

DIAGNOSIS AND TESTING

Compressor Manifold Leak Test**Tools Required:**

- Rotunda Electronic Leak Detector 005-00015
1. Tighten the manifold retaining bolt to 18-23 N-m (13-17 lb-ft).
 2. Add refrigerant to the system if necessary.
 3. Leak test the manifold O-ring seals using Rotunda Electronic Leak Detector 055-00015 or equivalent.
 4. If no leaks are found, the manifold O-ring seals are good.
 5. If a leak is found at the manifold and the manifold attaching bolt is tightened to 18-23 N-m (13-17 lb-ft), install new manifold O-ring seals as outlined. Then, repeat the leak test.

Compressor External Leak Test**Tools Required:**

- Rotunda Electronic Leak Detector 005-00015
 - Pressure Test Plate T89P-19623-H
1. If the compressor is on the vehicle, discharge the system. Refer to Section 12-00. Remove the compressor from the vehicle. Observe all safety precautions.
 2. Remove the manifold retaining bolt and remove the manifold from the rear head of the compressor. Install Pressure Test Adapter T89P-19623-H on the rear head of the compressor using the existing manifold attaching bolt.

3. Connect the high and low pressure lines of a manifold gauge set to the corresponding fittings on the Manifold Pressure Test Adapter.
4. Attach the center hose of the manifold gauge set to a refrigerant container standing in an upright position.
5. Using the clutch hub, hand-rotate the compressor shaft ten revolutions to distribute the oil inside the compressor.
6. Open the low pressure gauge valve, the high pressure gauge valve and the valve on the refrigerant container to allow the refrigerant vapor to flow into the compressor.
7. Using Rotunda Electronic Leak Detector 055-00015 or equivalent check for leaks at the compressor shaft seal and the compressor center seal.
8. If a shaft seal leak is found, install a new shaft seal as described in this section. If an external leak is found at the center joint of the compressor, install a new compressor assembly.
9. When the leak test is completed, close the manifold gauge valves (both high and low) as well as the valve on the refrigerant container.
10. Slowly remove the gauge set hoses from the pressure test fitting tool. (Allow the refrigerant to escape from the compressor).
11. Install the compressor on the vehicle.
12. Leak test, evacuate and charge the system. Refer to Section 12-00. Observe all safety precautions.