

Installer's Guide

Coil Thermal Expansion Valve Installation

ALL phases of this installation must comply with NATIONAL, STATE AND LOCAL CODES

IMPORTANT—This Document is customer property and is to remain with this unit. Please return to service information pack upon completion of work.

General Information

This Thermostatic Expansion Valve Kit may be used on any indoor air handler or coil that is equipped with a current thermostatic expansion valve with an internal check valve and mechanical fittings listed on the application chart provided in this Installer's Guide. This kit can be used on split system heat pumps and air conditioning systems.

Thermostatic Expansion Valve Kits can be field installed to fit a variety of sizes and combinations of air handlers or coils and outdoor units to optimize performance.

This TXV Kits will be an exact replacement for the current TXV that is installed in the air handler or coil.

This TXV kit will normally be used when a different refrigerant is going to be used in the air handler or coil than what is indicated on the unit name plate. The TXV type must always match the refrigerant type used in the outdoor unit.

Kit Identification

Confirm the TXV kit type is approved to be used with an indoor model. See application guide on pages 3 & 4 to verify proper kit and product model number. The first character in the kit model number indicates that the type of refrigerant that the valve can be used with. Example a 2AYTXVH3D1830A is an R22 valve.

The "3" in the eighth digit in the model number identifies the valve as a non-bleed TXV. When this TXV kit is installed with an outdoor unit that contains a reciprocating compressor, the outdoor unit must be equipped with a hard start kit if not factory installed. If the outdoor unit contains a scroll compressor, the installation of a hard start kit may be required.

Inspection

Check carefully for any shipping damage. Any such damage must be reported to, and claims made against the transportation company immediately. Any missing parts should be reported to your supplier at once and replaced with authorized parts only.

Installation Instructions

1. Skip this step if the air handler or coil has never been installed.

Recover system charge or "pump-down" system charge into the condensing unit complying with EPA regulations. Remove the sensing bulb from the suction line manifold by removing the clamp.

2. Using a back-up wrench, loosen mechanical fittings on each side of the TXV to be replaced.
3. Using a back-up wrench, loosen the external equalizing coupling.
4. Minimize the amount of movement of the liquid and distributor tubes to prevent work hardening.
5. To install the replacement TXV, connect the adapters by hand to ensure proper mating of threads and tighten until bodies "bottom" or a definite resistance is felt. **DO NOT** oil threads. The valve will only fit in one direction of flow.

6. **See figure 1.** Place a mark on one corner of the union nut and the thread assembly on the

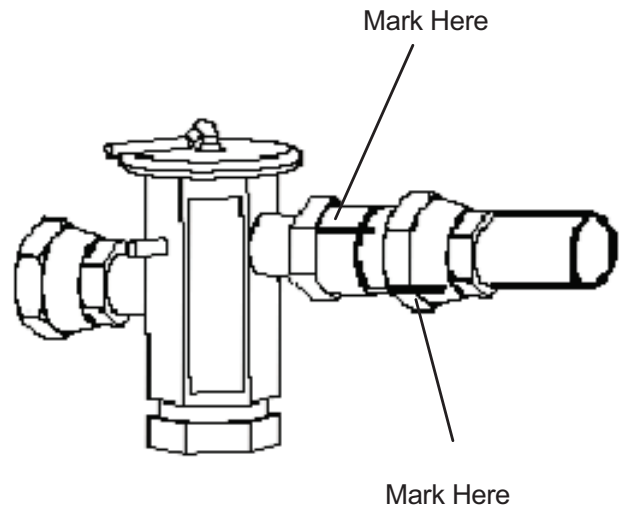


Figure 1

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TXV (A) . Then using a back-up wrench, tighten each nut an additional 1/6 turn (or 1 hex flat). The alignment of the lines will show the amount that the assemblies have been tightened. This final 1/6 turn is necessary to ensure the formation of leak proof joints. **See Figure 2.**

IMPORTANT

Correct tightening of the couplings is very important. Under tightening or over tightening may result in a coupling leak.

7. Install the equalizer line by hand tightening until the flare "bottoms", then use a back-up wrench and tighten securely.

IMPORTANT

Following good refrigeration practices, replacing the liquid line filter drier is recommended if the system has been commissioned. This is not necessary if this kit is being installed on a new air handler or coil.

8. To avoid damaging the TXV, remove the bulb or wrap a wet rag around the suction line between the TXV bulb and the braze joint before brazing. Clamp the TXV bulb to the gas line as illustrated in figure 3. The entire length of the bulb must be in firm contact with the gas line. The remote bulb tubing must not be allowed to touch a surface colder than the remote bulb location. The remote bulb tubing must be isolated from rubbing any other components. Insulate the bulb with the supplied insulation in the kit.
9. Pressurize with dry nitrogen and leak test all joints to insure no leaks exist. Evacuate system to a minimum 500 microns.
10. Make sure all capillary tubes are positioned over the drain pan to assure that any condensate that may form and drip from them is collected in the drain pan.
11. Open valves to outdoor unit if pumped-down or charge to a minimum of 50 psig static pressure. Start system and charge to appropriate level per the charging method recommended in the Outdoor Unit Installers Guide.
12. Using a permanent marker, check the Alternative Refrigerant Type box on the Air Handler, or circle the Refrigerant Type on the Coil Name Plate once the TXV kit installation is completed.
13. **IMPORTANT:**
Install the caution label (Figure 4 or 5) on the front panel of the unit.

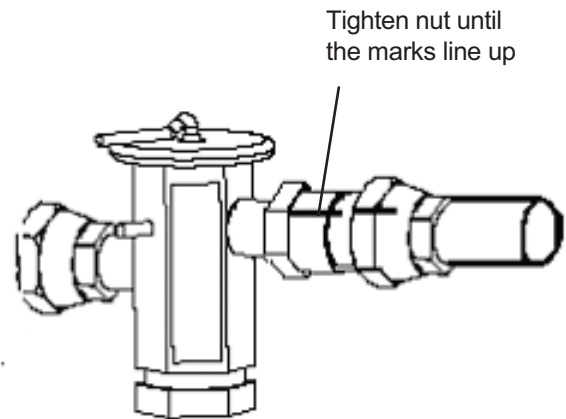


Figure 2

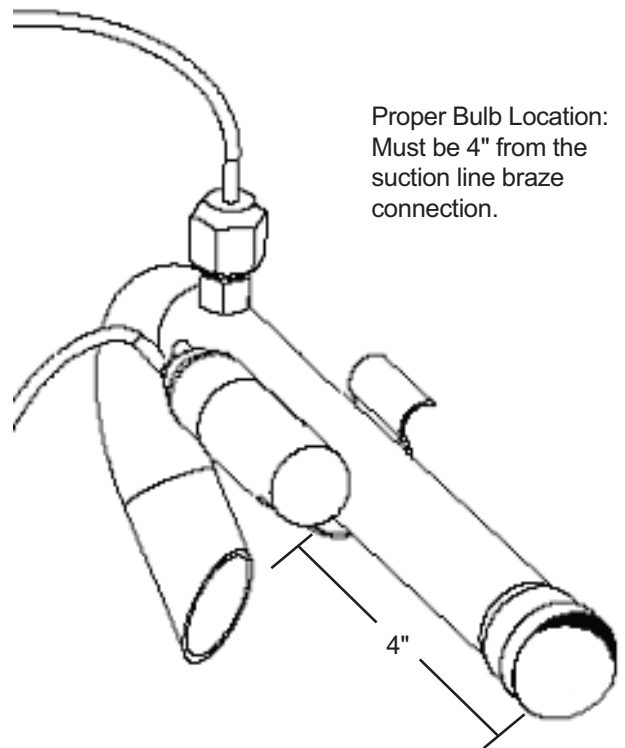



Figure 3

 **CAUTION**

UNIT CONTAINS R-22 REFRIGERANT!

R-22 OPERATING PRESSURE DIFFERS FROM THE OPERATING PRESSURE OF R-410A. PROPER SERVICE EQUIPMENT IS REQUIRED.

Failure to use proper service tools may result in equipment damage or personal injury.


SERVICE

USE ONLY R-22 REFRIGERANT AND APPROVED COMPRESSOR OIL

This unit has been converted to R-22 refrigerant. Change the model number first digit to 2 when ordering replacement parts.

A342546P01

Figure 4

 **CAUTION**

UNIT CONTAINS R-410A REFRIGERANT!

R-410A OPERATING PRESSURE EXCEEDS THE OPERATING PRESSURE OF R-22. PROPER SERVICE EQUIPMENT IS REQUIRED.

Failure to use proper service tools may result in equipment damage or personal injury.

SERVICE

USE ONLY R-410A REFRIGERANT AND APPROVED POE COMPRESSOR OIL

This unit has been converted to R-410A refrigerant. Change the model number first digit to 4 when ordering replacement parts.

A342547P01

Figure 5

Application Guide Air Conditioning and Heat Pump Systems

	MFG LOCATION -VDL	MFG LOCATION - TRT
BC Aluminum Coils	R410A	R22
2/4TXC, TXA - 018	4AYTXVH3D1831A	2AYTXVH3C1818A
2/4TXC, 2/4TXA - 024	4AYTXVH3D1831A	2AYTXVH3C2425A
2/4TXC, 2/4TXA - 025	4AYTXVH3D1831A	2AYTXVH3C2425A
2/4TXC, 2/4TXA - 031	4AYTXVH3D1831A	2AYTXVH3C3031A
4TXC, 4TXA - 032	4AYTXVH3D3343A	2AYTXVH3C3337A
2/4TXC, 2/4TXA - 036	4AYTXVH3D3343A	2AYTXVH3C3337A
2/4TXC, 2/4TXA - 037	4AYTXVH3D3343A	2AYTXVH3C3337A
2/4TXC, 2/4TXA - 042	4AYTXVH3D3343A	2AYTXVH3C4243A
2/4TXC, 2/4TXA - 043	4AYTXVH3D3343A	2AYTXVH3C4243A
4TXC, 4TXA - 044	4AYTXVH3D4863A	2AYTXVH3C4850A
2/4TXC, 2/4TXA - 048	4AYTXVH3D4863A	2AYTXVH3C4850A
2/4TXC, 2/4TXA - 049	4AYTXVH3D4863A	2AYTXVH3C4850A
2/4TXC, 2/4TXA - 050	4AYTXVH3D4863A	2AYTXVH3C4850A
2/4TXC, 2/4TXA - 060	4AYTXVH3D4863A	2AYTXVH3C5463A
2/4TXC, 2/4TXA - 061	4AYTXVH3D4863A	2AYTXVH3C5463A
4TXC, 4TXA - 064	4AYTXVH3D4863A	2AYTXVH3C5463A

**Application Guide
Air Conditioning and Heat Pump Systems**

	MFG LOCATION -VDL	MFG LOCATION - TRT
Horizontal Flat Coils	R410A	R22
2/4TXF - 018	4AYTXVH3D1831A	2AYTXVH3C1818A
2/4TXF - 033	4AYTXVH3D3343A	2AYTXVH3C3337A
2/4TXF - 041	4AYTXVH3D3343A	2AYTXVH3C4243A
2/4TXF - 054	4AYTXVH3D4863A	2AYTXVH3C5463A
2/4TXF - 063	4AYTXVH3D4863A	2AYTXVH3C5463A

	MFG LOCATION -TRT	
AS Aluminum Coils	R410A	R22
2/4TXA - 025	4AYTXVH3B2531A	2AYTXVH3B2531A
2/4TXA - 031	4AYTXVH3B2531A	2AYTXVH3B2531A
2/4TXA - 036	4AYTXVH3B3654A	2AYTXVH3B3637A
2/4TXA - 037	4AYTXVH3B3654A	2AYTXVH3B3637A
2/4TXA - 054	4AYTXVH3B3654A	2AYTXVH3B5454A
2/4TXA - 065	4AYTXVH3B6165A	2AYTXVH3B6565A

	MFG LOCATION -VDL	
Air Handlers	R410A	R22
2TFB 018-030	4AYTXVH3D1830A	2AYTXVH3D1830A
2TFB 036	4AYTXVH3D1831A	2AYTXVH3D1830A
2/4TFE025	4AYTXVH3D1831A	2AYTXVH3D1830A
2/4TEC 018-030	4AYTXVH3D1831A	2AYTXVH3D1830A
2/4TEC 036		2AYTXVH3D3636A
2/4TEC 036-042	4AYTXVH3D3642A	
2/4TEC 042-060		2AYTXVH3D4260A
2/4TEC 048-060	4AYTXVH3D4863A	
2/4TEH 018-030	4AYTXVH3D1831A	2AYTXVH3D1830A
4TEH 036		2AYTXVH3D3636A
2TEH 036-042	4AYTXVH3D3642A	
4TEH 042-060		2AYTXVH3D4260A
2TEH 048-060	4AYTXVH3D4863A	
2TGB 018	4AYTXVH3D1800A	2AYTXVH3D1830A
2TGB 025	4AYTXVH3D1830A	2AYTXVH3D1830A
2TGB 030	4AYTXVH3D1831A	2AYTXVH3D1830A
2TGB 036	4AYTXVH3D3600A	2AYTXVH3D1830A
2TGB 042	4AYTXVH3D3343A	2AYTXVH3D4260A
2TGB 048	4AYTXVH3D4863A	2AYTXVH3D4260A

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