1982 Crankcase Ventilation

AUDI

Quattro, 4000, 5000

DESCRIPTION

The crankcase ventilation system for Audi vehicles consists of a rubber hose containing a metered orifice. Some models may contain an in-line PCV valve instead of a restricted orifice. The hose is connected to cylinder head cover at one end and the air cleaner at the other end. The system is sealed and prevents crankcase vapors from reaching the atmosphere by drawing them through the hose and into the air cleaner.

OPERATION

4000 & 5000

Crankcase vapors and blow-by gases from the crankcase are drawn, by engine vacuum present at the air cleaner, into the cylinder head cover, through the metered opening (or PCV valve) and into the hose which directs the gases to the air cleaner.

Here, the vapors and gases mix with the fresh incoming air and are drawn into the engine with the air/fuel mixture to be burned. This reburning of the vapors lowers the emission output of the engine.

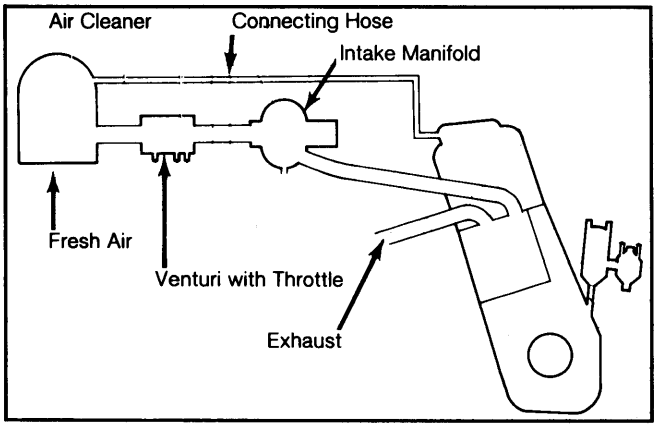
QUATTRO

On Quattro models, at idle speeds, the PCV valve is nearly closed so that most of the crankcase fumes flow through a restrictor to the air duct above the air sensor plate. As pressure in the intake rises the PCV valve opens and allows the crankcase fumes to flow directly to intake manifold. Under boost conditions, the PCV valve shuts and fumes are again routed to the air duct above the air sensor.

MAINTENANCE

Visually inspect the rubber hose between air cleaner and cylinder head for cracks, damage or restrictions about every 15,000 miles or once a year. If a strong smell of hot oil or increased engine noise is evident, check the system for leaks or possible disconnected hose.

Fig. 1: Typical Audi Crankcase Ventilation System



BMW

320i, 528e, 633CSi, 733i

DESCRIPTION & OPERATION

320i MODELS

This is a sealed system and does not allow entry of fresh air into the crankcase. Crankcase vapors and blow-by gases are drawn from the crankcase up to the cylinder head cover and into a hose which runs to the intake manifold side of the air cleaner.

From there, the gases travel through the intake manifold into the engine and are reburned with the fresh incoming air/fuel mixture. Suction created by the running engine has a vacuuming effect on the crankcase and because it is a sealed system, no fumes or gases can escape into the atmosphere.

ALL OTHER MODELS

This is also a sealed system and works in the same manner as the 320i system. The difference is in the method transferring gases from the valve cover.

These models draw fumes, vapors and gases directly from the valve cover into the air flow meter and straight into the intake manifold to be burned with the incoming air/fuel mixture.

Fig. 1: 320i Crankcase Ventilation System