

Crankcase Emission Control

In order to prevent crankcase vapor from escaping to the atmosphere, a closed crankcase emission control system is employed that maintains a slight vacuum in the crankcase under all engine operating conditions.

Crankcase vapor is collected from the camshaft cover and from the oil filler tube. At part throttle, the gases are fed into the intake manifold through a coolant heated restrictor. During full load operation the gases are fed into the engine through both the coolant heated restrictor and air intake elbow connection.

The necessary crankcase vacuum is balanced by the part throttle restrictor and the full throttle orifice in the inlet elbow. The restrictor and orifice sizes have been carefully chosen to control the crankcase vacuum while not flowing so much gas that idle speed is affected.

The part throttle restrictor is coolant heated to prevent icing during cold weather operation. An additional electrical breather heater element is located in the full throttle breather hose. The electrical heater provides heat to the gases passing through the hose, preventing ice formation in the inlet elbow orifice. The electrical heater element is controlled independently of the EMS ECM by an ambient temperature sensor, thermal switch and relay. Starting in the 1994 model year, a throttle housing heated by engine coolant was introduced.

