

# Installation, Operation, & Maintenance

IOM 4107  
Rev. B 2/25

## UC TXV KIT AND A2L SENSOR REPLACEMENT KIT

### ATTENTION:

Read all instructions thoroughly and retain all manuals  
for future reference.

## GENERAL

These kits are intended to be used with a universal UC air-handler. These units ship from the factory with a piston, a A2L Sensor and NO Refrigerant.

The TXV (Thermal Expansion Valve) kit contains the refrigerant specific TXV, this installation manual and any labels that will need to be affixed to the unit when a universal unit is field converted to a R454B or R32 unit.

The A2L sensor replacement kit contains the A2L sensor and this installation manual.

## KIT CONTENTS

TXV (Thermal Expansion Valve) KIT	
Component Name	
Thermal Expansion Valve (TXV)	
Tailpiece/liquid line attachment	
O-rings (x2)	
Nut	
A2L Label - TXV	
Black Tacky Tape	
Installation Manual	
TABLE 1 -COMPONENTS	

A2L SENSOR REPLACEMENT KIT	
Component Name	
A2L Sensor	
Installation Manual	
TABLE 1 -COMPONENTS	

## A2L SENSOR REPLACEMENT

- 1) Remove front bottom panel to access coil.
- 2) Disconnect A2L harness from existing installed sensor.
- 3) Remove installed A2L sensor from bracket by removing two screws as shown in Figure 1. (use existing screws to install new sensor)
- 4) Attach new sensor to bracket using two existing screws. See Figure 1  
**TAKE CAUTION – DO NOT SCREW INTO COIL/TUBING**
- 5) Connect A2L harness to new installed sensor.

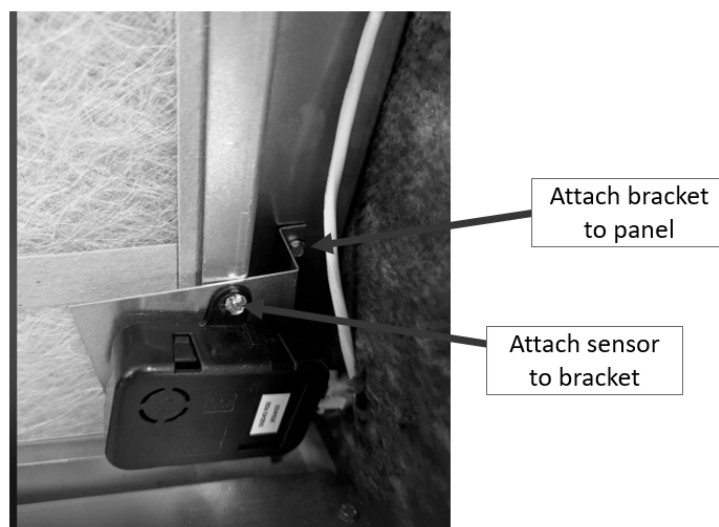


Figure 1 – Replacing Sensor to Bracket

## A2L SENSOR OUTPUTS

Table 2 shows the LED outputs of the A2L Sensor.

LED SENSOR OUTPUT	
STATUS LIGHT	SENSOR MODE
Green Continuous	START UP. The sensor is starting up
Green Blinking	NORMAL. The sensor is in normal operation mode.
Red Continuous	MITIGATE. The sensor has detected a leak.
Red Blinking	FAULT. The sensor has a fault.

TABLE 2

## LABEL PLACEMENT

Attach the R454B or R32 TXV label provided as shown in Figure 2 (R454B shown as example only).

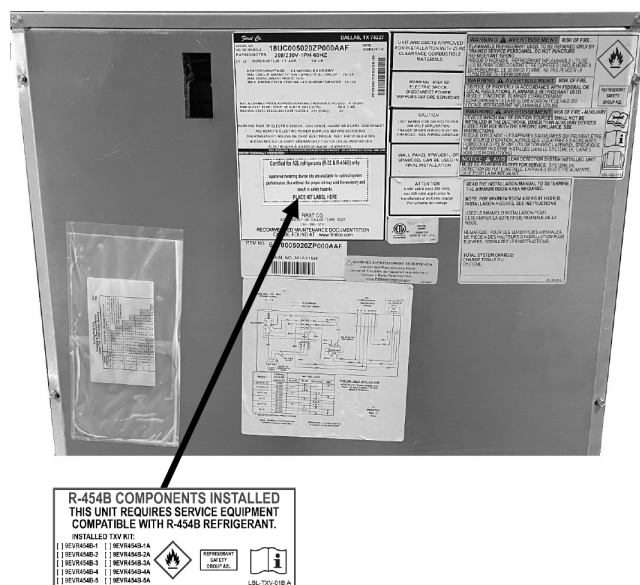


Figure 2 - Label Placement

## TXV INSTALLATION

- 1) Depressurize Schrader valve, remove liquid line tube from piston distributor body and discard. Discard O-rings and use new O-rings provided in kit.
- 2) Remove piston/orifice from inside of distributor body and discard. See figure 3.
- 3) Remove 1/4" cap from suction line equalizer fitting.
- 4) Check to make sure expansion valve has the correct refrigerant rating (**R454B or R32**).
- 5) Attach nut to the 3/8" tail piece then braise the 3/8" liquid line to tail piece as shown in figure 4.1.
- 6) Attach liquid line and nut to expansion valve male thread. Use provided O-rings. See figure 4.2.
  - a. **Torque to 260 in-lbs.**
- 7) Attach expansion valve nut to distributor male thread. Use provided O-rings. See figure 4.3
  - a. **Torque to 260 in-lbs.**
- 8) Carefully bend and secure 1/4" equalizer tube to suction line equalizer fitting with a wrench. Figure 4.4. No valve core is required. When handling equalizer line, do not kink or make large bends in tubing.
  - a. **Torque to 125 in-lbs.**
- 9) Locate and mount expansion valve sensing bulb on suction line above the centerline of the tube. Figure 4.5. Position should be between 9 and 3 o'clock. Make sure that the bulb is in contact with the suction line.
- 10) Insulate the TXV bulb with the black tacky tape, once installed.
- 11) Leak check all connections after unit has been pressured. Follow HVAC installation best practices such as checking all joints and using a soap solution and checking for bubbles.
- 12) Follow the outdoor unit manufacturer guidelines for charging.
- 13) The TXV is adjustable. Do not make more than a 1/4" turn at any time. Turn valve clockwise to increase superheat and counterclockwise to decrease.

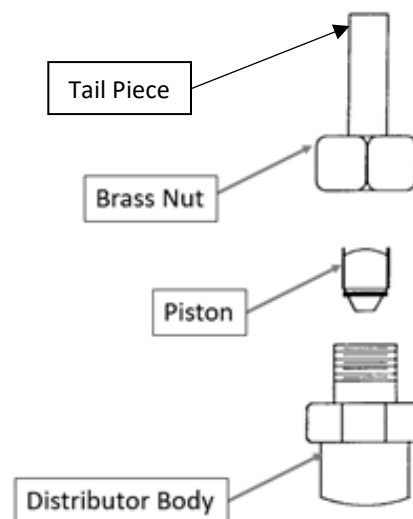


Figure 3 - Piston Removal

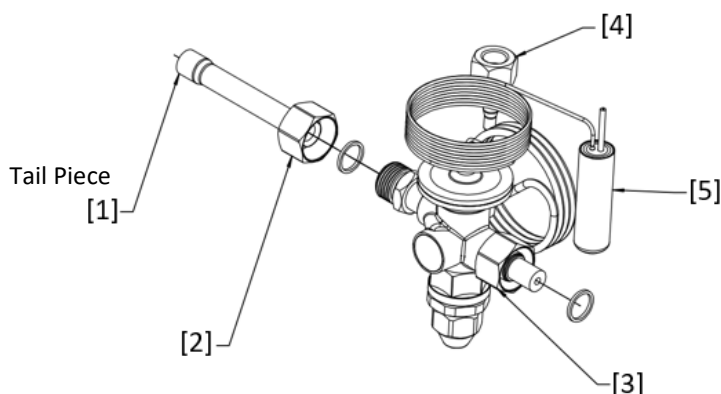


Figure 4 - TXV Installation

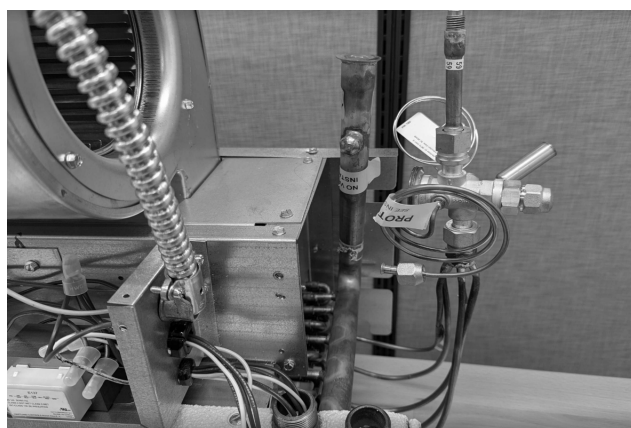


Figure 5 - Complete TXV assembly