

CHRYSLER CORP. IMPORTS DECELERATION SYSTEM

Arrow Pickup, Challenger, Champ, Colt, Ram-50 Pickup, Sapporo

DESCRIPTION

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.

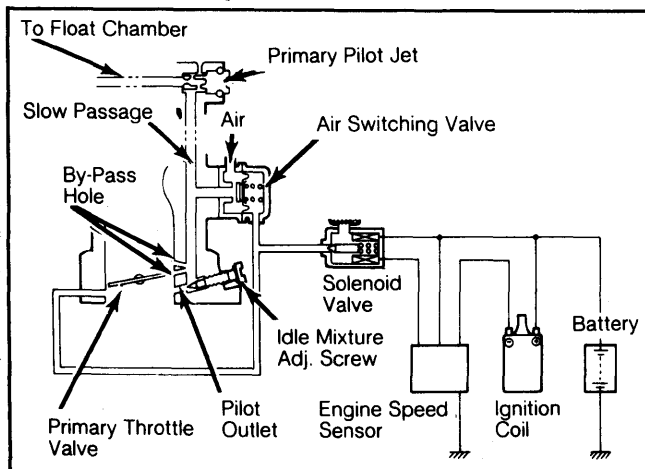
Air switching valve cuts off fuel to by-pass holes and pilot outlet by supplying additional air to slow idle passage. Coasting air valve supplies additional air to intake manifold. Deceleration spark advance system advances ignition timing, which is usually controlled by carburetor ported vacuum and engine speed.

OPERATION

AIR SWITCHING VALVE

When engine speed sensor detects 1600-2000 RPM (1400-1800 RPM on 2.6L engines), it deactivates air switching valve by opening solenoid valve. This maintains smooth vehicle operation during engine mode transient stage and prevents engine stalling.

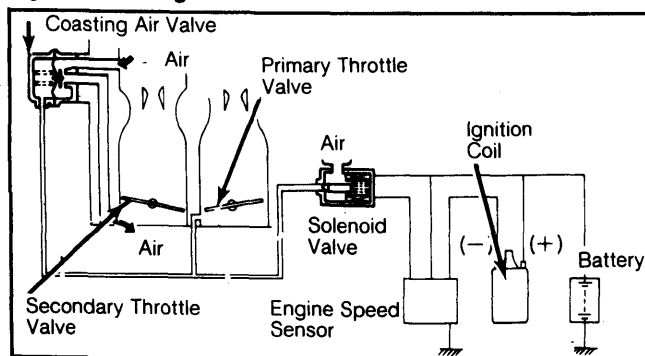
Fig. 1: Air Switching Valve



COASTING AIR VALVE

When engine speed sensor detects 1600-2000 RPM (1400-1800 RPM on 2.6L engines), it deactivates

Fig. 2: Coasting Air Valve



coasting air valve by opening solenoid valve. This maintains smooth vehicle operation during engine mode transient stage and prevents engine stalling.

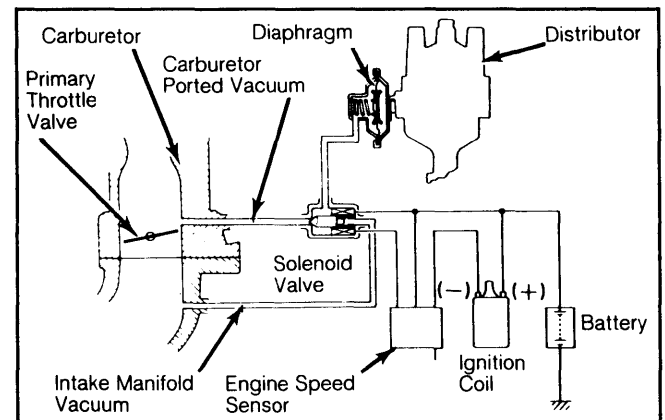
DASHPOT

On Man. Trans. models, carburetor is equipped with a dashpot, which delays throttle valve closure to its normal idling position, thus reducing HC emissions.

DECELERATION SPARK ADVANCE

When engine speed sensor detects 1600-2000 RPM (1400-1800 RPM on 2.6L engines), it activates solenoid valve movement. This changes intake manifold vacuum to carburetor ported vacuum, maintaining smooth vehicle operation.

Fig. 3: Deceleration Spark Advance System



ADJUSTMENTS

DASHPOT

With engine idling, push up dashpot free lever to touch dashpot adjusting screw. Turn screw to set idle speed to 1900-2100 RPM.

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.