

fuel economy and reduced emissions. This is achieved by using a removable, thin stamped, stainless-steel cup between the thermostatic choke control unit and the exhaust passage gases in place of the thicker cast-in manifold pocket used previously. A gasket is installed between the steel cup and manifold to ensure that no exhaust leak occurs. Also a part of the heated air system is a heat insulating spacer between the intake manifold and carburetor. This is used in place of a gasket and is essential for correct operation.

IDLE SPEED SOLENOID

The high performance engines (340, 440, 440 3-2V and 426 Hemi) employ idle speeds between 800 and 1000 rpm to obtain acceptable lower emissions during idle and deceleration. In order to prevent "after running" with such high idle speeds, these engines have an electrical solenoid throttle stop which holds the throttle at the correct idle position when energized but de-energizes when the ignition is turned off, allowing the throttle blades to close more completely. Refer to "Fuel System" Group 14 for service procedures.

SERVICE PROCEDURES

IGNITION TIMING (383 Cu. In. 440 Cu. In.)

(Solenoid Distributor)

To obtain maximum engine performance, the distributor must be correctly positioned on the engine to give proper ignition timing. The ignition timing test will indicate the timing of the spark at No. 1 cylinder at curb idle (Hot only).

Test procedure as follows:

- (1) Disconnect vacuum hose at distributor, and plug hose.
- (2) Connect the secondary lead of a power timing light to No. 1 spark plug, red primary lead to positive terminal of the battery and the black primary lead to the negative battery terminal. **Do not puncture cables, boots or nipples with test probes. Always use proper adapters. Puncturing the spark plug cables with a probe will damage the cables. The probe can separate the conductor and cause high resistance. In addition breaking the rubber insulation may permit secondary current to arc to ground.**
- (3) Loosen the distributor hold-down mounting screw just enough so distributor housing can be rotated in its mounting.
- (4) Start the engine and set the curb idle as shown in "Specifications." (Transmission in Neutral and Engine Hot).
- (5) Aim the power timing light at the timing marks on the chain case cover. If the timing light flash occurs when the timing mark on the vibration damper is located ahead of specified degree mark on the timing

LOWER COMPRESSION RATIOS

The 318, 383 and 440 CID engines (except the 426 Hemi and 440 CID 3-2V) have new pistons to reduce compressions by about 0.5. The lower compression ratio reduce hydrocarbon emissions by producing a better combustion chamber shape and by leaving more heat in the exhaust to assist the after combustion reaction.

DISTRIBUTOR SOLENOID

All 383 and 440 engines (except the 440 3-2V) have a solenoid incorporated in the distributor vacuum advance mechanism to retard the ignition timing when the throttle is closed. At closed throttle, electrical contacts on the carburetor throttle stop and with idle adjusting screw in the closed position, causes the distributor solenoid to energize. This retards the ignition timing to provide reduced exhaust emissions under hot idle conditions. Cold or part throttle starting is not penalized because the distributor solenoid is not energized unless the hot idle adjusting screw is against the throttle stop contact. **Timing must be set at closed throttle to give ignition full retard.**

plate. The timing is advanced. To adjust turn distributor housing (**Not Vacuum Chamber**) Counter clockwise. **Do not use vacuum chamber as a turning handle.** If the timing light flash occurs when the timing mark on the vibration damper is located past the specified degree mark on the timing plate. The timing is retarded. **To adjust turn distributor housing clockwise.** Timing may vary from the specified specifications a plus or minus 2-1/2° and still fall within range, but if the timing is checked it should be adjusted to the specification shown on the distributor charts.

- (6) To check the distributor solenoid for proper operation, disconnect the wire at the carburetor. Aim the power timing light at the timing marks on the chain case. The timing should advance above 5-1/2° and the engine speed should increase.
- (7) Stop the engine and tighten the distributor hold-down screw.
- (8) Reconnect the wire at the carburetor throttle stop.
- (9) Reconnect the vacuum hose to the distributor.
- (10) Remove the timing light.

EVAPORATION CONTROL SYSTEM

Chrysler Corporation cars sold in California have an Evaporation Control System (ECS) to reduce the loss of fuel from the fuel system to the atmosphere by evaporation. This is a closed system which controls fuel expansion and feeds fuel evaporation emissions from the carburetor or fuel tank. The vapors pass