



Emission Control System

General Information



Specifications

Engine		TBD
Item		
EVAP canister purge valve	Resistance(at68°F{20°C})(Ω)	24~28



Emission Control System

Crankcase Emission Control System



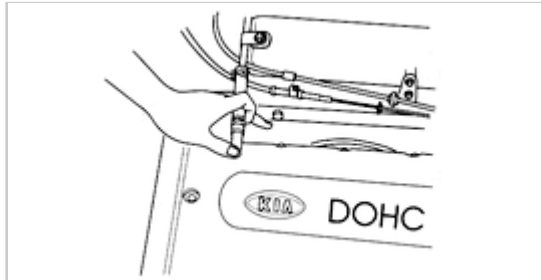
Emission Control System

Crankcase Emission Control System - Positive
Crankcase Ventilation (PCV) Valve

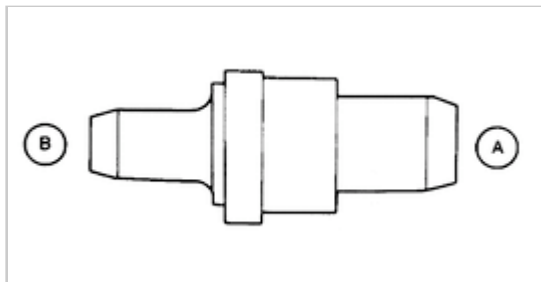


System check

1. Warm up engine to normal operating temperature.
2. Run engine at idle.
3. Disconnect PCV valve ventilation hose from cylinder head cover.
4. Block PCV valve opening.
5. Verify that vacuum is felt.



6. Remove PCV valve.
7. Blow through valve from port "A" and verify that air comes out of port "B".
8. Blow through valve from port "B" and verify that no air comes out of port "A".
9. Replace the PCV valve if necessary.





Emission Control System

Evaporative Emission Control System



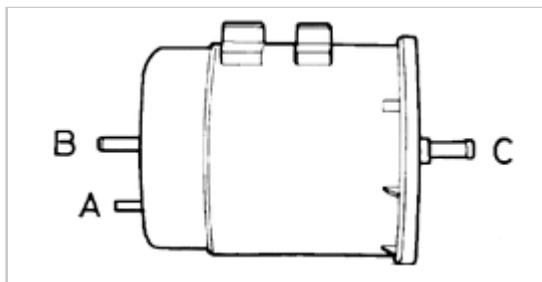
Emission Control System

Evaporative Emission Control System - Canister



Charcoal canister

1. Visually check for damage and replace the charcoal canister necessary.





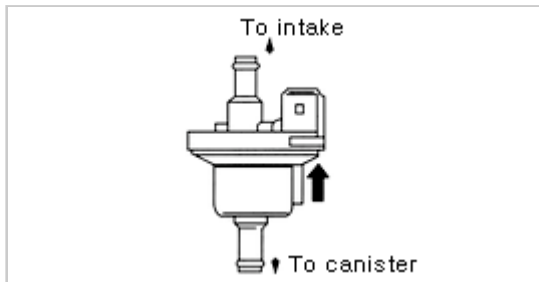
Emission Control System

Evaporative Emission Control System - Purge
Control Solenoid Valve (PCSV)

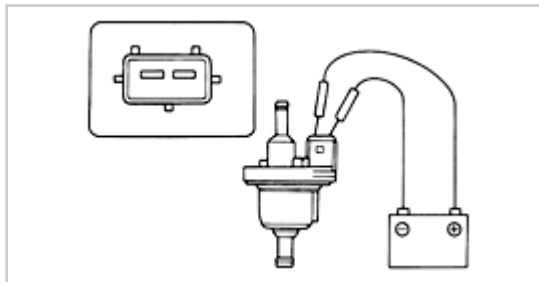


Inspection

1. Disconnect vacuum hoses from EVAP canister purge solenoid valve.
2. Verify that no air flows through valve.



3. Disconnect valve connector and apply 12 volt battery voltage as shown in figure.
4. Verify that air flows through valve.
5. If no air flows, replace the valve.
6. Reinstall valve connector.
7. Reconnect vacuum hoses.





Emission Control System

Evaporative Emission Control System - Two-way Valve



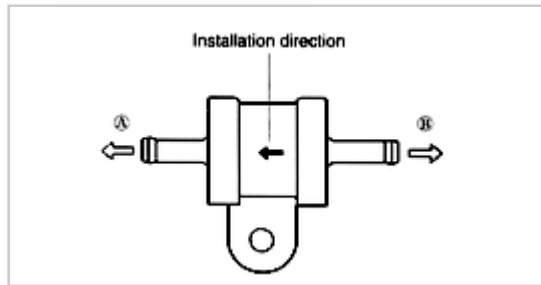
Two-way check valve

1. Remove the valve.
2. Check the operation of valve with a vacuum pump.

Specification:

Apply approx. 5.1 kPa (37 mmHg, 1.5inHg) Vacuum at port A	Airflow
Apply apporx. 5.9 kPa (44 mmHg, 1.7 inHg) Vacuum at port B	Airflow

3. If not as specified, replace the two-way check valve.





Description

Component description table

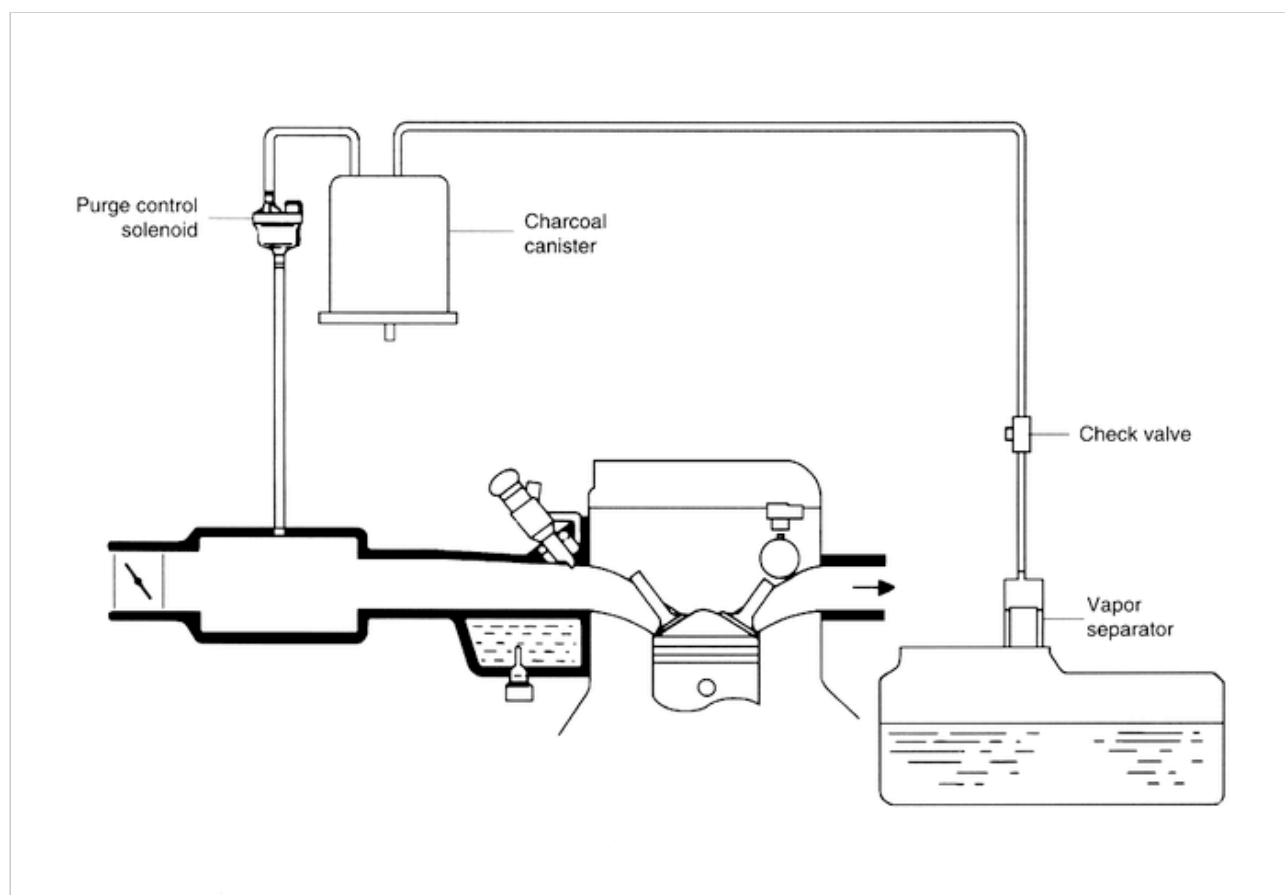
Component	Function	Remark
Evaporative emission canister	Stores fuel tank vapors(engine stopped)	-
EVAP canister purge valve	Controls fuel vapor from EVAP emission canister to intake manifold(dynamic chamber)	1. For purge control 2. Actuated by intake manifold vacuum

Outline of emission control system(Overview)

To reduce CO, HC, NOx emissions, the following systems are incorporated in the Sephia/Shuma.

1. Evaporative emission, the following systems are incorporated in the Sephia/Shuma.
2. Positive crankcase ventilation system
3. Three way catalyst

Evaporative emission control system



The evaporative system prevents hydrocarbon vapors from the fuel tank escaping into the atmosphere where they would form photo-chemical smog.

Gasoline vapors are collected in the charcoal canister. The ECM controls the Purge Control Solenoid Valve, to purge and collect vapors from the canister back to the engine for burning.

Carburetor EMS system consider the adaptive function in the EVAP emission control in the ECM. Any purge of EVAP canister result in the A/F regulation loop control deviations. During purging of EVAP canister (opening of EVAP purge valve), adaptive valve is maintained to neutral and adaptive A/F regulation is inhibited.

Adaptive A/F regulation loop control is allowed only when no purging of EVAP canister (closing of EVAP purge valve) is feeding the vapors into the intake manifold.

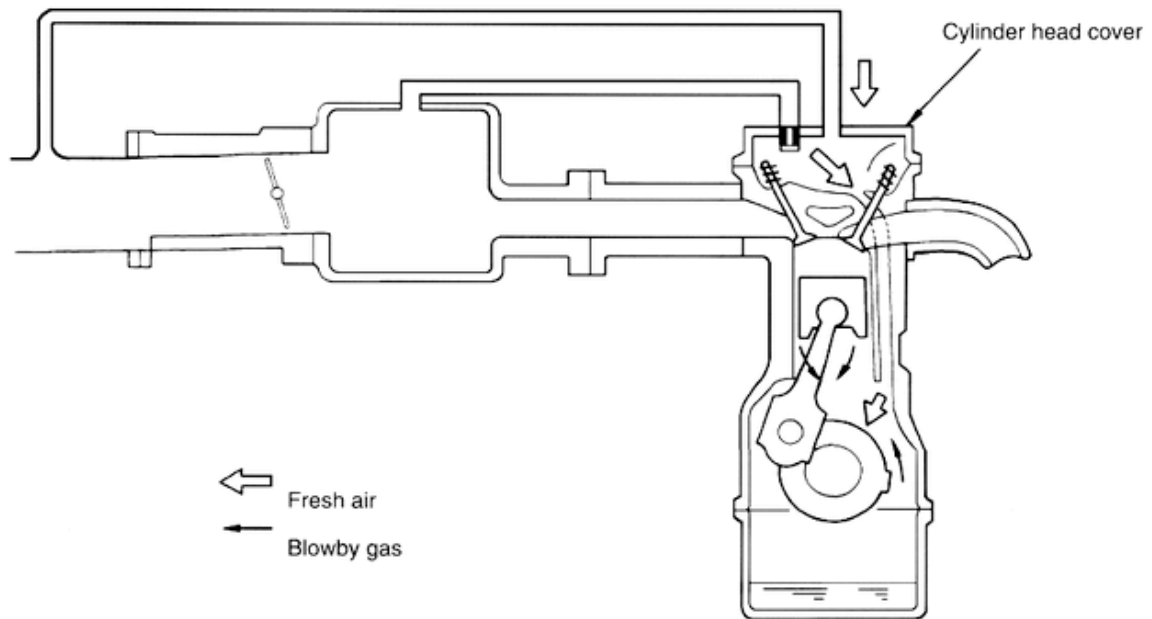
A check valve is used to control pressure in the fuel tank and to prevent fuel spillage in the event of a roll-over.

Positive crankcase ventilation(PCV) system

The PCV valve is operated by the intake manifold vacuum.

When the engine is running at idle, the PCV valve is opened slightly and a small amount of blowby gas is drawn into the dynamic chamber to be burned.

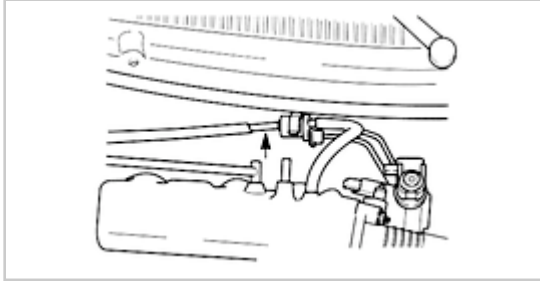
As the engine speed rises the PCV valve is opened further, allowing a larger amount of blowby gas to be drawn into the dynamic chamber.





System check

1. Warm up engine to normal operating temperature.
2. Disconnect vacuum hose from EVAP canister purge valve side of hose.
3. Verify that no vacuum is felt at EVAP canister purge control solenoid valve.



4. If not as specified, check EVAP canister purge valve operation.
5. If valve operating properly, reinstall vacuum hose.