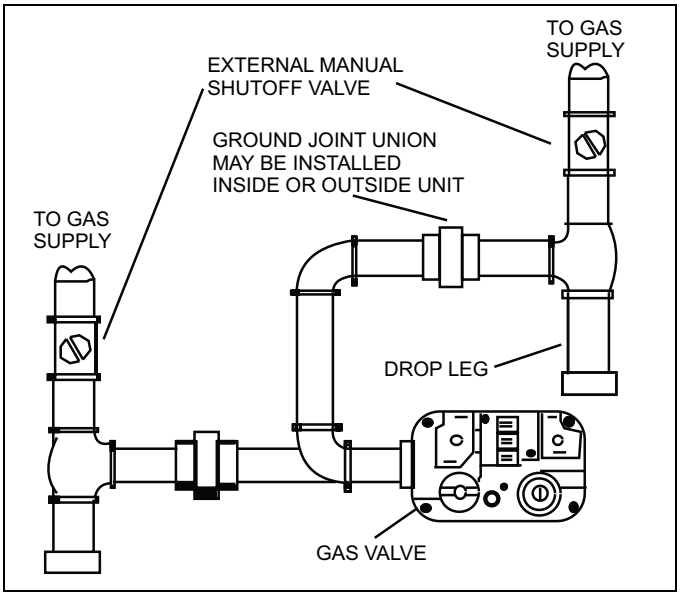

FIGURE 1: Gas Piping

2. Remove 1/8” test plug on inlet side of gas valve and install tubing adapter. See Figure 2.

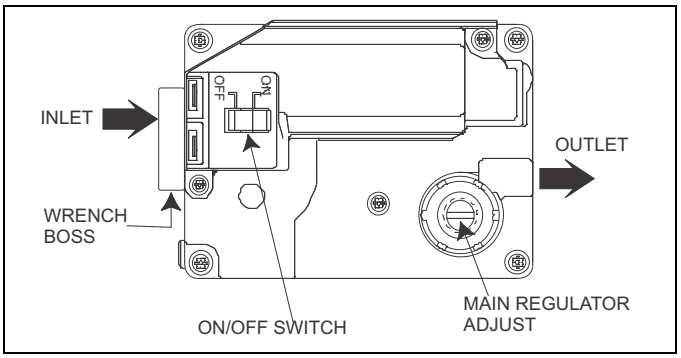

FIGURE 2: 36 E Gas Valve

3. Connect the positive side of manometer to adapter.
4. Turn on shutoff valve and check for proper pressure range. See Table 1.
5. Turn off gas supply, remove adapter, reinstall plug, turn on gas and check for gas leakage.

INLET GAS PRESSURE RANGE		
	Natural Gas	Propane (LP)
Minimum	4.5 In. W.C.	11 In. W.C.
Maximum	10.5 In. W.C.	13.0 In. W.C.

Outlet / Manifold

1. Turn off gas at external shutoff valve.
2. Remove 1/8” plug on outlet side of gas valve and install tubing adapter.
3. Connect the positive side of manometer to adapter.
4. Turn on gas and electrical power to furnace, set thermostat to a setpoint above indoor temperature and ensure unit lights properly.

NOTICE

For 90% sealed combustion unit. Read the gas pressure with the burner box cover in place. Disconnect the pressure reference hose from the side of the burner box. Using the tee fitting and a short piece of hose, connect the negative side of the manometer to the burner box pressure reference port. See Figure 3.

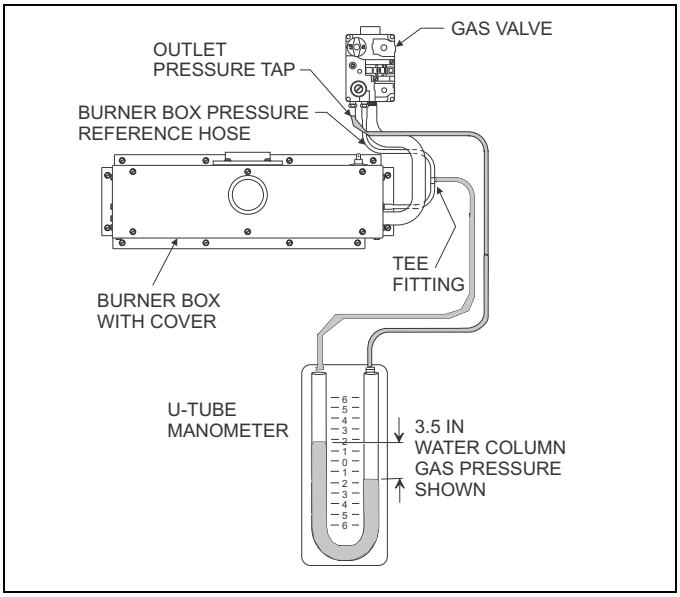

FIGURE 3: 90% Manifold Pressure

NOTICE

For 2 Stage Units. Check and adjust at high fire, W2 first and then low fire W1. See Table 2.

5. Check for proper pressure range with other nearby gas appliance operating.
6. If adjustment is necessary, set to the specifications below, after adjustment, shut down unit, replace plug, restart unit and check for gas leakage. See Figure 4.

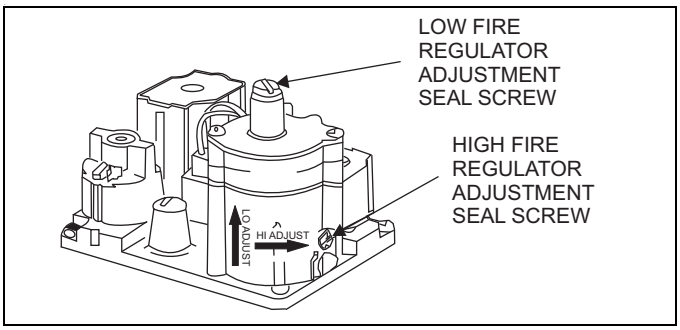

FIGURE 4: 2 Stage Valve Top

OUTLET / MANIFOLD PRESSURES				
Single Stage-W High Fire-W2	Natural Gas	3.5 W.C.	LP Gas	10 W.C.
Low Fire-W1		1.6 W.C.		4 W.C.

Reset thermostat back to homeowner's preference.

WARNING

An overpressure protection device, such as a pressure regulator which conforms to the National Fuel Gas Code, ANSI Z233.1 (U.S.) or Can-B149.1 or .2 (Canada) and acts to limit the downstream pressure to a value that does not exceed 0.5 PSI (14" w.c), must be installed in the gas piping system upstream of the furnace. Failure to do so may result in a fire or explosion or cause damage to the furnace or some of its components.

WHITE RODGERS 36G & 36J SERIES VALVES

Inlet / Supply

1. Turn off gas at external shutoff valve.
2. Loosen the setscrew inside the inlet test port housing with a 3/32nd hex head wrench. Do Not Remove. See Figure 5.

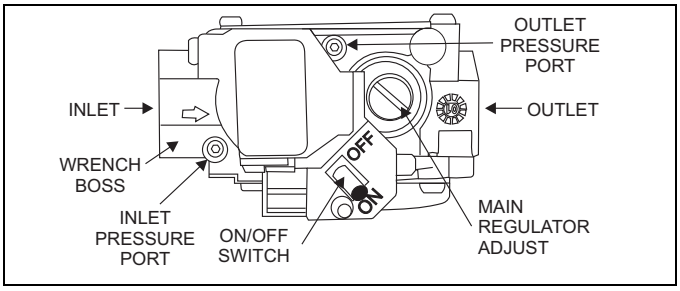

FIGURE 5: 36 G & 36J Gas Valve

3. Place 5/16" tubing over the test port housing. See Figure 6.

FIGURE 6: Tube Over Inlet Test Port Housing

4. Connect to the positive side of the manometer.
5. Turn on shutoff valve and check for proper pressure range. See Table 3.
6. Turn off gas safety at external shutoff valve.
7. Tighten test port setscrew.

INLET GAS PRESSURE RANGE		
	Natural Gas	Propane (LP)
Minimum	4.5 In. W.C.	11 In. W.C.
Maximum	10.5 In. W.C.	13.0 In. W.C.

Outlet / Manifold

1. Loosen the setscrew inside the outlet test port housing. Do Not Remove.
2. Place tubing over the test port housing. See Figure 7.

FIGURE 7: Tube Over Manifold Test Port Housing

3. Connect to the positive side of the manometer.
4. Turn on gas and electrical power to furnace, set thermostat to a setpoint above indoor temperature and ensure unit lights properly.

NOTICE

For 90% sealed combustion unit. Read the gas pressure with the burner box cover in place. Disconnect the pressure reference hose from the side of the burner box. Using the tee fitting and a short piece of hose, connect the negative side of the manometer to the burner box pressure reference port. See Figure 8.

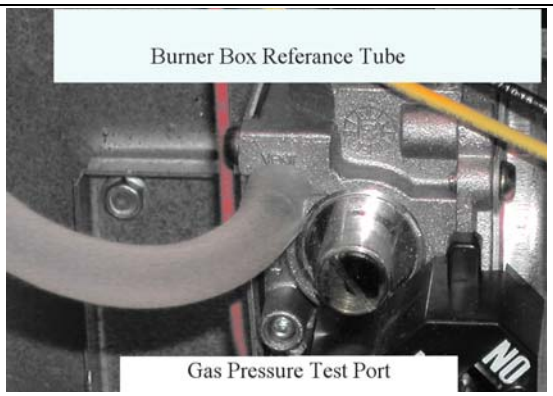

FIGURE 8: 90% Burner Box Re Tube

5. Check for proper pressure range with other nearby gas appliance operating. See Table 4.
6. If adjustment is necessary, set to the specifications below, after adjustment, shut down unit. Tighten test port set-screw. Restart unit and check for gas leakage.

OUTLET / MANIFOLD PRESSURES			
Natural Gas	3.5 W.C.	LP Gas	10 W.C.

Reset thermostat back to homeowner's preference.

⚠ CAUTION

Never apply a pipe wrench to the body of the combustion automatic gas valve. A wrench must be placed on the projection or wrench boss of the valve when installing piping to it.

NOTICE

Always check operation before leaving job.

CHECKING PRESSURE SWITCH OPERATION

Disconnect the pressure hose from the side of the pressure switch. Using the tee fitting and a short piece of hose, connect the negative side of the manometer to the pressure switch. Turn on gas and electrical power to furnace, set thermostat to a set-point above indoor temperature and ensure unit lights properly.

With draft inducer motor running, check pressure. See Figure 9.

FIGURE 9: Single Port Pressure Switch

If pressure is below setting on switch, (small sticker on switch) check motor, wheel and vent pipe(s) for restriction. If a 90% furnace, check condensate trap for proper drainage.

If pressure is above setting on switch and switch is not closing, replace switch.

NOTICE

For two port or multiple switches connect negative side same as above with other tee of manometer to other hose pressure reference tubing. See Figure 10.

FIGURE 10: Dual Port Pressure Switch

035-18780-001-B-0610
Supersedes: 035-18780-001 Rev. A (0803)

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