

CONVERSION TO R-134A REFRIGERANT

PROPER PROCEDURE

Please read and understand the R-134A manuals. Be sure to understand Swagelok fittings and the difference between make and remake. Read the section about refrigerant. For successful changeover the system must be clean and moisture free. Failure to perform this cleaning process properly may destroy the compressor.

CLEANING COLD PLATES

All mineral based oil must be removed from the cold plates and tubing. Flush the plates and tubing with mineral spirits (paint thinner). Blow out the thinner with nitrogen. If nitrogen is not available use dry compressed air from a dive tank or compressor system fitted with a good moisture separator. This can be followed by denatured alcohol blown out in the same fashion. Mineral oil and refrigerant R-134A do not mix. It is imperative that this step be completed properly. Cap off the cold plates and tubing and evacuate the existing parts to dehydrate and remove any solvents before installing new parts.

RECEIVER FILTER DRIERS

Refrigerant R-134A requires a different desiccant in the receiver filter drier (R/F/D). Be sure the proper part is supplied by Sea Frost.

VALVES (ENGINE DRIVE)

Change the Valve Control Unit (V/C/U) to a Model 134 V/U. The S/P/U valve must be added to the system. This valve must be fitted within 48" of the compressor suction hose. In most cases the S/P/U will be in the engine area.

WIRING

Note that the S/P/U has the high protection switch. The brown wires that connected to the V/C/U now connect to the S/P/U.

SA-III

Remove the SA-III compressor from the system and clean the condenser as instructed above in the section on Cleaning Cold Plates.

SA-III VALVES

The SA-III Model 40 V/Us must be changed to Model 134-40 V/Us.

SOLENOIDS (TWIN VALVE SYSTEMS)

The solenoids may remain. They must be cleaned of all oil from the existing system. The solenoids are normally open valves. It should not be necessary to activate them to flush them.

ORDER OF ASSEMBLY

Fit the compressor and R/F/D last. Do not uncap and connect the Engine Drive compressor or R/F/D until you are ready to evacuate the system and charge it. Do not leave the SA-III compressor open to the atmosphere.