1982 Crankcase Ventilation

HONDA

Accord, Civic, Prelude

DESCRIPTION

Honda uses a "Dual Return" crankcase ventilation system on all models.

It consists of a breather chamber in the camshaft cover, condensation chamber in the air cleaner, a carburetor insulator plate with a metered orifice, and hoses to route the crankcase emissions. The system prevents crankcase vapors from escaping into the atmosphere.

OPERATION

When the engine is idling or at part-throttle operation, blow-by vapor is returned to the intake manifold through breather hoses A and B, and through the metered orifice. When the throttle valve is wide open, vacuum decreases at the orifice and increases in the air cleaner. Vapors are then drawn through the air cleaner into the carburetor. A small amount of vapors still enter through the orifice.

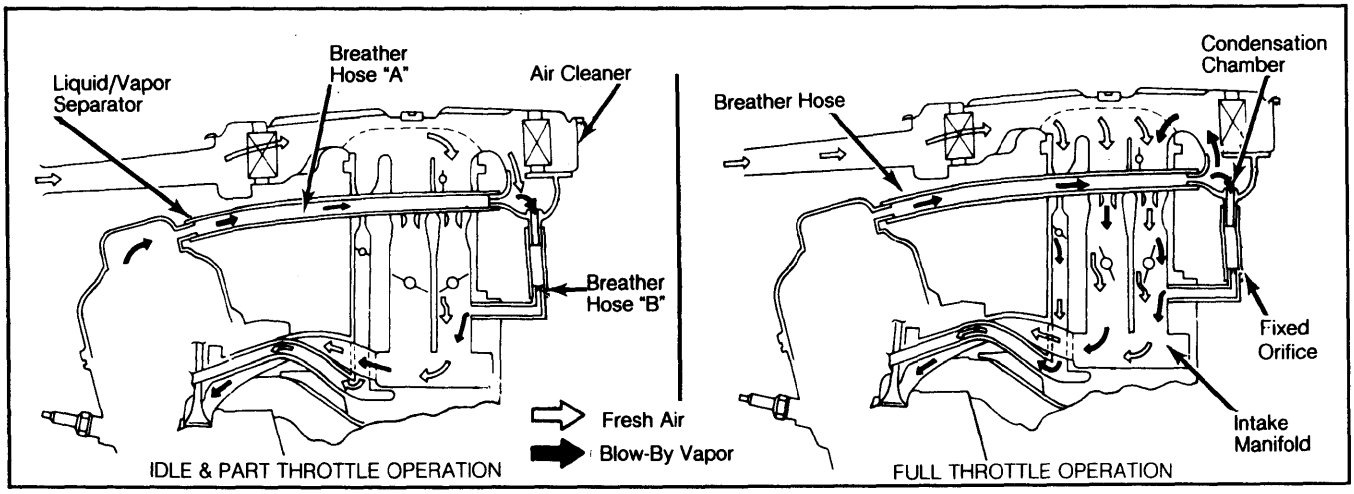
MAINTENANCE

Perform the following maintenance every 60,000 miles or 5 years.

1) Disconnect breather hose from carburetor insulator. Clean orifice with a No. 57 (.043") drill bit. Compressed air may also be used to clear tube.

2) Inspect condensation chamber in air cleaner. Remove from air cleaner and clean thoroughly. Be sure gasket is installed in original position and all hoses are tight when reinstalling condensation chamber.

Fig. 1: Honda Crankcase Ventilation System



Note fresh air and blow-by vapor direction.

ISUZU & LUV

Isuzu I-Mark, P'UP, LUV Pickup

DESCRIPTION

Isuzu and LUV use a closed type system which is designed to draw blow-by gases into the combustion chambers for reburning. It consists of a baffle plate in the head cover, regulating orifice (Gasoline models), PCV valve (Diesel models), and 2 connecting hoses (1 on Diesel models). The hose(s) allow air to pass from the head cover to either the air cleaner or the intake manifold.

OPERATION

Under normal conditions, blow-by gases and fuel vapors are mixed with air from air cleaner. Oil particles are separated by the baffle plate and gases are then drawn through regulating orifice (Gasoline models) or PCV valve (Diesel models) and into intake manifold. When engine is running with throttle wide open, intake manifold vacuum is not high enough to recover all gases and part of the gases are drawn into air cleaner.

MAINTENANCE

Every 12 months or 15,000 miles, clean internal part of hoses and regulating orifice in detergent oil and blow away foreign matter with compressed air. Check all hoses for cracks, fatique and swelling; replace if defective.

1982 Crankcase Ventilation

ISUZU & LUV (Cont.)

Fig. 1: Isuzu I-Mark Diesel Crankcase Ventilation System

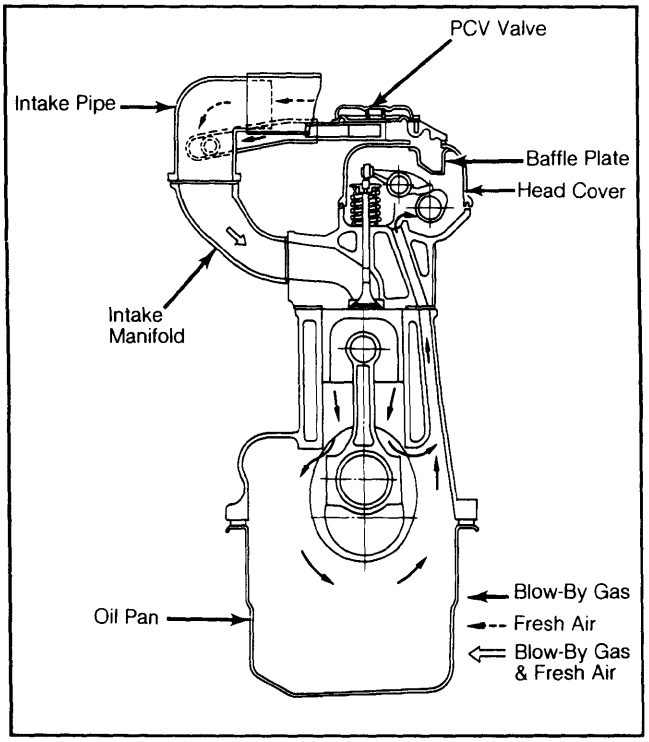
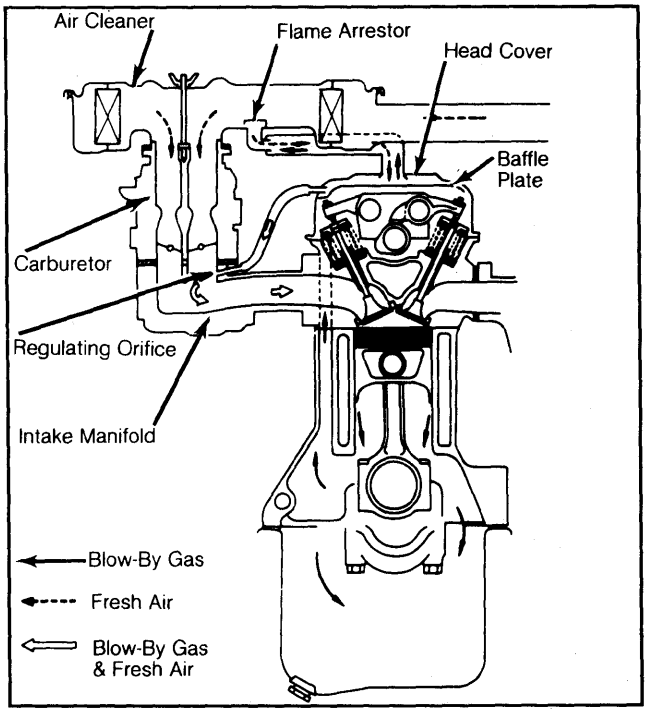


Fig. 2: Isuzu & LUV Gasoline Crankcase Ventilation System



JAGUAR

XJ6, XJ12

DESCRIPTION

The closed crankcase ventilation system for Jaguar is used to prevent crankcase fumes from entering into the atmosphere. The XJ6 system consists of an oil breather fitted to the valve cover or crankcase cover. A wire mesh screen flame arrester is located in the breather cap. A purge tube runs to the intake manifold, with an orifice or restrictor to limit the air flow. The crankcase fumes are vented to a charcoal canister when the engine is not running.

The XJ12 system consists of a breather housing, a two-outlet chamber in the air cleaner backplate, and a variable orifice valve.

OPERATION

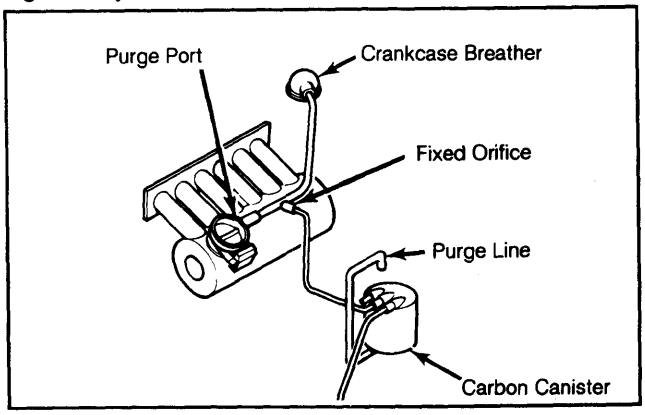
XJ6 MODELS

When engine is running, crankcase vapors are drawn from the valve cover area through the purge tube and into the intake manifold. The wire mesh screen acts as a flame arrester in case of backfire. The purge hose is also connected to the charcoal canister, and simultaneously purges the fuel evaporation system. When engine is stopped, fumes from the crankcase go into the canister.

XJ12 MODELS

To ensure that piston blow-by gas does not escape to atmosphere, a vacuum is maintained in crankcase. This is achieved by connecting the crankcase breather housing to a chamber in the left air cleaner backplate. The chamber has two outlets, one of which is connected to intake manifold balance pipe and the other to inlet side of air cleaner. In the former there is a variable orifice valve that controls part throttle crankcase ventilation. A vacuum is maintained in the crankcase at full throttle by the vacuum on the inlet side of the air cleaner.

Fig. 1: Jaguar XJ6 Crankcase Ventilation System



MAINTENANCE

Check all hoses for condition and tightness. Every 30,000 miles, clean restrictor in purge line and clean or replace filter in valve cover.