1980 Crankcase Ventilation

MAZDA

All Models

DESCRIPTION & OPERATION

Piston Engines – The Mazda closed crankcase ventilation system consists of a PCV valve and various connecting hoses. On piston engine applications, a hose leads from the valve cover, through a PCV valve and into the intake manifold below the carburetor. There is another hose which leads from the air cleaner into the valve cover to supply fresh air to the crankcase when engine vacuum overcomes crankcase pressure. Air flows through the air cleaner-to-valve cover hose, mixes with the blow-by gases and crankcase vapors, and is drawn out through the ventilation hose and PCV valve and back into the engine to be reburned with the incoming air/fuel mixture. The PCV valve regulates the amount of air flow to meet changes in operating conditions of the engine. When the engine is not running, the PCV valve is kept closed and blow-by gas is stored in the crankcase.

Rotary Engines – The system used on the rotary engine models is also a closed system and operates basically the same way as the piston engine arrangement. Filtered air is drawn into the system through the air cleaner, mixed with the gases and vapors that blow by the rotor during engine operation, and is drawn out through a ventilation and check valve and into the intake manifold. The ventilation and check valve operates as the PCV valve in this system.

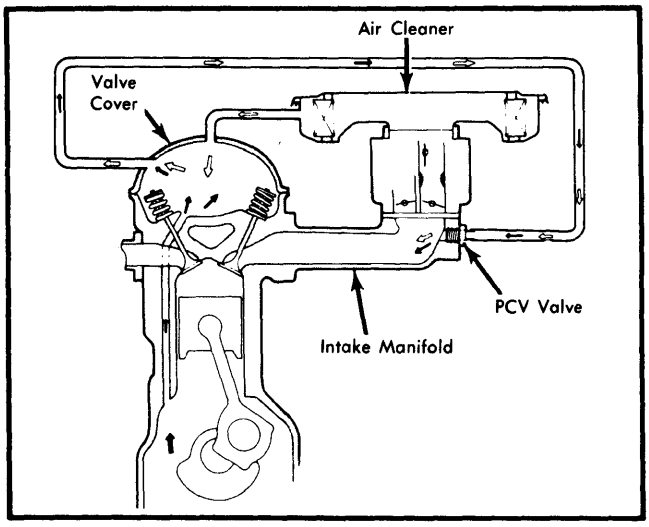

Fig. 1 Crankcase Ventilation System for Piston Engines (GLC, 626 and B2000)

TESTING

Piston Engines – With engine idling at normal operating temperature, disconnect PCV valve hose at valve cover. Close off hose opening with finger and check that idle speed drops. If idle speed does not drop, replace PCV valve.

Rotary Engines – **1)** Disconnect hoses "A" & "B" from valve. Start engine and idle. Check vacuum at port "A", if vacuum present, place finger over port "A" and check vacuum at port "B", if vacuum present, continue holding finger over port "A" and disconnect port "C" making sure there is no vacuum at port "B".

2) Stop engine. Disconnect hose "D" and attach suitable length of hose. Blow through valve and make sure air does not pass through. If any of above tests fail, replace valve.

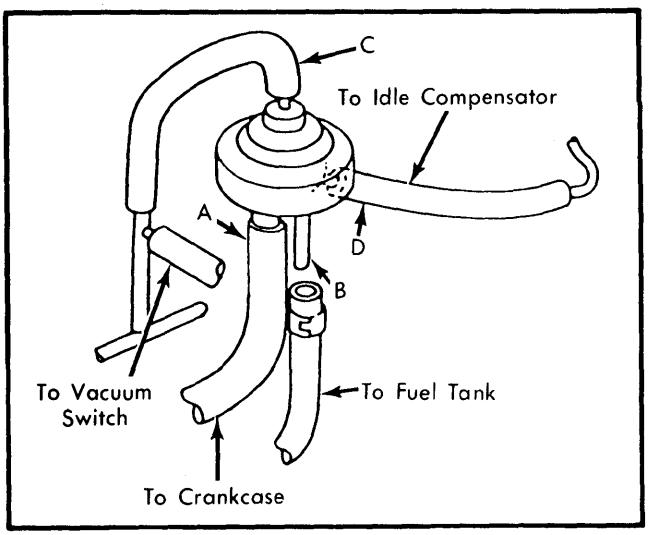

Fig. 2 Crankcase Ventilation and Check Valve for Rotary Engine (RX-7)

MAINTENANCE

Piston Engines – Every 15,000 miles or 15 months, clean and check ventilation system.

Rotary Engines – Every 12,500 miles or 12 months, clean and check ventilation valve and system.