IDENTIFYING A HEAVY-DUTY BELT THAT'S NEAR FAILURE

You Can't Always Tell Just By Looking.

A belt failure is the last thing your fleet needs to worry about.

EPDM vs. Neoprene Construction

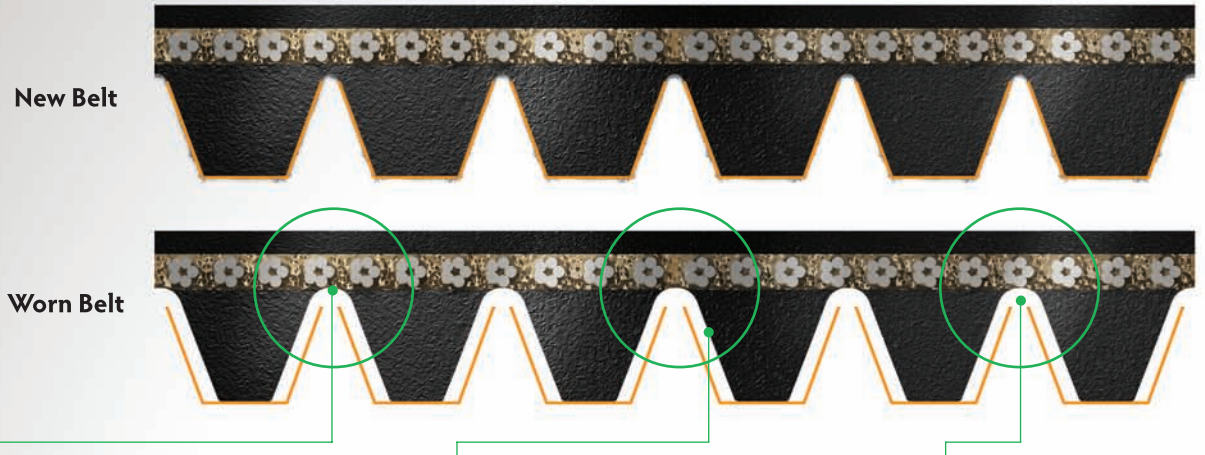
It used to be that a simple visual inspection of the belt during regularly scheduled maintenance would reveal problems such as cracking, chunk-out and rib separation. Those kinds of things signaled that a replacement was needed. But today, a visual inspection isn't always enough. That's because most belts today are made using EPDM (ethylene propylene diene m-class rubber) construction.

Fleet and Heavy-Duty OEMs have been using belts made with EPDM since the late 1990's. EPDM provides one significant benefit over older belts which used neoprene in their construction—they last longer. While longer life is an advantage, EPDM belts don't necessarily exhibit traditional signs of wear even though they might be at or near failure. So, a belt that looks like it still has plenty of life, might not because much of the material has worn away.

Material Loss – The New Diagnostic Standard

In many respects, an EPDM belt is much like a tire. As a tire rotates and comes into contact with the ground, it wears. A belt wears much the same way—it comes into contact with pulleys as it moves around the drive system. Over time, the grooves cut into the belt gradually wearing it away.

This material loss results in poor belt performance. Reduced tension is one example. This can lead to belt slip which causes severe vibration and a reduced ability to transmit power which often leads to inconsistent alternator performance or poor A/C system performance.



Rib Wear

Rounded Rib Tip - Material loss results in belt riding directly on top of pointed pulley tips. Belt can be sheared or slip off the drive.

Belt Seating

Material loss results in belt seating further down in pulley. This reduces wedging force necessary to transmit power.

Pulley Fit

Material loss reduces clearance between belt and pulley. Water and debris have difficulty passing between the two. Hydroplaning of belt can result.

Best Practices

When is it best to replace EPDM belts? At every scheduled preventative maintenance cycle a visual inspection is recommended. Don't look just for cracking or more traditional signs of wear. Look closely at the belt ribs for wear like flattening or thinning.

It's also a good idea to replace the belt when other components like the tensioner, alternator or water pump is replaced. Plus, you won't be adding to your downtime because the old belt is already off the drive. If the mileage is over 50,000 then it's time to inspect the belt and tensioner since even the best belts don't last forever.

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