MIKES CORVETTE CORNER

Serpentine Belt System Maintenance

The serpentine belt drive system was introduced for the Corvette in 1984 if memory serves me correct. Recently a Corvette brother asked me to help him determine where a 'chirping' noise was coming from after he installed a new serpentine belt on his C5.

After further analysis it was found to be coming from the automatic belt tensioner. At 90,000 miles he figured it was still ok. But after replacing the tensioner, we also found that it damaged the belt. This was attributed to improper tracking of the belt due to excessive radial play at the tensioner pulley.

The belt, automatic tensioner, idlers, pulleys, and powered accessories are all highly integrated in a serpentine drive system. As a rule of thumb, it is important to start inspecting the serpentine belt system at 60,000 miles and replace worn components by 90,000 miles. Or as stated in your owners manual.

The most important item in the serpentine system is the automatic belt tensioner. The tensioner and the belt are designed to as a system. They must be replaced at the same time to maximize system life. Not replacing them together will result in belt slip and a decrease in accessory drive efficiency, belt noise, and increased heat on the drive system.

When inspecting your belt, you will find some cracks along the ribbed area, some of the cracks are normal on the older neoprene belts. But if you have more than 3 cracks in a 3 inch section of one rib, it means that the belt has reached 80% of its intended life and should be replaced.

There are some neoprene belts still floating around in the aftermarket world. But what I recommend is the belt made with EPDM, this is an elastomer, which makes the belt crack resistant. I've seen some of these belts go 100,000 miles and no cracks were apparent. With these belts you generally see material loss.

When selecting a belt I usually go with the OEM belt, because they fit better and have a good track record. But I have also used the Continental belt along with the tensioners and idler pulley and had great success. And in some cases the Continental kit was quieter than the OEM.

And one tip that I can give to you is, when replacing the belt, always make sure you match it up before installing it. I had one that was incorrectly packaged and found it to be 2 inches longer than the OE belt. I was driving myself crazy thinking that the routing was incorrect, or one of the pulleys was too small. Then it hit me, match it up with the OE belt. Sure enough, it was 2-3 inches longer than the OE belt.

Mike