1973 FORD MOTOR CO. TEMPERATURE ACTIVATED VACUUM (TAV) SYSTEM

Used on 250" Engines with Auto. Trans.

DESCRIPTION

The Temperature Activated Vacuum System (TAV) is designed to select either carburetor spark port vacuum or carburetor EGR port vacuum as a function of ambient air temperature. The selected vacuum source is used to control distributor vacuum advance unit. System consists of an ambient temperature switch, a three-way vacuum valve and an external vacuum bleed. *NOTE – TAV and EGR systems work independently of each other with no interaction between the systems.*

OPERATION

When ambient air temperature is above 60°F, three-way valve is energized which supplies vacuum to distributor vacuum advance unit from carburetor EGR port. When ambient air temperature is below 49°F, three-way valve is de-energized, supplying vacuum to distributor from carburetor spark port. The in-line vacuum bleed functions to purge vacuum line of any excessive gasoline vapors.

SYSTEM CHECKING

AMBIENT TEMPERATURE SWITCH TEST

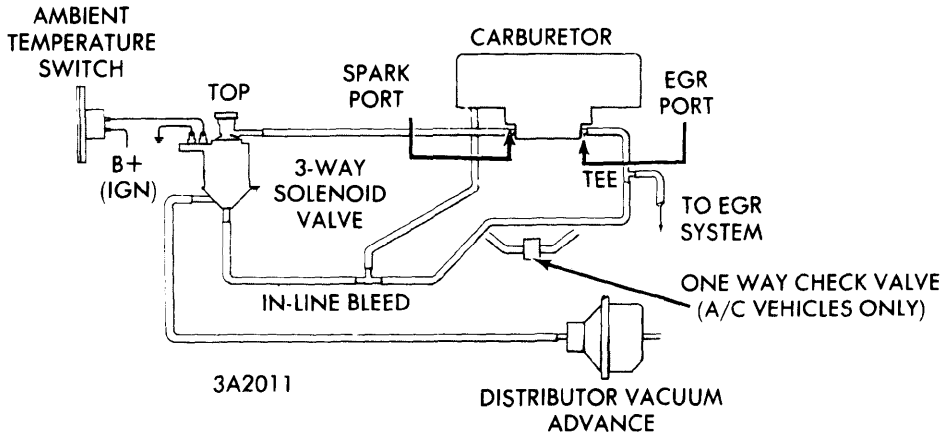
Disconnect temperature switch lead and connect to a grounded test lamp. Turn on ignition switch and warm temperature switch with hand or sponge saturated with hot water. Light should go on when switch temperature exceeds 65°F. If light does not go on, circuit is open, grounded, or switch is faulty. Cool switch until it is below 49°F (an aerosol spray such as starting fluid should provide sufficient cooling), light should go out. If light fails to go out either switch isn't cooled enough or is faulty.

THREE-WAY VACUUM VALVE TEST

Install vacuum gauge to bottom horizontal outlet port and vacuum source to top horizontal inlet port. With vacuum valve de-energized, gauge should read same vacuum as source. Energize valve by supplying 12 volts to second terminal and grounding other terminal. Vacuum gauge should read zero. With valve energized, move vacuum supply to bottom vertical inlet. Vacuum gauge should read same vacuum as source. De-energize valve and vacuum reading should be zero.

SYSTEM OPERATIONAL TEST

Install T-fitting and vacuum gauge into vacuum line at primary vacuum port of distributor. With ambient air temperature 65°F or higher, start engine and allow to idle. Vacuum reading should be zero. Increase engine speed to 1500 RPM or slightly higher. Vacuum reading should be five inches or more. Disconnect EGR port hose and plug line to carburetor, reading should drop to zero. Reconnect EGR port hose and disconnect one of the electrical leads at vacuum valve. Vacuum gauge should now read over six inches with engine speed slightly above 1500 RPM. This test indicates that system is operating properly.



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