1980 Crankcase Ventilation

CHRYSLER CORP. IMPORTS

Arrow
Arrow Pickup
Challenger
Champ
Colt
D-50 Pickup
Sapporo

DESCRIPTION & OPERATION

Federal Models – System is designed to prevent blow-by gases from entering the atmosphere by routing them back into intake manifold and carburetor air cleaner. System is a closed type and consists of an oil separator (camshaft chain sprocket), rocker arm cover baffle plate, small fixed orifice and connecting hoses. At part throttle operation, blow-by gas is drawn from rear of rocker arm cover into intake manifold with fresh air entering from air cleaner. At wide open throttle, blow-by gas is drawn through both passages; from rear of rocker arm cover to intake manifold and from front of cover to air cleaner dirty side.

California Models – System is designed to divert blow-by gases into the intake manifold to be burned by the engine. System is a closed type and consists of an oil separator (camshaft chain sprocket), rocker arm cover baffle plate, positive crankcase ventilation valve and connecting hoses. System supplies fresh air to crankcase through the air cleaner. Inside crankcase, fresh air is mixed with blow-by gases and passes through PCV valve into intake manifold under normal driving conditions. Under heavy acceleration or high-speed driving, intake manifold vacuum decreases and blow-by gases exceed PCV valve capacity. The gases are then routed through breather hose into the carburetor and burned by the engine.

MAINTENANCE

Federal Models – Check and clean entire crankcase ventilation system every 12 months/15,000 miles.

California Models – Check and clean entire crankcase ventilation system every 5 years/50,000 miles.

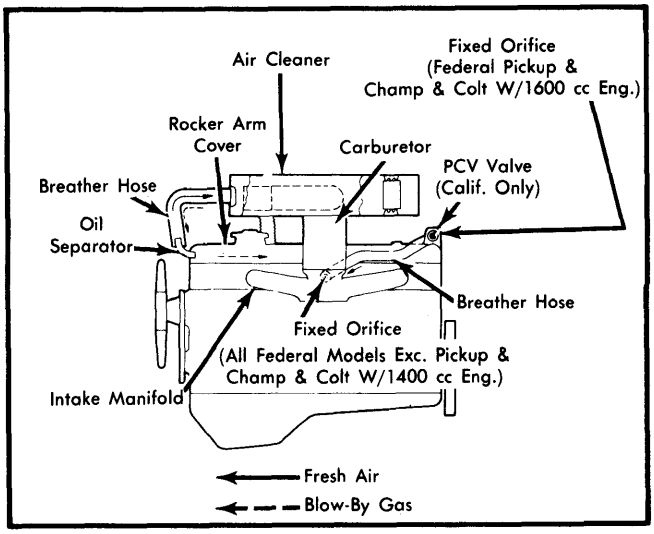

Fig. 1 Crankcase Ventilation System

COURIER

All Models

DESCRIPTION & OPERATION

The function of the ventilation system is to divert blow-by gases into the intake manifold to be burned by the engine. The system consists of a positive crankcase ventilation valve and connecting hoses. The system on 2.3L engine is closed by venting the filler cap to the crankcase. Ventilating air is routed into the rocker cover from the air cleaner, 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 intake manifold.

TESTING

PCV Valve (2.0L) – Remove hose from PCV valve. Start engine and run at about 700-1000 RPM. Hold finger over end of valve. A distinct vacuum should be felt. If no vacumn is felt, valve or system is clogged or defective.

PCV Valve (2.3L) – Remove oil filler cap. Hold PCV tester (V-44 or equivalent) securely over opening in valve cover to prevent leaking. Start engine, operate at idle. If check ball settles in green (good) area, system is "OK". If check ball settles in red (bad) area, system requires servicing.

MAINTENANCE

Crankcase Ventilation System – Every 15,000 miles or 15 months, inspect all hoses for leaks or deterioration. Test PCV valve for clogging, replace every 30,000 miles or 30 months. Replace components as necessary.

Carburetor Air Cleaner Element – Every 15,000 miles or 15 months, clean filter element. Every 30,000 miles or 30 months, replace element. Perform this maintenance more frequently if vehicle is operated in dusty conditions.