



TECHNICAL TIP FROM ZEN #17

WHY FREEWHEEL PULLEYS SHOULD NOT BE REPLACED WITH RIGID PULLEYS



## DESCRIPTION OF PIECES:

### RIGID PULLEY:

Has the unique and exclusive function of transmitting, through use of a belt, the engine's movement to the alternator. In this case, the alternator's entire vibration is transferred to the front-end accessory system.



### FREEWHEEL PULLEY:

Has the additional function of allowing alternator's rotor to freewheel, in cases of abrupt deceleration or engine shut-down. Thus, it prevents the belt from "slipping" and chirp noise, which also contributes to reduction of system vibration.



### BENEFITS OF THE FREEWHEEL PULLEY:

It prevents early tensioner and accessory drive components failures and also belt chirp noise.



### WHY ISN'T THE REPLACEMENT ADVISED?

ZEN always recommends the original product to be replaced with another that has the same functional characteristics. Replacing a freewheel pulley with a rigid pulley may bring about malfunctions such as:

- Damage to the tensioner and idlers due to the increase in vibration for the entire accessory system;
- (Chirp) noise from the belt;
- Breaking of the alternator shaft;
- Reduction of the belt life.