FORD MOTOR CO. STAGED CHOKE PULL-DOWN

DESCRIPTION

The staged choke pull-down system improves emission control by matching engine choking requirements, at all temperatures, with emission requirements. The system, which is vacuum controlled, consists mainly of a temperature sensing valve and a timing device built into a control unit. The control unit is mounted on the carburetor base, and is mechanically connected to the choke linkage. It also has a vacuum connection to the carburetor.

The temperature sensing device consists of a "snap bi-metal" and "O" ring valve. The timing device consists of a vacuum diaphragm separated by an orifice spacer and spring. The space between the diaphragm is filled with a silicone fluid which passes between the two diaphragms through the orifice spacer. A link attaches the linkage diaphragm to the choke linkage.

OPERATION

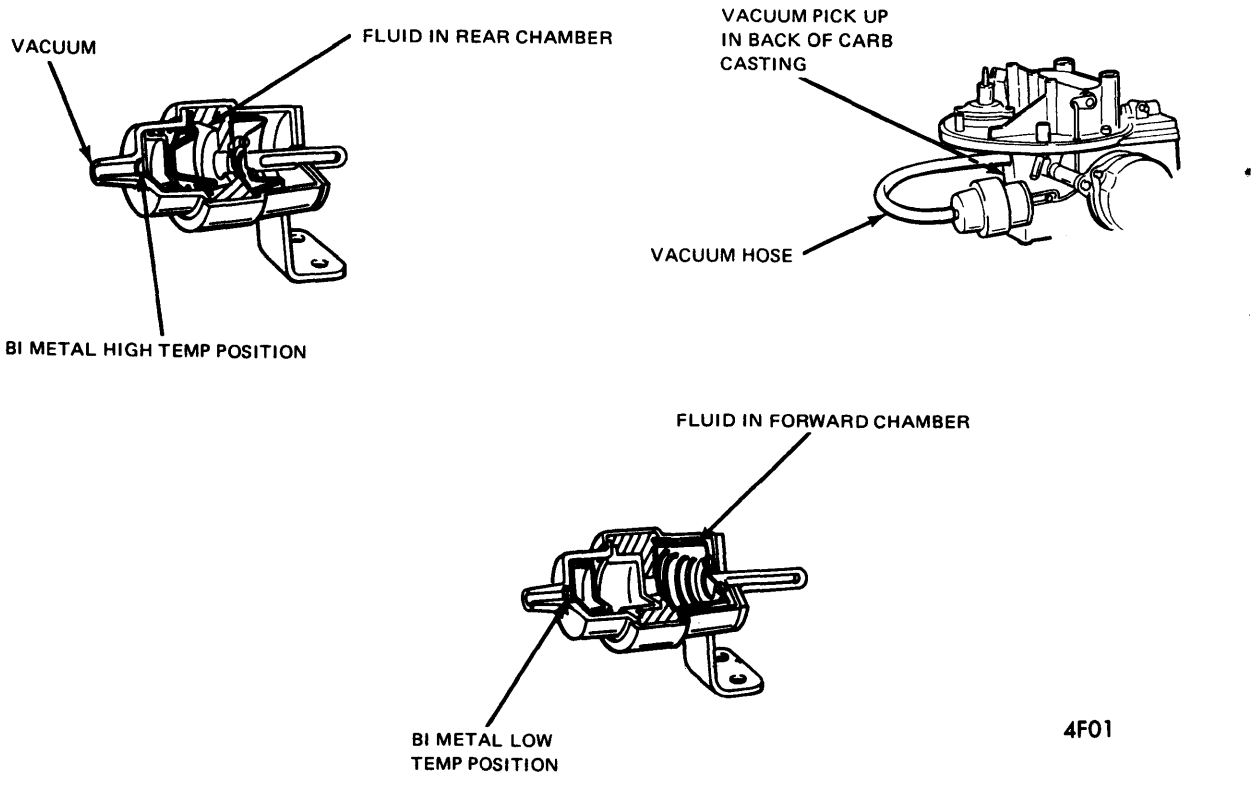
When the temperature of the staged choke pull-down unit is below 60°F, the valve is closed and the system is inoperative, thus permitting normal choking. When the temperature of the staged choke pull-down unit is above 60°F, the temperature valve is open. This applies carburetor vacuum to the vacuum diaphragm of the timing device, thus creating a low pressure area. At this point, atmospheric pressure acting on the linkage diaphragm overcomes the spring tension and forces fluid from the forward chamber to pass through the orifice in the spacer into the rear chamber. This movement of the linkage diaphragm, which is connected to the carburetor choke linkage moves the choke plate to the open position in about 15 to 60 seconds after engine start up.

TESTING

The transferring of fluid from the forward chamber into the rear chamber is the timing device. The timing is checked from the moment the engine is started to the time the link reaches the end of its travel and the choke is opened up.

Timing can also be checked off the car. Use an external vacuum supply, set at about 13 inches. Connect the vacuum hose to the vacuum port on the pull-down unit and note the number of seconds it takes the link to travel to the end of its stroke.

The timing will vary on different models. Two barrel carburetors will have two different control units. The first letter stamped on the unit will indicate the timing. Four barrel carburetors use three control units, with the time stamped on the unit.



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