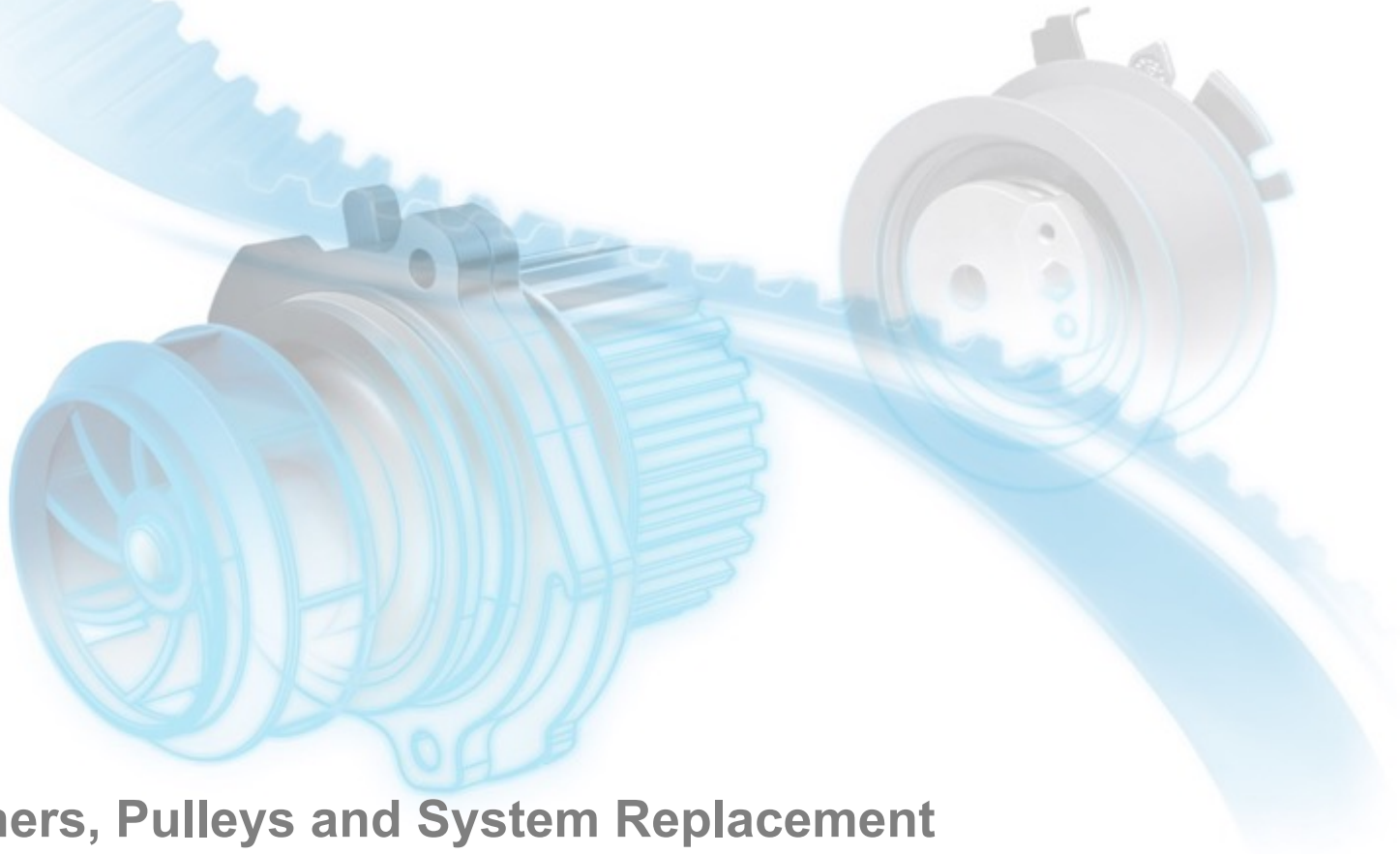




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Tensioners, Pulleys and System Replacement

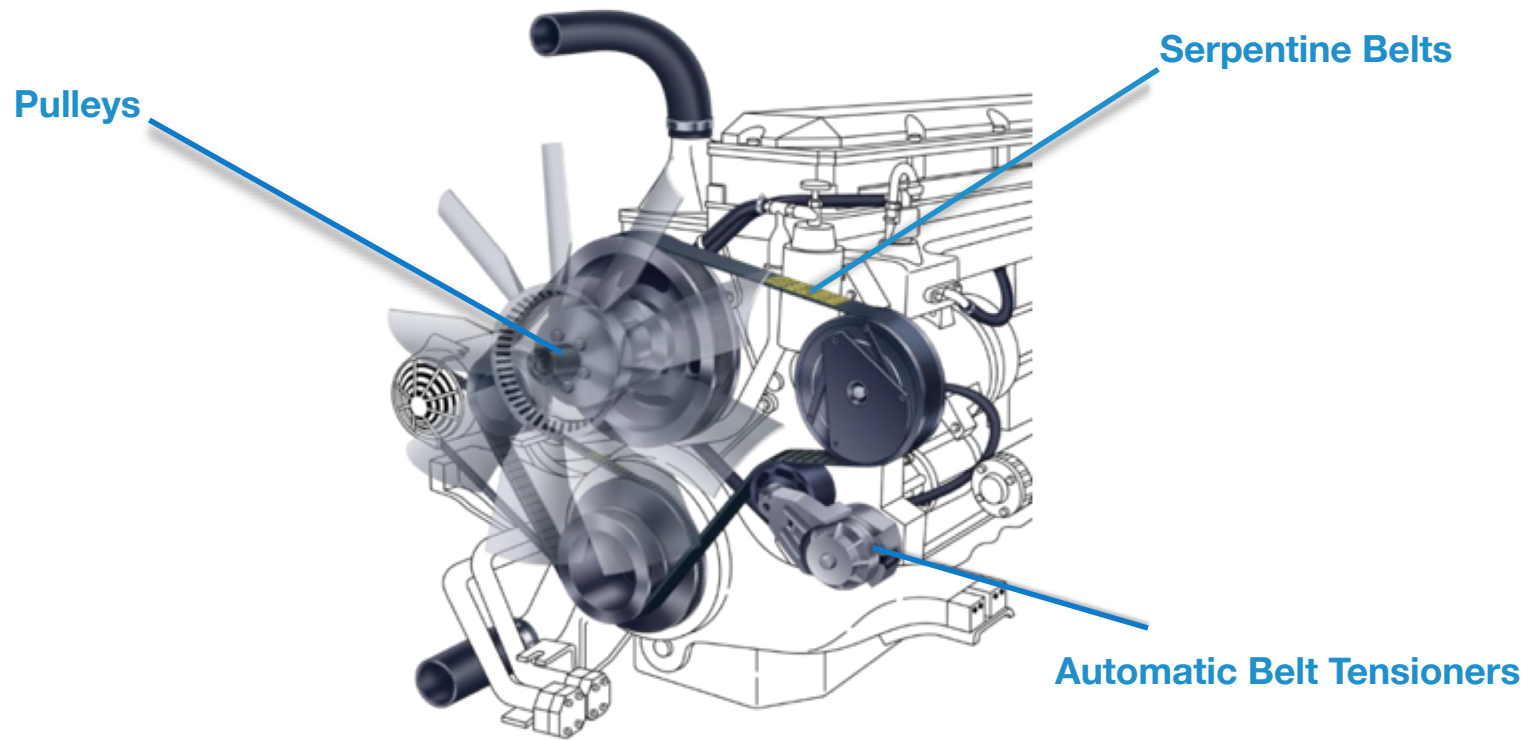
**TECHKNOW** SERIES  
by DAYCO<sup>SM</sup>



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## Belt System Basics

The serpentine belt and its surrounding components transmit torque from the crankshaft to the various accessories such as the alternator, A/C compressor, power steering pump, fan and often times the water pump.



## Replace Components Every 300,000 Miles



- Every 300,000 miles, class 4-8 trucks should have their front end drive system components replaced.
- Replacement should include the belt, idler pulleys and tensioners.
- A systems approach will ensure the longest life and best performance with minimal downtime.



**Ensure the best performance**

Replace the belt, tensioner and pulley for the longest life

**Every 300,000 miles**



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## The Evolution of Tensioners

**Older Designs:**  
Screw Type Tensioner



**Newer Design:**  
Spring Loaded Tensioner

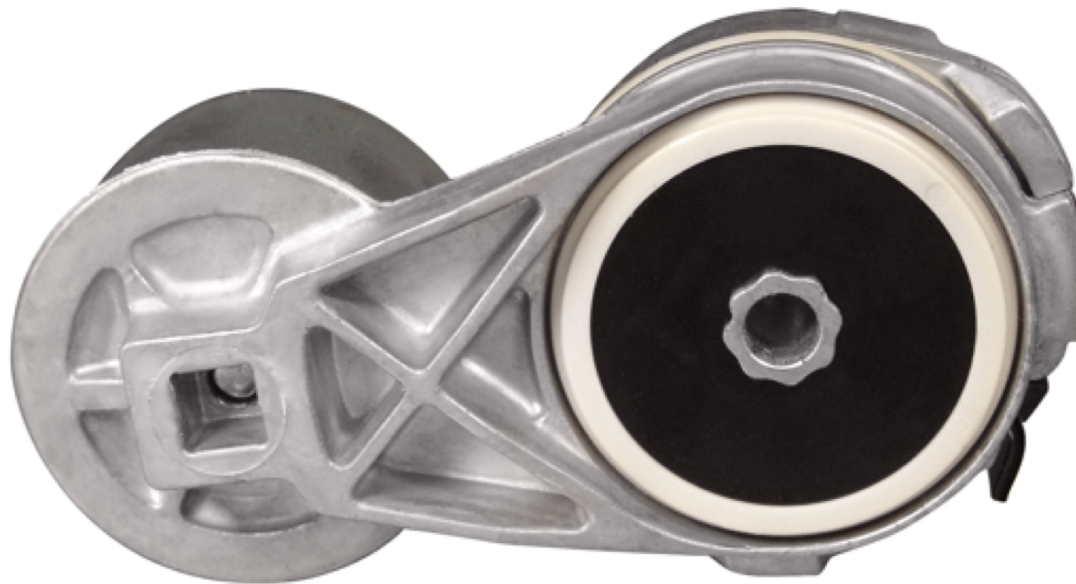






## The Tensioner's Damper System

- The damper system exists to smooth out pulsations in the drive belt.
- As engine speeds and engine loads change, the belt can fluctuate.
- The damper and spring assembly smooth out these pulses resulting in a more efficient drive system.

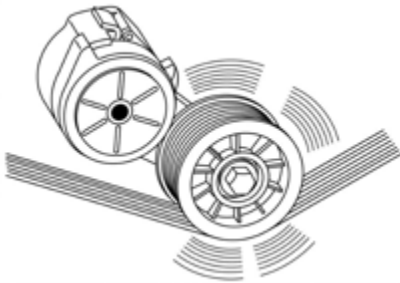


## 6 Tensioner Warning Signs

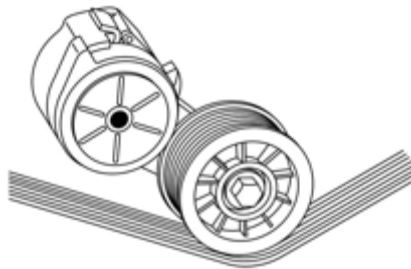


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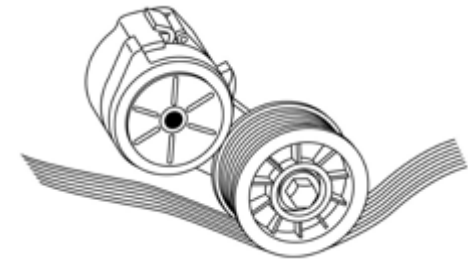
### 1. Tensioner Noise



### 2. Improper Belt Tracking



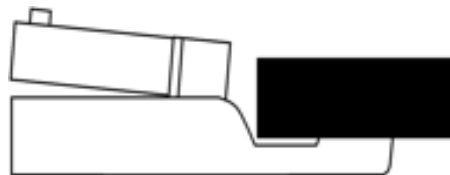
### 3. Loss of Tension



### 4. Sticking or Notchy Movement



### 5. Metal-to-Metal Contact



### 6. Broken or Cracked Tensioner "Stops"





## Idler Pulleys

- Come in different materials and can be smooth or ribbed
- Consist of high-quality bearing and cylindrical pulley shell
- Quality is driven by the type of sealed bearings they contain
- Always use what the OE recommends for replacement





## 8 Signs a Pulley Needs Replacement

**The No. 1 cause of belt failure is not due to the belt itself but because of worn pulley bearings.** That's because a pulley's job is to maintain proper contact with the drive belt. Any faults or issues and the belt cannot perform correctly. Here's the key signs a pulley is the culprit:

1. Excessive free rock
2. Misalignment
3. Cracked or broken
4. Spins too freely
5. Seized or locked bearing
6. Discoloration of the pulley
7. Pulley surface buildup
8. Excessive surface wear

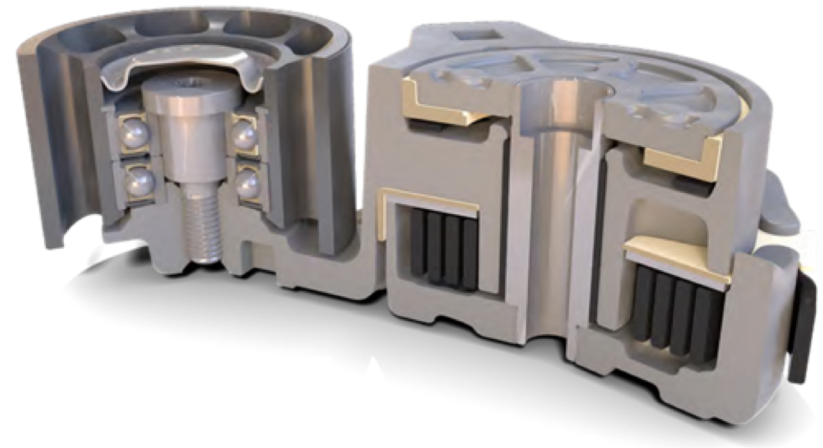


# Heavy Duty Automatic Belt Tensioner



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- Patented “flat spring” design prevents fluctuations
- Engineered for higher torque and power pulses
- Reinforced heavy-duty cast aluminum body and arms
- Rugged pulleys with dual permanently lubricated bearings
- 90 SKUs – No. 1 selling part is #89440

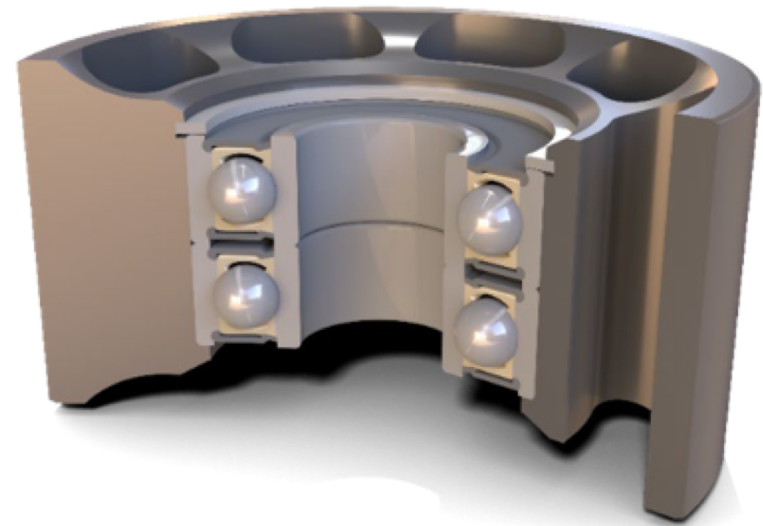




## Heavy Duty Pulleys



- Manufactured from steel, powdered metal, and/or engineered polymer materials
- Lifetime lubricated ball bearings and double high temperature seals
- OE technology built into each design with tighter dimensional tolerances
- 21 SKUs – No. 1 selling part is #89101



## Heavy Duty Poly-V Belt Kits



- Pulleys, tensioners and belt should be changed at same time
- Kits provide all the components needed to do the job right
- Dayco offers all genuine or OEM quality components



## Finding the Right Part, the First Time



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**Use the Dayco Parts app or website to search for the right part:**

- VIN lookup
- License plate parts lookup
- Product specifications
- Interchange search
  - Competitors
  - OEM



## Test Your Knowledge



- 1. What accessories are driven by the serpentine belt on a heavy duty truck?**
  - a) Water pump and alternator
  - b) Power steering and air conditioning
  - c) Both A and C
  
- 2. What is the purpose of the damper inside the tensioner?**
  - a) To make the truck and trailer ride smoother
  - b) To protect driven accessories from torque pulsation
  - c) To help the tensioner maintain pressure on the belt
  
- 3. When replacing the belt, what other components should be replaced?**
  - a) The water pump and alternator
  - b) The pulleys and tensioner
  - c) Only the belt and tensioner

## Test Your Knowledge



4. **OE manufacturers refer Dayco's flat spring technology tensioners because...**
- a) They maintain constant tension throughout the operating range
  - b) The tensioner body footprint remains the same throughout its travel
  - c) The spring is very strong for great tension on the belt
  - d) A and B
5. **Dayco HD pulleys can be made from this material/style and use these type of bearings.**
- a) Plastic and steel, single bearings
  - b) Plastic, steel, double bearings with grease fittings
  - c) Steel, Plastic, ribbed, smooth with greaseable bearings
  - d) Steel, plastic, ribbed, smooth with sealed pre lubricated bearing

Go to the next page for the correct answers.



## Test Your Knowledge Answer Key



**Question 1 -** c) The correct answer is both A and B

**Question 2 -** b) To protect driven accessories from torque pulsation

**Question 3 -** b) The pulleys and tensioner

**Question 4 -** d) The correct answer is both A and B

**Question 5 -** d) Steel, plastic, ribbed, smooth with sealed pre-lubricated bearings



**Thank you**

**daycoaftermarket.com**

**800-848-7902**