GENERAL CONTROLS

SPECIFICATIONS INSTALLATION AND SERVICE

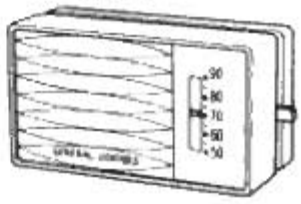
T80 HEATING THERMOSTAT FOR MILLIVOLT SYSTEMS OR B54M GAS VALVE

DESCRIPTION

T80 Series Thermostats control temperature by opening and closing circuits to heating equipment in response to room temperature change. THIS THERMOSTAT IS FOR USE WITH MILLIVOLT (PILOT GENERATOR OPERATED) SYSTEMS OR GENERAL CONTROLS TYPE B54M (.06 AMP.) GAS VALVE ONLY.

T80 VERTICAL MODEL

T80 HORIZONTAL MODEL



OPERATION

T80 operating mechanism consists of a temperature selection lever and a U shaped bimetal with thermo-poised contacts.
Temperatures are selected by moving selection lever to desired comfort level. Moving lever positions bimetal contacts to make when temperature drops to lever setting.
Thermostat operating differential is approximately ½°F.

LOCATION SUGGESTIONS

Proper thermostat location is necessary for satisfactory temperature control.
Install thermostat . . .
. . . in room heated by system.
. . . where exposed to normal free air circulation. Do not locate where directly affected by lamps, appliances, fireplaces, sunlight or drafts.
. . . on inside wall, four to five feet from floor.

MOUNTING AND WIRING

T80 Thermostats are available with or without wiring sub-base. Sub-base kit (part #106340A for vertical and horizontal models) may be ordered separately. Mount and wire thermostat as shown in Figure 1 or 2. Thermostat cover snaps off hinge pins for installation convenience. See table below for wire selection. Use solid conductor copper wire only.

FOR DISTANCE OF	40′	60′	100′
USE WIRE SIZE	19-2	18-2	16

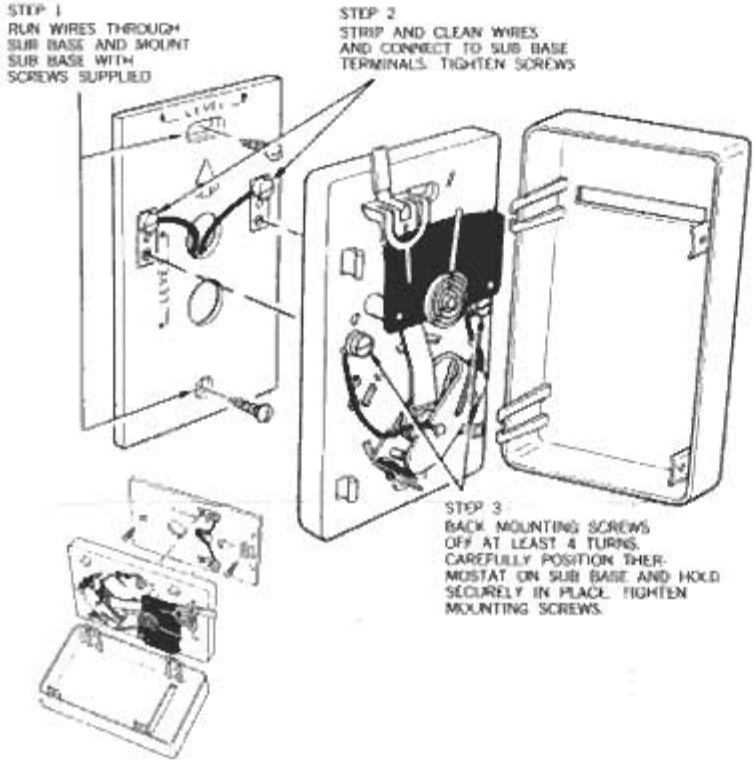


Fig. 1 Mounting and wiring with Sub Base (T80-500 and T80-400 only)

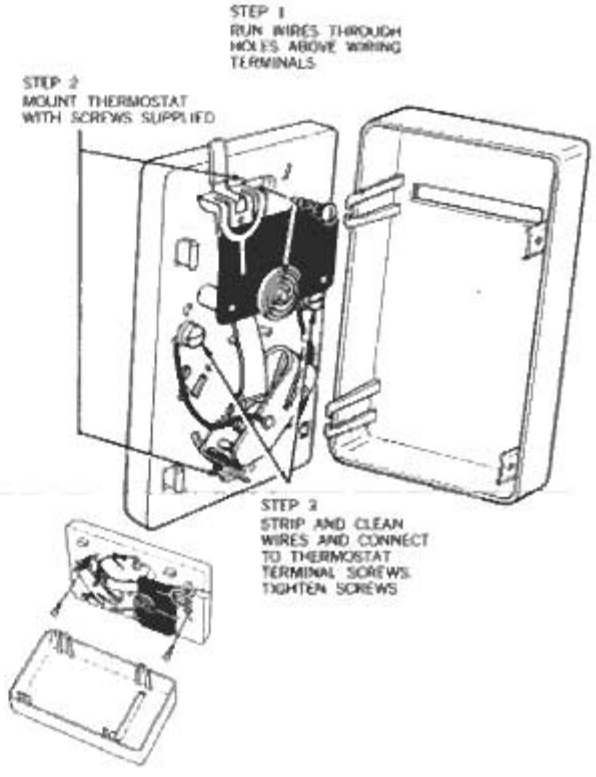


Fig. 2 Mounting and wiring without Sub Base.

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GENERAL CONTROLS

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SDI T80-8
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ADJUSTMENTS AND SERVICE

If system fails to maintain proper temperature control, check following items before adjusting thermostat:

1. Refer to SERVICE CHECK CHART below for possible causes of unsatisfactory system operation and their remedies.
2. Thermostat location (See LOCATION SUGGESTIONS).
3. System and thermostat wiring. Make sure thermostat mounting screws and all other wiring connections and splices are clean and tight.
4. Check operation of limit operating controls.

CLEANING CONTACTS

Open thermostat cover and move temperature selection lever to lowest dial setting. Carefully lift rubber cup (Fig. 4) and insert a piece of high grade bond paper or calling card between contacts. Set lever 10° above room temperature and move card back and forth several times to clean contacts. Remove paper and make sure rubber cup seats firmly against bimetal.

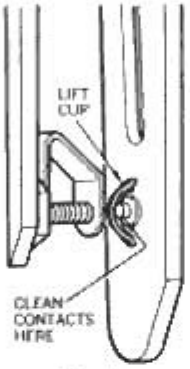

Fig. 3

Caution — Never place sandpaper, crocus cloth, or abrasive material between the contacts as this would permanently damage contact surface.

Thermometer Adjustment: (1) Determine temperature at thermostat location with an accurate mercury thermometer. (2) Open thermostat cover and turn thermostat adjustment screw a small amount. (3) Close cover and check reading.

NOTE: Heat from hands and breath will affect thermostat. When making any adjustment, work quickly, then allow time for unit to stabilize and re-check adjustment.

WARNING — Do not bend or distort leaf spring (Fig. 4) even slightly when installing or servicing thermostat. Proper operation of thermostat depends on maintenance of spring pressure which is pre-set at factory.

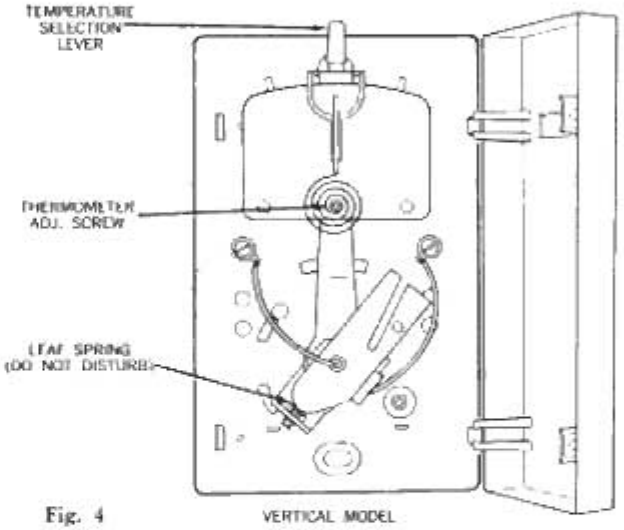

Fig. 4 VERTICAL MODEL

SERVICE SUGGESTIONS

TROUBLE	POSSIBLE CAUSE	REMEDY
Thermostat set above room temperature, pilot flame lighted, but appliance not on. OR Apparent lag in thermostat action.	Pilot flame too small or yellow in color due to restricted pilot line, dirt in primary air opening or burner head, drafts, or wrong orifice in pilot.	Clean pilot line, primary air opening and burner head, check mounting and change pilot orifice if required.
	Loose or dirty electrical connections in wiring or at terminals of valve or limit switch.	Clean all splices, tighten terminals. Check with millivolt meter. (FOR MILLIVOLT SYSTEMS ONLY.)
	Pilot Generator producing insufficient millivoltage.	Check with millivolt meter. (FOR MILLIVOLT SYSTEMS ONLY.)
	Thermostat not making contact due to dirty contact points. Thermostat mounted in cold or drafty spot.	Clean contacts. See "Adjustment and Service." Mount according to instructions.
Thermostat apparently does not turn appliance off.	Electrical circuit shorted. Staples or nails driven through thermostat wires.	Check electrical circuit and repair.