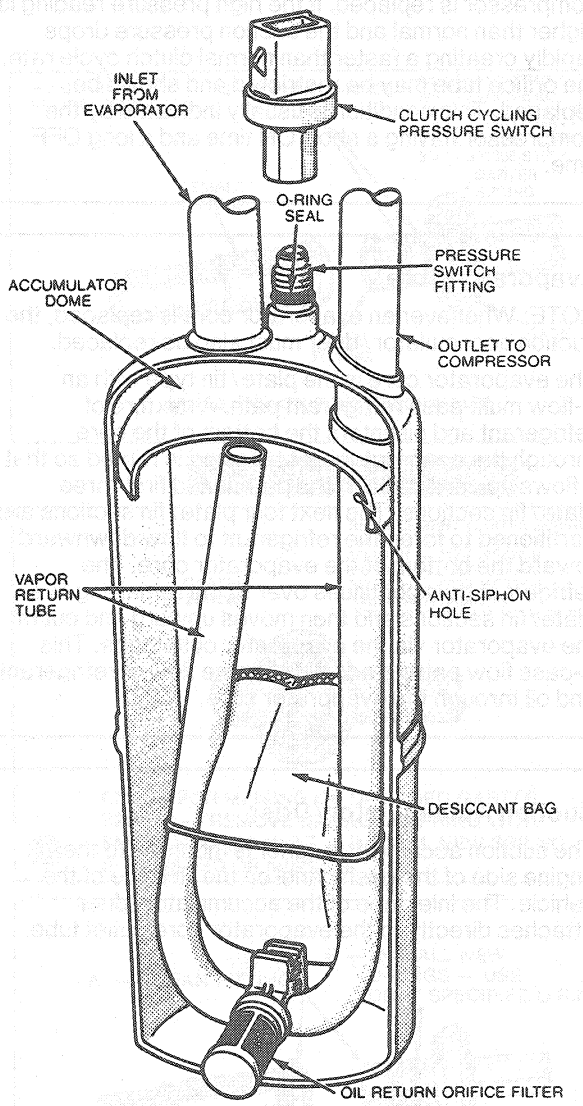
DESCRIPTION AND OPERATION (Continued)

Typical Suction Accumulator / Drier



Refrigerant enters the accumulator / drier canister from the evaporator core through the inlet tube and the heavier, oil-laden refrigerant falls to the bottom of the canister. A small diameter oil bleed hole is located in the side of the outlet tube near the bottom of the canister. This bleed hole is covered with a filter screen and allows a small amount of the heavier liquid refrigerant and oil mixture to re-enter the suction line at a controlled rate. When the heavier liquid refrigerant and oil mixture enters the compressor suction line, it has a second opportunity to vaporize and circulate through the compressor without causing damage to the compressor due to refrigerant slugging.

A desiccant bag is mounted inside the suction accumulator / drier canister to absorb any moisture which may be in the refrigerant system.

A fitting located on the top of the canister is used to attach the clutch cycling pressure switch. A long-travel Schrader-type valve stem core is installed in the fitting opening to prevent refrigerant loss when the clutch cycling pressure switch is removed.

If it is necessary to check the suction accumulator / drier for excessive refrigerant oil, the oil must be poured from the accumulator through the pressure switch fitting when the Schrader valve stem is removed.

Clutch Cycling Pressure Switch

The clutch cycling pressure switch is mounted on a Schrader valve-type fitting on the top of the suction accumulator / drier assembly (refer to Suction Accumulator / Drier illustration). A valve depressor, located inside the threaded end of the pressure switch, presses in on the Schrader valve stem as the switch is mounted and allows the suction pressure inside the accumulator / drier canister to act on the switch. The electrical switch contacts will open when the suction pressure drops to 22 to 28 psi on R-12 systems, 22-25 psi on R-134a systems. The contacts will close when the suction pressure increases to 40-47 psi on R-12 systems and 39-47.5 on R-134a systems.

Ambient temperatures below approximately 45-50°F during cold weather seasons will prevent the pressure switch contacts form closing. This is due to the pressure / temperature relationship of the refrigerant and the requirement of the system pressure to reach the pressure required psi to close the switch contacts. The switch contacts control the electrical circuit to the compressor magnetic clutch coil. When the switch contacts close, the signal to energize the A / C clutch is sent to the Constant Control Relay Module (CCRM). The CCRM then supplies the voltage to energize the magnetic clutch for compressor operation. When the pressure switch contacts open, the CCRM opens the clutch electrical circuit to de-energize the clutch and compressor operation stops. The clutch cycling pressure switch, when functioning properly, will control the evaporator core pressure at a point where the plate / fin surface temperature will be maintained slightly above freezing which prevents evaporator icing and the blockage of airflow.

Service Gauge Port Valves (R-12 System)

Tools Required:

- High Side Adapter Set D81L-19703-A
- Tee Adapter Tool D87P-19703-A

The refrigerant system has a high-pressure (discharge) and a low-pressure (suction) gauge port valve. These are Schrader-type valves which provide access to both sides (high-pressure and low-pressure) of the system for service hoses and a manifold gauge set so system pressures can be read. Rotunda High Side Adapter Set D81L-19703-A or Motorcraft®Tool YT-354 or 355 or equivalent, is required to connect a manifold gauge set or charging station to the high-pressure gauge port valve.