

Lotus twin cam alloy breather tube

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The Lotus twin cam engine has an un-enviable reputation for leaking oil.

This is because of the basic design, inferior components, type of sealant used and poor assembly techniques.

There are several areas where simple improvements can be made and the source of oil leaks can be eliminated.

One improvement can be made by changing the original crank case breather from rubber to aluminium.

Once the rubber breather tube comes into contact with the hot engine oil, the tube starts break down and eventually it will fail completely.

This component provides an air-way between the crank case and alloy cylinder head so it's vital that it provides a reliable oil tight seal.

Installing a simple alloy breather tube with a Nitrile O-ring completely eliminates any possible oil leaks.

BEFORE ordering a replacement breather tube, check which cylinder block you have and measure the diameter of the breather hole.

NOTE CAREFULLY - The cylinder blocks have different sized breather holes depending on the Ford part number ie. 120E, 701M, 711M



The alloy tube should be installed into the cylinder block with the aid of a nylon face hammer or hide mallet

DO NOT under any circumstances use a regular steel faced hammer to install the tube

The original breather hole in the cylinder block should be carefully de-greased with solvent.

The alloy breather tube should be a slight interference fit in this hole

The smaller diameter part of the breather tube needs to be installed in the hole with Loctite 620 locking compound

Coat the small diameter with Loctite 620 and gently tap the tube into the hole with a soft face nylon hammer or hide mallet

The Loctite compound helps lubricate the tube whilst being driven into the hole and then provides a total seal plus a mechanical locking action

*The tube needs to be driven into the hole until the top step is level with the top of the cylinder block
The correct installed height maybe checked by placing a steel rule or straight edge across the top of the block face to the step on the tube*

When the tube is at the correct height, the extended boss and O-ring will protrude above the cylinder head block face

The head gasket and cylinder head should be installed per the Lotus workshop manual by using two dowels located diagonally in the cylinder block upper face.

Just prior to installing the cylinder head, the breather tube boss containing the O-ring should be lightly coated with a silicon sealant such as Loctite Blue Max or Loctite Grey Max

The high quality sealants mentioned above maybe purchased in a convenient small size tube

The sealant helps lubricate the O-ring and boss as the head is installed.

As the sealant cures, it then guarantees an oil-tight seal in conjunction with the O-ring

At a later date, the cylinder head may be simply remove in the usual way without fear of disturbing the alloy breather tube

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