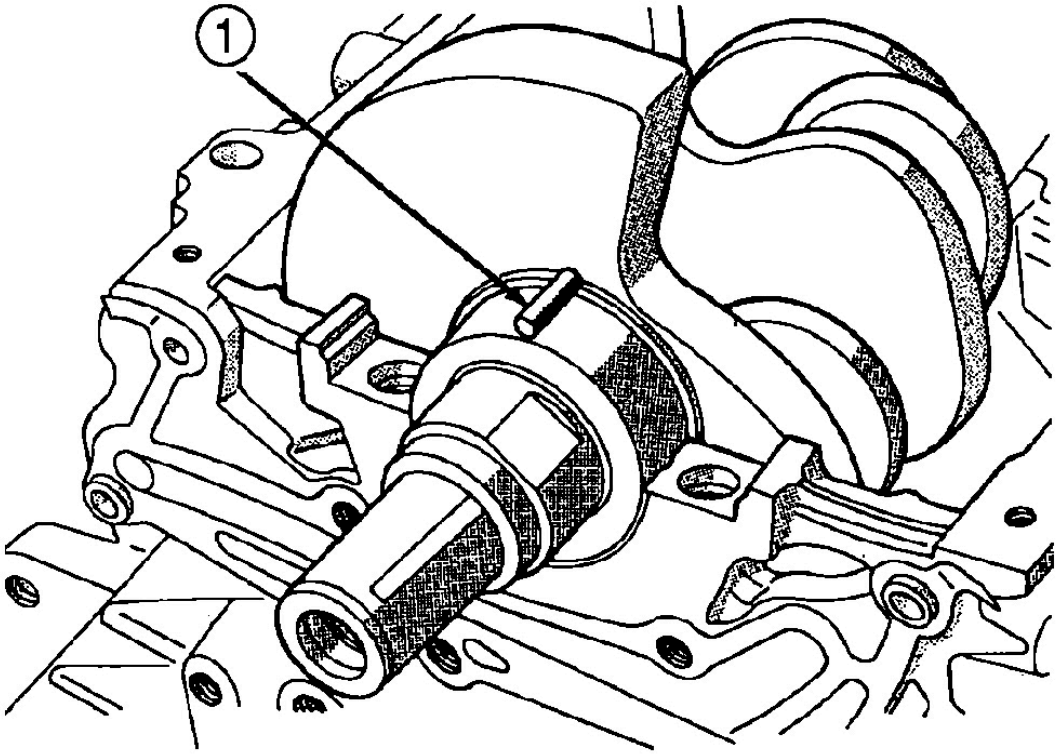
It is not necessary to wait for curing of the sealant. The cooling system can be refilled and the vehicle placed in service immediately.

STANDARD PROCEDURE - MEASURING BEARING CLEARANCE USING PLASTIGAGE

Engine crankshaft bearing clearances can be determined by use of Plastigage or equivalent. The following is the recommended procedure for the use of Plastigage:

1. Remove oil film from surface to be checked. Plastigage is soluble in oil.
2. Place a piece of Plastigage across the entire width of the bearing shell in the cap approximately 6.35 mm (1/4 in.) off center and away from the oil holes (**Fig. 6**). (In addition, suspected areas can be checked by placing the Plastigage in the suspected area). Torque the bearing cap bolts of the bearing being checked to the proper specifications.



1 - PLASTIGAGE
G03511859

Fig. 6: Plastigage Placed in Lower Shell-Typical
Courtesy of DAIMLERCHRYSLER CORP.

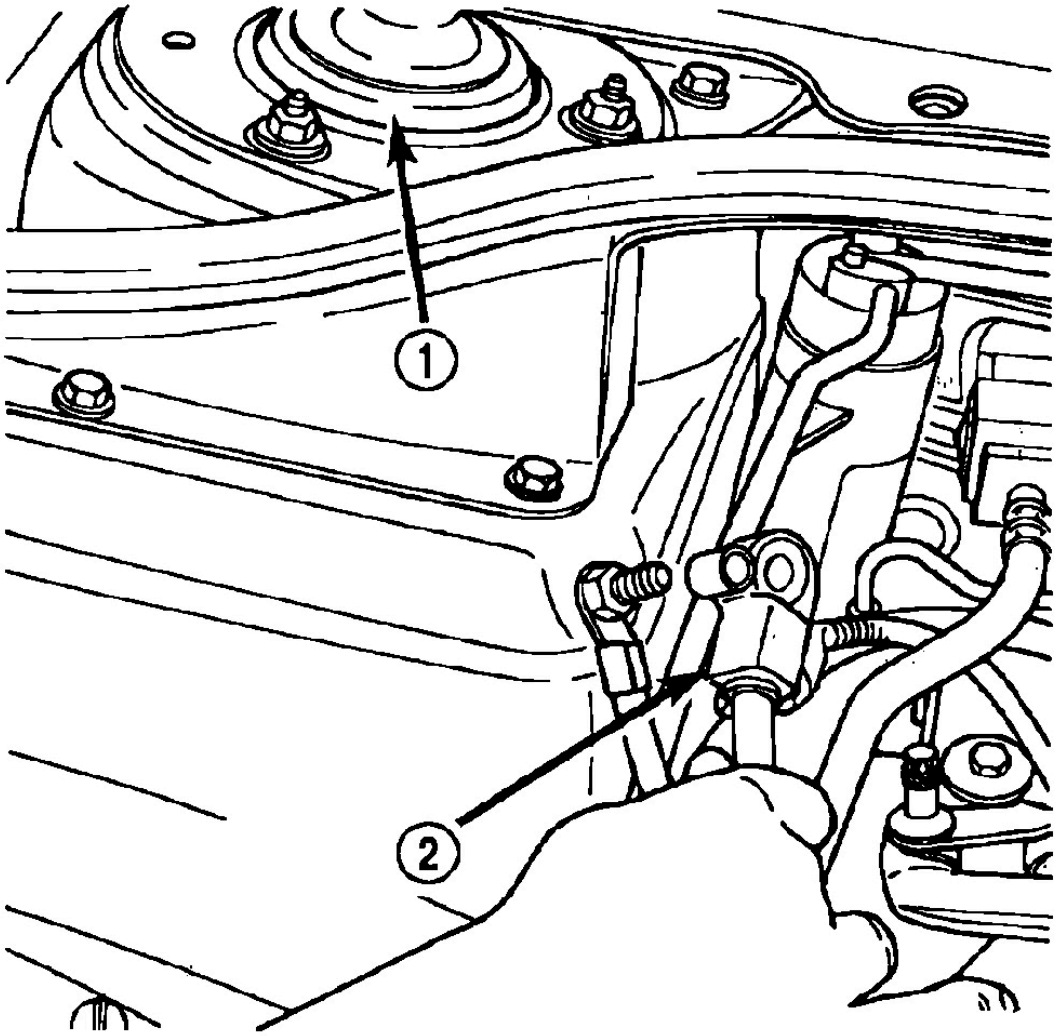
3. Remove the bearing cap and compare the width of the flattened Plastigage with the metric scale provided on the package. Locate the band closest to the same width. This band shows the amount of clearance in thousandths of a millimeter. Differences in readings between the ends indicate the amount of taper present. Record all readings taken. Compare clearance measurements to specs found in engine specifications (Refer to **SPECIFICATIONS** ,). **Plastigage generally is accompanied by two scales. One scale is in inches, the other is a metric scale.**

   NOTE: Plastigage is available in a variety of clearance ranges. Use the most appropriate range for the specifications you are checking.

4. Install the proper crankshaft bearings to achieve the specified bearing clearances.

REMOVAL - ENGINE ASSEMBLY

1. Release fuel pressure. (Refer to **STANDARD PROCEDURE - FUEL SYSTEM PRESSURE REL**)
2. Disconnect negative cable at right strut tower (**Fig. 7**).

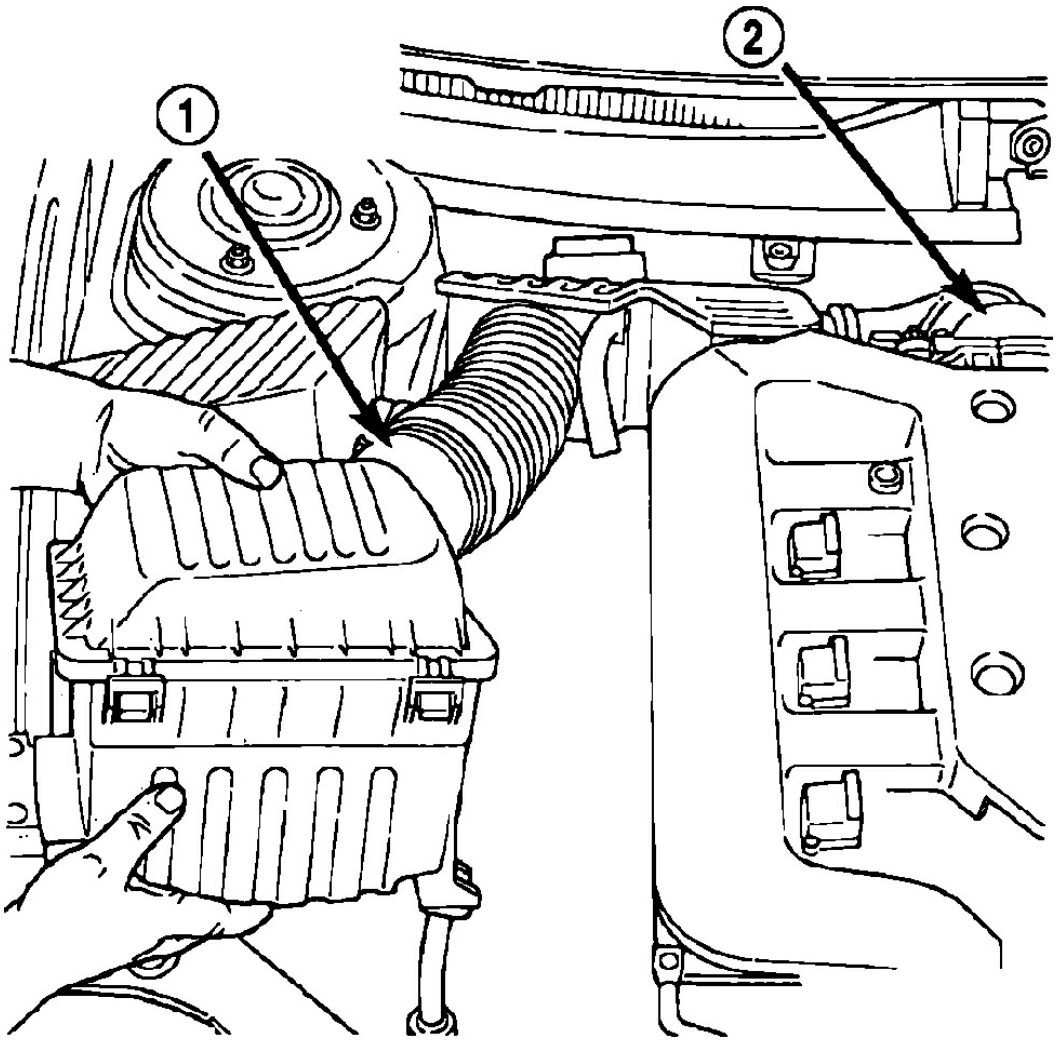


1 - RIGHT STRUT TOWER
2 - BATTERY NEGATIVE CABLE
G03511860

Fig. 7: Negative Cable Remote Terminal
Courtesy of DAIMLERCHRYSLER CORP.

3. Mark hood position at hinges and remove hood. (Refer to **HOOD**)
4. Remove both wiper arms. (Refer to **WIPER ARMS**)
5. Remove both right and left cowl screens. (Refer to **COWL GRILLE AND SCREEN**)

6. Remove strut tower brace.(Refer to **FRONT STRUT TOWER TO TOWER BRACE**)
7. Remove air cleaner assembly with air inlet hose (**Fig. 8**).



1 - AIR CLEANER ASSEMBLY WITH AIR INLET HOSE
2 - THROTTLE BODY
G03511861

Fig. 8: Air Cleaner With Inlet Hose
Courtesy of DAIMLERCHRYSLER CORP.

8. Remove upper radiator crossmember. (Refer to **GRILLE OPENING REINFORCEMENT**)
9. Disconnect hood release cable from hood latch.

10. Drain cooling system. (Refer to **STANDARD PROCEDURE**)
11. Remove radiator fan. (Refer to **RADIATOR FAN**)
12. Remove accessory drive belts. (Refer to **ACCESSORY DRIVE**)
13. Disconnect upper radiator hose at engine.
14. Disconnect lower radiator hose at radiator.
15. Disconnect engine oil and transmission cooler lines at radiator.
16. Remove power steering line bracket at left side of radiator.
17. Remove fasteners attaching air conditioning condenser to radiator.
18. Remove radiator. (Refer to **RADIATOR**)
19. Remove generator. (Refer to **GENERATORS & REGULATORS**)
20. Remove power steering pump mounting bolts and set pump aside (Do not disconnect lines). (Refer to **PUMP**)
21. Remove air conditioning compressor mounting bolts and set aside (Do not disconnect lines).
22. Loosen and remove V-Band clamp at right exhaust manifold.
23. Remove front and rear support bracket fasteners attaching right side catalytic converter down pipe.
24. Disconnect fuel line. (Refer to **FUEL LINES**)
25. Disconnect throttle and speed control cables from bracket. (Refer to **THROTTLE CONTROL CABLE**)
26. Disconnect coolant hoses at coolant recovery/pressure container.
27. Disconnect all vacuum hoses.
28. Disconnect ground straps at both cylinder heads.

CAUTION: Upper Intake manifold is a composite design. Therefore, manifold should be removed before lifting engine or damage to the manifold could occur.

29. Remove upper intake manifold and cover intake manifold openings with tape. (Refer to **INTAKE MANIFOLD - UPPER**)
30. Disconnect heater hoses.
31. Remove rear throttle body support bracket.
32. Remove fastener for water pipe at transmission to block bolt.
33. Remove four upper transmission to block bolts.
34. Disconnect all electrical connections.
35. Hoist vehicle.
36. Drain engine oil.
37. Remove structural collar and mark flex plate to torque converter position.
38. Remove bolts holding torque converter to flex plate.
39. Disconnect both transmission oil cooler line brackets from engine.
40. Loosen and remove left exhaust manifold V-Band clamp.