UNITED TECHNOLOGIES CARRIER

Commercial Division
Carrier Corporation

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SERVICE BULLETIN

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SUBJECT:

PURGE PUMP LEAKAGE

1.0 PURPOSE

To forward information concerning leaks at the purge pump.

2.0 MACHINES AFFECTED

All R-11 and R-113 19C machines with console Serial No. 70,000 and higher.

3.0 INFORMATION

The oil-less piston-type purge pump, like the diaphragm pump it replaced, is not designed to be perfectly leak-tight. The fit of the discharge and suction valves and the carbon piston ring, however, is such that leakage should be minimal. A small leak through the pump may not be serious in itself, since a system of valves prevents this leakage from entering the refrigeration system, provided the valves are leak-tight.

4.0 PROCEDURE

During Purge Operation #3 on the purge valve chart (Pressurize System for Leak Test), Valves 1 and 2 must be closed, and the solenoid valve switch must be in the OFF position. If a leak is detected at the pump, operate the solenoid valve switch ON and OFF a few times in the event dirt or some other foreign matter is lodged under the valve seat. If the leak persists, disconnect and isolate the pump from the purge system. Install flare plugs on the inlet and outlet piping, and continue to leak test the machine.

To determine whether any leakage through the pump is entering the system during Purge Operation #1 (NORMAL AUTOMATIC), proceed as follows:

4.1 Make certain Valves 1, 2, 4, 5, and 6 are tightly closed and that the solenoid switch is in the OFF position.

4.2 Observe operation of the purge. If the pump cycles, the solenoid and/or check valve are leaking, allowing air to enter the purge system. If this is the case, replace the solenoid valve and/or the check valve.