REFRIGERANT SYSTEM SERVICE (Continued)

System Discharging

Tools Required:

- Rotunda A/C Reclaim System 078-00800

In order to minimize the discharge of ozone depleting chlorofluorocarbons into the atmosphere, the Ford Motor Company supports the efficient usage, recovery and recycling of the R-12 used in passenger cars, compact trucks and light truck air conditioners. Ford Motor Company recommends the use of a U.L.-approved recovery/recycling device such as Rotunda Model Number 078-00800 or equivalent, (which meets SAE Standard J 1991), during any A/C system repair and recharge procedure which requires that the system be discharged.

System Evacuating

1. Connect manifold gauge set as outlined, if not yet connected.
2. Leak test the system as outlined.
3. Remove the refrigerant from the system as outlined.
4. Ensure both manifold gauge valves are turned all the way to the right (closed).
5. Ensure the center hose connection at the manifold gauge is tight.
6. Connect manifold gauge set center hose to a vacuum pump.
7. Open manifold gauge set valves and start the vacuum pump.
8. Evacuate the system with the vacuum pump until low-pressure gauge reads at least 99.4 kPa (29.5 in-Hg) (vacuum) and as close to 101.1 kPa (30 in-Hg) as possible. Continue to operate the vacuum pump for 30 minutes.
9. When evacuation of system is complete, close the manifold gauge set valves and turn the vacuum pump off.
10. Observe low-pressure gauge for five minutes to ensure system vacuum is held. If vacuum is held, charge the system. If vacuum is not held for five minutes, leak test the system, service the leaks, and evacuate the system again.

System Charging Set Up:

Ford Motor Company recommends using a charging station to perform evacuation and charging of the refrigerant system. Follow the instructions provided with the charging station.

If a charging station is not available, system charging may be accomplished using a separate vacuum pump, charging cylinder and manifold gauge set. The use of small cans of R-12 is NOT recommended.

If the charging cylinder method is used, the center port of the manifold gauge set should have two refrigerant hoses with integral shut-off valves built into the gauge set manifold. If the gauge set is the type that does not have shut-off valves and two hoses at the center port, a tee fitting and two hoses should be installed at the center port. In addition, the hoses attached to the center port should have shut-off valves at the other ends of the two center hoses to prevent air from entering the hoses when not connected to the vacuum pump and charging cylinder.

Charging with a Charging Cylinder:

1. If the vehicle suction (low) side service part is located on the accumulator, connect the gauge set center hose to the liquid port of the charging cylinder. If the suction (low) side service port is NOT on the accumulator (located on the suction hose), connect the center hose to the GAS port of the charging cylinder.

   WARNING: LIQUID CHARGE INTO THE VEHICLE SUCTION ACCUMULATOR ONLY. TO PREVENT COMPRESSOR SLUGGING, DO NOT LIQUID CHARGE INTO A REFRIGERANT HOSE WHILE THE ENGINE IS OPERATING.
2. When evacuating the system with the vacuum pump, the gauge set second center hose should be connected to the charging cylinder and opened to the gauge set so that the hose will be evacuated with the system.
3. When evacuation of the system is completed, close the center hose valve to the vacuum pump and turn the pump off.
4. Open the charging cylinder valve and the gauge set low side valve to allow refrigerant to enter the system.
5. When no more refrigerant is being drawn into the system, start the engine and select an A/C function on the control assembly. Then, move the blower speed controller to high to allow the remaining refrigerant to be drawn into the system. Continue to add refrigerant into the system until the specified weight of R-12 has been added. Then, close the charging cylinder valve and allow the system to pull any remaining refrigerant from the hose. When the suction pressure drops to approximately 30 psi, close the gauge set center hose valve.
6. Operate the system until the pressures stabilize to verify normal operation and system pressures.
7. In high ambient temperatures, it may be necessary to operate a high volume fan positioned to blow air through the condenser and radiator to aid in cooling the engine and prevent excessive refrigerant system pressures.
8. When charging is complete, close the valves at the ends of the low and high hoses if not equipped with automatic closing valves. Then, disconnect the manifold gauge set hoses from the vehicle and install the protective caps on the service gauge port fittings.