



**SCB RELAY BOARD REPLACEMENT KIT (P/N 60144001-CL)
FOR MODELS UPGRADED WITH THE
PITCO SELF CLEANING BURNER SYSTEM**

Each kit should contain the following parts in the noted quantities:

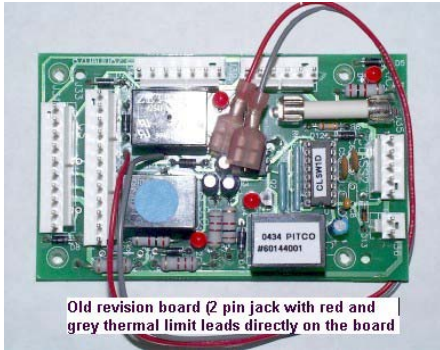


Part Number	Description	Quantity
60144001	CONTROL, RELAY BOARD SCB	1
B6760501	WIRING, HARNESS SCB	1

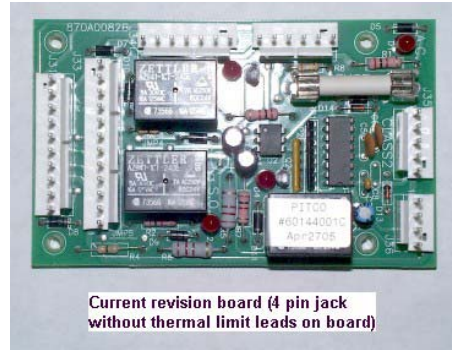
Replacement of older revision boards will require upgrading the SCB harness. Older revision boards will have grey and red wires for the thermal limit switch connected directly to the board and a two-pin jack on the board for the SCB valve harness. Current revision boards will not have the red and grey leads. Additionally,

the two-pin jack has been changed to a four-pin jack. The thermal limit switch signal is now routed through this four-pin jack.

If the board you are replacing is a current revision board, you will not need to replace the harness and may discard the harness included in this kit.



Old revision board (2 pin jack with red and grey thermal limit leads directly on the board)



Current revision board (4 pin jack without thermal limit leads on board)

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.

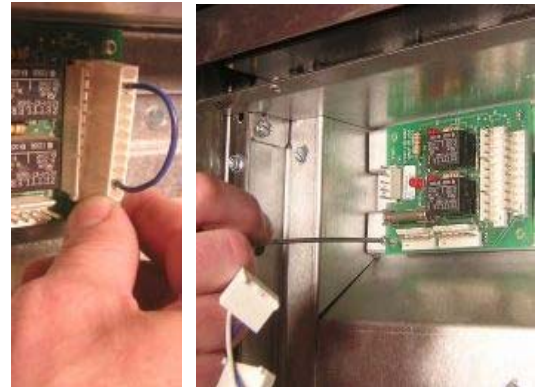
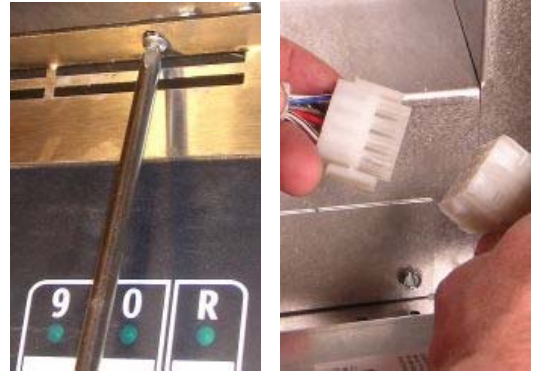


WARNING

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

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 open front panel 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 and insulation paper. 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 in the same position on the replacement relay board.
- c. Install the insulation paper onto the backside of the replacement relay board and mount the board in the front panel enclosure, using the same screws and holes as the old board.



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 relay board to short out and damage the relay 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.
- e. If you are replacing a new revision board (4 pin connector and no attached wires) proceed to step f. If you are replacing an older revision board disconnect and remove the old valve and thermal limit harnesses from the appliance. Feed the new harness through the opening that you removed the old one from. Connect the new harness: red and violet wires to the vertically oriented tabs on the SCB valve and the green wire to the horizontally oriented tab on the SCB valve, and the grey wires to the thermal limit switch.
- f. 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. Proceed to the next section to verify proper operation of the SCB system



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.

Should there be a problem with your appliance, use the following table 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.

In the event of problems with or questions about your order, please contact the Pitco Frialator factory at:
 (800) 258-3708 US and Canada only or
 (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.

MAILING ADDRESS – P.O. BOX 501, CONCORD, NH 03302-0501
 SHIPPING ADDRESS – 10 FERRY ST., CONCORD, NH 03301