1974-79 EXHAUST EMISSION SYSTEMS
Ford Motor Co. Crankcase Ventilation

All Models

DESCRIPTION

1976-78 Capri II (2.3L Engine) - The crankcase ventilation system consists of an oil separator, PCV valve, a sealed oil filler cap, and connection hoses. *See Fig. 1.* The PCV valve is located in-line between carburetor base and the oil separator mounted near distributor. On A/C equipped models, there is also a hot idle compensator in same line as PCV valve

1976-78 Capri II (2.8L Engine) - The crankcase ventilation system for this engine operates like the 2.3L engine, except that the PCV valve is located in the carburetor spacer beneath the carburetor and an oil separator is not used. Air flows into right rocker arm cover, through engine and crankcase, out left rocker arm cover, and into sealed oil filler cap.

1977-79 Courier - The function of the ventilation system is to divert blow-by vapors into the intake manifold to be burned by the engine. The system consists of a positive crankcase ventilation valve and an oil separator. Ventilating air is routed into the rocker cover from the air cleaner.

The air then is routed to the oil separator, and then to the ventilation valve. The valve meters air to the intake manifold. During idle, when manifold vacuum is high, the valve is pulled closed, limiting air flow to the intake manifold. During normal operation, the valve is open and allows a full flow of ventilating air to flow into the intake manifold.

1978-79 Fiesta - The crankcase ventilation system is controlled by a combination oil filler cap and crankcase control orifice and valves. These are all combined into the filler cap assembly. *See Fig. 2.* Fresh air is drawn in from the air cleaner through the top connector on the filler cap.

It then flows through valve "D" and into the crankcase (through the bottom connector). After mixing with blow-by gases, it is then drawn up into the rocker cover and into the center connector. With no fresh air ventilation, blow-by gases close one-way valve "D". This reverse pressure opens valve "E", allowing blow-by to the dirty side of the air cleaner where gases are taken back into the induction system.

TESTING

PCV VALVE

1976-78 Capri II (2.3L & 2.8L Engines) - 1) With engine at normal operating temperature, remove PCV valve from its location. If valve is operating properly, a hissing sound will be heard and a strong vacuum will be felt when finger is placed over inlet.

2) While holding finger in inlet, check system for leaks. Reinstall PCV valve and remove crankcase air inlet hose. Loosely hold a piece of stiff paper over end of hose.

3) Paper should be sucked against inlet hose. Stop engine. Remove PCV valve and shake it. A definite rattling sound will be heard. If test results are not as indicated, replace PCV valve.

1976-79 Courier (1.8L, 2.0L & 1976-77 2.3L Engine) - Remove hose from PCV valve. Start and run engine at 700-1000 RPM. Hold finger over end of valve. A distinct vacuum should be felt. If no vacuum is felt, valve or system is clogged or defective.

1978-79 Courier (2.3L Engine) - Remove oil filler cap. Hold PCV Tester (V-44) securely over opening in valve cover to prevent leaking. Start engine, operate at idle. If check ball settles in Green area, system is okay. If check ball settles in Red (bad) area, system requires servicing.

1978-79 Fiesta - 1) Disconnect crankcase ventilation hose at air cleaner. Start engine and idle. Place a 3 x 5 card over open end of hose. If vacuum does not hold card, disconnect hoses and remove cap.

2) Soak cap in solvent for 5-30 minutes. Do not soak longer than 30 minutes. Shake cap dry, do not use compressed air. Reinstall cap and repeat above test. If system does not operate properly, replace cap assembly.

MAINTENANCE

Every 15,000 miles or 15 months, clean filter element and inspect all hoses for leaks or deterioration. Replace filter element and PCV valve every 30,000 miles or 30 months (24,000 miles on Capri). Perform maintenance more frequently if vehicle is operated in dusty conditions.

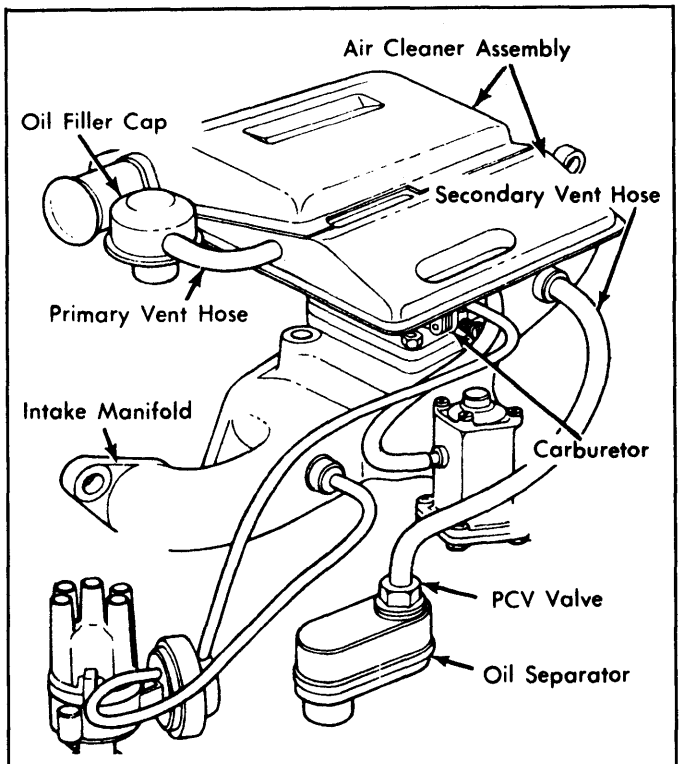

Fig. 1: Capri Crankcase Ventilation System (Typical)

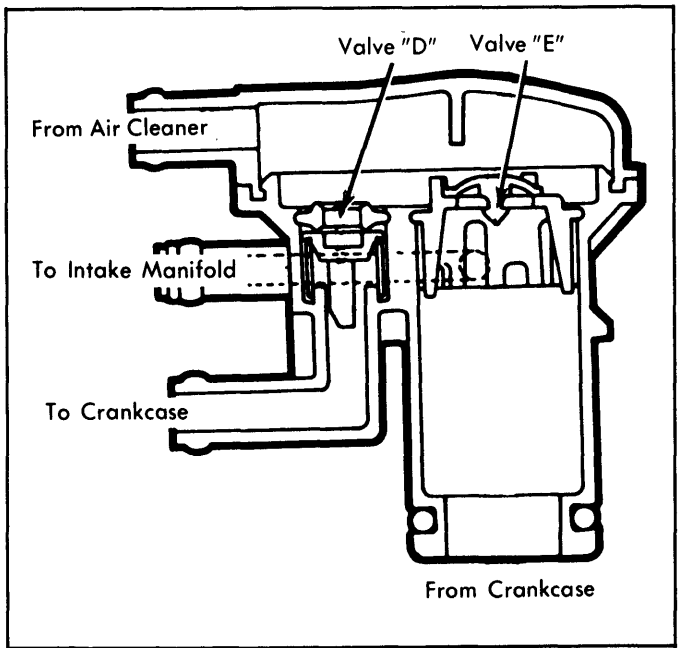

Fig. 2: Fiesta Crankcase Ventilation Valve Assembly