

## DC5000 COMPRESSOR REPLACEMENT PROCEDURE (R-134A)

- [ ] IF POSSIBLE OPERATE THE COMPRESSOR WITH PROPER CHARGE FOR 5 MINUTES WITH WARM PLATES TO RETURN OIL TO THE COMPRESSOR.
- [ ] REMOVE THE COMPRESSOR AND DRAIN THE OIL INTO A CUP.
- [ ] NOTE THE AMOUNT OF OIL REMOVED. (TOTAL OIL IN SYSTEM IS 6oz.)
- [ ] REMOVE THE VALVE UNIT AND BACK FLUSH IT (SEE DATA SHEET)
- [ ] REMOVE THE RECEIVER/FILTER/DRYER (R.F.D).

IF THE V/U IS PLUGGED OR SHOWS EVIDENCE OF BLACK OIL, ALL THE CONTAMINATED OIL MUST BE REMOVED FROM THE SYSTEM. FLUSH THE PLATES WITH MINERAL SPIRITS AND COMPRESSED AIR OR NITROGEN. MOST OF THE OIL WILL BE IN THE PLATES, SO FLUSH REPEATEDLY UNTIL THE MINERAL SPIRITS EXITING THE PLATES IS CLEAN. FLUSH ALL COPPER TUBING TO REMOVE CONTAMINATED OIL. A SUCTION LINE FILTER MAY NEED TO BE FITTED. CONTACT SEAFROST.

- [ ] REFIT THE V/U.
- [ ] INSTALL NEW R.F.D AND NEW COMPRESSOR.

**DO NOT ADD OIL TO THIS COMPRESSOR.** THE OIL QUANTITY HAS BEEN ADJUSTED TO ACCOUNT FOR A NEW RFD AND NO STANDING OIL IN THE SYSTEM. REMOVE ALL CONTAMINATED OIL BEFORE FITTING THE NEW COMPRESSOR.

- [ ] EVACUATE TO THE BEST VACUUM.
- [ ] CLOSE GAUGE VALVES AND LET THE SYSTEM STAND.
- [ ] IF THE LOW SIDE GAUGE HOLDS, PROCEED TO ADD R-134A CHARGE. IF PRESSURE RISES CHECK ALL CONNECTIONS. (ADD A MINIMUM AMOUNT OF REFRIGERANT TO DETERMINE THE LEAK LOCATION. RECOVER / RE - CLAIM THE REFRIGERANT AND RE-EVACUATE THE SYSTEM TO BEST VACUUM.)
- [ ] ADD CHARGE TO BRING THE SYSTEM PRESSURE TO BOTTLE PRESSURE.
- [ ] CAREFULLY LEAK CHECK ALL THE CONNECTIONS IN THE SYSTEM.

- [ ] START THE COMPRESSOR.  
WHILE ADDING 14 OZ. OF REFRIGERANT AS VAPOR. OBSERVE THE SIGHT GLASS AS THE LINE RETURNING TO THE COMPRESSOR BECOMES FROSTED.
- [ ] SLOWLY ADD CHARGE AT A PRESSURE UNDER 20 PSI UNTIL THE GLASS SHOWS MOSTLY CLEAR. (REFER TO THE DC5000 MANUAL.) TOTAL (MAXIMUM) CHARGE FOR THIS SYSTEM WILL BE ABOUT 24 OZ. THE SIGHT GLASS MUST CLEAR OR THE UNIT WILL NOT OPERATE PROPERLY.

THE LOW SIDE PRESSURE SHOULD DROP SLOWLY AS THE UNIT COOLS UNTIL AFTER ABOUT 60 MINUTES, THE 0-5 PSI RANGE. A RAPID DROP INTO A VACUUM INDICATES THAT THE VALVE IS PLUGGED OR FROZEN. SEE ATTACHED PRESSURE CHARTS.

IF THE PRESSURE EXCEEDS 220 PSI THE MANUAL HIGH PRESSURE SWITCH WILL DISCONNECT. DO NOT ALLOW THE SYSTEM TO BE OPERATED IN THIS OVERCHARGED STATE; DOING SO WILL CAUSE EXCESSIVE WEAR ON THE COMPRESSOR.

\* WARM WATER PRESSURES WILL BE 90 TO 125 ON THE HIGH SIDE.

\* COLD WATER PRESSURES WILL BE UNDER 100 ON THE HIGH SIDE.

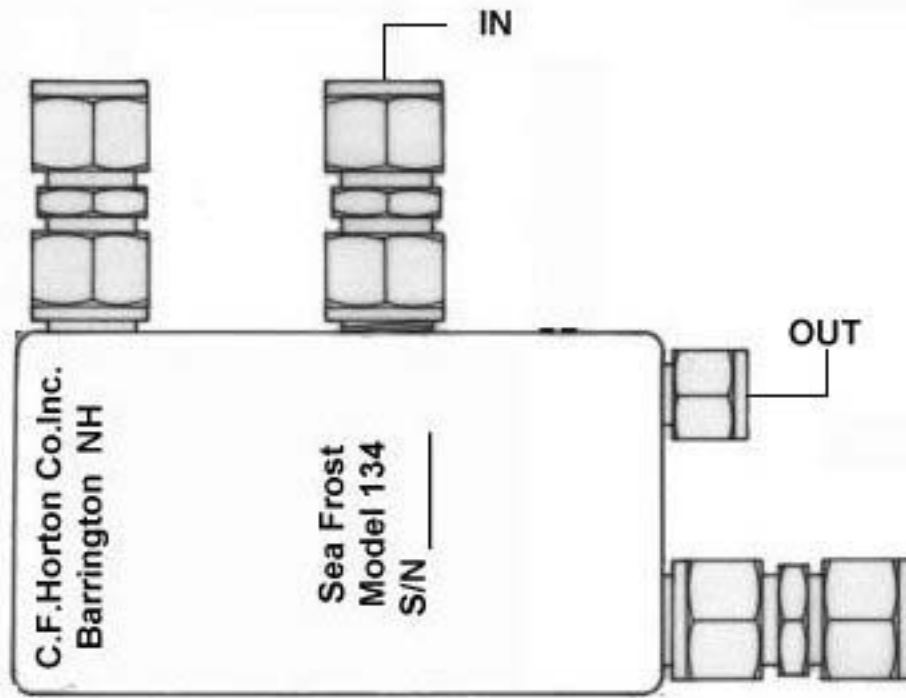
CONDENSING TEMPERATURE WILL GENERALLY BE 15 DEGREES WARMER THAN THE WATER.

\* PUMP SIZE AND WATER TEMPERATURE ARE ALL FACTORS IN THE OPERATING PRESSURES OF THIS SYSTEM. PLEASE CALL IF YOU HAVE QUESTIONS OR PROBLEMS.

PLATE TEMPERATURE WILL AFFECT RUN TIMES. IT MAY REQUIRE SEVERAL HOURS TO FREEZE THE PLATES IN A TWO PLATE DC5000 SYSTEM.

## CLEANING THE VALVE UNIT (V/U)

WITH THE V/U IN THIS POSITION FILL THIS FITTING WITH CLEAN PAINT THINNER (MINERAL SPIRITS). MAKE AN ADAPTOR FROM RUBBER HOSE TO PRESSURIZE THIS FITTING WITH COMPRESSED AIR. USE LOW AIR PRESSURE (10 PSI). HIGH PRESSURE WILL SHUT THE VALVE.



SLUDGE, DIRT, AND CONTAMINANTS WILL BLOW OUT. COLLECT THE CONTAMINANTS IN A CLEAN CLOTH.

REPEAT THIS PROCESS SEVERAL TIMES UNTIL THE MINERAL SPIRITS COMES OUT CLEAN AND THERE IS AIR FLOW THROUGH THE VALVE. NOTE: THE VALVE IS A RESTRICTIVE DEVICE THAT WILL NOT PASS THE FULL VOLUME OF INPUT AIR.

RE: DC 5000 MOTOR COUPLING CHANGE TO JAW TYPE

It is possible to replace this without discharging the system. To replace this drive coupling it will be necessary to shorten the motor shaft and key.

- 1) Remove the four hex bolts holding the DC motor to the rubber mounts.
- 2) Raise the motor and condenser assembly enough to remove the two hex head bolts holding the motor to the motor base. These are located under the base.
- 3) Remove the cable clamps to allow the wire to the high pressure switch to slacken.
- 4) Loosen the four long bolts at the compressor that hold the compressor and motor together. Lift the motor out and away from the coupling.
- 5) Remove the old coupling. (The motor side may have two 5/32" allen screws in it. This will require removing the top screw to reveal the lower one). The compressor side has been fitted with locktite. Heat this coupling with a heat gun or hair drier to soften the locktite. Install the new compressor side coupling. It should bottom on the shaft shoulder after the spline. Make sure the allen screw is engaging the flat on the shaft. Use locktite 271 on the shaft and 1/8" allen screw. Hacksaw the motor shaft to 1" measuring from the face of the motor to the end of the shaft. Hacksaw the key to fit the length of the remaining key way. Install the keyed coupling on the motor leaving .325" (21/64") between the back of the coupling and the motor face. Do not use locktite here because it may be necessary to reposition this after the motor is reinstalled.
- 6) Install the drive isolator in the compressor side of the coupling.
- 7) Index the motor coupling in the drive isolator as the motor is repositioned.
- 8) Refit the four long bolts at the compressor and tighten.
- 9) Reinstall the motor to it's base and reinstall the four bolts to the rubber mounts etc.

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