TRANE

General Service Bulletin

HCOM-SB-82

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Product Section	Refrigeration
Product	Scroll Compressor
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LITERATURE CHANGE HISTORY: New

SUBJECT: Scroll compressor reliability improvement on 20-60 ton RAUC, A through D design sequence; S*HC, P through U design sequence; and S*HD, K through N design sequence. (The design sequence is the tenth digit of the unit model number.)

INTRODUCTION: A 7 PSIG low pressure switch can be added to the control circuit to improve compressor reliability. The purpose of this control is to prevent the scroll compressor from operating with no refrigerant gas flow. This low pressure switch is outside the reset relay circuit, when the switch opens the compressor stops. When the switch closes at 22 PSIG the compressor automatically restarts.

APPLICATION CONSIDERATIONS: Scroll compressors must have mass flow or compressor failure will occur. With this in mind careful consideration must be given when applying solenoid valves with scroll compressor bearing units. Pump down applications must be avoided completely and liquid line solenoids should be applied only when necessary, and then only as a refrigerant migration device! If a liquid line solenoid valve must be applied, its' coil must be wired to energize and de-energize with the scroll compressor contactor coil. Never manually or automatically pump down a scroll compressor bearing unit below 7 PSIG!

DISCUSSION: To improve scroll compressor reliability the 7 PSIG pressure switch can be added to existing units. The 7 PSIG pressure switch can be mounted to any 1/4 male access fitting on the low pressure side of the refrigeration system. It is advisable to use a field supplied tee, 1/4 female by 1/4 male by 1/4 male with a valve core in one port for system access. Use Robinair part number, 40396, 40399 or equivalent.

The wiring modifications are as follows:

RAUC C20-60 UNITS: Circuit one, remove wire numbers 61A and 61B from terminal strip 1TB3-2, reference line 94 on the unit schematic. Reconnect wires 61A and 61B to one lead of the 7 PSIG pressure switch. Connect the other lead on the pressure switch to terminal strip 1TB3-2.

Circuit two, C40-60 units only, remove wire numbers 74A and 74B from terminal strip 1TB4-5, reference line 108 on the unit schematic. Reconnect wires 74A and 74B to one lead of the 7 PSIG pressure switch. Connect the other lead on the 7 PSIG pressure switch to terminal strip 1TB4-5.

S*HC C20-60, & S*HD C20-30 UNITS: Circuit one, remove wire numbers 57D and 57B from terminal strip 1TB6-11, reference line 105 on the unit schematic. Reconnect wires 57D and 57B to one lead of the 7 PSIG pressure switch. Connect the other lead on the pressure switch to terminal strip 1TB6-11.

Circuit two, C40-60 units only, remove wire number 66B from terminal strip 1TB6-4, reference line 114 on the unit schematic. Reconnect wire number 66B to one lead of the 7 PSIG pressure switch. Connect the other lead of the pressure switch to terminal strip 1TB6-4.

PARTS ORDERING INFORMATION: Trane part number CNT-1317 has the correct pressure setting and 210 inch leads. The refrigeration connection is 1/4 inch female flare with valve core depressor.

NEW PRODUCTION: RAUC, E design sequence; S*HC, V design sequence; and S*HD, P design sequences and later have a 7 PSIG pressure switch factory installed.