

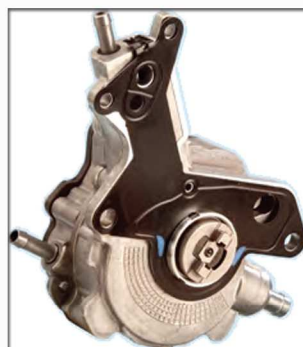
VACUUM PUMPS

Codes: 91()()

In the diesel engines, having no throttle on the air duct, all accessories, such as the servobrake, cannot obtain the necessary vacuum from the duct itself to make them work. It is therefore necessary to create the vacuum by sucking up with a suitable pump, that is the vacuum pump, of course. This is a machine driven pump able to create the vacuum that can be also used to control other functions of the vehicle (egr vacuum, turbo, secondary valve control). These booster pumps are driven by the suitable belts, by the services belt, or directly by the camshaft or by the rear part of the alternator.

There are different types of vacuum pumps:

- The oldest type are the diaphragm pumps
- The more recent blade pumps, which must be directly lubricated by the engine oil
- The latest Tandem pumps, so-called because they are both mechanical fuel pre-pumps and vacuum pumps. This pump is mounted on a little shaft directly driven by the camshaft.



Diaphragm pumps

Blade pumps

Tandem pumps

As the pump is an essential security item for the whole vehicle, it's important to verify its correct function for example, every time the brakes are checked, or after many kilometers, or any time there is a sign of possible failure in the braking system.

CAUTION: before replacing the vacuum pump, make sure all braking system components are working properly.