

# DTC valve installation instructions

For ZF(D)13KVE, ZF(D)18KVE, ZF(D)25KVE, ZF28KVE  
R-407A/C/F, R-448A and R-449A applications

Please see all the parts before assembly in fig. 1

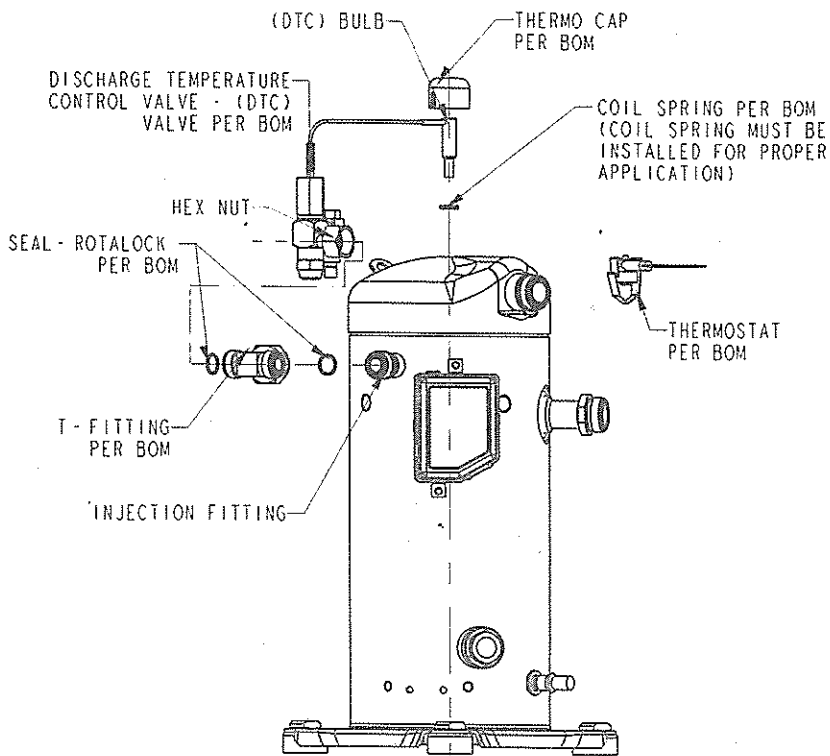


Figure 1. Explosion view

## DTC valve assembly

1. Assemble *T-fitting* onto *injection fitting*, please see figure 1 and figure 2.
  - a. Take off seal-line plug and rotalock cap from *injection fitting*.
  - b. Put *seal-rotalock* into the slot of *injection fitting*.
  - c. Thread *T-fitting* onto *injection fitting* with the torque of 29 - 34 Nm [250-300 in. lbs.]. (see figure 2).
2. Connect *Discharge Temperature Control (DTC) valve* to *T-fitting*.
  - a. Put *seal-rotalock* into the *T-fitting* slot, and thread the *DTC valve* onto the *T-fitting*. Please see the assembly in figure 3 for small T-box models and figure 4 for large T-box models.

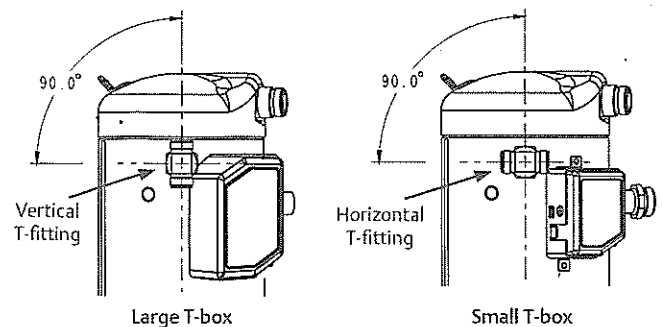


Figure 2. T-fitting installation

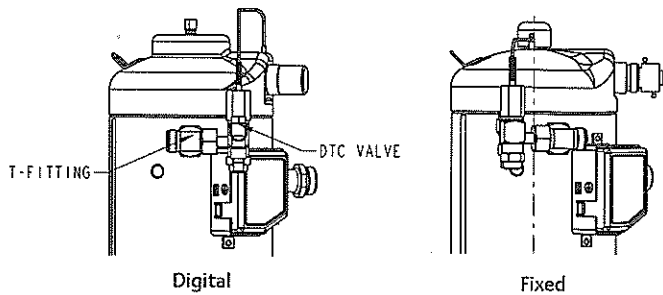


Figure 3. DTC valve installation for small T-box models

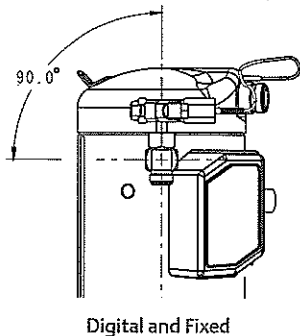


Figure 4. DTC valve installation for large T-box models

b. Verify the *coil spring* is seated in the thermostat tube groove area (see figure 5) on the top of the compressor. (The spring is required for proper installation and is included in the kit if not already installed on the compressor).

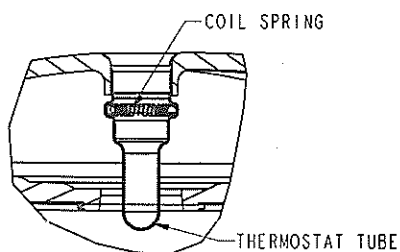


Figure 5. Coil spring location

c. Spread a thin film of *thermal grease* around *DTC bulb*, and press fit *DTC bulb* into *thermostat tube* on top of the compressor until the bulb bottoms out in the *thermostat tube*. (install by hand, do not use excessive force.) Copper tube from the *DTC bulb* should be approximately [1/8"] off the top of the compressor. Take care and avoid damaging or scratching the bulb. Please see figure 6.

d. Snap *thermal cap* onto *DTC bulb* on top of the compressor. If there is a need to remove the *thermal cap* due to space limitations, replace the *DTC bulb* with provided *insulation tape* piece. Please see figure 6.

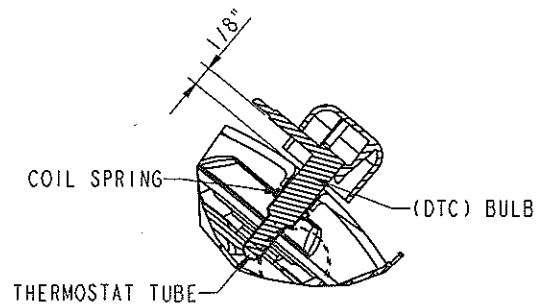


Figure 6. Bulb installation on top of the compressor

3. Maximum operating temperature for valve bulb is limited to [293°F].
4. Ensure liquid refrigerant is available in the line feeding *DTC valve* prior to starting the compressor. Failure to do this will result in damage to the valve and compressor.

### DTC valve removal

1. Close valves to isolate the compressor from the system.
2. Evacuate the compressor and ensure no pressure remains.
3. Remove the *DTC valve* from *T-fitting*.

### Thermostat installation

1. Install the discharge line thermostat on the discharge tube per dimension 120.00 [4.72"] down line from *Discharge service valve*.
2. Snap the retainer clip over the tube and onto the thermostat. The thermostat should be placed on the discharge tube so that the body is in an upward position on a horizontal tube installation. Please see figure 7.
3. The wire must not contact the top cap of compressor or the discharge tube. Care should be taken to route wires so that they do not come in contact with sharp objects to avoid any impact on tripping temperature by the ambient. The discharge line thermostat must be insulated.

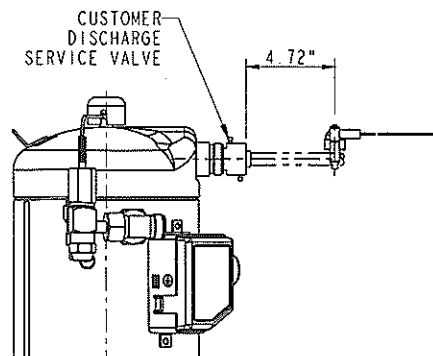


Figure 7. Thermostat installation