



## Neoprene vs. EPDM Construction

Recent changes in OE and aftermarket serpentine belt construction means changes in the way technicians diagnose belt wear. Newer construction EPDM belts last considerably longer and are built to resist noise and cracking. These are some of the most obvious warning signs that older style Neoprene belts show as they wear out. In fact, EPDM construction can mask wear to the point that technicians may overlook problems with serpentine belts.

Up until 2001, most serpentine belt systems utilized a belt constructed of Neoprene that performed admirably for 80,000 to 96,000 kilometers. After achieving this mileage, Neoprene belts have a tendency to crack, develop significant edge wear or chunk out. In other cases, the belt wears abnormally and can cause annoying noise. Most technicians know these belt failure warning signs from training either in school, a textbook or on the job training. With Neoprene belts, the basic belt diagnostics in place for many years still have a place today.

With the technology boom of the late 1990's and early 2000's, vehicle manufacturers started demanding longer life out of serpentine belts, and today we see mileage on late model vehicles exceeding 160,000 kms in some cases with the original equipment belt. This newer design belt utilizes EPDM construction which helps to mitigate some of the problems that caused belt failure in the Neoprene belt designs like cracking and belt noise. However, the EPDM technology can mask serpentine belt wear and other system issues which have caused some confusion in the industry.

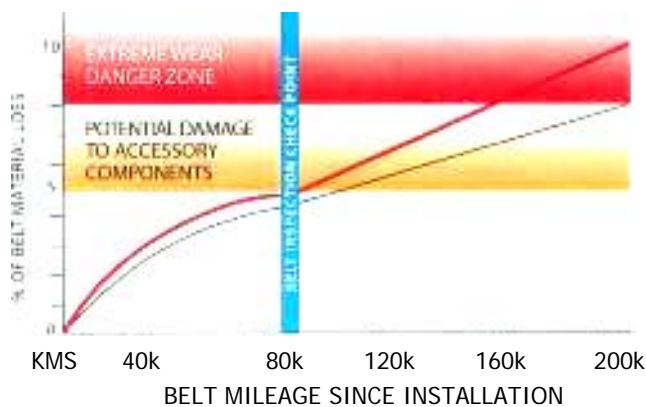
*Belt wear after 160,000 kilometers*





NEOPRENE

EPDM

Even the slightest loss of rib material (as little as 5%) can cause loss of tension and/or belt slip, which will affect the overall performance of components and lead to their failure. Belt profile changes are slight, but the effects are tremendous. The belt drives many systems (electrical, cooling and steering), and minor losses in performance can be amplified resulting in poor durability, drivability and efficiency.



The bottom line is to make sure that belt inspection goes beyond looking for traditional belt wear signs (i.e. cracking, noise and edge wear). Belts must be inspected for material loss to guarantee that the diagnostic is done thoroughly and the belt is in good shape.

-  BELT WEAR UNDER EXTREME CONDITIONS
-  TYPICAL BELT WEAR