

T-4000-611 Conversion Kit

Dual T-400 Series to T-4000 Series

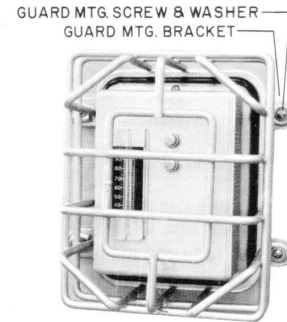
Using Existing Bakelite Back

This kit is used to convert an existing T-400 series dual temperature thermostat to a T-4000 series vertical or horizontal mounting dual temperature thermostat. It can be used for thermostats with a **flush or surface mounted pipehead** also for models with wire or cast guards.

The following additional items must be ordered separately to complete the conversion:

- a. Proper T-4000 Series Thermostat; vertical or horizontal mounting
- b. Cover to match room instrument
- c. Guard Adapter Kit if the converted installation is to make use of existing wire or cast guard (T-4000-603)

STEP 1: Remove and discard the four guard mounting screws and washers. **NOTE:** The guard mounting bracket is not removed if wire or cast guard is used on the converted installation.

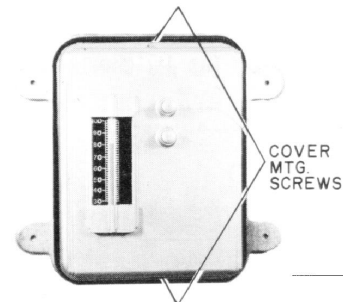


**Table I: Dual Function Instruments
(Temp. or Humidity)**

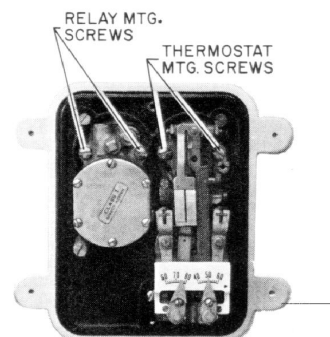
Original Controller		Recommended Conversion (Using This Kit)
Model	Pipehead Style (See Back Page)	
T-315	V	T-4003
T-405	III	T-4502
T-411	V	No Direct Replacement*
T-418	III	
T-423	III	T-4752
T-431	VII	No Direct Replacement*
T-432	III	T-4752
T-435	VII	No Direct Replacement*
T-445	IIb	
T-460	III	T-4502 with Manual Index Switch
T-461		
T-462	III	T-4502 & Two-Position Air Switching Device
T-465	IV	T-4512
H-101	V	No Direct Replacement*

* Contact Branch Office or Field Engineering for custom conversion possibility.

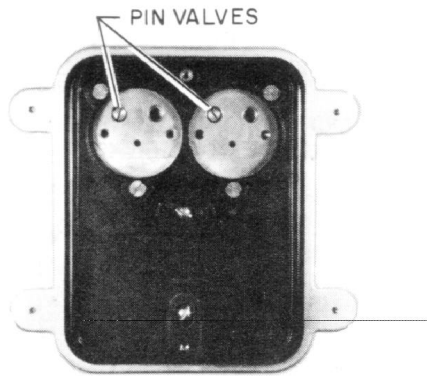
STEP 2: Remove and discard the two cover mounting screws and cover.



STEP 3: Remove and discard the thermostat mounting screws, relay mounting screws, relay and gaskets.

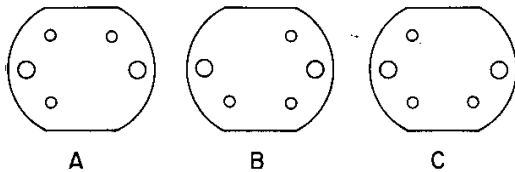


STEP 4: Before beginning the conversion, make sure that the gasket surfaces are clean and free of foreign material. Remove the pin valve in the left side pipehead only.

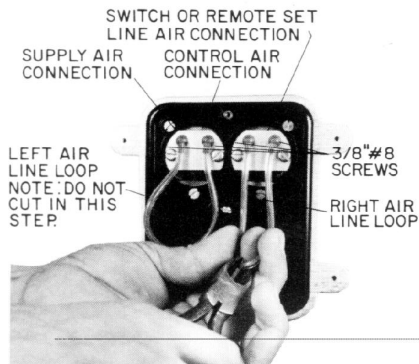


STEP 5: Refer to the chart on the back page and determine the required number and orientation of gaskets (facing the installation).

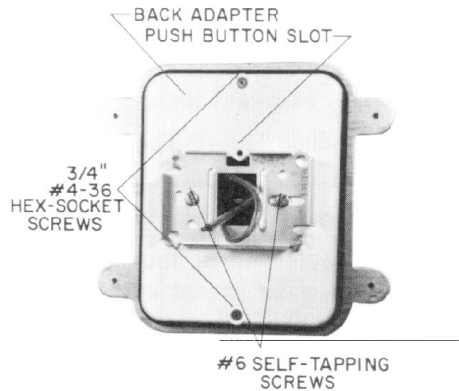
- a. For 2-pipe conversions only, block off the right side secondary supply by closing the pin valve and use just the left side gasket orientation "A".
- b. For 3-pipe conversions, use gasket orientation "A" for the left side and gasket orientation "B" or "C" (as per chart) for right side.



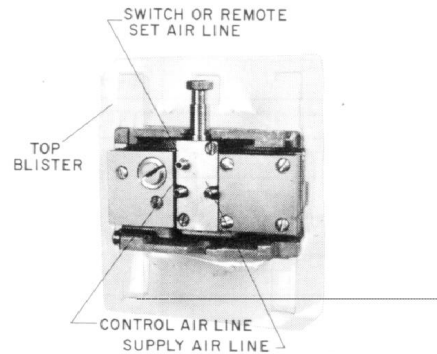
STEP 6: Assemble the gasket(s) and pipehead adapter(s) with the 3/8 in. #8 screws furnished. For 2-pipe conversions, make sure pin valve is closed. For 3-pipe conversions, cut the right air line loop in half and remove and discard the tubing on the fitting which is blocked off by the gasket (Refer to the chart). Note: Do not alter left air line loop until Step. 9.



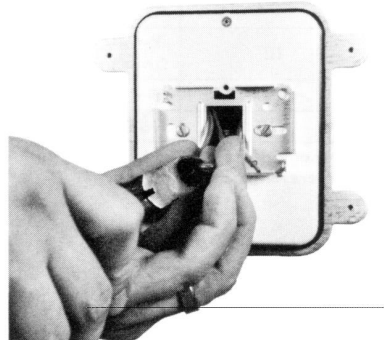
STEP 7: Attach the back adapter to the existing installation with the two 3/4 in. #4-36 hex socket screws furnished. Note: For vertical thermostat mountings, remove the two #6 self-tapping screws and rotate the bracket 90°. The push button slot in the bracket must be on the top for a horizontal thermostat mounting and on the left side for a vertical mounting.



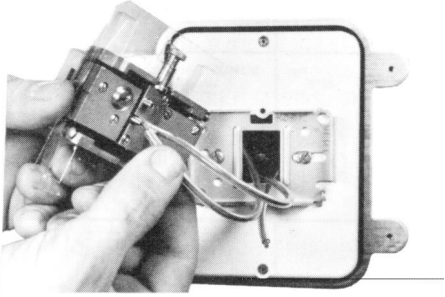
STEP 8: Determine the appropriate thermostat air line connections.



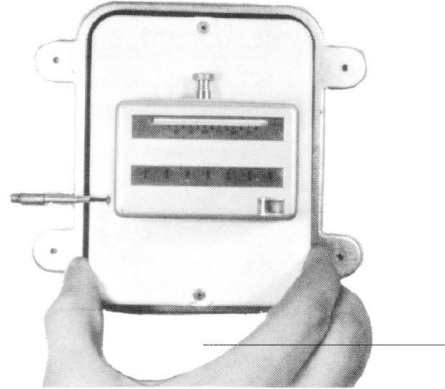
STEP 9: Cut the left air line loop in half.



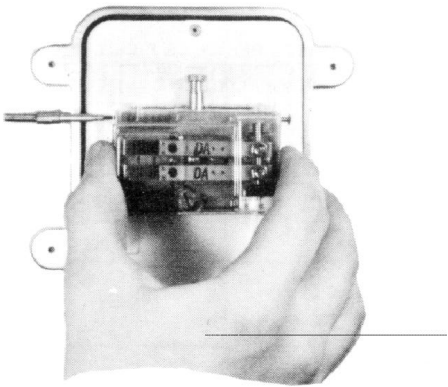
STEP 10: Assemble the air lines to the thermostat as shown (slide the tubing over the terminals at least 1/8 in. beyond the barb). **NOTE:** Do not remove thermostat from the top blister when assembling tubing. The top blister, which protects the bi-metal strips and factory calibration from accidentally being changed, should not be removed until after next step.



STEP 12: Secure the thermostat cover with the socket head mounting screws on the mounting bracket. For thermostats with guards go on to next step.



STEP 11: Secure the thermostat to the mounting bracket with the socket head mounting screws on the thermostat body. Remove and discard the top blister after the thermostat is secured to the mounting bracket.



STEP 13: Place the guard adapter over the guard mounting bracket. **NOTE:** If the piping is exposed, cutouts will have to be made in the guard adapter.

Secure the guard and guard adapter as shown with the four #6 screws and washers furnished. **NOTE:** On installations with cast guards, the washers are not used.

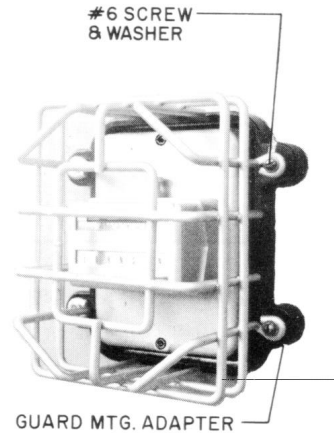
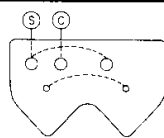
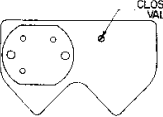
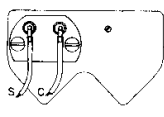
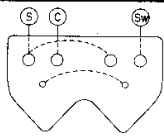
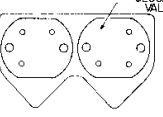
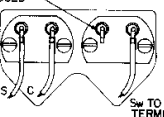
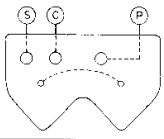
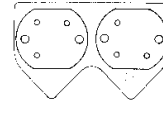
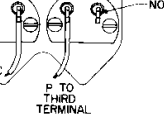
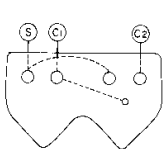
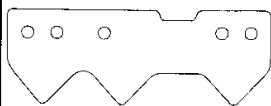


Chart of Pipehead, Gasket and Adapter Arrangements

STYLE	BASIC PIPEHEAD *	DESCRIPTION	GASKET REPLACEMENT	PIPEHEAD ADAPTER
III		DUAL SIZE PIPEHEAD 2-PIPE (HEATING-COOLING OR DUAL TEMP.)		
IV		DUAL SIZE PIPEHEAD 3-PIPE (DAY-NIGHT WITH SWITCH LINE)		
V		DUAL SIZE PIPEHEAD 3-PIPE (SUB-MASTER)		
VI		DUAL SIZE PIPEHEAD 3-PIPE (TWO-SINGLE CONTROLLERS OR SINGLE CONTROLLER PLUS TWO-POSITION RELAY)	<p>THIS SPECIAL PIPEHEAD CAN BE CONVERTED SEVERAL WAYS, DEPENDING UPON THE CONTROLLER TO BE USED AND THE HEATING SYSTEM TO BE CONVERTED. FOR EXAMPLE:</p> <ul style="list-style-type: none"> a) USE T-4002 WITH CONTROL AIR TO C₁ ONLY OR TO BOTH C₁ AND C₂ (A 5/32 IN. BRASS TEE, F-700-83, IS REQUIRED IF BOTH C₁ AND C₂ ARE USED.) b) USE T-4512 WITH THE THIRD TERMINAL CONNECTED TO C₂. c) USE T-4003 WITH THE THIRD TERMINAL CONNECTED TO C₂. 	
VII		TRIPLE SIZE PIPEHEAD 3-PIPE (OR MORE)	CONTACT BRANCH OFFICE OR FIELD ENGINEERING FOR CUSTOMIZED CONVERSION POSSIBILITIES	

* S = MAIN SUPPLY AIR LINES
C, C₁, C₂ = CONTROL (BRANCH) AIR LINES

P = PILOT AIR LINE
SW = SWITCH AIR LINE

**JOHNSON
CONTROLS**

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