

## DIAGNOSIS AND TESTING (Continued)

- b. If the cold coolant level in the radiator is sufficient, run the vehicle for 10 minutes with the radiator pressure cap off and check for coolant circulation through the heater and radiator. If the coolant drops below the radiator filler neck, add coolant to the filler neck. Repeat the above procedure until all the air is purged from the cooling system.

When this procedure has been completed, feel the heater inlet and outlet hoses and the underside of the upper radiator hose. The thermostat should be removed only if these hoses are cold or if no coolant circulation is observed through the radiator after 10 minutes of operation.

## Cooling System Pressure Test

## Tools Required:

- Rotunda Radiator / Heater Core Pressure Tester 021-00012

1. Open hood and place fender covers.

**WARNING: NEVER REMOVE THE RADIATOR PRESSURE CAP UNDER ANY CONDITIONS WHILE THE ENGINE IS OPERATING. FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR DAMAGE TO THE COOLING SYSTEM OR ENGINE. TO AVOID HAVING SCALDING HOT COOLANT OR STEAM BLOW OUT OF THE RADIATOR, USE EXTREME CARE WHEN REMOVING THE CAP FROM A HOT RADIATOR.**

**WAIT UNTIL THE ENGINE HAS COOLED, THEN WRAP A THICK CLOTH AROUND THE RADIATOR CAP AND TURN IT SLOWLY TO THE FIRST STOP. STEP BACK WHILE THE PRESSURE IS RELEASED FROM THE COOLING SYSTEM. WHEN CERTAIN ALL THE PRESSURE HAS BEEN RELEASED, PRESS DOWN ON THE CAP (STILL WITH A CLOTH), TURN AND REMOVE.**

2. When engine is cool, cautiously remove radiator pressure cap. Disconnect battery. Fit correct adapter to Rotunda Radiator / Heater Core Pressure Tester 021-00012 or equivalent and clip in position onto radiator filler neck.

**NOTE:** Small amount of "weeping" from the water pump blend hole is normal.

3. Pump up cooling system to a maximum of 110 kPa (16 psi) and hold for two minutes. If pressure drops within this time, inspect for leaks and service as required.

4. Pressure test radiator pressure cap.
5. Check condition of secondary seal on radiator cap seals.
6. Check coolant level in radiator and in reservoir. Fill as required with recommended coolant, install radiator pressure cap and connect battery cables.
7. Remove fender covers and close hood.

## TESTING

## Leak Testing

Clean the radiator before leak testing to prevent contaminating the test tank. Leak test the radiator in clean water with 145 kPa (21 psi) air pressure. Do not leak test an aluminum radiator in the same water that copper / brass radiators are tested in. Flux and caustic cleaners may be present in the tank and they will attack aluminum. A separate clean test tank is necessary for aluminum radiators. If conditions do not allow a separate tank for aluminum radiator leak testing, thoroughly clean the test tank each time before testing an aluminum radiator in the tank.

When a tank is removed to service a tube-to-header leak, the core can be leak tested by clamping the tank (with an O-ring gasket in place) to the core and leak testing with air under water. When service is completed, install the tank. Refer to Radiator Tank Installation.

Always install plugs in the oil cooler fittings before leak testing or cleaning any radiator equipped with an oil cooler.

## REMOVAL AND INSTALLATION

## Radiator

## Tools Required:

- Disconnect Tool T82L-9500-AH

## Removal

1. Drain cooling system by removing radiator pressure cap and opening draincock located at lower rear corner of radiator inlet tank. Three revolutions are required to open draincock to full open position.
2. Remove rubber overflow tube from coolant recovery reservoir and detach it from radiator. On Taurus SHO, disconnect tube from radiator and remove recovery reservoir. Refer to illustration.