CHRYSLER CORP. IMPORTS DECELERATION SYSTEMS

Arrow Pickup
Challenger
Champ
Colt
Ram-50 Pickup
Sapporo

DESCRIPTION

The deceleration systems reduce HC emissions through the use of an air switching valve, coasting air valve, dashpot (Man. Trans. only), and a deceleration spark advance system consisting of an engine speed sensor and solenoid valve. The air switching valve cuts off fuel to by-pass holes and pilot outlet by supplying additional air to slow idle passage. The coasting air valve supplies additional air to the intake manifold. The deceleration spark advance system advances ignition timing, which is usually controlled by carburetor ported vacuum and engine speed.

OPERATION

Air Switching Valve – When engine speed sensor detects 1600-2000 RPM (1400-1800 RPM on 2600 cc engines), it deactivates the air switching valve by opening the solenoid valve. This maintains smooth vehicle operation during engine mode transient stage and prevents engine stalling.

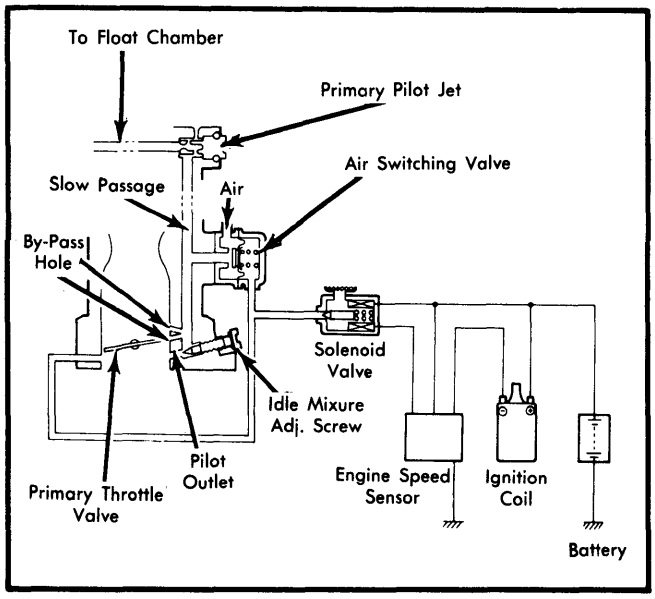

Fig. 1 Air Switching Valve

Coasting Air Valve – When engine speed sensor detects 1600-2000 RPM (1400-1800 RPM on 2600 cc engines), it deactivates the coasting air valve by opening the solenoid valve. This maintains smooth vehicle operation during engine mode transient stage and prevents engine stalling.

Dashpot – The carburetor is equipped with a dashpot, which delays throttle valve closure to its normal idling position, thus reducing HC emissions.

Deceleration Spark Advance System – When engine speed sensor detects 1600-2000 RPM (1400-1800 RPM on 2600 cc engines), it activates solenoid valve movement. This changes intake manifold vacuum to carburetor ported vacuum, maintaining smooth vehicle operation.

ADJUSTMENTS

DASHPOT

With engine running at idle, push up dash pot free lever to touch dash pot adjusting screw. Turn screw to set idle speed to 1900-2000 RPM.

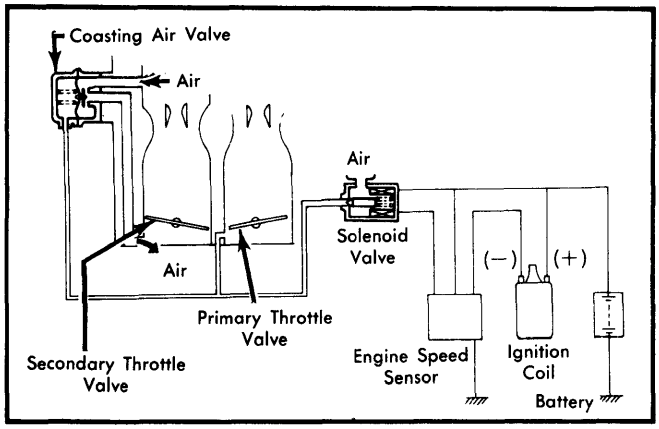

Fig. 2 Coasting Air Valve

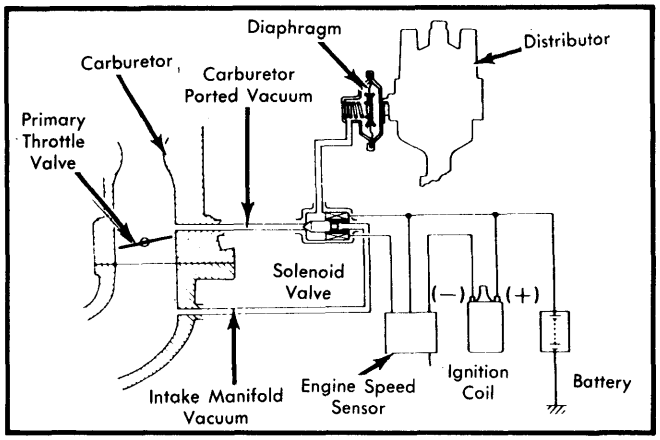

Fig. 3 Deceleration Spark Advance System

TESTING

1) Run engine at idle. Disconnect solenoid valve connector to disable solenoid valve (manifold vacuum will act on air switching valve, causing valve to open). If idle drops excessively or engine stalls, air switching valve and solenoid valve are okay.

2) If idle speed does not change, check vacuum passage for clogging and check condition of air switching valve or solenoid valve.

3) With engine idling, battery voltage should be measured at solenoid connector. If voltage is not present, electrical wiring or engine speed sensor is defective.

4) Increase speed to 1500 RPM. Check to ensure voltage is present at solenoid valve connector. If not, engine speed sensor is defective.

5) Increase speed to 2500 RPM. Check to be sure no voltage is present at solenoid valve connector. If it is, engine speed sensor is defective.