FORD MOTOR CO. DISTRIBUTOR VACUUM VENT VALVE

DESCRIPTION

Some engines require a Distributor Vacuum Vent Valve. The functions of this valve are to prevent fuel migration to the distributor vacuum advance diaphragm and to act as a spark advance delay valve. The valve helps control exhaust emissions by delaying vacuum advance during light acceleration and by "dumping" vacuum to eliminate vacuum advance during heavy acceleration, deceleration and idle.

OPERATION

When spark port vacuum is applied to the vent valve diaphragm, the dump valve closes, the check valve opens and the distributor diaphragm begins to evacuate through the sintered metal restrictor. At the same time, any fuel in spark port line is evacuated. The sintered metal restrictor located in the vent valve diaphragm acts as a spark delay valve slowing spark advance.

When spark port vacuum decreases, the check valve closes and the dump valve opens the distributor vacuum line to atmosphere. Venting the distributor line prevents fuel migration to the distributor diaphragm and returns the distributor to zero vacuum advance.

TESTING

1) Connect an external vacuum source of 10 in. Hg to the "VAC" side (side with I.D. number) of the Distributor Vacuum Vent Valve.

2) Connect a 24 inch section of vacuum hose to a vacuum gauge and connect the other end of hose to the other port of vent valve.

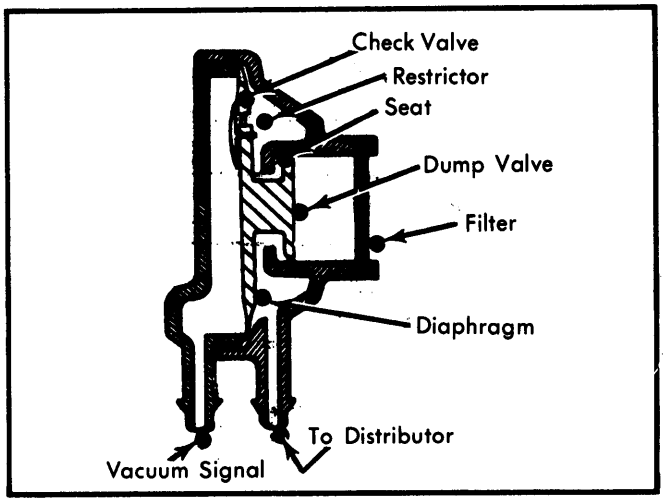

Fig. 1 Distributor Vacuum Vent Valve

3) Apply vacuum and check the time (in seconds) it takes for gauge to read from 0 to 8 in. Hg with a constant 10 in. Hg vacuum source. Minimum and maximum time for vent valve to read 8 in. Hg should be as follows:

Distributor Vacuum Vent Valve Specifications

Valve Code No.	Time In Seconds Minimum	Maximum
20	16	36.8
40	28	67.6
5	7	13.7