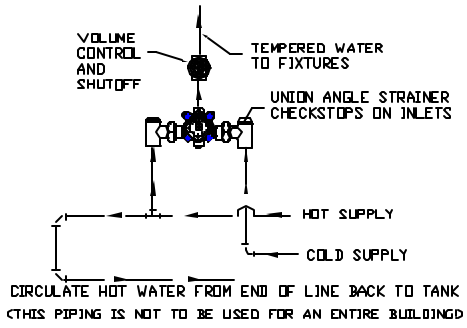
REQUIRED METHODS OF PIPING TM VALVES (RECIRCULATED HOT WATER SYSTEMS)

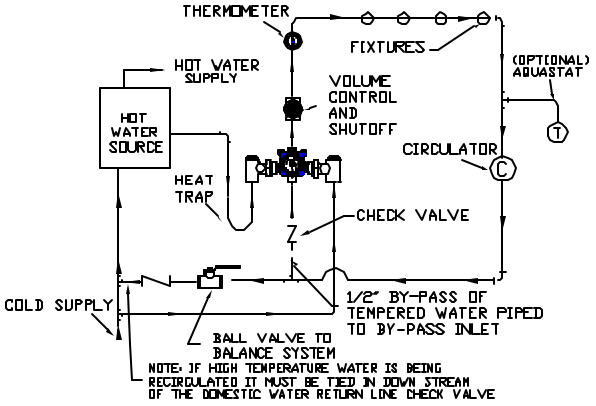
METHOD #1



METHOD #1

Required when hot water supply is to be circulated to a master mixer or individual thermostatic mixing valves which are a substantial distance from the hot water source. It is used primarily in a building with several risers, with tempered water in each riser controlled by a separate master mixer. NOTE: The engineer must determine maximum distance which can be run, i.e. maximum allowable time for hot water to reach user with one shower head operating, based upon code requirements and/or good practice.

METHOD #2



METHOD #2

Required when tempered water is to be circulated through a loop, to maintain tempered water at each fixture. The function of the 1/2" by-pass is to allow the recirculated water to pass through the mixing valve during periods of no draw without entering the hot water source to avoid being reheated. The ball valve allows the system to be properly balanced. This by-pass loop helps reduce the buildup of undesirable hot water in the primary system, and **MUST NOT** be omitted. See set-up instructions below.

METHOD #2 SET-UP INSTRUCTIONS

Before any attempt is made to adjust this system, be sure the temperature of the hot water at the source is properly set and maintained.

1. **Be sure system is piped in accordance with Method #2.**
2. **Shut off circulator.**
3. **Open enough fixtures to flow a minimum of 1 GPM.**
4. **Set mixing valve to the desired temperature, (note Warning Tag attached to the pointer of the valve).**
5. **Shut off all fixtures. Note: At this point, be sure NO water is being drawn through any fixture until the temperature in the recirculated line has been set.**
6. **Open the ball valve approximately 1/2 way and start the circulator. Make sure no water is being drawn.**
7. **Observe the temperature until it stabilizes.**
8. **Close the ball valve slightly if the temperature is to hot, or open if it is too cold and again let the temperature stabilize. Repeat until the desired recirculated temperature is set.**

INSTRUCTIONS FOR DISMANTLING VALVE (DWG. 1)

1. Shut off hot and cold supplies to valve.
2. Remove four Cover Screws M20-2C to release entire thermostatic control assembly.

WHEN RE-ASSEMBLING VALVE, insert Cover Gasket M20-3C in base. Lubricate TM28-6B O'Rings before re-inserting assembly.

After installing new parts, it will may be necessary to reset high temperature limit. See instructions "TO RESET ADJUSTABLE HIGH TEMPERATURE LIMIT STOP" (page 2).

TO REMOVE BRIDGE ASSEMBLY (DWG. 2)

Remove MU-10B Pointer Rod Nut, remove TM28-1-8B Bridge Assembly from pointer rod.

Failure to properly blend the water may be caused by a sticking condition in the TGM-1/28 Port Sleeve Assembly. The Thimble should slide freely on the Port Sleeve.

Clean with a NON-CORROSIVE CLEANING AGENT AND SOFT CLOTH. DO NOT USE ABRASIVES, then wash parts thoroughly.

To reassemble, replace Bridge Assembly on pointer rod. Driving ball on Thimble **MUST** engage hole in coil bracket. Replace pointer rod nut.

DO NOT apply grease or lubricants to the TGM-1/28 Port Sleeve Assembly.

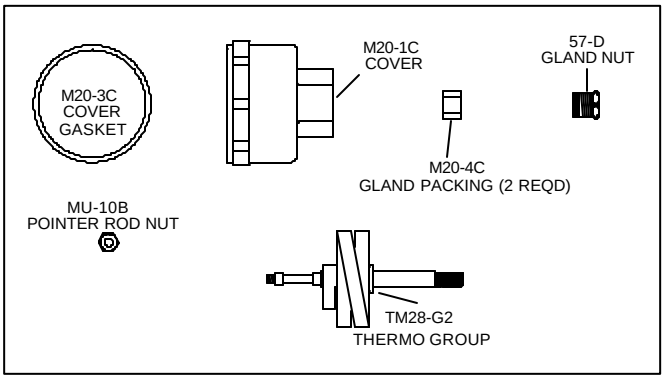
TO DISASSEMBLE BRIDGE ASSEMBLY (DWG. 3)

Remove TM25-3A Holder Nuts using a screwdriver in the slots provided. Clean or replace TGM-1/28 Port Sleeve Assembly following instructions above. When reassembling, check TM-25-3B port sleeve packings and replace if necessary.

TO CLEAN OR REPLACE THERMOSTAT GROUP

Remove stop retaining ring and stop. Loosen gland nut. Push rod through cover. BE CAREFUL NOT TO PULL THERMOSTAT COIL OUT OF SHAPE.

To clean, if a deposit has collected on the thermostat group, brush in a non-corrosive cleaning solution. Rinse in clean water and replace in cover with parts as shown.



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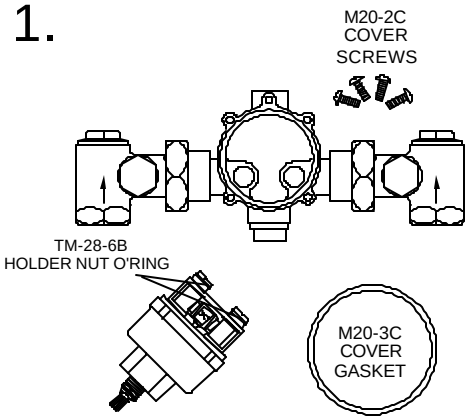

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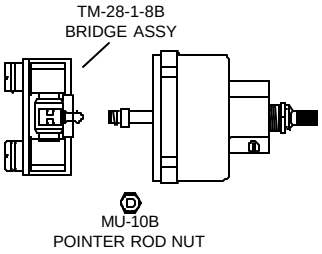

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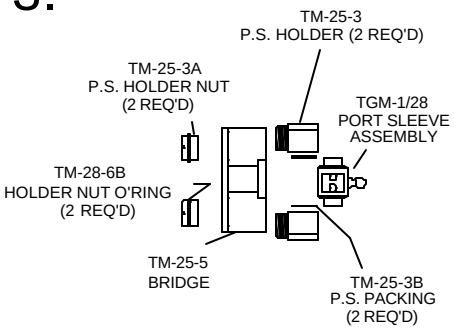

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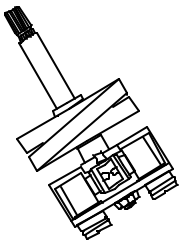

To replace entire Thermostatic Control Assembly specify TM-28-1-12B

NOTE: AFTER INSTALLING NEW PARTS IT WILL BE NECESSARY TO RESET THE ADJUSTABLE HIGH TEMPERATURE LIMIT STOP (SEE PAGE 2).
REMEMBER: THIS IS A CONTROL DEVICE, WHICH MUST BE CLEANED ON A REGULAR BASIS (SEE MAINTENANCE GUIDE AND RECORD, MGR-1000).