

STEWART-WARNER

CAD CELL PRIMARY CONTROL

MODELS PC-1 AND PC-2

GENERAL DESCRIPTION:

PC-1—NON-RECYCLING TYPE. Ignition "On" at all time during burner cycle.

PC-2—RECYCLING TYPE. Ignition "Off" after approximately 65 seconds.

ELECTRICAL:

120 Volts, 60 cycle, single phase

Motor Rating: Full load amps. 9

Locked rotor amps. 54

Ignition Transformer: 250 VA

NOTE: Set the heat anticipator in the thermostat at .4 amps.

INSTALLATION

NOTICE: In all cases the cad cell flame detector must be mounted in the bracket provided on the burner by the burner manufacturer.

OPERATION

The primary control is completely checked and adjusted at the factory and, therefore, will require no adjustment in the field.

STARTING THE BURNER

1. Depress and release the reset button to insure that the unit is in the normal starting position.
2. Open the hand valves in the oil supply line.
3. Move the indicator on the thermostat or operating control toward the upper limit, until it calls for heat.
4. Close the line switch. The burner will start. For corrective measures, see SERVICE.

SCAVENGING TIME

PC-2 (Recycling type)

After starting the burner, allow it to run for a few minutes so that all parts of the burner and control are warmed. Then open and immediately reclose the line switch. (Note the time at opening of the switch). The burner should shut down immediately. The burner should automatically start (recycle) after the shutdown period. This shutdown period, known as the scavenging period, permits any unburned gases to pass up the stack. Record the time from the moment switch was pulled until the recycle of the burner starts. This should be approximately one to two minutes.

SAFETY SWITCH CHECK

Start the burner and allow the unit to run for several minutes. Then with the burner running, disconnect the flame detector lead at terminal D. This simulates a flame failure during normal operation of the burner. The PC-1 (non-recycling) control will immediately start into lockout and will shut down the burner in approximately 45 seconds.

The PC-2 (recycling) control will immediately shut down the burner and start timing out the scavenge cycle. After a period of from one to two minutes the burner will restart. With the flame detector disconnected, the control will remain in the safety lock out cycle and will shut down the burner in approximately 45 seconds.

About two minutes will be required after safety lock out for the thermal timer to cool sufficiently to permit resetting. The burner cannot start with the safety reset button depressed.

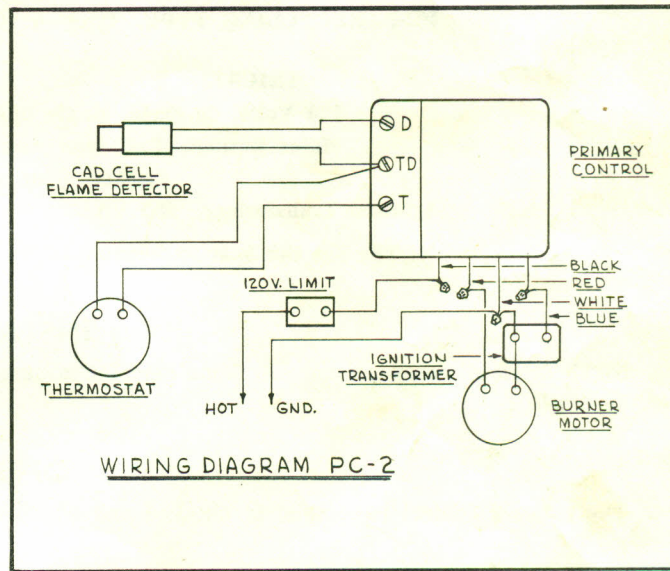
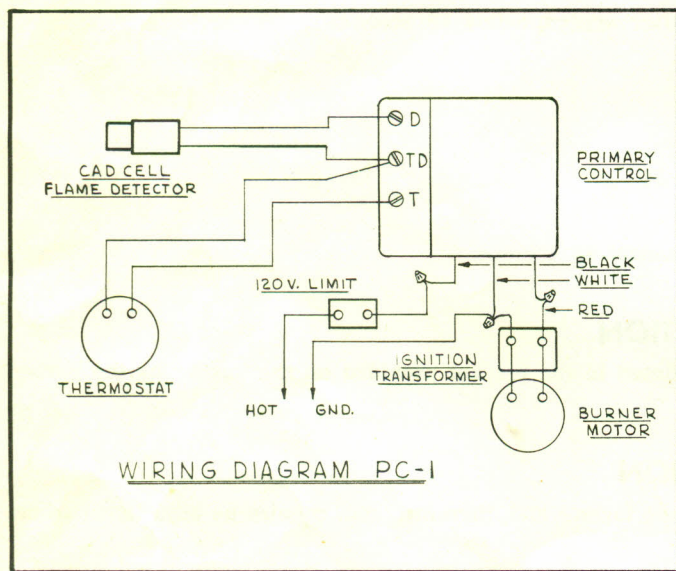
SERVICE

If the primary control fails to operate after the line switch has been closed and the thermostat and limit control are calling for heat, press the reset button and release. The burner should start immediately. If the burner does not start or combustion does not take place, open the line switch, check the power supply, oil supply, ignition transformer and wiring connections. If the unit still does not start, replace the primary control.

If the primary control goes into safety lockout after the burner has started, check for a defective flame detector, obstruction blocking light to cell, plugged oil lines, or ignition failure.

PARTS LIST

	PC-1	PC-2
Control package, complete.....	300690	300729
Primary relay only.....	300712	300730
Cad cell and socket assembly.....	300697	300697
Cad cell only.....	300691	300691



STEWART-WARNER CORPORATION

HEATING AND AIR CONDITIONING DIVISION • LEBANON, INDIANA