



## Overrunning Alternator Pulleys 101

When inspecting an OAP, remember to use the “**look, listen, and feel**” method. OAPs as well as OADs (Overrunning alternator decoupler with internal spring) are often grouped together and simply called “clutch pulleys” in the industry. Be careful not to confuse the two as this procedure applies only to Overrunning alternator pulleys (OAP).

### **Look:**

Inspect the overrunning alternator pulley for damage, missing cap or grease purge.

### **Listen:**

With the engine running, listen for abnormal noises coming from the OAP, serpentine belt or the belt tensioner. Raise the idle to approx 2000-2500 rpm and shut the engine off. Listen for a buzzing noise coming from the alternator. If there is a buzzing noise for a short time (1-5 seconds) after the engine is shut off, then your OAP may be worn out. The OAP allows the rotor in the alternator to coast to a stop. This is the best time to listen to see if the clutch pulley is noisy because the serpentine belt is holding the pulley while the alternator rotor is still turning.

### **Feel:**

With the engine shut off, remove cap from OAP and use appropriate tool to rotate the shaft section. The shaft should rotate freely in one direction and “lock” in the other direction. This “feel” applies only to OAPs (one-way clutches) and not to IDPs (Isolating Decoupling Pulley with patented internal spring). If the shaft of the clutch pulley does not rotate freely in one direction and lock up in the other direction, then it is time to replace it. If the OAP’s protective cap is damaged during removal it is recommended to replace it.

### **ATTENTION ALTERNATOR REBUILDERS**

Whenever rebuilding an alternator, always replace the clutch pulley with a new one. This will help eliminate future failures of the rebuild resulting in many satisfied customers.

Some alternator manufacturers recommend replacing the clutch pulley every 50,000 miles / 90,000 kilometers as it is a wear item.