ACCESSORY KIT INSTALLATION MANUAL

THERMAL EXPANSION VALVE KITS WITH

R-22 – (S1-1TVMCA1, S1-1TVMCB1, S1-1TVMCD1) OR

R-410A – (S1-1TVMBA1, S1-1TVMBB1, S1-1TVMBC1, S1-1TVMBD1, S1-1TVMBE1, S1-1TVMBF1, S1-1TVMBG1, S1-1TVMBH1)

FOR USE ON COIL MODELS: CF, CM, CU

FOR USE ON AIR HANDLER MODELS: AP, AE, AVC, RFCX*P2, RFCX*E2

GENERAL INFORMATION

This thermal expansion valve (TXV) with internal check valve is to be used with flex coils for models listed above. This kit is required to provide overall rated system performance improvement. The kit can be applied to the listed indoor (ID) coils and air handlers, both for heat pump and cooling applications.

The kit consists of a bolt-on TXV, 2.5 feet of thermal insulation, bulb straps or bulb clamp, Teflon washer and this instruction.

When a TXV kit is installed, a hard start kit may be required. Consult your outdoor (OD) Tabular Data Sheet.

Refer to Tabular Data Sheet for the specific Model/TXV match-up.

S1-1TVMBA1, S1-1TVMBB1, S1-1TVMBC1, S1-1TVMBD1, S1-1TVMBE1, S1-1TVMBF1, S1-1TVMBG1, S1-1TVMBH1 series TXV kits are R-410A A/C and HP compatible.

THERMOSTATIC EXPANSION VALVE (TXV) INSTALLATION

⚠ CAUTION

Outdoor unit model numbers ending with an "H" have a factory installed hard start kit which is required when a TXV is installed. Outdoor unit model numbers with no "H" ending do not require a hard start kit unless local regulations dictate it.

The following are basic steps for installation. Install TXV kit as follows:

IMPORTANT

Refer to the OD unit Technical Guide to determine the proper TXV kit to be used on this product.

1. Relieve the holding charge by depressing Schrader core on the suction manifold stub out.
2. After holding charge is completely discharged, loosen and remove the Schrader core.
3. Place a backup wrench on distributor, loosen and remove brass distributor nut. Retain brass nut for use on liquid line. Keep Teflon washer in place and discard clear disk.

⚠ CAUTION

Do not overtorque. Do not use slip joint pliers. This will distort the aluminum distributor and the brass fitting (potentially causing leaks).

4. Ensure Teflon washer is seated in distributor. Install the thermal expansion valve to the distributor assembly with supplied fittings. Hand tighten and turn an additional 1/4 turn to seal. Do not overtighten fittings. See Figure 1.

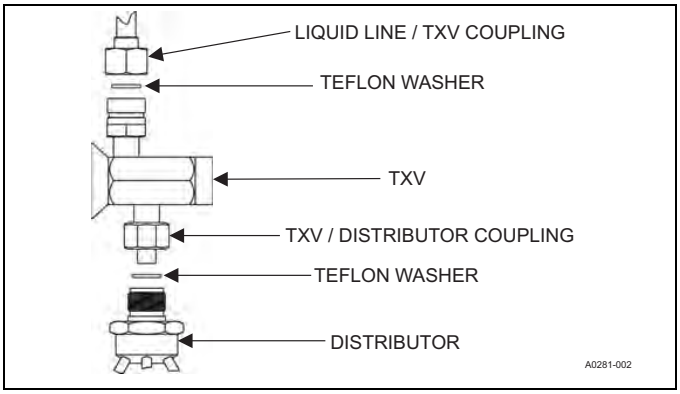

FIGURE 1: TXV Installation

5. Slide the nut removed in step 3 over the supplied liquid line. Place supplied Teflon washer from TXV kit in place on TXV, and install liquid line to the top of the thermal expansion valve. Adjust assembly so liquid line aligns with hole in access panel. See Figure 2. Hand tighten the liquid line, and apply an additional 1/4 turn to seal.

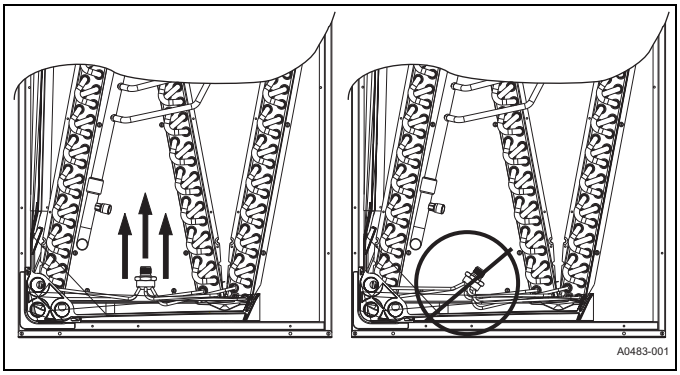

FIGURE 2: Recommended Distributor Adjustment

⚠ WARNING

*Schrader valve core **MUST NOT** be installed with TXV installation. Poor system performance or system failure could result.*

6. Install the TXV equalizer line onto the vapor line by hand tightening the 1/4" SAE coupling nut to the equalizer fitting, and apply an additional 1/3 turn to seal. See Figure 3.

⚠ CAUTION

In all cases, mount the TXV temperature sensing bulb after vapor line is brazed and sufficiently cooled.
Failure to use suction line split grommet may result in TXV failure.

7. Pass the temperature sensing bulb tube for the TXV through the tube opening in the split grommet of the access panel.

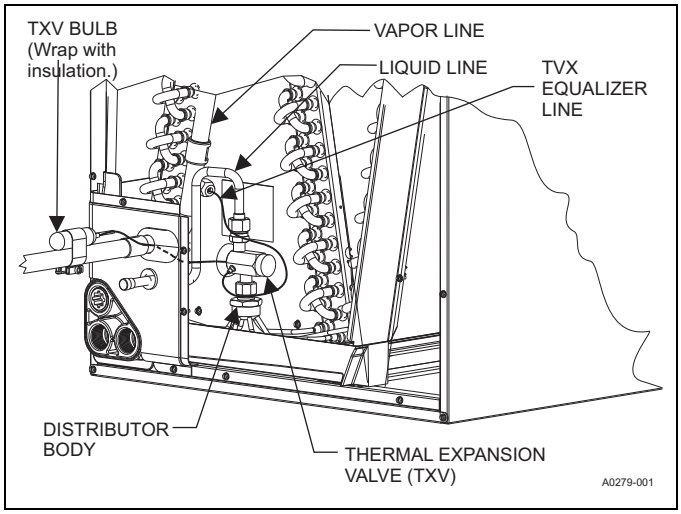

FIGURE 3: TXV Bulb and Equalizer line Installations

8. Install the TXV bulb to the vapor line near the cabinet, using the bulb clamp(s) furnished with the TXV assembly. Ensure the bulb is making maximum contact. See Figures 3 and 4, and accomplish the following:
   a. If possible, install the temperature bulb on a horizontal run of the vapor line. Ensure that the bulb is installed at a 10 o'clock or 2 o'clock position.
   b. If bulb installation is made on a vertical run, locate the bulb at least 16" (40.6 cm) from any bend, and on the tubing sides opposite the plane of the bend. Position the bulb with the tail of the bulb at the top, so that the bulb acts as a reservoir. See Figure 5.
   c. Insulate the bulb using thermal insulation provided to protect it from the effect of the surrounding ambient temperature. Cover completely to insulate.

9. After line set is installed, leak test the system.

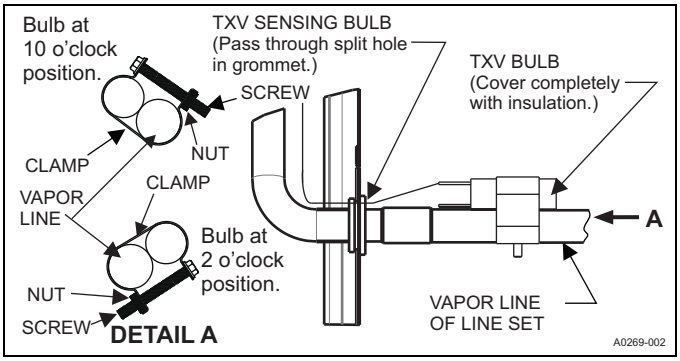

FIGURE 4: Proper Bulb Location

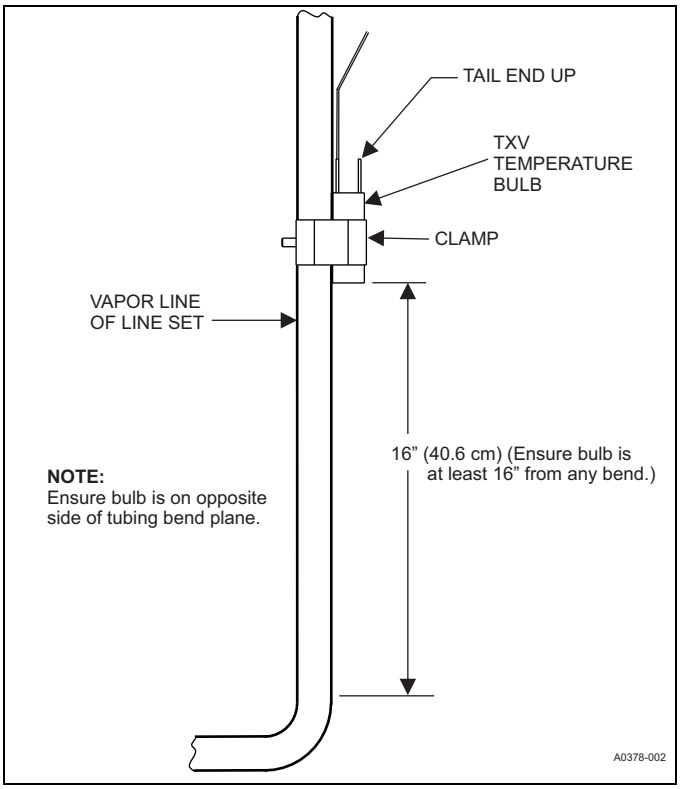

FIGURE 5: Vertical Temperature Bulb Orientation

5020042-UAI-C-0216
Supersedes: 5020042-UAI-B-0915

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