



IMPORTANT FOR FUTURE REFERENCE

Please complete this information and retain these instructions for the life of the equipment:

Model #: _____

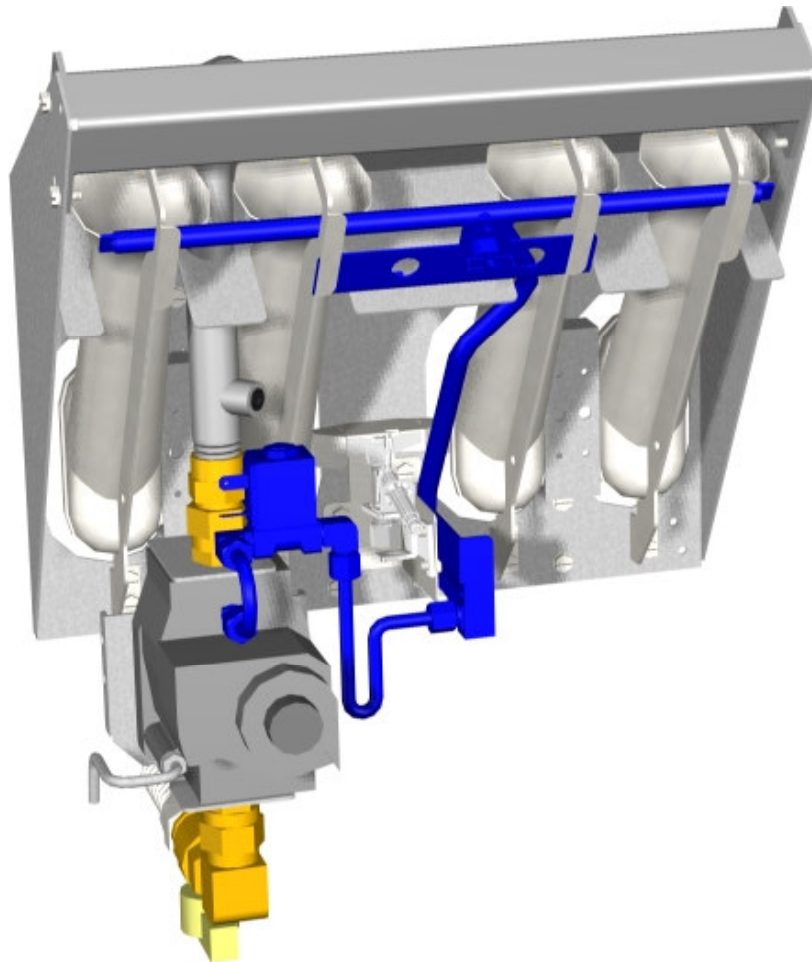
Serial #: _____

Date Upgraded: _____

Technician: _____

ENGLISH

Installation Instructions for the PITCO Self-Cleaning Burner System



L80-029 Rev 5 10/07

RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE

WARNING

The power supply to the appliance **MUST** be disconnected before performing this procedure.

WARNING

Ensure that the gas supply to this appliance is turned off before performing this procedure.

WARNING

Use only parts supplied with this kit. Use of any parts other than those supplied with this kit will void the warranty and could cause unsafe conditions or improper operation of your appliance.

WARNING

Drain the tank and ensure that appliance has cooled to room temperature before performing this upgrade. **DO NOT** work on a hot appliance or an appliance containing hot cooking medium; serious personal injury may occur.

TO THE PURCHASER

Post in a prominent location the instructions to be followed in the event that an operator smells gas. Obtain this information from your local gas supplier.

WARNING

There is an open flame inside this appliance. The unit may get hot enough to set nearby materials on fire. Keep the area around the appliance free from combustibles.

WARNING

DO NOT use an open flame to check for gas leaks!

WARNING

Adequate means must be provided to limit the movement of this appliance without depending on the gas line connection. If any restraining devices are disconnected during this procedure, ensure that they are reconnected before putting the appliance into service. Failure to do so could result in a dangerous and unsafe condition.

WARNING

Installation of this upgrade kit should only be performed by a competent service technician.

WARNING

Do not attempt to move a cooking appliance when the unit is at operating temperature. Serious personal injury could result if skin comes in contact with the hot surfaces.

WARNING

DO NOT sit or stand on this appliance. Serious injury could result from falling or contact with hot shortening/oil.

WARNING

Improper installation, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

WARNING

If gas flow to appliance is interrupted, or pilots extinguish, wait 5 minutes before attempting to relight the pilot to allow any residual gas in appliance to dissipate.

NOTICE

It is recommended that your appliance be inspected by a qualified technician on a yearly basis.

Theory of Operation:

A natural gas burning appliance requires roughly 10 cubic feet of air to properly combust a single cubic foot of gas. Minute airborne particles entrained during this process pass through the combustion system and are incinerated. However, some particles may be trapped within the combustion system, building up over time, causing an eventual decrease in the operational efficiency of your appliance. The rate at which this build up may occur varies from kitchen to kitchen and is greatly influenced by the environment (breeding, flour etc.) and kitchen processes (i.e. cleaning). Historically, frequent cleaning of burners and other combustion related components has been the only way to insure optimal efficiency of your fryer. The Pitco Self Cleaning Burner System (SCBS) will minimize the cost and inconvenient down time of frequent cleaning of combustion system components. Each morning when the appliance is turned on, a small amount of gas is momentarily diverted into a runner tube, which, after passing by the pilot, ignites and causes a short but effective light back at the main burner orifice. This brief flame bath cleans the inside of the burner face by incinerating any foreign matter that has accumulated from the previous day's operation.

The Pitco Self Cleaning Burner System is designed to help maintain proper operation and efficiency of your appliance's combustion system by minimizing the build up of any foreign material inside the burner housings. Proper installation of this upgrade and periodic maintenance of the appliance are critical to safe, reliable and efficient operation.

Tools required to perform this upgrade:

| | | |
|-----------------------------------|-----------------------------------|------------------------------------|
| 5/16" (8 mm) wrench | 1 1/16" wrench | Wire cutters |
| 5/16" (8 mm) nut driver | Cordless screwdriver w/ 5/16" bit | Pipe joint compound or teflon tape |
| 7/16" (12 mm) wrench | Phillips screwdriver | |
| 1/2" (13 mm) wrench | Small flat blade screwdriver | |
| 11/16" (18 mm) wrench (or socket) | 3/16" (5 mm) hex key | |
| 7/8" (23 mm) wrench | | |

Before you begin:

Verify that you have all the parts for the model that you are upgrading by checking the kit number and contents against the exploded view drawings in the back of these instructions.

WARNING

The power supply to the appliance MUST be disconnected before performing this procedure.

WARNING

Ensure that the gas supply to this appliance is turned OFF before performing this procedure.



WARNING

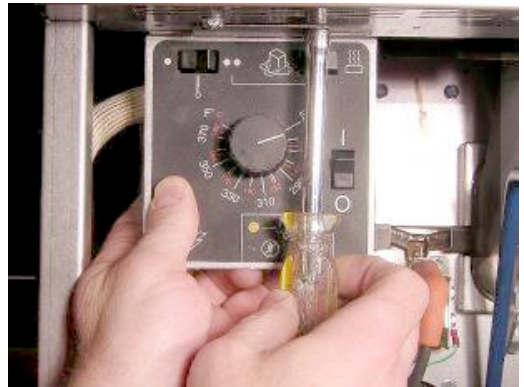
Drain the tank and ensure that appliance has cooled to room temperature before performing this upgrade. DO NOT work on a hot appliance or an appliance containing hot cooking medium; serious personal injury may occur.

Follow this procedure for Installation of Self Cleaning burners and SCBS arm:

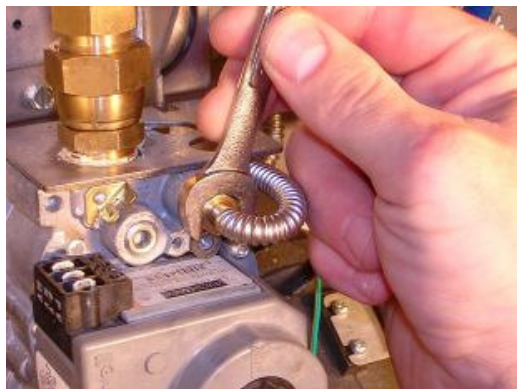
- a. Disconnect the control harness from the main gas valve and tuck it out the way to avoid damaging the harness during this procedure.



- b. If your appliance has a solid-state control (or auxiliary thermostat) behind the door, remove it at this time. With a 5/16" nut driver remove the two self-threading screws that mount the control to the appliance, disconnect the control harness and tuck it out of the way to avoid damaging the harness during this procedure. Be sure to store the control in a safe place to avoid accidental damage to it.

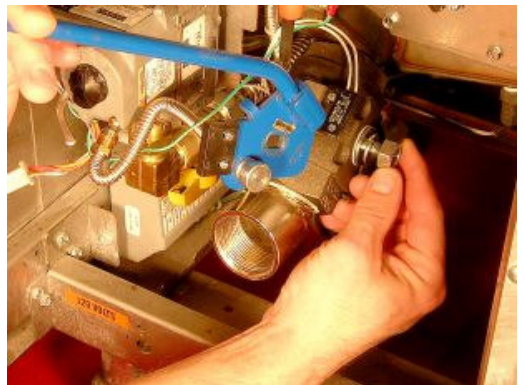


- c. Using a 7/16" wrench, remove the pilot tubing from the gas valve by turning the brass fitting counter-clockwise. There is no need to remove the pilot from the burner assembly.



WARNING
Ensure that the tank contents have been drained before executing this step!

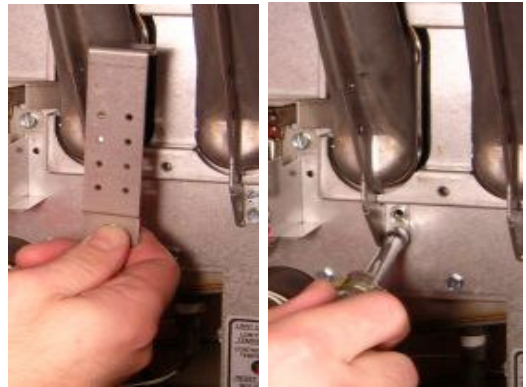
- d. Using an 11/16" wrench or socket, loosen and remove the drain valve nut and washer, and remove the blue drain valve handle. Note: You may want to place the nut and washer back on the valve stem for safekeeping.



- e. Using a 1 1/16" wrench and a 7/8" wrench, loosen the brass fitting on the top of the gas valve and disconnect the gas valve from the manifold inlet.
This will allow you to drop the gas valve down and keep it out of the way during burner replacement.



- f. Using a 5/16" wrench, nut driver or screw gun bit, remove all burners by removing the (2 ea.) self threading screws holding them into the burner rack. Retain these for reinstallation of the new burners. Note: On models MG2 and SGH50, it will be necessary to remove the air collars surrounding the burner head.



WARNING

Be sure to keep the removed burners separate from burners supplied with the upgrade kit. The existing burners WILL NOT work with the Pitco Self-Cleaning Burner System. DO NOT attempt to use the old burners with the Pitco Self-Cleaning Burner System: an unsafe condition may occur.

- g. Replace the burners to the LEFT of the pilot with burners supplied with the Pitco Self-Cleaning Burner System upgrade kit, securing them with the fasteners removed and retained in step f.



NOTE: Pre-tap the holes on mounting bracket on the SCBS runner arm with the two self tapping screws provided in the kit before you install it.

- h. With the ports FACING INWARD, insert the SCBS Arm into the space between the burner venturis and orifice holders of the newly installed burners.



- i. Capture the remaining burners on the SCBS Arm in the same manner as in step h, and secure them into the appliance, taking care not to strip the pre-threaded holes.



- j. Secure the SCBS Arm to left side of the burner to the right of the pilot using two 10 X 24 self-threading screws provided with the Pitco Self-Cleaning Burner System Upgrade Kit.



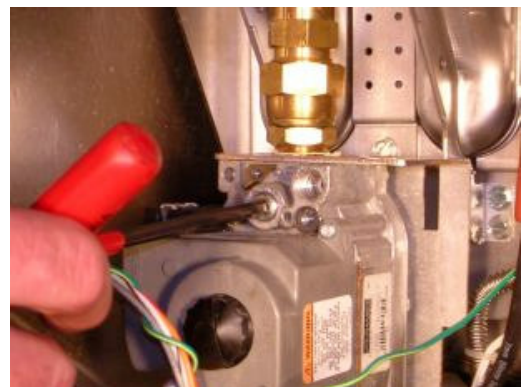
The SCBS Arm should now be mounted properly and securely. Inspect your work to insure that the burners are installed correctly. Improperly mounted or poorly aligned burners may result in an unsafe condition or poor appliance performance. They should be mounted properly on the orifice fittings, facing straight into the burner tubes and secured tightly to the appliance.



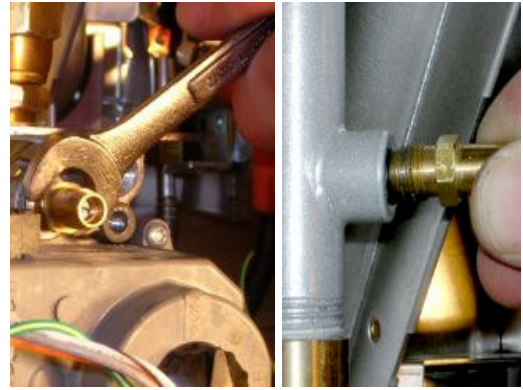
Follow this procedure for installation of the SCBS Valve:

NOTE: The valve type you receive in your kit may differ in appearance slightly from the one shown in these instructions.

- a. Re-attach the gas valve to the manifold inlet using a 1 1/16" wrench and a 15/16" wrench and, with a 3/16" (5 mm) hex key, remove the plug from the pressure tap port on the TOP portion (Outlet Side) of the valve, next to the pilot fitting.



NOTE: CE approved models will have a pressure test fitting in this location. For CE approved models, remove this pressure test fitting using a 7/16" (12 mm) wrench. Using a 3/16" (5 mm) hex key, remove the plug from the auxiliary pressure tap on the manifold inlet and replace it with pressure tap fitting that you removed from the TOP (Outlet side) of the valve. Use teflon tape or apply pipe joint compound on the threads of the fitting to ensure a gas-tight seal.

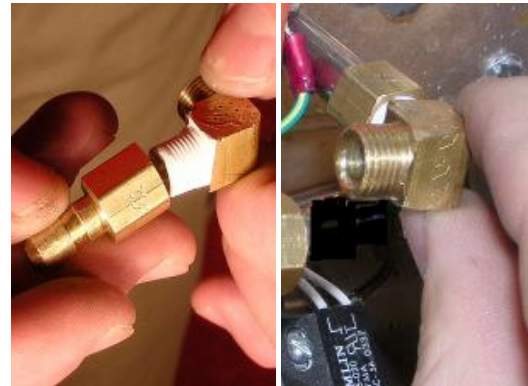


- b. Remove the straight 1/8" NPT X 1/4" compression fitting from the U tube end of the SCBS Valve Assembly provided with the kit and, with a 7/16" wrench, install it into the recently vacated pressure test port on the TOP (Outlet Side) of the valve. Use teflon tape or apply pipe joint compound on the threads of the fitting to ensure a gas-tight seal.

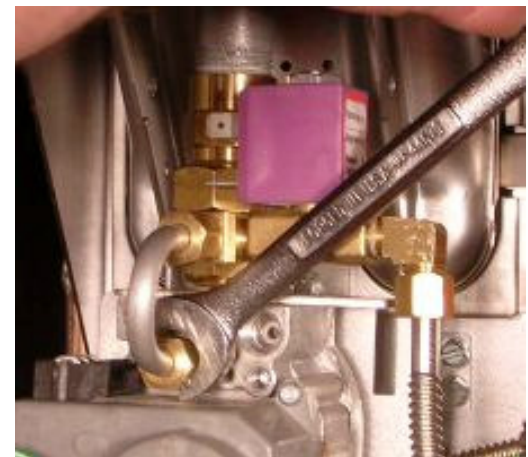
NOTE: The threads on this fitting (1/8' NPT and 1/4" compression) are not interchangeable. Be sure to install the NPT side of this fitting into the gas valve. Failure to complete this step correctly could damage the threads of both the fitting and the pressure test port, and may result in gas leakage at this joint.



- c. Remove the 1/8" NPT X 90° 1/4" compression fitting from the other end of the SCBS Valve Assembly provided with the kit and install the orifice tip, also provided in the kit, on to the NPT end of the fitting. Insert the orifice end of this assembly into the runner tube installed previously in this procedure. **NOTE:** Check the orifice against the parts list included in these instructions to insure that it is the correct size for the gas type of your appliance.



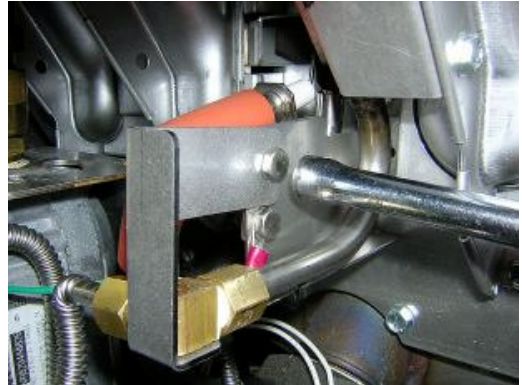
- d. Mount the SCBS Valve Assembly into the appliance by loosely attaching the U tube end of the assembly onto the straight fitting that you installed into the TOP (Outlet Side) of the gas valve in step b.



- e. Thread the compression nut on the corrugated tubing end of the SCBS Valve Assembly onto the orifice assembly that you inserted into the runner tube in step c and tighten with a 1/2" (13 mm) wrench.



- f. Install the orifice retainer bracket onto the pilot bracket and SCBS Orifice assembly. This will secure the orifice assembly into the runner tube.



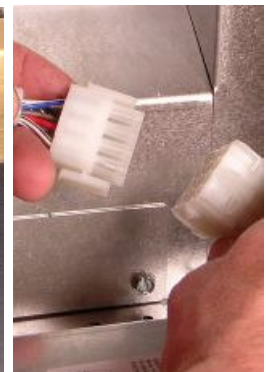
- g. Tighten ALL joints on the SCBS Valve assembly with a 1/2" (13 mm) wrench. Reinstall the pilot tubing into the gas valve.



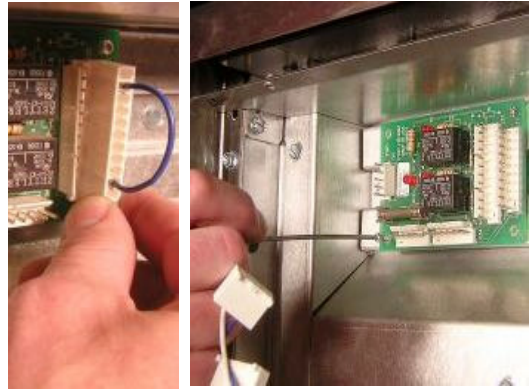
- h. Reconnect the control harness to the main gas valve, and if you removed a Solid State Control earlier in this procedure you may re-install it at this time.

Follow this procedure to prepare and install the SCBS Control Board and Harnesses:

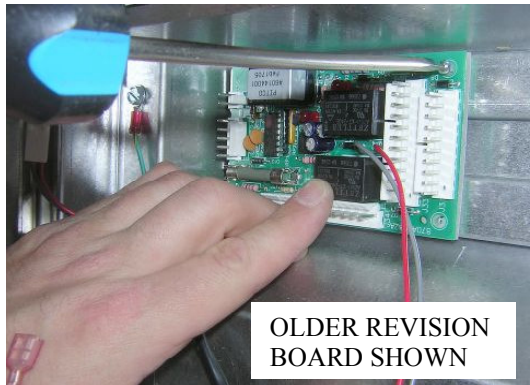
- a. Using a phillips head screwdriver, remove the two screws that secure front panel and rotate the control assembly down. Disconnect the control harness and remove the front panel assembly from the appliance. (This will not be necessary if your model uses a solid-state control). Store the front panel assembly in a safe place to avoid damaging the control.



- b. Disconnect the wiring harness from the relay board mounted behind the front panel and remove the relay board and insulation paper. Be sure to retain the screws. The existing relay board may or may not have a jumper plug as shown. If it does, remove it from the old relay board and install it into the same position on the “new” SCBS relay board provided.



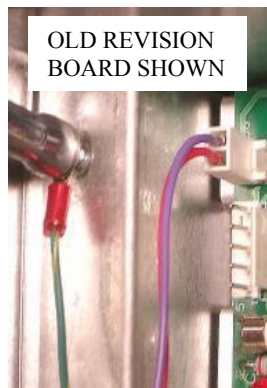
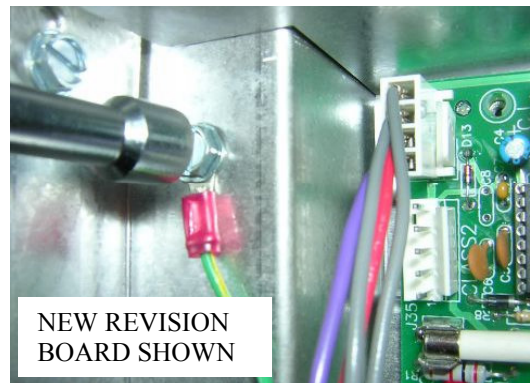
- c. Install the insulation paper provided with the Pitco Self-Cleaning Burner System Upgrade Kit onto the backside of the SCBS Control Board and mount the board in the front panel enclosure, using the same screws and holes as the old board. **Older revision boards will have wires attached to the board for the thermal cutout and a two pin connector for the valve harness; these wires are not present on newer revision boards, which have the thermal cutout harness and valve harness combined into one single harness.**



NOTE

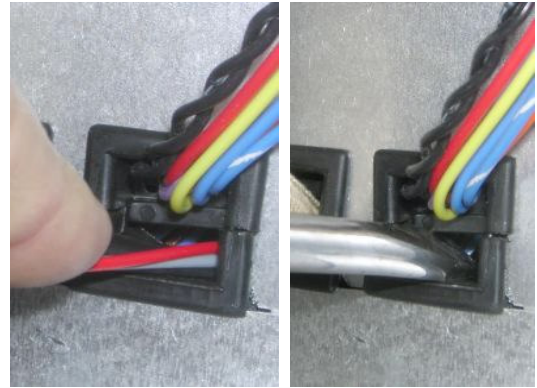
It is critical for proper operation that the insulation paper is installed. Failure to install the insulation paper may cause soldered joints on the back of the Control board to short out and damage the Control board and/or appliance.

- d. Plug four-pin connector on SCBS Harness into SCBS Relay Board and ground as shown, using the existing fastener to secure ground cable to the appliance chassis. **Older revision models will have the thermal cutout leads feeding directly from the board, a two-pin connector for the valve harness and a separate harness for the thermal limit assembly. For older revision boards, plug the two pin connector on the SCBS Valve harness into the SCBS Relay Board and ground as shown, using the existing fastener to secure ground cable to the appliance chassis. Connect the SCBS Thermal Limit Harness (supplied with older revision kits only) to the red and grey leads on the older revision SCBS Relay Board.**



- e. If the appliance you are upgrading does NOT have a Solid State Control, proceed to step f in this section. If the appliance that you are upgrading has a Solid State Control, feed the other ends of the SCBS Harness through the unused portion of the strain relief holding the Solid State Control Harness and proceed directly to step h in this section.

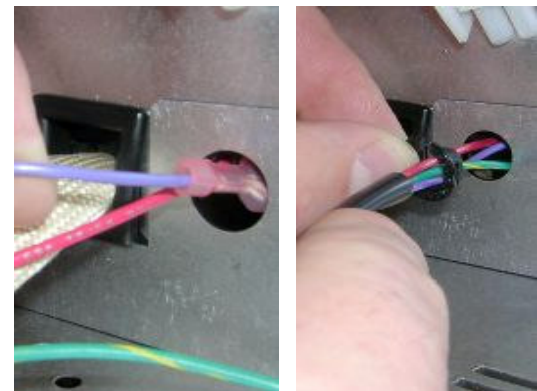
NOTE: If needed, you can carefully nudge open the area in the strain relief with a screwdriver to make additional room to insert the SCBS harness. Take care not damage the harness during this procedure.



- f. Using a 5/16 nut driver, remove the two screws on the underside of the front panel that hold the slotted bottom on. Remove the slotted front panel bottom; this will allow easier access to the cable retainer plate. Remove the two screws holding the cable retainer plate onto the appliance and remove the cable retainer plate, leaving the control cable held in place by the square strain relief. Replace the cable retainer plate that you removed with the new one provided in the kit. Cable retainer plate style varies from model to model; the one that came with your kit should look exactly like the one that you removed with an added hole.



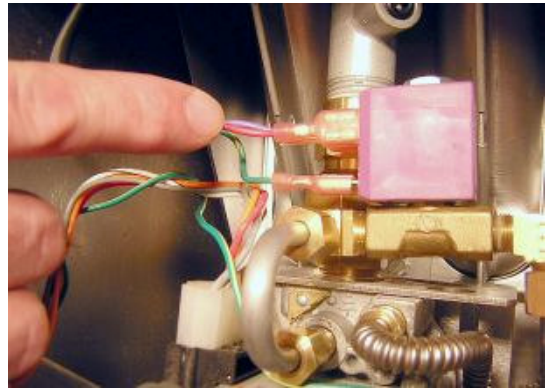
- g. Feed the SCBS harness through the hole in the cable retainer plate. Collect and capture all wires in this harness into the split grommet provided with the kit and install the grommet into hole in the cable retainer plate. The installation of the grommet is critical as it insures that the wires will not chafe and/or short out against the metal edge of the hole in the cable retainer bracket.



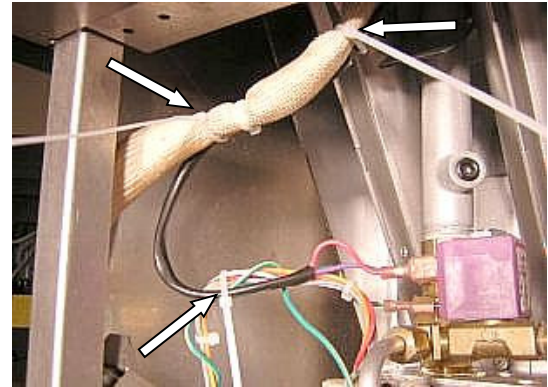
- h. You may now reconnect the main control harness to the SCBS board exactly as it was connected to the previous board, re-attach the front panel bottom and reconnect, remount and close up the front panel assembly.



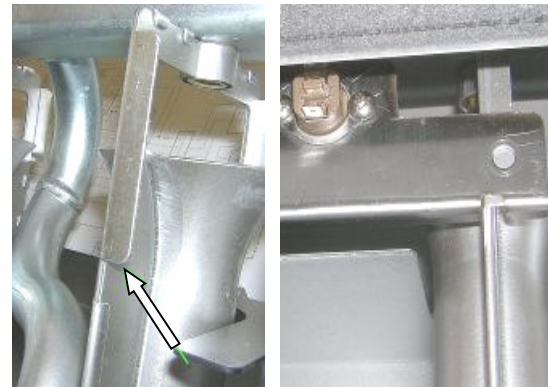
- i. Connect the SCBS Harness to the SCBS Valve as shown. The red and violet wires must be connected to the vertically oriented tabs on the valve and the green (ground) wire must be connected to the bottom, horizontally oriented tab on the valve. The grey wires will be connected to the Thermal Limit at a later point in the upgrade process.



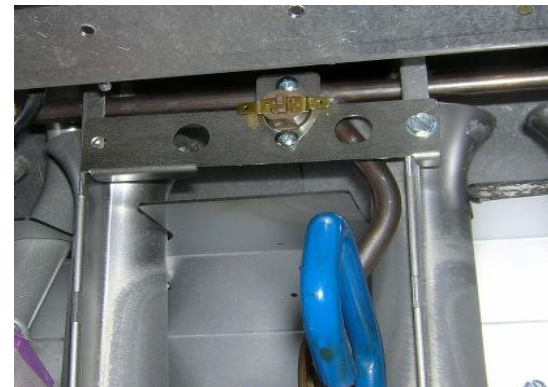
- j. Route the SCBS Harness along the main control harness and wire tie it to the control harness. The proper wire tie locations are indicated by arrows, see photo at right. Trim excess from wire ties.



- k. Mount the Thermal Limit Switch Assembly with the flange of the bracket oriented down and facing inward toward the tank. The switch terminals will then be facing outward toward the front of the appliance. Mount the assembly by straddling it on the two burners on either side of the pilot and positioned up to where the flange on the assembly meets with the bottom of the flange on the burner "web", see photos at right.



- l. Fasten the Thermal Limit Switch to the flange on the burner web using two self-drilling fasteners provided in the Pitco Self Cleaning Burner System Kit. Connect the leads of the SCBS Harness to the tabs on the Thermal Limit Switch. Re-attach the drain handle.



You have now successfully installed the Pitco Self-Cleaning Burner system. Apply the schematic label provided with the kit over the one on the inside of the appliance door. **Before proceeding it is highly recommended that you now thoroughly check the appliance to insure that the procedure was properly followed. Check that all gas joints are tight, all electrical connections are correct, and that the appliance is completely and properly reassembled.**

Follow this procedure to check proper operation of the Pitco Self-Cleaning Burner System:

WARNING

Ensure that tank is filled to the level line with oil before turning the appliance on. Turning the appliance on with an empty or partially filled tank could cause an unsafe condition, which could lead to damage to the appliance, property damage or personal injury.

- a. Reconnect the power supply and turn on the gas supply to the appliance.
- b. Energize the unit and check the gas delivery system and Pitco Self-Cleaning Burner System for gas leaks by applying liquid leak detector or a solution of soapy water to all gas joints and watching for bubbles at the joints.
- c. If you detect bubbles at any gas joint, turn the appliance off, disconnect the power supply and turn off the gas supply immediately. Retighten any joints that show signs of leaking and repeat steps a, b and c until no leakage is detected. If you do not detect any leaks, proceed to step d.
- d. Turn appliance on and observe its behavior. The appliance will execute a Cleaning Cycle every time it is energized from an "OFF" state, so you may turn the appliance off and then on again to verify proper execution of the Cleaning Cycle. Refer to the below table to verify proper Cleaning Cycle execution

| Event | Duration | Indication |
|--------------------------|-----------|---|
| Turn appliance "ON" | N/A | Control Illuminates, pilot sparks and ignites. Pre-Purge pulse is initiated. |
| Pre-Purge Pulse | 2 seconds | Appliance operates briefly and stops. Pilot remains lit. |
| Interwaiting period 1 | 5 seconds | Appliance does not operate. Pilot remains lit. |
| Cleaning Pulse | 6 seconds | Main valve operates, lighting main burners. SCBS valve operates, feeding gas to the SCBS Arm. The SCBS arm ignites, initiating a brief burn at the main burner orifice of each burner. |
| Interwaiting period 2 | 8 seconds | The Main and SCBS valves de-energize for this period. The pilot remains lit. |
| Normal operation resumes | N/A | The appliance operates normally and begins to heat up. The SCBS Valve remains de-energized until power to the appliance is recycled. There is no flame on the SCBS Arm. There is no burn at the main burner orifices. |

With the Pitco Self-Cleaning Burner System installed, the appliance should behave as outlined in the above table. A Cleaning Cycle will execute every time the appliance is turned "ON" from an "OFF" state. The thermal cut out switch is designed to disable the appliance if the Self Cleaning Burner System malfunctions and remains activated for an extended period of time or if there is a downdraft into the flue or a blocked flue situation.

Follow this procedure to adjust and verify proper operation of an appliance using flue baffles (McDonald's models MG2 and MG2T):

WARNING

If the appliance you are upgrading is equipped with flue baffles, it may be necessary to adjust the baffle's opening to restore proper operation of the appliance.

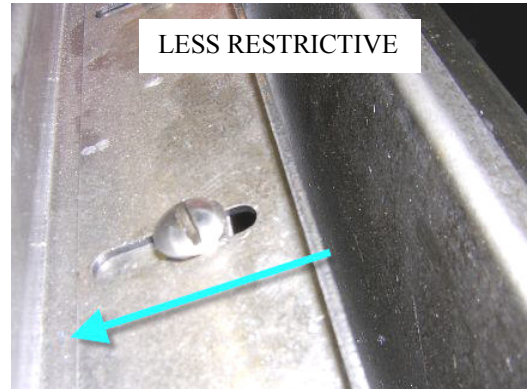
If the model you are upgrading is an MG2 or MG2T, it may be necessary to adjust the flue baffle opening to restore proper operation of the appliance's combustion system. Flue baffles are used when the appliance is direct coupled to an exhaust hood, the flue baffle balances the exhaust draw on the combustion system. When operating properly, the burners should exhibit light blue flame and generate a mild, consistent roar. It is possible to view the burner flame on the center two burners by peeking sideways into the opening on the air collars near the pilot. If, during operation the burner flames appear to be lifting or pulsing, the draw of the hood may be too powerful and the baffle will need to be adjusted to a more restrictive setting. Lifting or pulsing burners can usually be heard when the

appliance is in operation, or can be detected visually by watching the burner flame through the air collars. The sound of the burners will be inconsistent and the flame may appear to 'peel' off of the burner face. A certain amount of flame roll out during ignition is normal. However, excessive flame roll out during burner operation is abnormal. Excessive flame roll out will cause undue heating in the burner area and will cause the thermal cut out switch to trip. If there is significant flame roll out upon ignition or during normal operation, the flue baffle setting may be too restrictive and will need to be adjusted to a more open position.

Determine whether or not the appliance you have upgraded has flue baffles. After performing this upgrade procedure, observe the appliance during startup and normal operation. If pulsing burners or extreme flame roll out are detected, adjust the flue baffle according to the following procedure.

Follow this procedure to verify proper setting of flue baffles and adjust if necessary:

- a. Ensure that the appliance is installed properly under the hood in the manner in which it is intended to be used. Turn the appliance on and allow it to execute the cleaning cycle and go into normal operation. Observe the operation of the main burners as the appliance brings the oil to set point, during idling and during cooking operations.
- b. If the burners appear to pulse or the flame is lifting off of the burner face proceed to step c of this section of these instructions. If there appears to be significant roll out during ignition or any time during operation, proceed to step d of this section of these instructions.
- c. **For pulsing/lifting burner flame:** Turn the appliance off and allow it to cool. Pull the appliance out from under the hood and loosen the screws securing the adjustable slide plate on the flue baffle. Move the slide plate toward the rear of the appliance to a more restrictive position and retighten the screws. Repeat steps a and c until no pulsing or flame lift is observed.
- d. **For excessive flame roll out:** Turn the appliance off and allow it to cool. Pull the appliance out from under the hood and loosen the screws securing the adjustable slide plate on the flue baffle. Move the slide plate toward the front of the appliance to a less restrictive position and retighten the screws. Repeat steps a and d until flame roll out is minimized.
- e. Observe burner operation while allowing the appliance to heat up and during hot operation (cooking and idling): the flue baffle must be adjusted correctly to allow the appliance to operate properly during both (cold) start up and normal (hot) use conditions. It may be necessary to fine tune the flue baffle setting for proper operation under both conditions.



WARNING

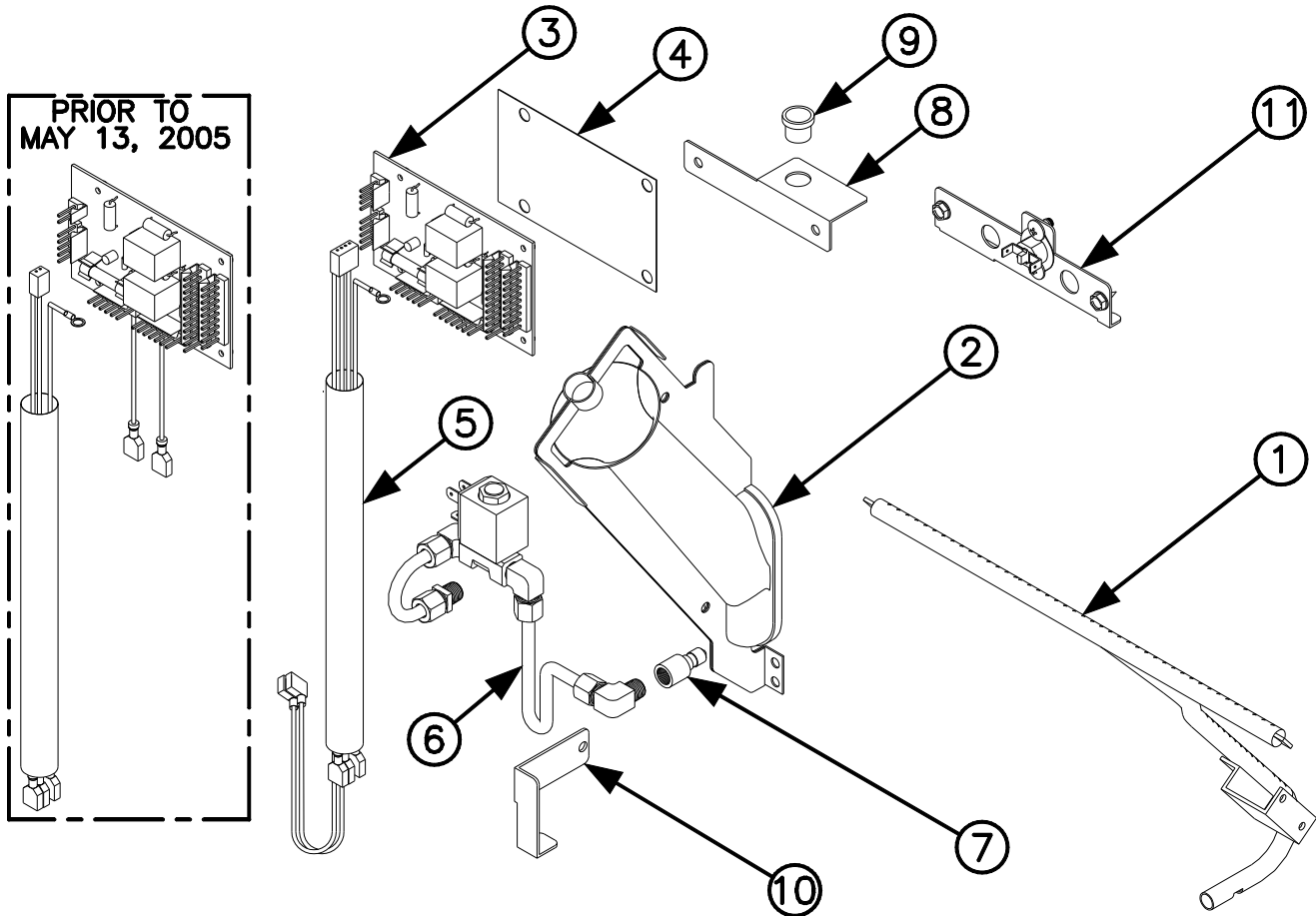
If the flue baffle CANNOT be adjusted properly, the facility must have the ventilation system checked immediately to be sure that it is operating within normal specifications. After the ventilation system is corrected, the baffle setting must be rechecked. Failure to correct ventilation problems or properly set flue baffles will result in extremely poor appliance operation and possible equipment damage.

TROUBLESHOOTING

Should there be a problem with your appliance, use the following tables to isolate possible faults before calling Pitco Technical Support.

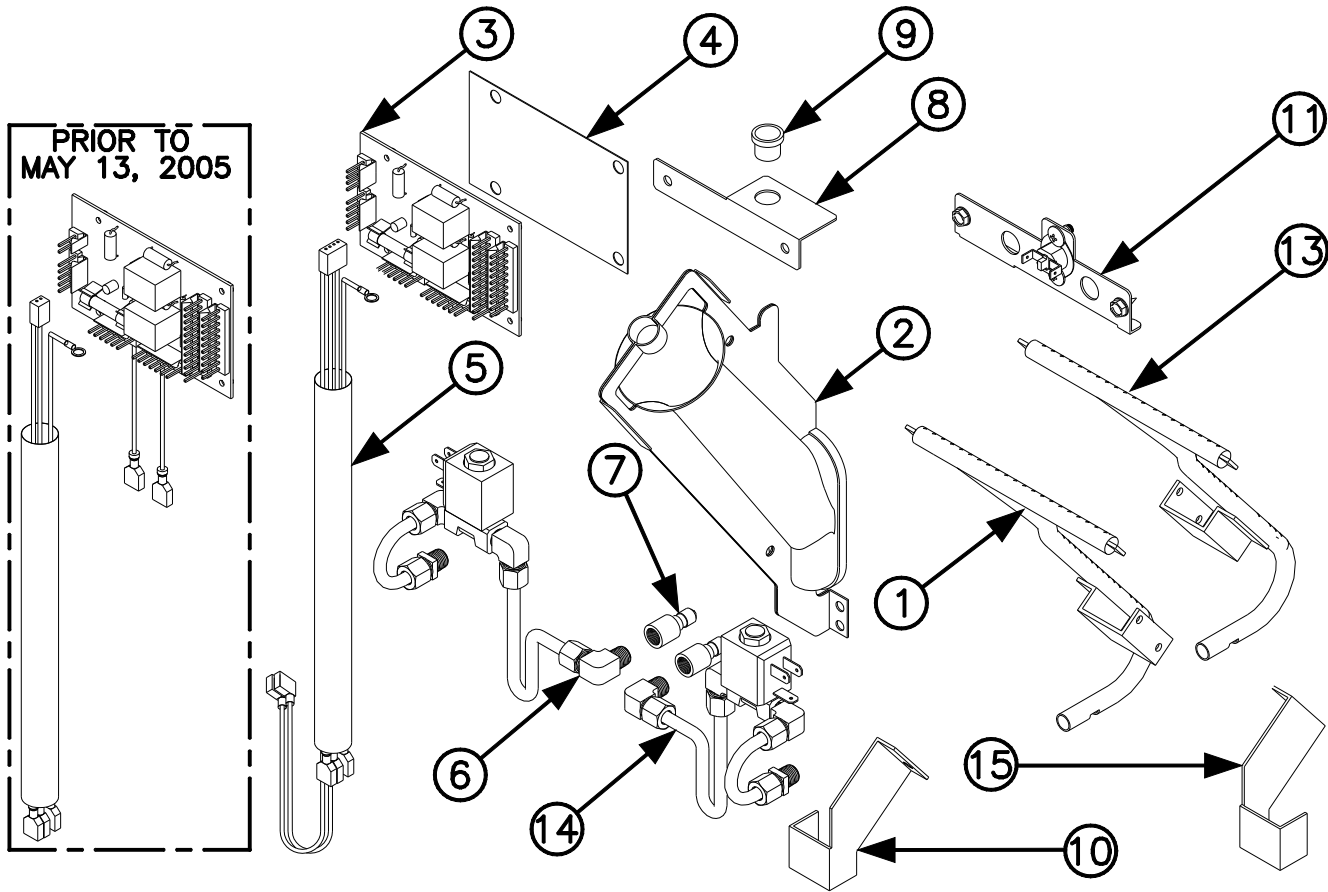
| PROBLEM | POSSIBLE CAUSES | CORRECTIVE ACTION |
|--|--|--|
| Appliance will not run, front panel lights are not ON. | A. Main breaker in OFF position. | A. Turn on Circuit Breaker to appliance. |
| | B. Gas supply turned OFF. | B. Turn on gas supply to appliance. |
| | C. Appliance unplugged. | C. Plug appliance power cord into wall outlet. |
| | D. Blown control fuse. | D. Refer to Service and Parts manual for your appliance to properly diagnose and correct these problems. |
| | E. Faulty transformer. | E. |
| | F. Defective controller. | F. |
| Appliance will not run, front panel lights are ON. | A. Tripped hi limit | A. Depress red button and reset hi limit. |
| | B. Controller is not turned on | B. Turn controller on. |
| | C. SCBS thermal limit switch has tripped | C. Depress button on thermal limit switch and reset. |
| | D. Faulty temperature probe | D. Refer to Service and Parts manual to diagnose and correct these problems. |
| | E. Defective controller. | E. |
| Appliance is ON, but a Cleaning Cycle does not execute | A. Unplugged wire harness. | A. Verify that all wires and harnesses are plugged in properly to the correct component. |
| | B. Improper wiring. | B. Verify that the wiring steps in this instruction have been followed correctly. Correct any faulty wiring. |
| | C. Faulty SCBS Board | C. Replace SCBS Board. |
| | D. Faulty SCBS Valve | D. Replace SCBS Valve. |
| | E. Clogged SCBS Orifice | E. Clean debris from SCBS orifice opening. |
| | F. Poorly aligned or faulty SCBS Lighter arm. | F. Check that the SCBS Lighter arm has been properly installed. Replace if faulty. |
| SCBS energizes beyond normal cycle parameters (during cooking, idling, etc.) | A. Faulty SCBS Board | A. Replace SCBS Board. |
| | B. Faulty SCBS Valve | B. Replace SCBS Valve. |
| Appliance will not run, control flashes ignition failure | A. Pilot tubing is loose. | A. Ensure pilot tubing is tight and properly connected. |
| | B. Pilot is mounted improperly. | B. Ensure that pilot is mounted properly. |
| | C. Flame sensor is misaligned. | C. Ensure that the flame sensor is properly aligned. |
| | D. Low Pilot | D. Ensure that pilot is adjusted to provide adequate flame. |
| | E. Clogged Pilot orifice | E. Ensure that pilot orifice is clear of debris. |
| | F. Damaged or defective Pilot. | F. Replace pilot if necessary. |
| | G. SCBS Thermal Limit switch has tripped. | G. Reset Thermal Limit switch. On models MG2 and MG2T, verify that flue baffles are properly adjusted per these instructions. Check ventilation hood for improper operation, down draft or blockage. |
| Appliance will not maintain temperature properly. | A. Faulty temperature probe | A. Refer to Service and Parts manual to diagnose this problem and replace temperature probe. |
| | B. Faulty hi limit switch | B. Refer to Service and Parts manual to diagnose this problem and replace hi limit switch. |
| Thermal Limit Switch trips after short period of operation. | A. Blockage in burner tubes. | A. Ensure that burner tubes are free of obstructions. |
| | B. Flue is blocked | B. Ensure that flue is free of obstructions. |
| | C. Model MG2 or MG2T flue baffle is set too restrictively. | C. Refer to flue baffle adjustment procedure in these instructions to set flue baffle to a less restrictive setting. |
| | D. Ventilation hood malfunction | D. Check ventilation hood for improper operation, down draft or blockage. |

SG14, SG14R SELF CLEANING BURNER SYSTEM



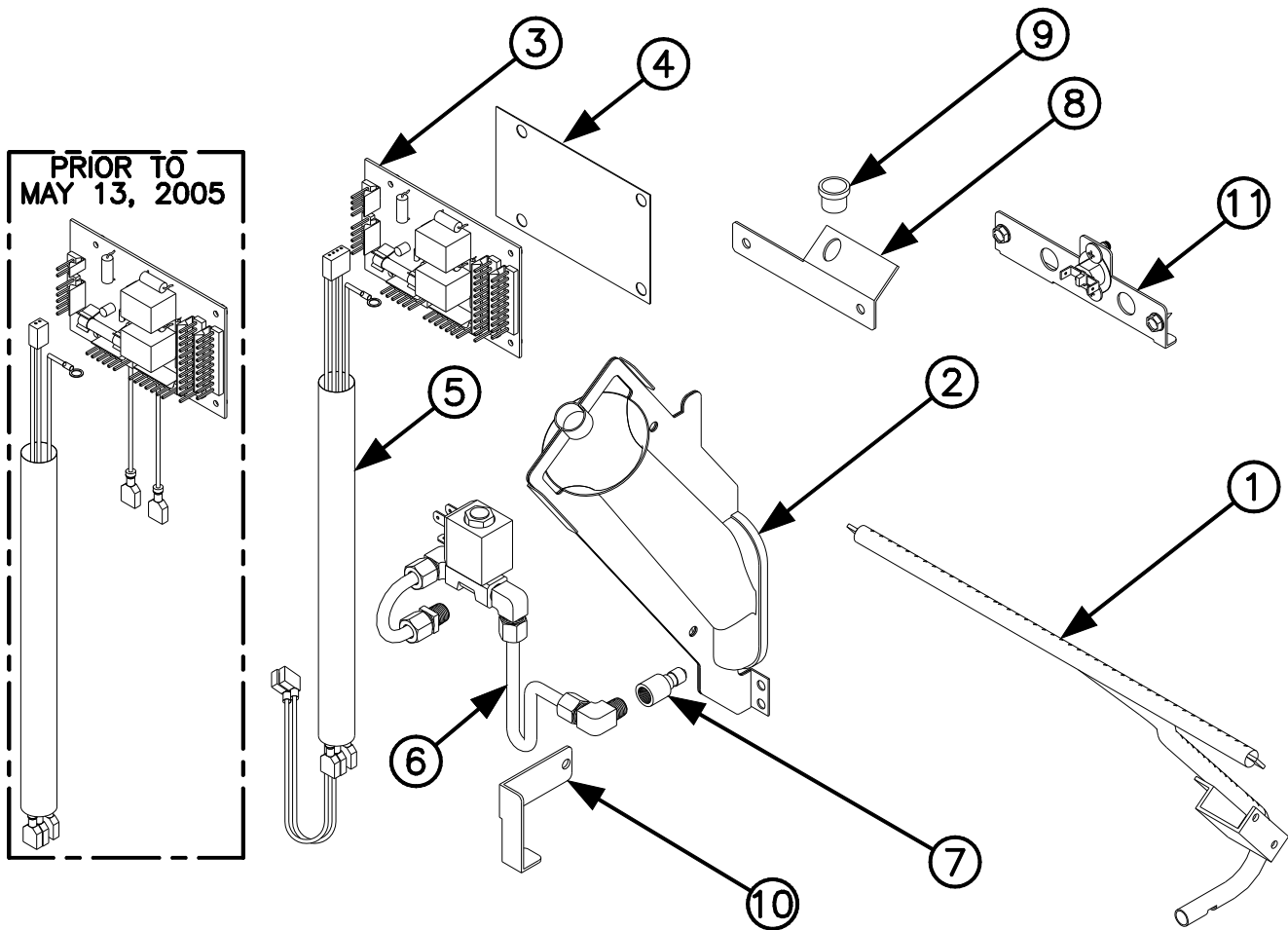
| KIT #'S | | NATURAL GAS = B8702001-CL, LP GAS = B8702002-CL | | |
|-----------------------|------------------------|---|--------------|-----|
| MODELS | ITEM # | DESCRIPTION | PART # | QTY |
| SG14 SG14R | 1 | PIPING, BURNER RUNNER TUBE SG14, 14R, SGH50 | B8042001 | 1 |
| | 2 | PIPING, BURNER SCB | B8041901 | 4 |
| | 3 | CONTROL, SCB RELAY BOARD 24 VAC CLASS 2 | 60144001 | 1 |
| | 4 | INSULATION, RELAY BOARD | 60132602 | 1 |
| | 5 | WIRING, HARNESS SCB | B6760501 | 1 |
| | 6 | PIPING, SCB (LH) | B8042101 | 1 |
| | 7 | ORIFICE, PILOT RUNNER TUBE #52 (NATURAL GAS) | 2908-0940501 | 1 |
| | | ORIFICE, PILOT RUNNER TUBE #68 (LP GAS) | 2908-0940502 | |
| | 8 | CONTROL BOX, CABLE RETAINER SG14, 14R, 14T | A2034703 | 1 |
| | 9 | BUSHING, .512 HOLE DIAMETER | 60130401 | 1 |
| | 10 | PILOT ORIFICE RETAINER BRACKET (LH) | A2036701 | 1 |
| | 11 | PIPING, HI LIMIT SCB | B8042201 | 1 |
| | 12 | INSTRUCTIONS, SCB UPGRADE INSTALLATION | L80-029 | 1 |
| | 13 | SCREW, TAPPING SLOTTED (NOT SHOWN) | PP10023 | 2 |
| | 14 | LABEL, GAS SG WITH SCB (NOT SHOWN) | A6092301 | 1 |
| 15 | TIE, CABLE (NOT SHOWN) | P5045140 | 3 | |

SG14T SELF CLEANING BURNER SYSTEM



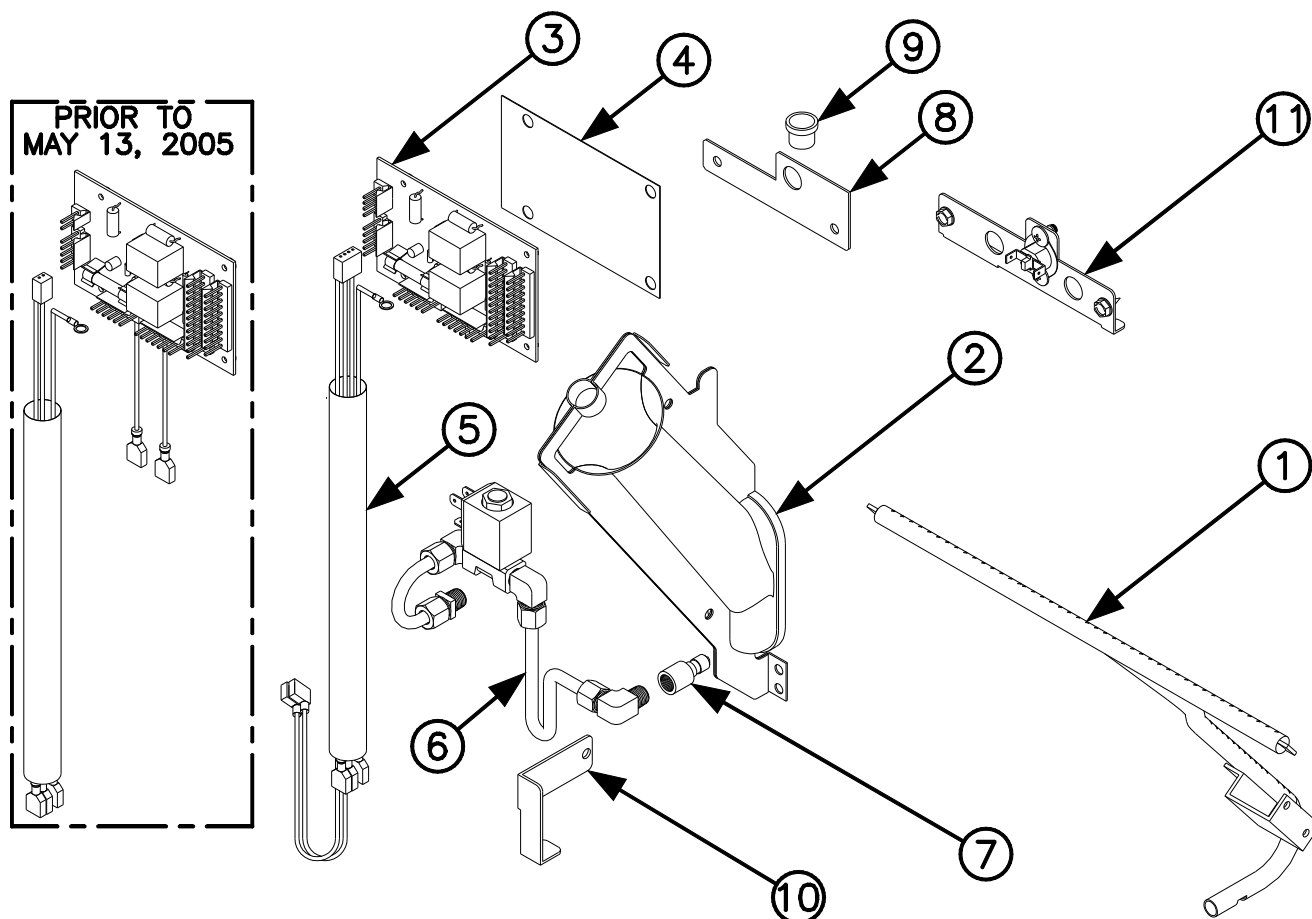
| KIT #'S | | NATURAL GAS = B8702005-CL, LP GAS = B8702006-CL | | |
|---------|------------------------|---|--------------|-----|
| MODELS | ITEM # | DESCRIPTION | PART # | QTY |
| SG14T | 1 | PIPING, BURNER RUNNER TUBE SG14T, SGH50T (LH) | B8042003 | 1 |
| | 2 | PIPING, BURNER SCB | B8041901 | 4 |
| | 3 | CONTROL, SCB RELAY BOARD 24 VAC CLASS 2 | 60144001 | 2 |
| | 4 | INSULATION, RELAY BOARD | 60132602 | 2 |
| | 5 | WIRING, HARNESS SCB | B6760501 | 2 |
| | 6 | PIPING, SCB (LH) | B8042101 | 1 |
| | 7 | ORIFICE, PILOT RUNNER TUBE #52 (NATURAL GAS) | 2908-0940501 | 2 |
| | | ORIFICE, PILOT RUNNER TUBE #68 (LP GAS) | 2908-0940502 | |
| | 8 | CONTROL BOX, CABLE RETAINER SG14, 14R, 14T | A2034703 | 2 |
| | 9 | BUSHING, .512 HOLE DIAMETER | 60130401 | 2 |
| | 10 | PILOT ORIFICE RETAINER BRACKET (LH) | A2036801 | 1 |
| | 11 | PIPING, HI LIMIT SCB | B8042202 | 2 |
| | 12 | INSTRUCTIONS, SCB UPGRADE INSTALLATION | L80-029 | 1 |
| | 13 | PIPING, BURNER RUNNER TUBE SG14T, SGH50T (RH) | B8042004 | 1 |
| | 14 | PIPING, SCB (RH) | B8042102 | 1 |
| | 15 | PILOT ORIFICE RETAINER BRACKET (RH) | A2036802 | 1 |
| | 16 | SCREW, TAPPING SLOTTED (NOT SHOWN) | PP10023 | 4 |
| | 17 | LABEL, GAS SG WITH SCB (NOT SHOWN) | A6092301 | 1 |
| 18 | TIE, CABLE (NOT SHOWN) | P5045140 | 6 | |

SG18 SELF CLEANING BURNER SYSTEM



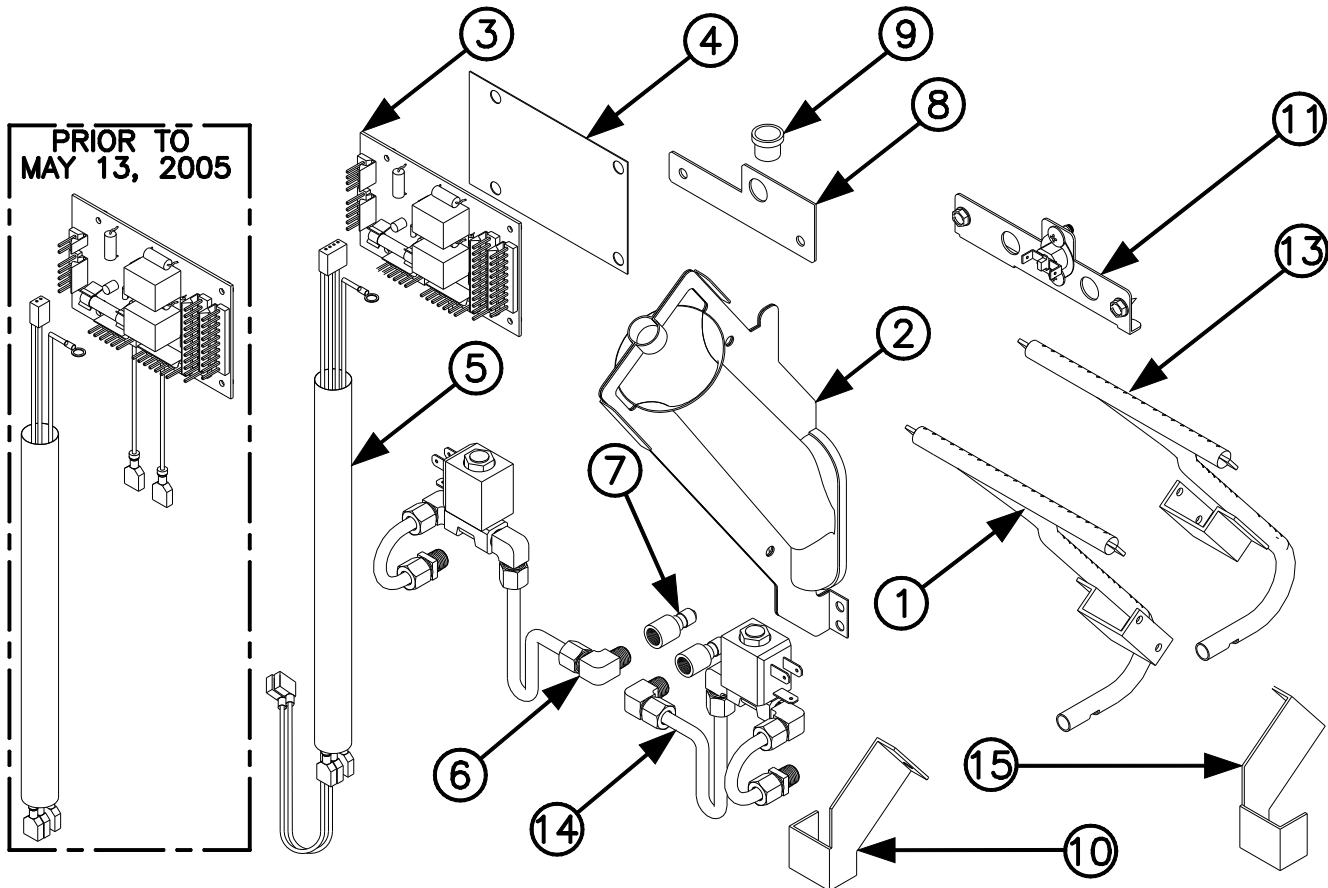
| KIT #'S | | NATURAL GAS = B8702011-CL, LP GAS = B8702012-CL | | |
|-------------|------------------------|---|--------------|-----|
| MODELS | ITEM # | DESCRIPTION | PART # | QTY |
| SG18 | 1 | PIPING, BURNER RUNNER TUBE SG18, SG6H | B8042002 | 1 |
| | 2 | PIPING, BURNER SCB | B8041901 | 5 |
| | 3 | CONTROL, SCB RELAY BOARD 24 VAC CLASS 2 | 60144001 | 1 |
| | 4 | INSULATION, RELAY BOARD | 60132602 | 1 |
| | 5 | WIRING, HARNESS SCB | B6760501 | 1 |
| | 6 | PIPING, SCB (LH) | B8042101 | 1 |
| | 7 | ORIFICE, PILOT RUNNER TUBE #50 (NATURAL GAS) | 2908-0940503 | 1 |
| | | ORIFICE, PILOT RUNNER TUBE #68 (LP GAS) | 2908-0940502 | |
| | 8 | CONTROL BOX, CABLE RETAINER SG18 SCB | A2035003 | 1 |
| | 9 | BUSHING, .512 HOLE DIAMETER | 60130401 | 1 |
| | 10 | PILOT ORIFICE RETAINER BRACKET (LH) | A2036701 | 1 |
| | 11 | PIPING, HI LIMIT SCB | B8042201 | 1 |
| | 12 | INSTRUCTIONS, SCB UPGRADE INSTALLATION | L80-029 | 1 |
| | 13 | SCREW, TAPPING SLOTTED (NOT SHOWN) | PP10023 | 2 |
| | 14 | LABEL, GAS SG WITH SCB (NOT SHOWN) | A6092301 | 1 |
| 15 | TIE, CABLE (NOT SHOWN) | P5045140 | 3 | |

SGH50, MG2 SELF CLEANING BURNER SYSTEM



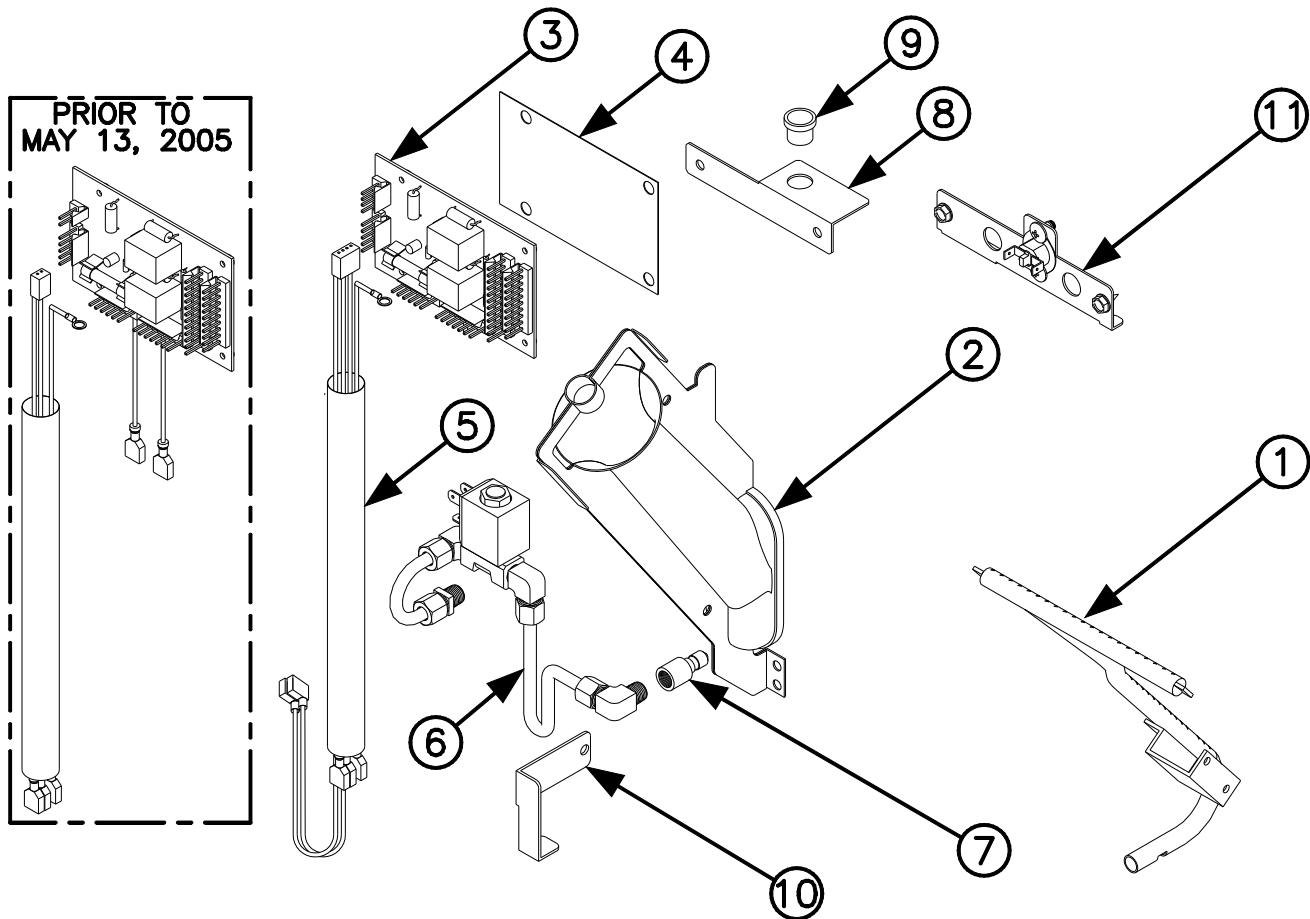
| KIT #'S | | NATURAL GAS = B8702003-CL, LP GAS = B8702004-CL | | |
|--------------|------------------------|---|--------------|-----|
| MODELS | ITEM # | DESCRIPTION | PART # | QTY |
| SGH50 MG2 | 1 | PIPING, BURNER RUNNER TUBE SG14, 14R, SGH50 | B8042001 | 1 |
| | 2 | PIPING, BURNER SCB | B8041901 | 4 |
| | 3 | CONTROL, SCB RELAY BOARD 24 VAC CLASS 2 | 60144001 | 1 |
| | 4 | INSULATION, RELAY BOARD | 60132602 | 1 |
| | 5 | WIRING, HARNESS SCB | B6760501 | 1 |
| | 6 | PIPING, SCB (LH) | B8042101 | 1 |
| | 7 | ORIFICE, PILOT RUNNER TUBE #52 (NATURAL GAS) | 2908-0940501 | 1 |
| | | ORIFICE, PILOT RUNNER TUBE #68 (LP GAS) | 2908-0940502 | |
| | 8 | CONTROL BOX, CABLE RETAINER MG2 SCB | A2035705 | 1 |
| | 9 | BUSHING, .512 HOLE DIAMETER | 60130401 | 1 |
| | 10 | PILOT ORIFICE RETAINER BRACKET (LH) | A2036701 | 1 |
| | 11 | PIPING, HI LIMIT SCB | B8042201 | 1 |
| | 12 | INSTRUCTIONS, SCB UPGRADE INSTALLATION | L80-029 | 1 |
| | 13 | SCREW, TAPPING SLOTTED (NOT SHOWN) | PP10023 | 2 |
| | 14 | LABEL, GAS SG WITH SCB (NOT SHOWN) | A6092301 | 1 |
| 15 | TIE, CABLE (NOT SHOWN) | P5045140 | 3 | |

SGH50T, MG2T SELF CLEANING BURNER SYSTEM



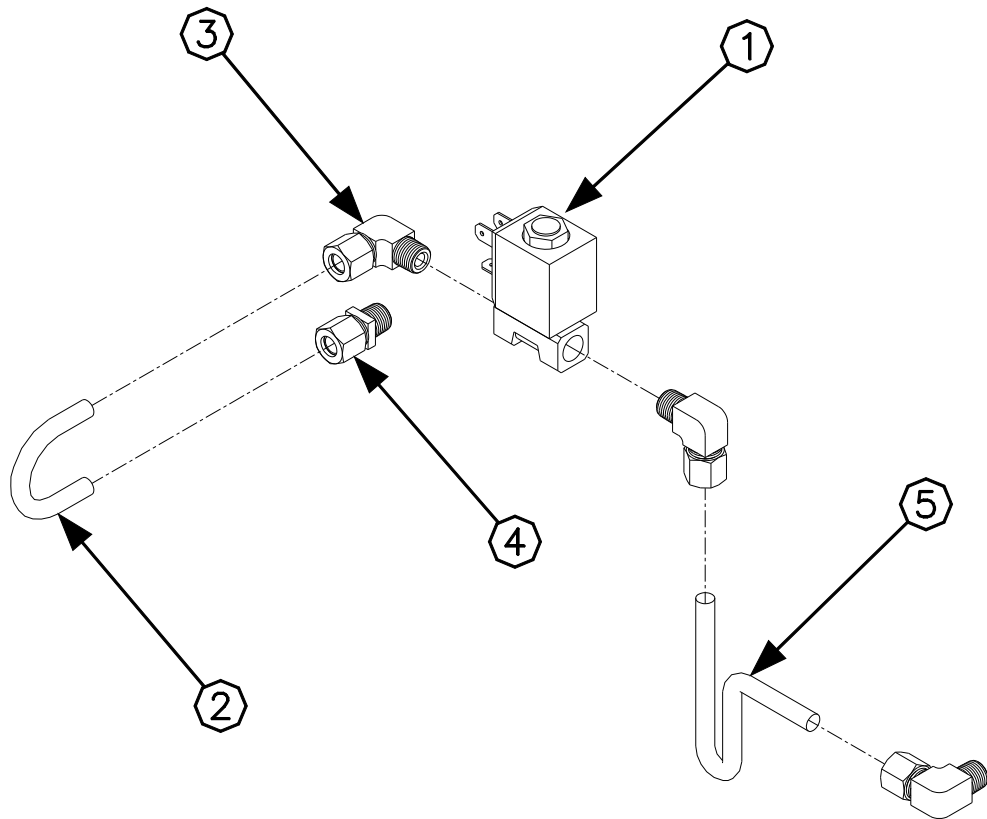
| KIT #'S | | NATURAL GAS = B8702007-CL, LP GAS = B8702008-CL | | |
|-----------------------|------------------------|---|--------------|-----|
| MODELS | ITEM # | DESCRIPTION | PART # | QTY |
| SG50T MG2T | 1 | PIPING, BURNER RUNNER TUBE SG14T, SGH50T (LH) | B8042003 | 1 |
| | 2 | PIPING, BURNER SCB | B8041901 | 4 |
| | 3 | CONTROL, SCB RELAY BOARD 24 VAC CLASS 2 | 60144001 | 2 |
| | 4 | INSULATION, RELAY BOARD | 60132602 | 2 |
| | 5 | WIRING, HARNESS SCB | B6760501 | 2 |
| | 6 | PIPING, SCB (LH) | B8042101 | 1 |
| | 7 | ORIFICE, PILOT RUNNER TUBE #52 (NATURAL GAS) | 2908-0940501 | 2 |
| | 7 | ORIFICE, PILOT RUNNER TUBE #68 (LP GAS) | 2908-0940502 | |
| | 8 | CONTROL BOX, CABLE RETAINER SG14, 14R, 14T | A2035705 | 2 |
| | 9 | BUSHING, .512 HOLE DIAMETER | 60130401 | 2 |
| | 10 | PILOT ORIFICE RETAINER BRACKET (LH) | A2036801 | 1 |
| | 11 | PIPING, HI LIMIT SCB | B8042202 | 2 |
| | 12 | INSTRUCTIONS, SCB UPGRADE INSTALLATION | L80-029 | 1 |
| | 13 | PIPING, BURNER RUNNER TUBE SG14T, SGH50T (RH) | B8042004 | 1 |
| | 14 | PIPING, SCB (RH) | B8042102 | 1 |
| | 15 | PILOT ORIFICE RETAINER BRACKET (RH) | A2036802 | 1 |
| | 16 | SCREW, TAPPING SLOTTED (NOT SHOWN) | PP10023 | 4 |
| | 17 | LABEL, GAS SG WITH SCB (NOT SHOWN) | A6092301 | 1 |
| 18 | TIE, CABLE (NOT SHOWN) | P5045140 | 6 | |

SRTG SELF CLEANING BURNER SYSTEM



| KIT #'S | | NATURAL GAS = B8702009-CL, LP GAS = B8702010-CL | | |
|-------------|------------------------|---|--------------|-----|
| MODELS | ITEM # | DESCRIPTION | PART # | QTY |
| SRTG | 1 | PIPING, BURNER RUNNER TUBE SG14T, SGH50T, (LH) | B8042003 | 1 |
| | 2 | PIPING, BURNER SCB | B8041901 | 2 |
| | 3 | CONTROL, SCB RELAY BOARD 24 VAC CLASS 2 | 60144001 | 1 |
| | 4 | INSULATION, RELAY BOARD | 60132602 | 1 |
| | 5 | WIRING, HARNESS SCB | B6760501 | 1 |
| | 6 | PIPING, SCB (LH) | B8042101 | 1 |
| | 7 | ORIFICE, PILOT RUNNER TUBE #52 (NATURAL GAS) | 2908-0940501 | 1 |
| | | ORIFICE, PILOT RUNNER TUBE #68 (LP GAS) | 2908-0940502 | |
| | 8 | CONTROL BOX, CABLE RETAINER SG14, 14R, 14T | A2034703 | 1 |
| | 9 | BUSHING, .512 HOLE DIAMETER | 60130401 | 1 |
| | 10 | PILOT ORIFICE RETAINER BRACKET (LH) | A2036701 | 1 |
| | 11 | PIPING, HI LIMIT SCB | B8042201 | 1 |
| | 12 | INSTRUCTIONS, SCB UPGRADE INSTALLATION | L80-029 | 1 |
| | 13 | SCREW, TAPPING SLOTTED (NOT SHOWN) | PP10023 | 2 |
| | 14 | LABEL, GAS SG WITH SCB (NOT SHOWN) | A6092301 | 1 |
| 15 | TIE, CABLE (NOT SHOWN) | P5045140 | 3 | |

SCB VALVE ASSEMBLY EXPLODED VIEW AND PARTS LIST



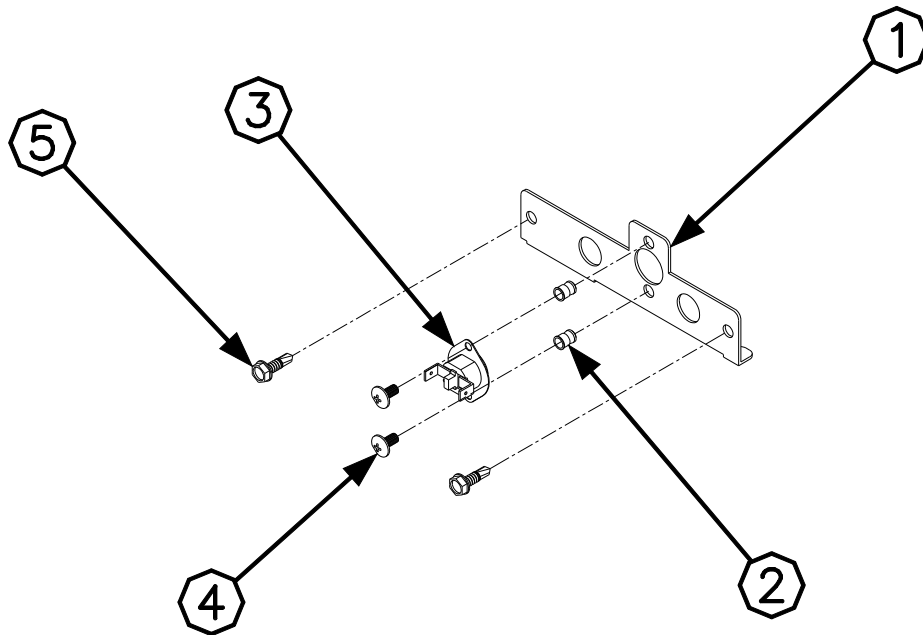
| ITEM # | DESCRIPTION | PART # | QTY |
|--------|------------------------------------|----------|-----|
| 1 | VALVE, SOLENOID SCB 24 VAC | 60148101 | 1 |
| 2 | PG, TUBING SCB SG* | A8039001 | 1 |
| 3 | ELBOW, 1/4 X 1/8 BRASS COMP | P7037797 | 3 |
| 4 | FTG, CMPRSN BRS STR .25TB X .12 | PP10934 | 1 |
| 5 | TUBING, FLEX W/O FTG 6.0" X .25 OD | 60116010 | 1 |

FOR ASSEMBLY #'S

B8042101 - SG14, SG14R, SG14T, SG18, SGH50, SGH50T (LH VAT)), MG2, MG2T (LH VAT)

B8042101 - SG14T (RH VAT), SGH50T (RH VAT), MG2T (RH VAT)

SCB THERMAL HI LIMIT ASSEMBLY EXPLODED VIEW AND PARTS LIST



| ASSEMBLY # B8042201 – USE FOR SG14, SG14R, SG18, SGH50, MG2 | | | |
|--|---------------------------------|----------|-----|
| ITEM # | DESCRIPTION | PART # | QTY |
| 1 | BRACKET, HI LIMIT SCB SG, SGH | A2036904 | 1 |
| 2 | NUTSERT, 6-32 UNC * | P0091400 | 2 |
| 3 | SW, THERMAL LIMIT W/ MAN RESET | 60147801 | 1 |
| 4 | SCR, 6-32 x 5/16 TH PHILLIPS ZN | PP10687 | 2 |
| 5 | SCR. 10-16 x 5/8 HEX SLF DR | P0075300 | 2 |

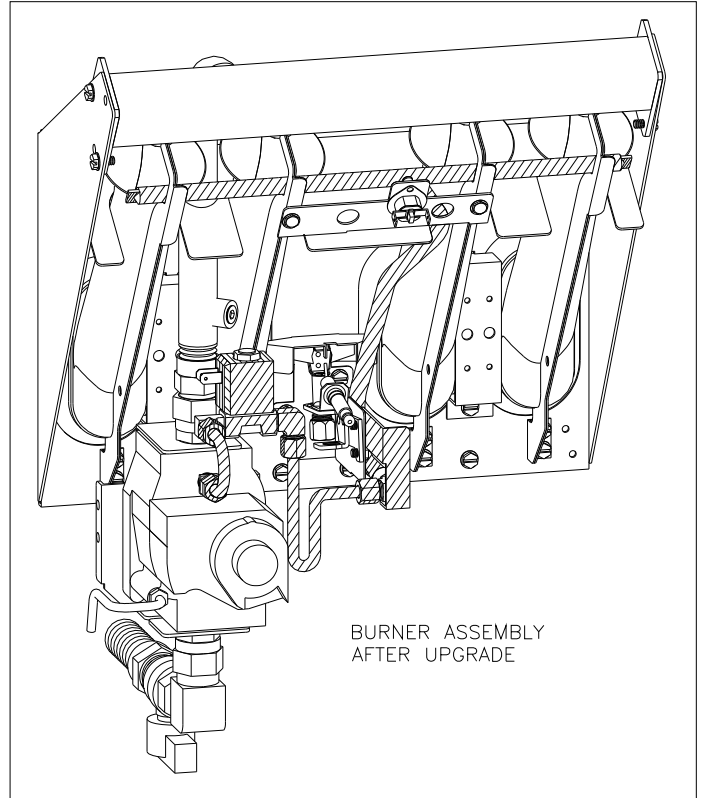
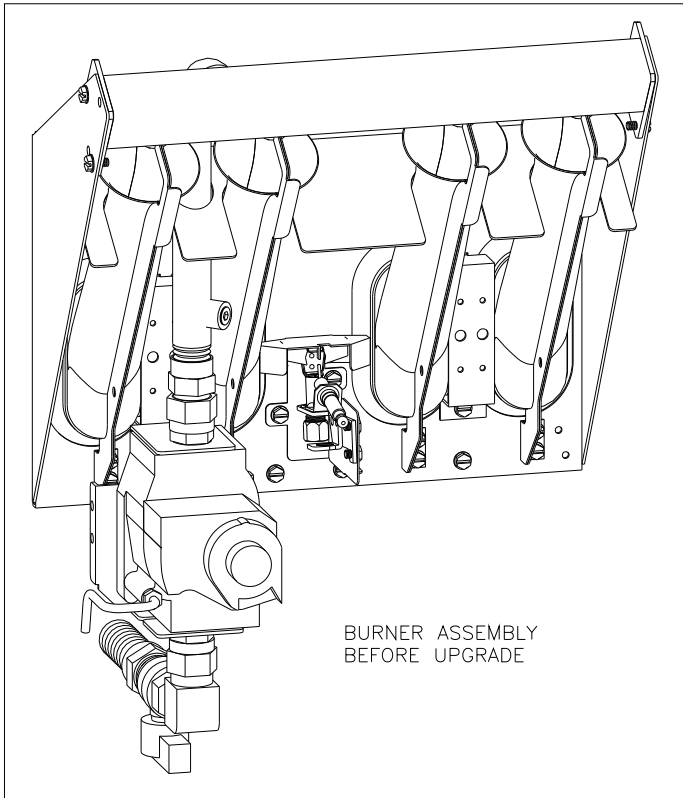
| ASSEMBLY # B8042202 – USE FOR SG14T(LH), SGH50T(LH), MG2T(LH) | | | |
|--|---------------------------------|----------|-----|
| ITEM # | DESCRIPTION | PART # | QTY |
| 1 | BRACKET, HI LIMIT SCB SG, SGH | A2036902 | 1 |
| 2 | NUTSERT, 6-32 UNC * | P0091400 | 2 |
| 3 | SW, THERMAL LIMIT W/ MAN RESET | 60147801 | 1 |
| 4 | SCR, 6-32 x 5/16 TH PHILLIPS ZN | PP10687 | 2 |
| 5 | SCR. 10-16 x 5/8 HEX SLF DR | P0075300 | 2 |

| ASSEMBLY # B8042203 – USE FOR SG14T(RH), SGH50T(RH), MG2T(RH) | | | |
|--|---------------------------------|----------|-----|
| ITEM # | DESCRIPTION | PART # | QTY |
| 1 | BRACKET, HI LIMIT SCB SG, SGH | A2036906 | 1 |
| 2 | NUTSERT, 6-32 UNC * | P0091400 | 2 |
| 3 | SW, THERMAL LIMIT W/ MAN RESET | 60147801 | 1 |
| 4 | SCR, 6-32 x 5/16 TH PHILLIPS ZN | PP10687 | 2 |
| 5 | SCR. 10-16 x 5/8 HEX SLF DR | P0075300 | 2 |

*** NUTSERT TOOL REQUIRED TO SET NUTSERTS PROPERLY**

Before and After: Visual Aid

The below images show a typical model SG14 burner assembly before and after the installation of the SCBS upgrade. Wire harnesses and pilot tubing are omitted to provide better clarity. In order to give the installer a sense of part orientation and location, the gas piping parts (valve, tubing, runner arm and fittings) of the SCBS system are shaded. For clarity, the thermal limit switch assembly is not shaded.





In the event of problems with or questions about your order, please contact the Pitco Frialator factory at:

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(603) 225-6684 World Wide

In the event of problems with or questions about your equipment, please contact the Pitco Frialator Authorized Service and Parts representative (ASAP) covering your area, or contact Pitco at the numbers listed to the left.

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