EXHAUST GAS RECIRCULATION

The EGR system comprises:

- An EGR valve.
- An EGR cooler.
- An EGR outlet tube.

The EGR cooler is attached to the rear of the exhaust manifold. Coolant from the engine cooling system circulates through a matrix in the EGR cooler to reduce the temperature of the exhaust gas. Attached to the outlet side of the cooler is the EGR valve. The valve is motor driven, under the control of the engine control module (ECM), to allow varying amounts of exhaust gas into the intake manifold depending on the engine operation. At engine switch off the valve opens and closes several times to clear any deposits which may have accumulated during running.

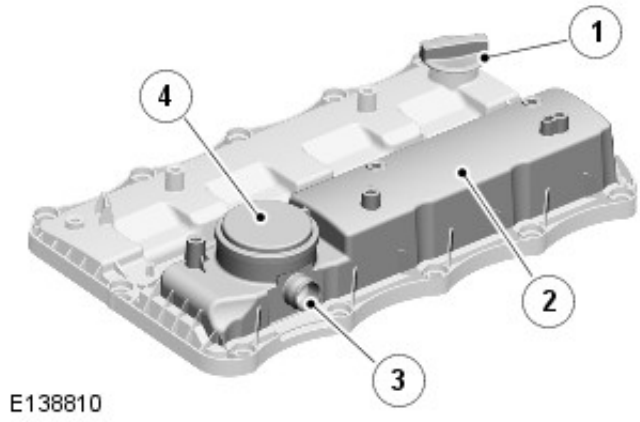
The EGR outlet tube transports the exhaust gas from the EGR valve to the intake manifold, where it is blended with the incoming charge air stream by a mixer tube.

The ECM monitors the EGR system function and stores fault codes in the event of failure. The EGR valve can also be activated for testing using Land Rover approved diagnostic equipment.

POSITIVE CRANKCASE VENTILATION

The PCV system consists of an oil separator, a PCV valve and a breather hose. The oil separator and the PCV valve are integrated into the RH (right-hand) side of the camshaft cover. The breather hose connects the camshaft cover to the turbocharger inlet duct.

Camshaft Cover



Item	Part Number	Description
1	-	Engine oil filler cap
2	-	Oil separator
3	-	Ventilation outlet
4	-	PCV

When the engine is running, the depression in the turbocharger inlet duct draws in gases from the engine sump through the oil separator, PCV valve and breather hose. Any oil in the gases is removed by the oil separator and drains back into the oil pan through the drain channels in the cylinder head and cylinder block. The PCV valve prevents reverse flow into the camshaft cover when there is minimal depression in the turbocharger inlet duct.