



Damage to vacuum pumps due to insufficient lubricating oil supply

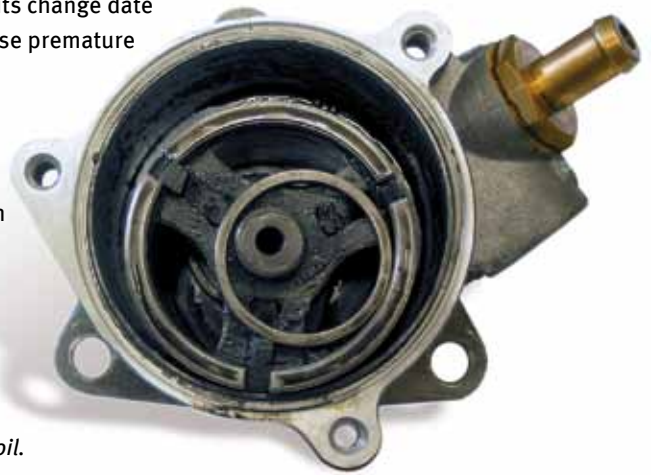
Vehicles	Product
all vehicles with vacuum pumps	Vacuum pumps with rotary drive

Potential complaints:

- Vacuum pump is jammed or damaged
- Drive dogs on the vacuum pump or the camshaft are broken off
- Damage to the camshaft

Lubricating oil that is past its change date or is contaminated can cause premature wear in a vacuum pump.

Aged engine oil contains many dirt particles from mechanical abrasion within the engine and soot particles from the exhaust.



Lack of lubrication due to old or contaminated engine oil.

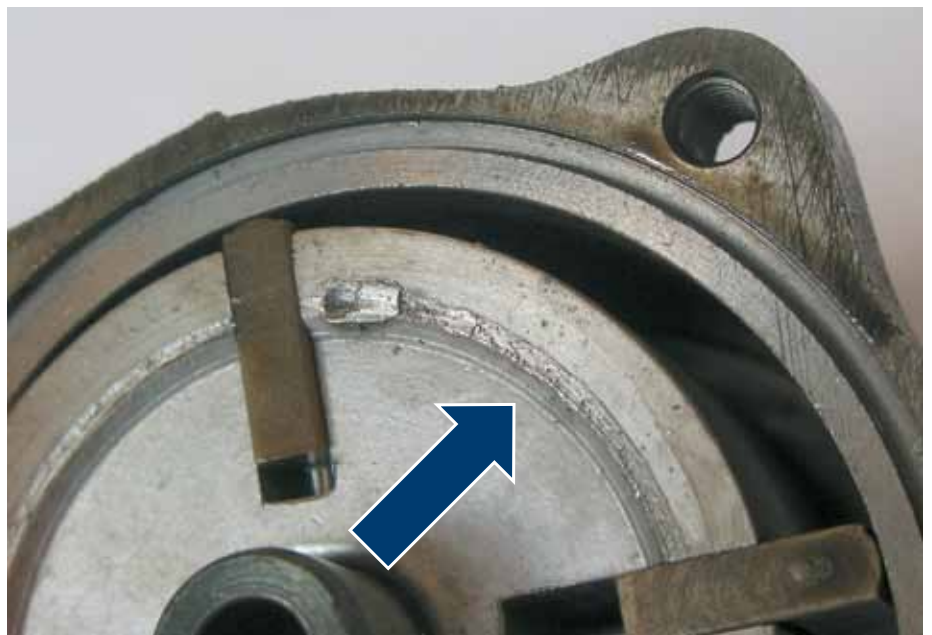
Rotating vane vacuum pumps are the latest means of generating a vacuum. These vacuum pumps, like any other, require a good supply of lubricating oil. In most cases this is taken from the engine oil circuit.

The lubricating oil together with the air that was pumped out is returned into the cylinder head.

But if the lubricating oil supply is insufficient or faulty the vacuum pump will suffer malfunctions and damage even in a relatively short time.

The damaged vacuum pump must then be replaced.

A jammed vacuum pump can lead to further damage elsewhere.



This vane pump has suffered "galling" due to lack of oil

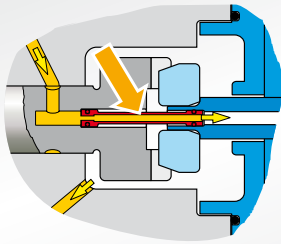
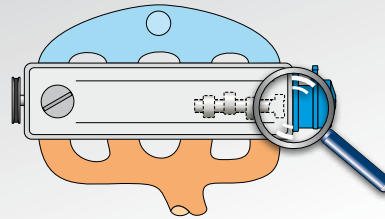
Products may change and may not be as depicted in photographs.

Supersedes SI 0030/A

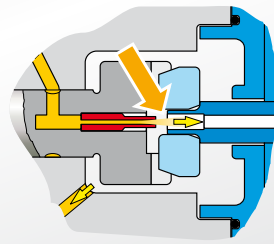


Oil feed variants

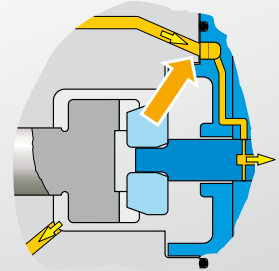
The lubricating oil supply can be performed in various ways:



Direct lubrication via an oil pipe
The camshaft is connected to the vacuum pump by an oil pipe.



Spray lubrication through the camshaft
The oil channel is incorporated in the camshaft.



Direct lubrication through the flange
The oil supply is performed through channels in the face of the flange, i.e. radially to the vacuum pump.

Checking the lubricating oil feed

Modern high-performance vacuum pumps require an oil supply of 30–60 litres an hour. Before fitting a new vacuum pump it is therefore essential to check that the lubricating oil feed is functioning correctly:

- Remove the vacuum pump.
- Protect attached parts against the oil flow.
- Hold a container (measuring jug or similar) to the lubricating bore or channel.
- Run the engine briefly at idling or turn it over using the starter motor, to check the oil flow delivery.
- The oil should flow from the lubricating channel or pipe in a continuous or evenly pulsating stream. (See above for the arrangement details)
- If this does not occur, the cause (perhaps a blockage) must be rectified.



Example: On the Opel Vectra the lubricating oil feed is via holes in the flange

Take great care to keep everything scrupulously clean!
Deposits in the oil and fragments of gaskets can block the lubricating bores.



Caution: When the lubricating supply is working properly the flow here can be 30-60 litres an hour.