General Service Bulletin

See HUB DOC-81472

RTAA

CHHB Compressor Motor Terminal Rework

Order No: **RTAA-SVB08B-EN** Date: May 2003

Introduction

The purpose of this bulletin is to explain the proper procedure for replacing the motor terminals on CHHB 70-100 ton compressors. CHHB compressors are used on RTAA 130-400 ton units.

NOTICE: Warnings and Cautions appear at appropriate sections throughout this literature. Read these carefully.

⚠ **WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ **CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

CAUTION: Indicates a situation that may result in equipment or property-damage only accidents.

⚠ WARNING

Contains Refrigerant!

System contains oil and refrigerant under high pressure. Recover refrigerant to relieve pressure before opening the system. See unit nameplate for refrigerant type. Do not use non-approved refrigerants, refrigerant substitutes, or refrigerant additives.

Failure to follow proper procedures or the use of non-approved refrigerants, refrigerant substitutes, or refrigerant additives could result in death or serious injury or equipment damage.

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Repair Procedure

⚠ WARNING

Hazardous Voltage!

Disconnect all electric power, including remote disconnects before servicing. Follow proper lockout/tagout procedures to ensure the power can not be inadvertently energized. Failure to disconnect power before servicing could result in death or serious injury.

1. Remove all power to the unit.
2. Isolate and evacuate the compressor.
3. Remove all nuts, washers, and outer insulators from the terminal plate.
4. Carefully remove the cover plate so the motor winding temperature sensors can be unplugged.
5. Mark and unplug the motor winding temperature sensors -- set the cover plate aside.
6. Remove the remaining insulators.
7. If the terminal is damaged and needs to be replaced go to step 8. If the terminals are in good condition go to step 12.
8. Use a hacksaw or die grinder and cut where specified in Figure 1.
9. Carefully cut the copper jacketed sleeve axially. Care must be taken to limit damage to the metal sleeve on the end of the winding.
10. Spread the sleeve apart and remove. The metal sleeve should still be attached to the winding lead.
11. Attach the new terminal with a large electrical crimping tool.

    Trane-Pueblo uses a Thomas & Betts TBM5 compression tool (die number 13455). Black die
12. Clean off old gasket and put the new one in place.
13. Place inside insulator over the copper terminal. Make sure that the square cutout in each insulator fits over the square "popout" of the copper terminal stud.
14. Clean terminal openings in the cover plate and insert it over the terminal (numbers should be facing toward you).
15. Insert a rubber seal over terminal and slide into the opening of the cover plate. Lightly coat the seal with oil. Be careful not to damage the seals when inserting them. The oil will help to prevent any tearing.
16. Replace outer insulators.
17. Place 1/2" brass washers on insulators. Hand tighten the nut on the terminal stud.Verify that the square insulator is lined up and tight against the cover plate. If it is not properly lined up the corner of the insulator could break off. Torque nuts to 15 ft-lb. Maintain a uniform gap between the inside insulators to ensure that the inside insulators do not "twist" against the other insulators as damage could occur.
18. Repeat steps 13- 18 for each terminal.

19. Reconnect the motor winding temperature sensors as previously marked.

CAUTION

Equipment Damage!

Over torquing the terminal nuts may result in breakage, leakage, or both.

20. Replace the cover plate and torque to 40 ft-lb.
21. Reconnect power wires and check phase rotation

CAUTION

Compressor Damage!

It is essential to confirm that proper phase rotation is established - Phase A to L1, Phase B to L2, and Phase C to L3. Phase rotation must be checked with a phase sequence indicator before start-up, otherwise catastrophic damage to the compressor may result.

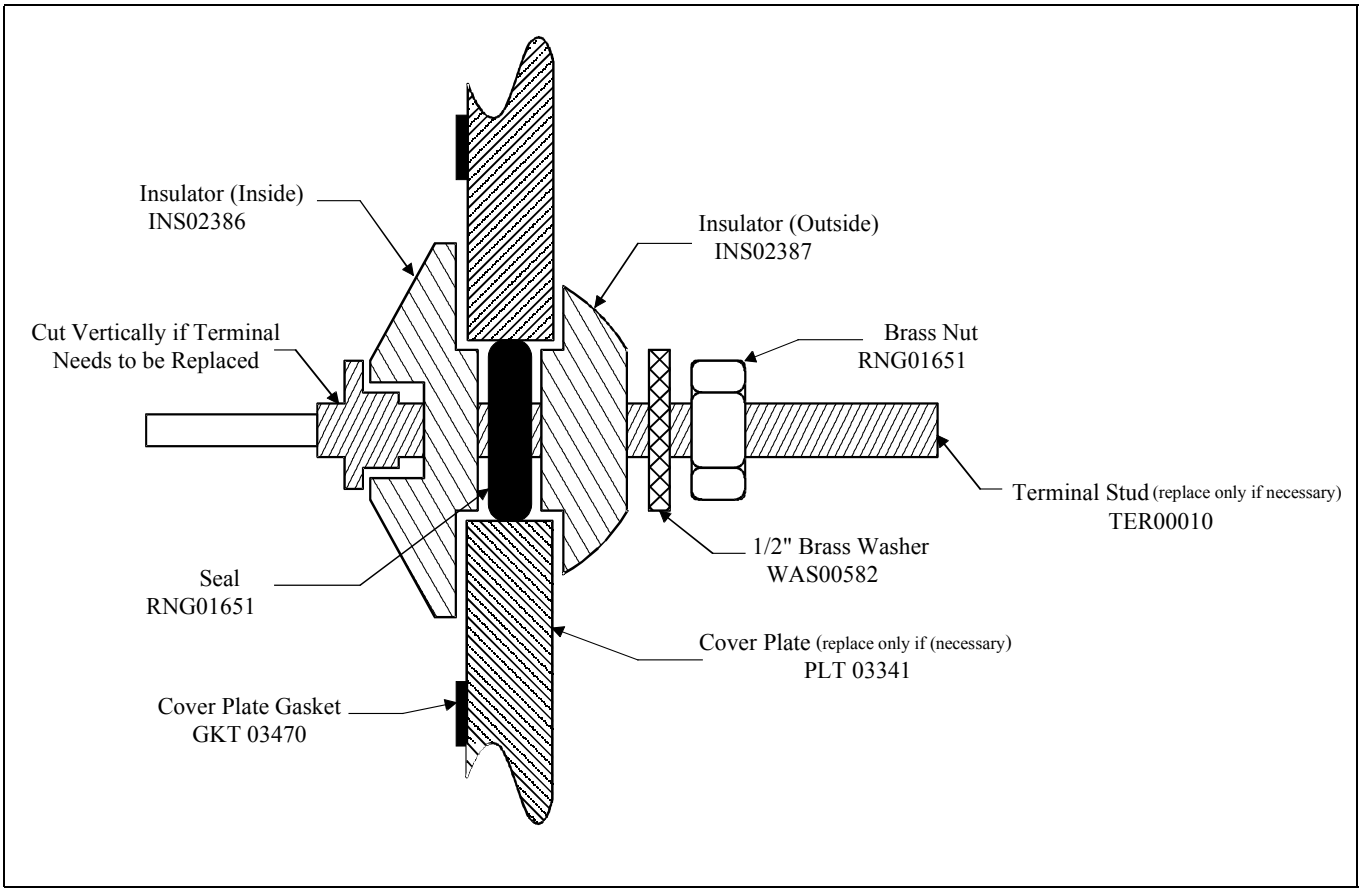

Figure 1: Terminal Cross Section

Parts Ordering Information

This bulletin is informational only and does not authorize any parts or labor. Use the following table to order the necessary parts.

Description	Part Number	Qty
Repair Kit	KIT05241	1 Kit per Terminal
Cover Plate Gasket	GKT03811	1

The parts listed in the table below are included in KIT05241.

Description	Part Number	Qty
1/2" Washer	WAS00582	1
Insulator (inside)	INS02386	1
Insulator (outside)	INS02387	1
Seal	RNG01651	1
Nut	NUT00258	1

Order the parts listed in the table below only if necessary.

Description	Part Number	Qty
Cover Plate	PLT03341	1
Terminal Stud	TER00010	1

Questions

Contact the Product Technical Service department in Pueblo, Colorado with questions regarding this Service Bulletin. They can be reached at techservicepueblo@trane.com.

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Stocking Location	Electronic Only

Trane has a policy of continuous product data and product improvement and reserves the right to change design and specifications without notice. Only qualified technicians should perform the installation and servicing of equipment referred to in this bulletin.