

Front End Accessory Drive System Replacement

Just like many other components on today's class 4-8 trucks, it's important that mechanics look at the belt, pulley and tensioner as a whole system and replace all components at once. Most OEMs recommend service or inspection around 300,000 miles but if just the belt is replaced, the driver could experience issues with a loose tensioner or pulley within just a few weeks or months, and may need to replace the belt again due to premature failure. All three components experience wear and tear gradually over time so replacing the two pulleys, tensioner and belt altogether will allow for more enhanced performance and less vehicle down time.

If a technician is unsure whether a big rig's front-end accessory drive system needs replacement, here are two key ways to investigate:

1. Listen for Noise

With the engine running, spray water on the belt and then listen closely to the tensioner for one of these two sounds as different noises correlate to different problems:

- **Chirp** – intermittent noises that are sharp, and as belt speed increases pitch and volume stay constant. A chirp is often the result of misalignment, improper installation or worn parts. If this noise continues with a light spray of water, further investigation is needed to determine the cause of misalignment.
- **Squeal** – high pitched noise that lasts several seconds and doesn't change in pitch. It may change with acceleration or an added accessory load. If the noise goes away with a light water spray, it is usually a sign of tension loss.

2. Check Belt Placement

A technician should examine the way the belt tracks. If it is tracking off center, at or off the edge of the pulley, or if the belt flips off the tensioner, this could be a sign of tensioner misalignment caused by bushing wear. Replacing all the components at once enables mechanics to ensure the system is completely aligned. Checking and replacing the belt alone could be problematic as it rarely solves the vehicle's issue. In an effort to avoid comebacks, replacing the tensioner assembly and associated pulleys – along with a complete system inspection – is important.

