TRANE® AIR CONDITIONING

FILE INFORMATION:

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LITERATURE FILE NO.

**HCOM-SB-62**

**GENERAL SERVICE BULLETIN**



5/28/82

SUBJECT: MODEL "K" COMPRESSOR REDESIGN - HIGH PRESSURE CONTROL PORT LOCATION

## INTRODUCTION:

The Model "K" compressor has been redesigned to improve the location of the high pressure control port. The design sequence of original and redesigned compressors can be identified using either the compressor model number or serial number (See Table 1).

TABLE 1 - Design Sequence Identification

| MODEL NUMBER | TONNAGE | DIGIT | ORIGINAL | REDESIGN |
|---|---|---|---|---|
| Example: CRHK-300A4CA | 20 | 10th | C and earlier | D and later |
| | 25 & 30 | 10th | E and earlier | F and later |
| SERIAL NUMBER | | | | |
| Example: A0F25G2541 | 20 | 6th | G and earlier | H and later |
| | 25 or 30 | 6th | K and earlier | L and later |

## DISCUSSION:

The redesigned Model "K" Compressor rotolock stub has increased in length by 1/2 inch due to the relocation of the high pressure control port (See Figure 1).

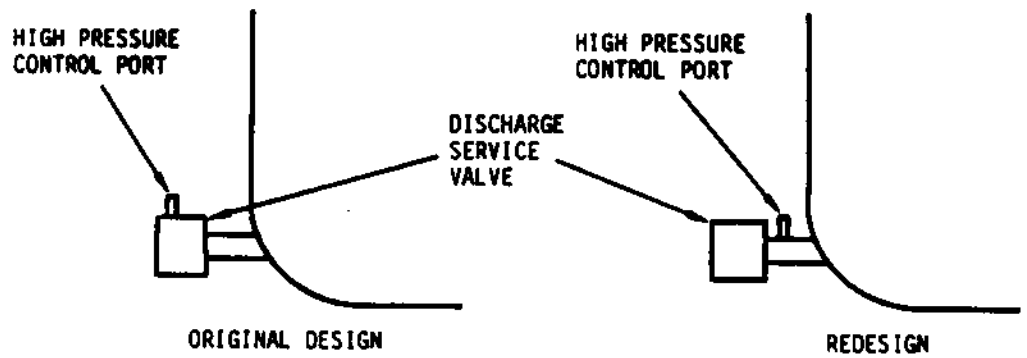


FIGURE 1 - High Pressure Control Port Location

The additional 1/2 inch makes the compressors non-interchangeable due to a difference in the discharge line orientation from the service valve to the muffler. It is necessary to order the appropriate discharge line when replacing an original design compressor with a redesigned compressor. (See Parts Ordering Information).

## INSTALLATION INSTRUCTIONS:

The following is to aid in the replacement of the original design Model "K" compressor with a redesign Model "K" compressor.

1. Remove unit charge.

> ***WARNING: NEVER USE A TORCH ON A REFRIGERANT LINE UNTIL IT HAS BEEN DETERMINED THAT ALL GAS HAS BEEN ELIMINATED FROM THE LINE. UNSAFE PRESSURES COULD RESULT. FAILURE TO DO SO COULD RESULT IN PERSONAL INJURY OR DEATH.***

2. Remove suction and discharge service valves from compressor.
3. Remove compressor from unit as discussed in HCOM-SR-58.
4. Unsweat discharge service valve from discharge line.
5. Unsweat discharge line from entering side of muffler.
6. Mount redesign compressor on unit compressor mounts.
7. Attach suction and discharge service valves to compressor.
8. Align new discharge line in discharge service valve and muffler.
9. Mark muffler/discharge line/service valve while in appropriate position.
10. Remove discharge service valve from compressor.
11. Align muffler/discharge line/discharge service valve with marks made previously.
12. Silver solder the discharge line to both the muffler and discharge service valve.
13. Connect the discharge service valve to the compressor.

## PARTS ORDERING INFORMATION:

When replacing an original design Model "K" compressor, also order the appropriate discharge line as shown in Table 2). Circuit #1 is the circuit closest to the control panel.

TABLE 2 - Discharge Line Selection

| UNIT TONNAGE | UNIT | CIRCUIT | DISCHARGE LINE PART NUMBER |
|---|---|---|---|
| 20 | all | N/A | TUR-1022 |
| 25 | all | N/A | TUR-1023 |
| 30 | all | N/A | TUR-1024 |
| 40 | all | 1<br>2 | TUR-1025<br>TUR-1026 |
| 50 | CGAR/RAUR<br>S-HC (Rooftop)<br>all | 1<br>1<br>2 | TUR-1029<br>TUR-1023<br>TUR-1027 |
| 55 | S-HC (Rooftop) | 1<br>2 | TUR-1024<br>TUR-1028 |
| 60 | all | 1<br>2 | TUR-1024<br>TUR-1028 |

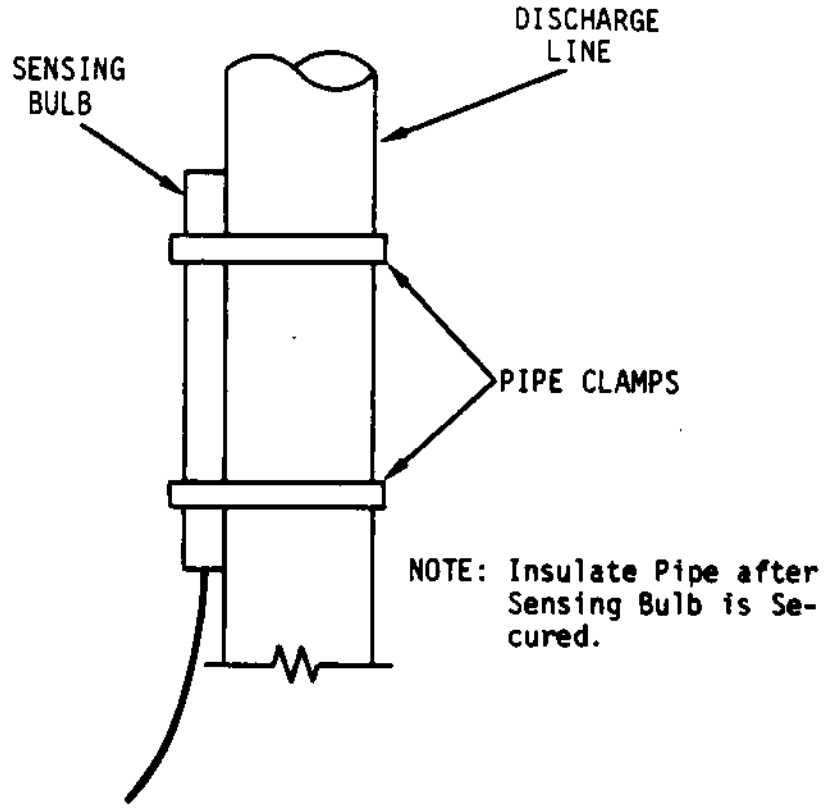


FIGURE 2 - Sensing Bulb Installed on Discharge Line

1. Pump-down the unit.

2. Open and secure the main electrical disconnect.

> ***WARNING: TO AVOID PERSONAL INJURY AND EQUIPMENT DAMAGE, DISCONNECT THE ELECTRICAL POWER TO THE UNIT. FAILURE TO DO SO MAY RESULT IN ACCIDENTAL ELECTRICAL SHOCK.***

3. Use the bracket supplied in the kit as a template and drill two 3/16" holes, 4" from the right and 1/4" from the front of the base of the control panel.

4. Secure the bracket to the control panel base with the screws provided.

5. In front of the bracket, drill a 3/8" hole in the base of the control panel.

6. Insert one of the supplied grommets in the hole that was drilled in Step 5.

7. Push the sensing bulb(s) and about twelve inches of capillary tube through the control panel grommet.

8. Carefully route the capillary tube/sensing bulb of the control which has wires 37E and 37M attached, to the vertical discharge line between the compressor and the muffler of circuit #1 (compressor closest to the control panel). On this circuit, the capillary tube must be mounted up. Do not pull more of the capillary tube from the control panel than necessary.

> ***CAUTION: DO NOT CRIMP THE CAPILLARY TUBE DURING THE ROUTING PROCESS. DAMAGE TO THE CONTROL WILL RESULT.***

9. Clamp the sensor to the #1 circuit vertical discharge line between the compressor and muffler, with the clamps provided.

10. Secure the #1 control to the bracket with the screws provided.

11. Wire tie the excess capillary tube coil from the #1 control which remains in the control panel.

12. Using the insulation provided, wrap the sensing bulb/discharge line. Wrap the insulation with electrical tape to secure its position.

13. Remove wire 37C from 1TB6-1 (1TB7-1 on S*HC/D Rooftops) and terminal 4 of 1K1.

14. Connect wire 37E from the loss of charge control to terminal 1TB6-1 (1TB7-1 on S*HC/D Rooftops).

15. Connect wire 37M from the loss of charge control to terminal 4 of 1K1.

The remaining steps apply only to 40 through 60 ton units.

16. Drill a 3/8" hole in each of the #1 compressor support channels (closest to the control panel) as close to the base rail as possible.

17. Insert a grommet in each of the holes that were drilled in Step 16.

18. Carefully route one of the capillary tubes/sensing bulbs through these grommets. Do not pull more of the capillary tube through control panel base than necessary.

19. Clamp the sensing bulb with the capillary tube down to the vertical rise in the discharge line between the #2 compressor (furthest from the control panel) and the muffler.

20. Using the clip provided, fasten the loose capillary tube from the #2 discharge sensor to the inside of the base rail between the compressors.

21. Secure the #2 control to the bracket with the screws provided.

22. Wire tie the excess capillary tube coil from the #2 control which remains in the control panel.

23. Using the insulation provided, wrap the sensing bulb/discharge line. Wrap the insulation with electrical tape to secure its position.

24. Remove wire 37G from 1TB7-1 (1TB7-7 on Rooftops) to terminal 4 of 1K2.

25. Connect wire 37F from the limit switch to terminal 1TB7-1 (1TB7-7 on Rooftops).

26. Connect wire 37P from the limit switch to terminal 4 of 1K2.

27. Add the loss charge of charge control to the unit wiring diagram.