1965-74 FORD MOTOR CO. CLOSED SYSTEM

DESCRIPTION

Beginning in 1965 Ford Motor Company introduced a "closed" positive crankcase ventilation system on all California vehicles. Beginning in 1968 all vehicles used a "closed" system. System consists of a non-vented oil filler cap, air intake hose connecting filler cap with ventilation filter in air cleaner housing, a PCV valve located in grommet in valve cover, connected by a hose to intake manifold. In addition, 1970 2-Bbl. models with air conditioning have a Hot Idle Compensator located in crankcase vent hose between manifold and PCV valve. 1970 Mustang and Cougar 4-Bbl. California vehicles have a combustion arrestor which houses PCV valve.

OPERATION

Crankcase Ventilating air source is carburetor air cleaner. Air passes through filter located in air cleaner and then through a hose connecting air cleaner to oil filler cap. From oil filler cap, air flows into rocker arm chamber. Ventilating air moves down past push rods into lower crankcase and then up into another section of rocker arm chamber. Air and crankcase gases then enter spring-loaded PCV valve and are then directed to intake manifold through crankcase vent hose, tube and fittings. When air and crankcase gases enter intake manifold they are mixed with air/fuel mixture and burned in combustion process.

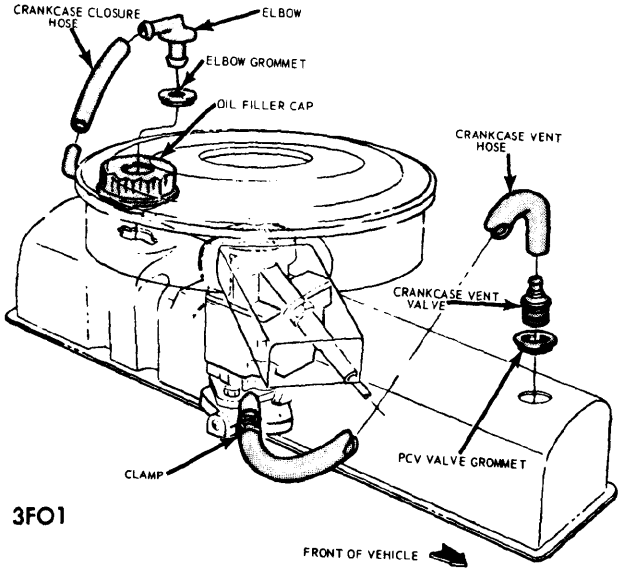
SYSTEM CHECKING

To test crankcase ventilation system, start engine and allow it to reach normal operating temperature. Make sure engine is idling at normal curb idle and perform following checks: Remove PCV valve from its mounting. If valve is functioning properly and not plugged, a hissing noise will be heard as air passes through valve, and a strong vacuum should be felt when a finger is placed over valve inlet. While finger is over valve inlet, check for vacuum leaks in hose line and at all connections. Re-install PCV valve; then remove crankcase air inlet hose at air cleaner. Loosely hold a piece of stiff paper over opening at end of inlet hose. Paper should be sucked against hose opening with a noticeable force after sufficient time has elapsed for crankcase pressure to lower (usually about a minute). As a final check; stop engine, remove PCV valve and shake it. A metallic clicking noise should be heard, indicating valve is free.

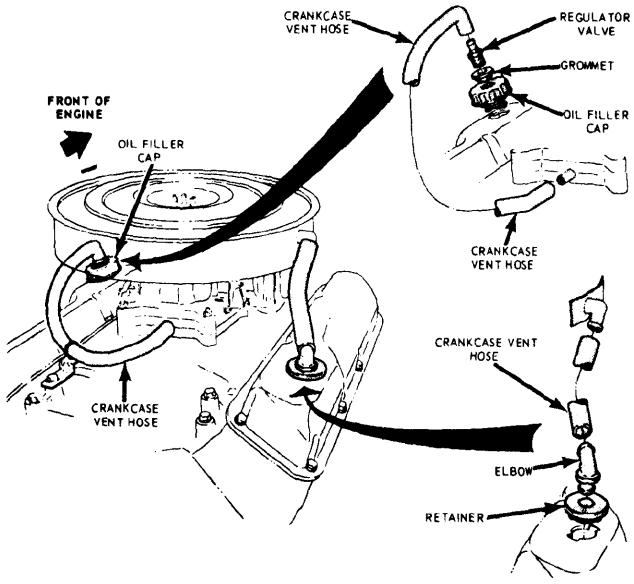
NOTE — If system passes both the engine running and engine stopped tests, it is functioning properly and no further tests are required. If it has failed either test, replace appropriate components and retest. If it does not pass on second try, clean system.

SERVICE PROCEDURES

Replace PCV valve every 12,000 miles or 12 months (1965-73) or every 24,000 miles or 24 months (1974). *NOTE — Do not attempt to clean PCV valve.* Every 12,000 miles or 12 months inspect, clean or replace as necessary crankcase ventilation system hoses, tubes, filler cap, fittings and filter element. Clean all hoses in a low volatility petroleum base solvent and dry



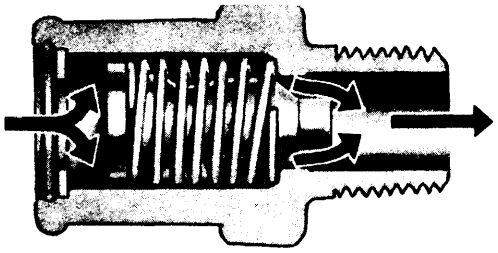
CRANKCASE VENTILATION SYSTEM (6 CYL. TYPICAL)



CRANKCASE VENTILATION SYSTEM (V8 TYPICAL)

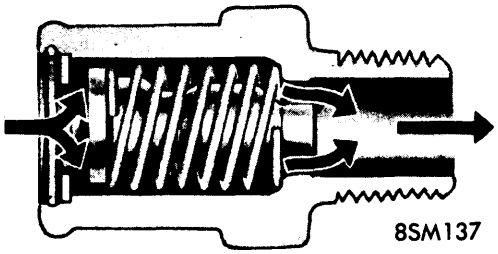
1965-74 FORD MOTOR CO. CLOSED SYSTEM (Cont.)

with compressed air. Thoroughly wash crankcase breather cap, if so equipped, in a low volatility petroleum base solvent and shake dry. *NOTE — Do not dry with compressed air; damage to filtering media may result.* Clean tubes, fittings and connections to assure unobstructed flow of crankcase gases. Replace any system component that shows signs of damage, wear or deterioration as required.

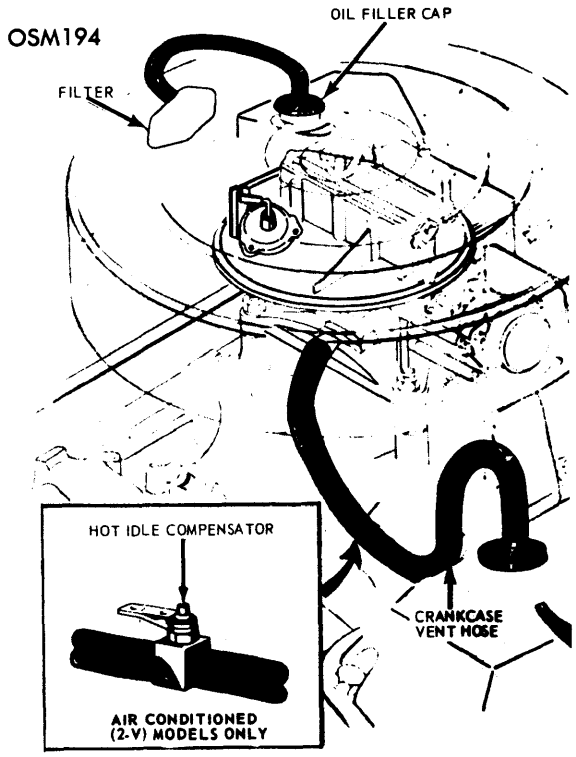


LOW SPEED OPERATION – HIGH MANIFOLD VACUUM

HIGH SPEED OPERATION – LOW MANIFOLD VACUUM



PCV VALVE OPERATION



1970 CRANKCASE VENTILATION SYSTEM (2-Bbl. WITH A/C)