

1974-79 EXHAUST EMISSION SYSTEMS

Ford Motor Co. Decel Valve System

3-163

1975-78 Capri, Capri II

DESCRIPTION

A conventional decel valve system is used on 2300 cc and 2800 cc (automatic transmission) engines and a speed modulated decel valve system on 2800 cc (manual transmission) engines. All 2000 cc engine equipped models with manual transmissions use a decel valve with a vacuum connection at bottom of valve. Decel valve supplies additional air/fuel mixture to engine during periods of deceleration (high intake manifold vacuum when throttle valve is closed). Conventional decel valve is controlled by engine vacuum while speed modulated decel valve is controlled by vehicle speed through a connection to 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 (HC) and carbon monoxide (CO) 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.

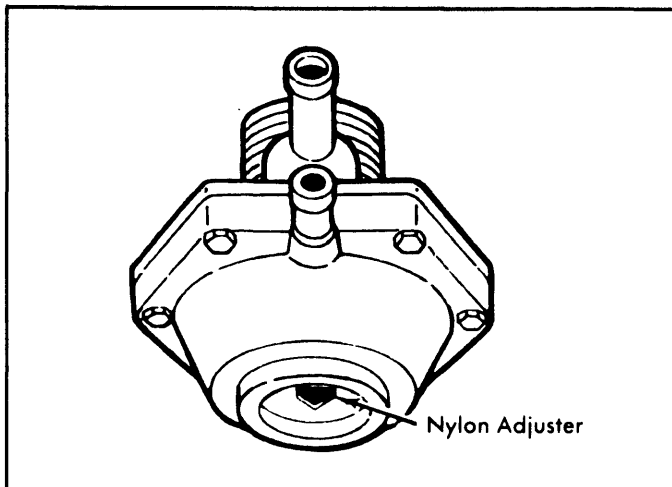


Fig. 1: Conventional Decel Valve System

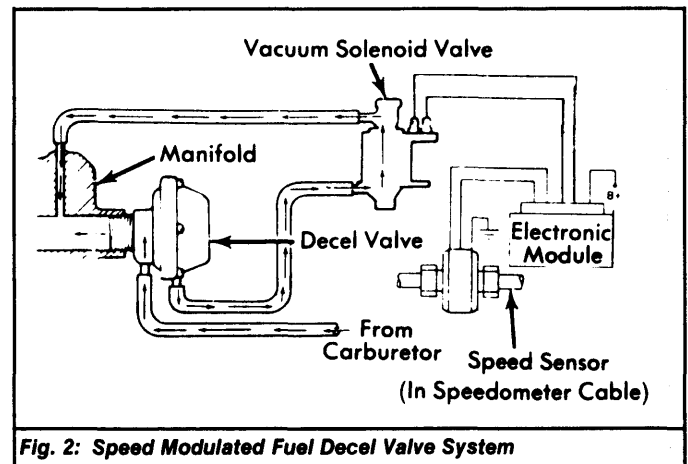


Fig. 2: Speed Modulated Fuel Decel Valve System

ADJUSTMENT

CONVENTIONAL DECAL VALVE

- 1) Run engine at 1200 RPM for 20 minutes. Connect tachometer. Remove air/fuel mixture hose from decel valve and connect a vacuum gauge, using a "T" fitting, so valve remains operational.
- 2) With transmission in Neutral, raise engine speed to 3000 RPM. Hold RPM steady for 5 seconds, release throttle, and note time required until vacuum gauge reads zero (0).
- 3) Correct decel valve timing should be 2-5 seconds. If not, use Driver (T73P-9K809-A) to turn nylon adjuster clockwise to decrease time or counterclockwise to increase time.
- 4) After adjustment of decel valve, check that fast idle speed is to specification. If valve timing cannot be adjusted, replace valve.

SPEED MODULATED DECAL 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 and then below 11 MPH vacuum gauge should show zero vacuum.