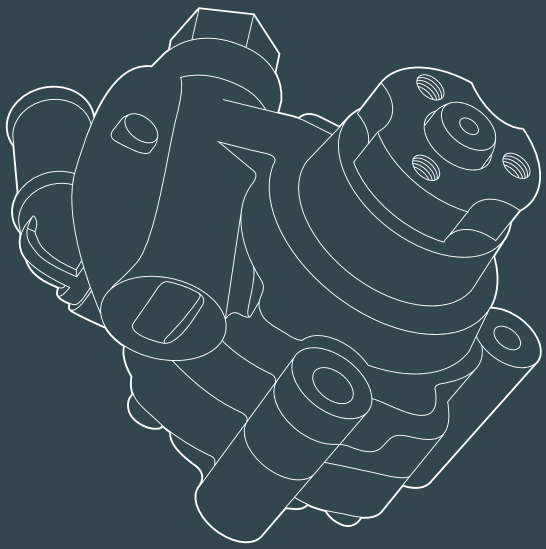
CAR PARTS INDUSTRIES

TROUBLESHOOTING GUIDELINES - STEERING PUMP



INSTALLATION STEPS

Determine the cause of breakdown.	Before installing a new steering pump – please determine what has caused the old pump to break down – fitting a new pump will not improve the rest of the system, and defects that are not repaired might also damage the new pump.
Compare the old and new pump.	Check that the pump is equivalent to the one from the vehicle – same pulley size, offset, same fixation measurement & connections.
Flushing is necessary.	In general, it is recommended to flush the steering system, when replacing the pump. This is done to ensure that any particles that could have caused the failure of the pump are removed.
Check the power steering lines.	The hoses wear from inside out, so their condition cannot be assessed visually. If any hoses feel stiff, porous or hard, the replace all hoses. They have been installed for an equal length of time, so they are likely equally deteriorated.
Bleeding the system.	After the new pump has been installed, it is necessary to bleed the steering system. This includes filling the system with fresh power steering fluid (following the recommendations of the vehicle manufacturer). In specific cases, it may be necessary to use a vacuum pump, to remove all airlocks.
Check the fluid level.	After finalising the installation of the pump, including bleeding the system, remember to check that the level of power steering fluid is within the minimum and maximum mark on the container or dip stick. Running with either too little or too much fluid may damage the system.

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POSSIBLE ERRORS

Problem	Cause	How to identify	Solution	Preventive actions
Leaking.	The o-rings/gaskets have not been replaced. The mating surface/connecting thread is not clean or is damaged. There is an assembly error on the unit.	Power steering fluid is visible on the outside of the unit, and spills have been cleaned up.	Ensure the o-rings/gaskets have been changed, if the leak is present at the hydraulic lines. If the leak is present elsewhere, the unit must be returned.	None.
Excessive noise.	Air lock in the steering system.	With the engine running there is a distinct whirring coming from the unit.	Bleed the steering system. Some units require vacuum bleeding to remove air locks.	Before changing a valve check if the vacuum is present, operate the valve with a hand pump, and check if the vacuum is maintained.
No/low pressure.	Debris in the steering system, or collapsed hydraulic lines. Air lock in the steering system.	The steering feels heavy.	Bleed the steering system. Some units require vacuum bleeding to remove air locks. The hydraulic lines may have degraded – most lines last around 10 years.	Always clean passages, when replacing an EGR valve. Check that the injection system is performing well, and the DPF should not be clogged.