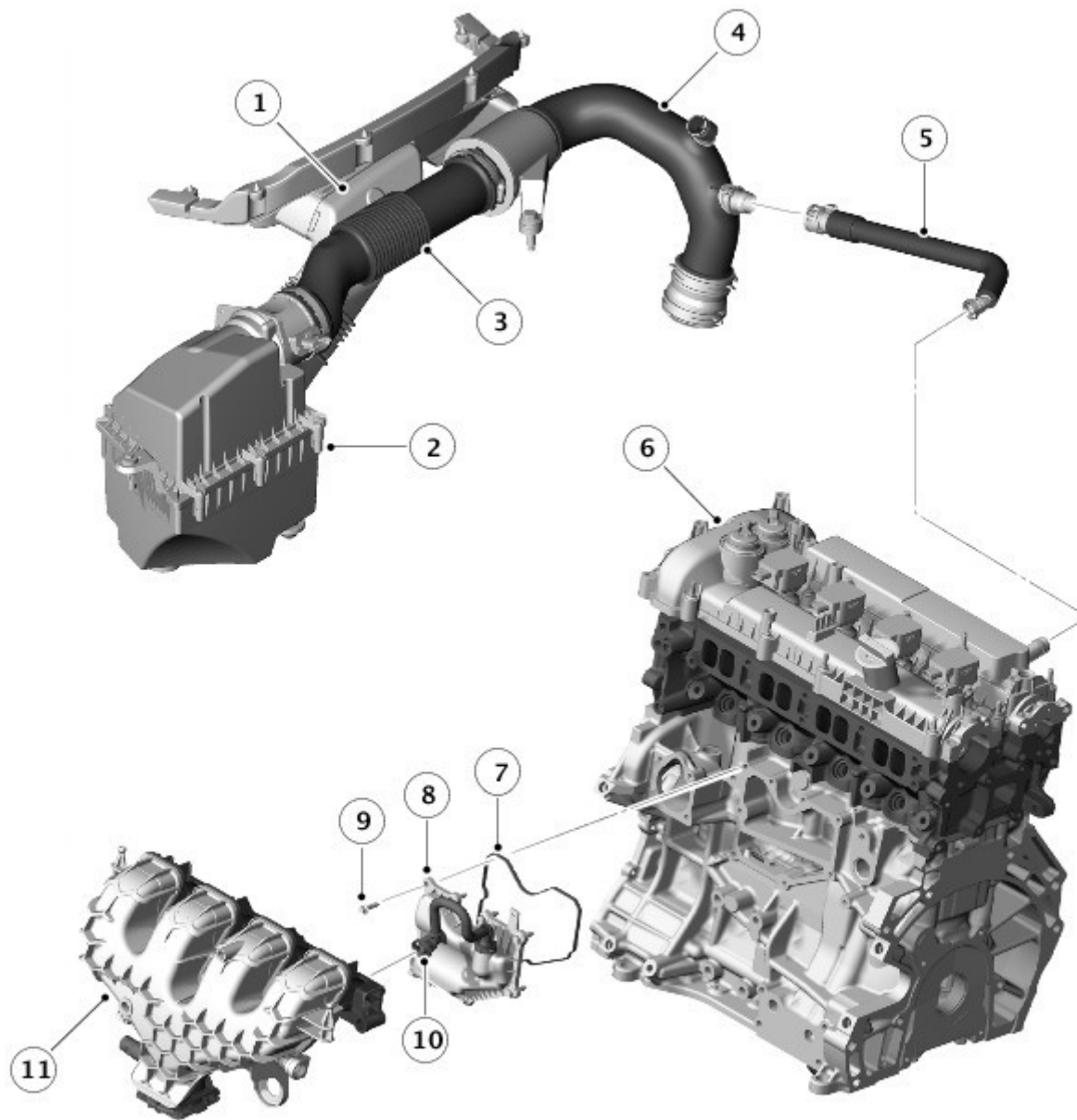


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**2017.0 XE (X760), 303-08B**

## **ENGINE EMISSION CONTROL - GTDI 2.0L PETROL**

**DESCRIPTION AND OPERATION**

COMPONENT LOCATION



E172546

ITEM	DESCRIPTION
1	Lower clean air inlet duct

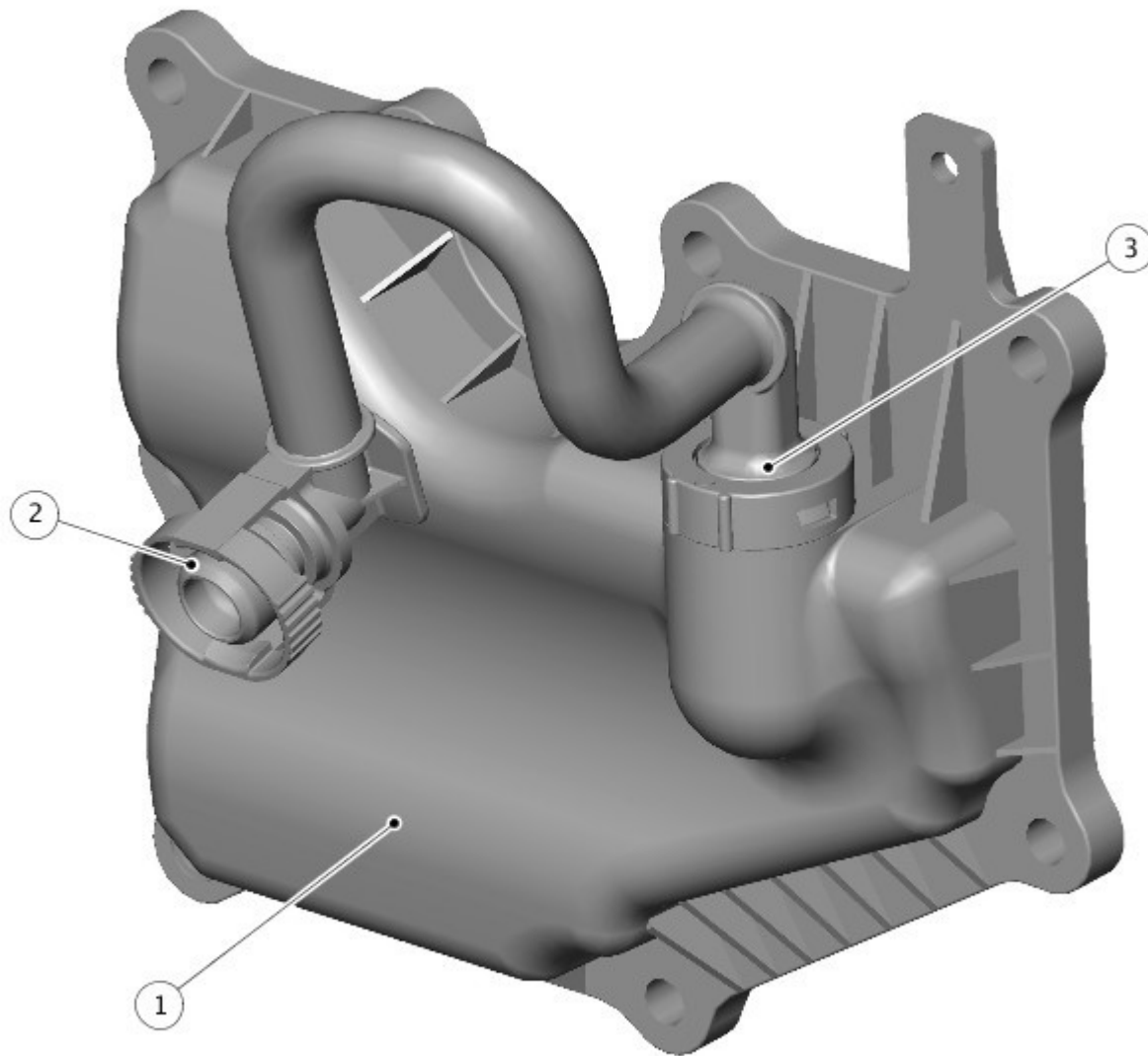
ITEM	DESCRIPTION
2	Filter housing
3	Upper clean air inlet duct
4	Air duct to turbocharger
5	Camshaft cover vent hose
6	Camshaft cover
7	Gasket
8	Oil separator
9	Bolt (8 off)
10	Crankcase ventilation hose
11	Intake manifold

## OVERVIEW

The engine emission control system reduces the level of hydrocarbon emissions released to atmosphere from the engine. The engine emission control system consists of an oil separator and Positive Crankcase Ventilation valve located on the engine cylinder block and a camshaft cover breather.

## DESCRIPTION

### OIL SEPARATOR



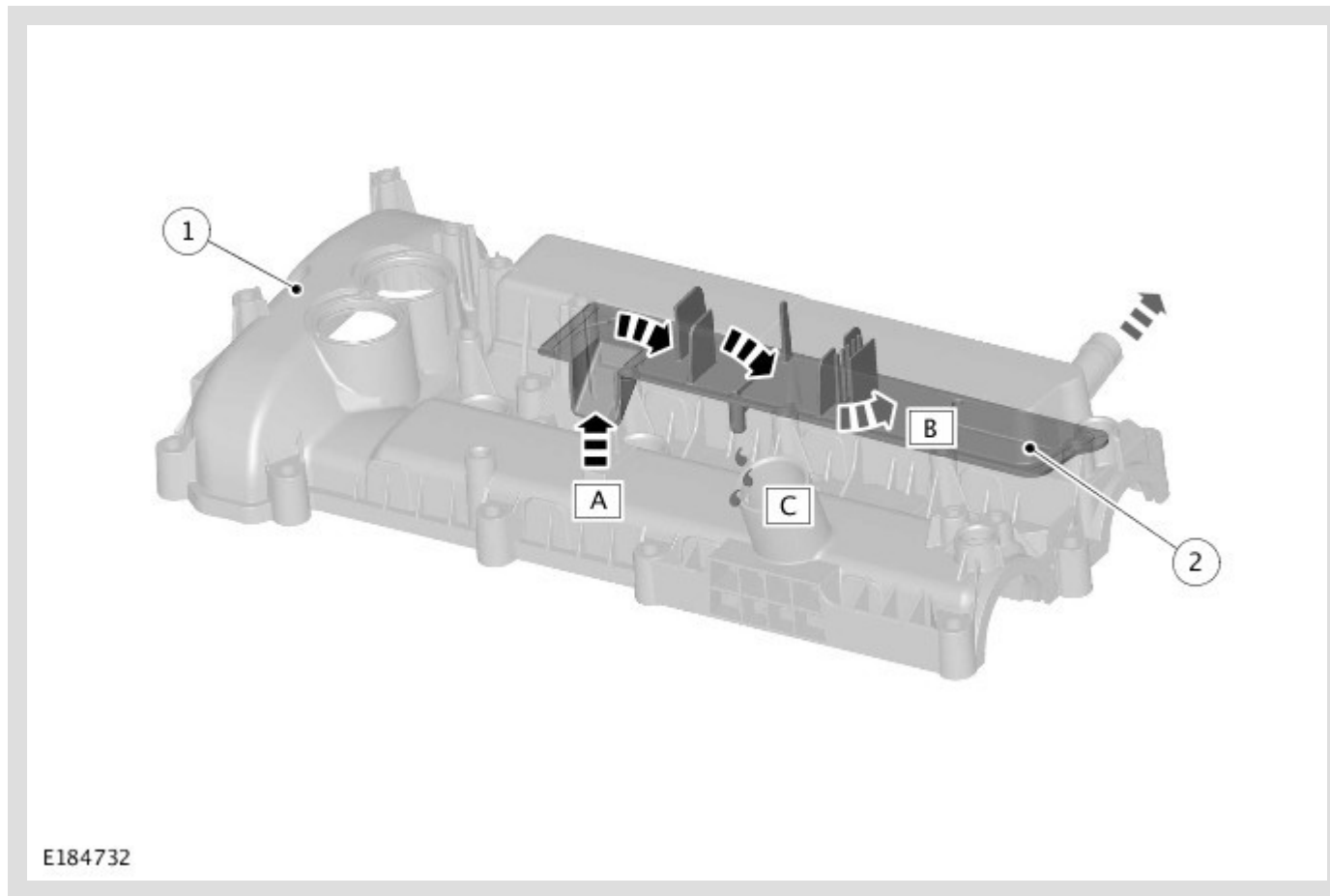
E164053

ITEM	DESCRIPTION
1	Oil separator

ITEM	DESCRIPTION
2	Hose connection to intake manifold
3	Positive Crankcase Ventilation valve

The oil separator is located on the left side of the cylinder block. It is secured with eight bolts and sealed with a gasket. A hose connects from the top of the separator and is routed into the intake manifold. The hose connection to the separator contains a Positive Crankcase Ventilation valve. The Positive Crankcase Ventilation valve is open at low throttle opening and closed at mid to full throttle openings.

### CAMSHAFT COVER BREATHER



ITEM	DESCRIPTION
A	Gas/Oil vapor

ITEM	DESCRIPTION
B	Gas vapor
C	Oil
1	Camshaft cover
2	Baffle valve

The camshaft cover breather comprises a hose connecting the camshaft cover to the clean air low pressure intake duct from the air cleaner and a baffle valve located within the cover. This breather is known as the full load breather.

## OPERATION

### **OIL SEPARATOR**

Piston blow-by gases are drawn through the oil separator into the engine air intake manifold and added to the air charge. The depression caused by the engine air intake draws gasses from the crankcase, through the oil separator and the hose into the intake manifold.

The resultant depression in the engine oil pan, front covers and cylinder head covers reduces the load on the joint seals in those areas. Engine oil drawn into the oil separator is collected on angled plates in the separator. The oil collects on the plates and falls back to the oil pan via a hole in the cylinder block.

### **CAMSHAFT COVER BREATHER**

Piston blow-by gases that enter the camshaft cover are drawn through the baffle valve and into the clean air Low Pressure (LP) intake duct by a venturi effect of the clean air passing the hose connection. Oil vapor is collected in the baffle valve and drains back to the cylinder head and the oil pan.