

Alternator Pulley Swapping: Things to Consider

There are times when it is necessary to transfer the customer's old pulley to his replacement alternator. Most Bosch type alternators are sold without a pulley. Nippondenso externally regulated alternators (for Chrysler vehicles) may require a different pulley than what comes on the replacement alternator. However, pulley swapping for other types of alternators should be avoided when ever possible.

Pulley Removal and Replacement: General

Use a ½ drive impact set to the maximum power setting. Pulley nuts are removed counter clockwise (even if the alternator was designed to run CCW). Save all parts so they can be replaced in the same order: pulley nut, lock washer, pulley, shaft key and pulley spacer (NOTE: lock washer, shaft key and pulley spacer are not used on all alternators). When installing the pulley use an impact only. Never insert anything into the alternator to attempt to hold the rotor while tightening the pulley nut. This will damage the rotor or the case!!!

WARNING: If pulley is NOT tightened correctly serious injury may occur!!!

1) Counter Clockwise Rotation

Some alternators have a shaft that rotates counter clockwise. The pulley nut for these alternators was installed in the factory with a thread locking compound and then torqued to specification. It is NOT possible to replace these pulleys properly, without disassembling the unit. CCW alternators are usually Nippondenso alternators coming from Honda vehicles. Do NOT remove a pulley from a CCW alternator. This will void the manufacture's warranty.

2) Shaft Size

The two most common shaft sizes for alternators are 15mm and 17mm. Some alternator part numbers include different OE versions (with different shaft sizes). Look at the shaft size before you make the swap. Many times pulleys will NOT interchange for this reason.

3) Pulley Offset

Pulley offset is the commonly overlooked when making a pulley swap. Things that effect pulley offset: pulley, pulley spacer, housing and bearing. If the offset changes by more that 2mm the customer may experience belt problems.

CAUTION: A JUMPED BELT CAN BE SERIOUS WHEN IT ALSO DRIVES THE WATER PUMP, P/S, ETC.!!!

Check pulley offset of the failed alternator; then make sure it is the same on the replacement alternator.



