1974-79 EXHAUST EMISSION SYSTEMS
Ford Motor Co. Thermostatic Air Cleaners

1975-78 Capri, Capri II

DESCRIPTION

The thermostatic air cleaner provides heated air to carburetor (from shroud on exhaust manifold) when engine is cold, with progressive mixing of cold/heated air to maintain carburetor air intake temperature at about 105-130°F (41-54°C). At higher temperatures, hot air intake is closed off so that only underhood air is supplied to carburetor.

Mixing of air is controlled by a vacuum operated motor on air cleaner snorkel. When engine compartment temperature is below 105°F (41°C), bimetallic sensor in air cleaner assembly is closed and allows vacuum to pass through sensor and close door to engine compartment air. Warm air is drawn from around exhaust manifold shroud and into carburetor.

When temperature inside air cleaner reaches 105°F (41°C), bimetallic switch opens and bleeds off vacuum. Without vacuum, the hot air door is shut and carburetor receives air from engine compartment.

The cold weather modulator valve, inserted in vacuum line between bimetallic sensor and vacuum motor, prevents vacuum override of air cleaner door at temperatures below 55°F (13°C) by maintaining vacuum at vacuum motor.

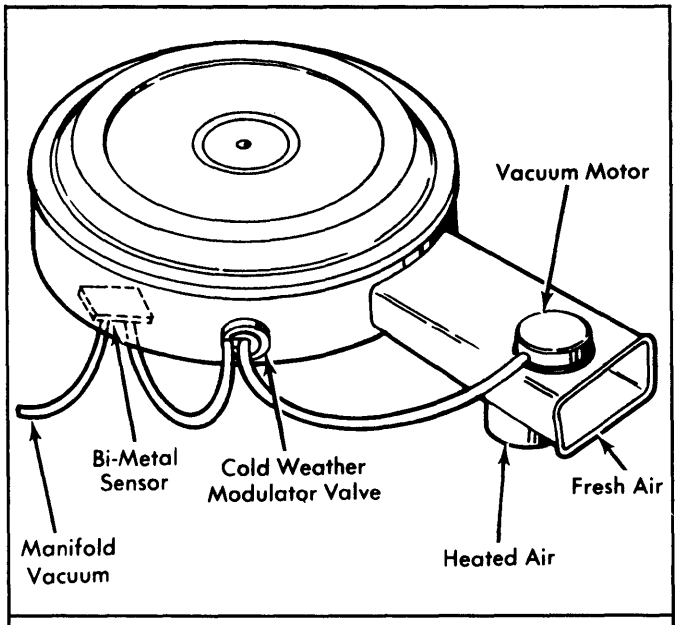

Fig. 1: Thermostatic Air Cleaner

TESTING

VACUUM MOTOR & VALVE ASSEMBLY

1) Duct valve should be open when engine is off. Start engine. Valve should close during engine idle, unless engine has reached normal operating temperature.
2) If engine is cold and valve does not close during idle, check for disconnected vacuum lines to vacuum motor. cold weather modulator valve, and bimetallic sensor.
3) Check bimetallic switch to see that bleed valve is closed. Rapidly open and close throttle. Valve should open if temperature is above 55°F (13°C) during throttle opening. If valve does not function properly, check for binding or replace.

COLD WEATHER MODULATOR

1) Disconnect vacuum lines from cold weather modulator. Connect a hand-held vacuum pump to motor side of modulator valve and apply 10-16 in. Hg of vacuum.
2) With valve cooled to 40°F (4.5°C) or less, valve should hold vacuum for 60 seconds. With valve heated to 70°F (21°C) or more, valve should not hold vacuum. Replace cold weather modulator if it does not test as indicated.