

1975-79 EXHAUST EMISSION SYSTEMS

Ford Motor Co. Decel Valve

3-127

1975-77 Ford Motor Co.

DESCRIPTION

Three deceleration valve systems are used. The conventional decel valve system (which is used on the 1975-77 2300 cc engine only) and the speed modulated decel valve system (which is used on the 1975-76 2800 cc V6 engine only). The third type is called A/C modulated decel valve system and is used on 1977 2800 V6 with 2150 2-Bbl. carb. only.

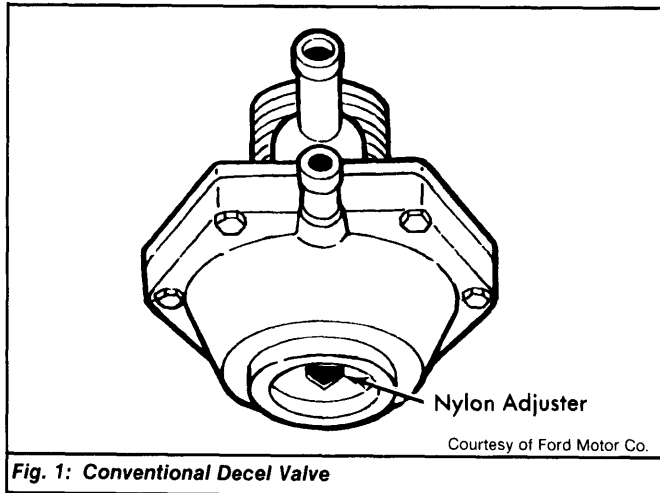
The decel valve supplies additional air/fuel mixture to engine during periods of deceleration (high intake manifold vacuum when throttle valve is closed). The conventional decel valve is controlled by engine vacuum. The speed modulated decel valve is controlled by vehicle speed through a connection to the speedometer cable.

OPERATION

Conventional decel valve is operated by a diaphragm subjected to atmospheric pressure on one side (through small hole in bottom of valve) and manifold vacuum on other side. A small diameter pipe connects valve to a system of fuel and air bleed jets in carburetor. When valve is opened (caused by high manifold vacuum) air/fuel mixture is drawn from carburetor and enters intake manifold. This additional air/fuel mixture results in a considerable reduction of hydrocarbons and carbon monoxide emissions.

The speed modulated decel valve uses a vacuum solenoid to control operation of decel valve. Decel valve is operational when vehicle is decelerating above 11 MPH. When decelerating below 11 MPH, vacuum solenoid closes, stopping vacuum to decel valve.

The A/C modulator decel valve uses a vacuum solenoid (controlled by the A/C on/off switch) as an interlock to prevent operation of the decel valve when the A/C is off.



ADJUSTMENT

CAUTION: Turn A/C switch OFF before testing decel valve on A/C modulator decel system.

Conventional & A/C Modulated Decel Valve - 1) Run engine at 1200 RPM until warm. Connect tachometer. Remove air/fuel mixture hose from decel valve and connect a vacuum gauge, using a "T" fitting so valve remains operations.

2) With transmission in Neutral, raise engine speed to 3000 RPM and hold steady for 5 seconds, then release throttle and note time required until vacuum gauge reads zero. Correct decel valve timing is 2-5 seconds. Turn nylon adjuster clockwise to decrease time and counterclockwise to increase time. See Fig. 1.

NOTE: Nylon adjuster can be damaged by use of a screwdriver and it is recommended that Adjuster (T73P-9K809-A) be used.

3) After adjustment of decel valve, check that fast idle speed is to specification. If valve cannot be adjusted, replace valve.

Speed Modulated Decel Valve - Raise rear of vehicle and place jacks under axle housing. To check vacuum solenoid, place transmission in Drive, raise engine speed until speedometer is above 11 MPH. Release throttle and allow speed to drop. Vacuum gauge should show vacuum until speedometer reaches 11 MPH. Below 11 MPH, vacuum gauge should show zero vacuum.

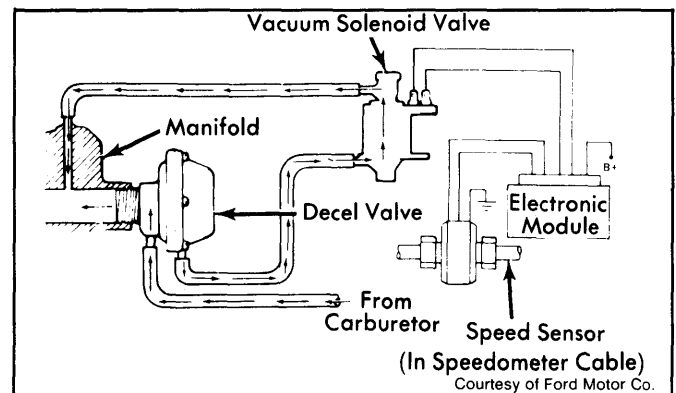


Fig. 2: 1975-76 Speed Modulated Decel System

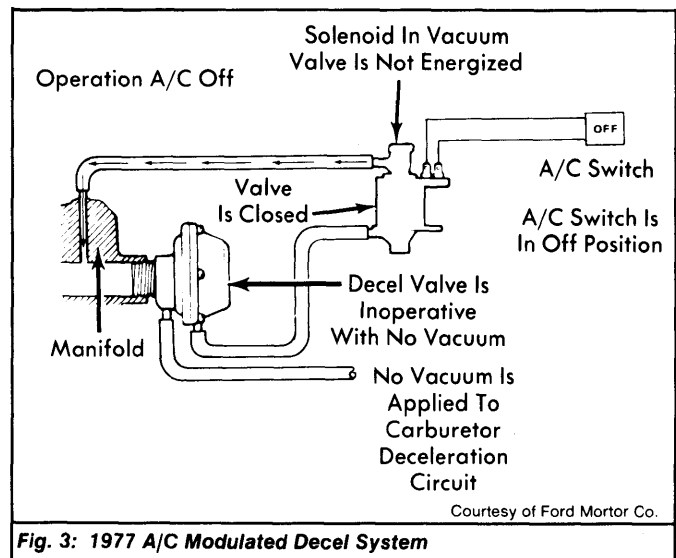


Fig. 3: 1977 A/C Modulated Decel System