



Manuals.plus /

- › Gates /
- › Gates 38216 DriveAlign Automatic Belt Drive Tensioner Instruction Manual

Gates 38216

Gates 38216 DriveAlign Automatic Belt Drive Tensioner Instruction Manual

Model: 38216 | Brand: Gates

1. PRODUCT OVERVIEW

The Gates 38216 DriveAlign Automatic Belt Drive Tensioner is engineered for optimal performance in various automotive applications. This component plays a crucial role in maintaining consistent tension on the serpentine belt, which drives essential engine accessories such as the alternator, power steering pump, and air conditioning compressor. Designed with precision, it ensures reliable operation and extends the lifespan of your vehicle's belt drive system.

Key Features:

- **Comprehensive Coverage:** Fits a wide range of cars, vans, SUVs, and light trucks, including both domestic and import models.
- **OE-Quality Manufacturing:** Produced using advanced technology and high-quality materials to match or exceed Original Equipment Manufacturer (OEM) standards for durability and performance.
- **Labyrinth Seal Protection:** Features a patented labyrinth seal that safeguards internal components, contributing to a longer service life.
- **Vibration Damping System:** Incorporates a patented vibration-damping system to absorb extreme vibrations, enhancing the longevity of the tensioner, belt, and other accessories.
- **Torsional Round Spring Design:** Ensures consistent tension and reliability throughout its operation.



Figure 1: Gates 38216 DriveAlign Automatic Belt Drive Tensioner.

2. COMPATIBILITY

The Gates 38216 DriveAlign Automatic Belt Drive Tensioner is designed to fit various vehicle models. It is compatible with a comprehensive line of cars, vans, SUVs, and light trucks, covering both domestic and import (European and Asian) vehicles. For specific fitment details, always refer to your vehicle's manufacturer specifications or consult a qualified mechanic.

3. INSTALLATION (SETUP)

Proper installation is critical for the optimal performance and longevity of your belt drive system. It is highly recommended to consult your vehicle's specific shop manual for detailed service instructions. If you lack the necessary installation manual or sufficient skill, seeking assistance from a qualified mechanic is advised.

General Installation Guidance:

- Ensure the engine is cool and the vehicle is safely supported on jack stands.
- Locate the existing belt tensioner and the serpentine belt routing diagram (often found under the hood).
- Use appropriate tools to relieve tension on the old belt and remove it.

- Unbolt and remove the old tensioner.
- Install the new Gates 38216 tensioner, ensuring all bolts are tightened to the manufacturer's specified torque.
- Route the new serpentine belt according to the diagram.
- Apply tension with the new tensioner and verify correct belt alignment on all pulleys.
- Start the engine and check for proper operation and any unusual noises.

Video: Drive Belt Tensioner Assembly. This video provides a visual overview of a drive belt tensioner and its function within an engine system.

Video: 16620 28090 Drive Belt Tensioner Assembly. This video showcases a drive belt tensioner, highlighting its components and how it integrates into the engine's belt system.

4. OPERATION

The Gates 38216 DriveAlign Automatic Belt Drive Tensioner operates by applying continuous, optimal tension to the serpentine belt. This constant tension is essential for the efficient transfer of power from the engine's crankshaft to various accessories. Its internal mechanisms are designed to compensate for belt stretch and wear over time, ensuring that all driven components receive the correct amount of power without slippage or excessive strain. The patented vibration-damping system further contributes to smooth operation by absorbing engine vibrations.

5. MAINTENANCE

Regular maintenance of your vehicle's accessory drive system is crucial for preventing unexpected breakdowns and ensuring long-term reliability. The serpentine belt, tensioner, and pulleys are wear items that require periodic inspection and replacement.

Recommended Maintenance Schedule:

- It is generally recommended to inspect and consider replacing the serpentine belt, tensioner, and pulleys around 90,000 miles, or as specified by your vehicle manufacturer's maintenance schedule.
- When replacing the serpentine belt, it is highly advisable to replace the tensioner and any associated pulleys simultaneously. These components wear together, and replacing them as a system ensures optimal performance and prevents premature failure of new parts.
- During inspections, also check the timing belt, water pump, and coolant hoses for any signs of wear, cracks, leaks, or degradation.

6. TROUBLESHOOTING

Recognizing the signs of a failing belt drive system can help prevent more significant issues. Pay attention to the following symptoms:

- **Loud Squeaking or Chirping:** Often indicates a worn or misaligned serpentine belt, or a failing tensioner or pulley bearing.
- **Weak Air Conditioning:** A loose or failing serpentine belt can lead to insufficient power to the AC compressor, resulting in poor cooling.
- **Hard Steering:** If the power steering pump is driven by the serpentine belt, a failing belt or tensioner can make steering difficult.
- **Engine Overheating:** A malfunctioning water pump (driven by the serpentine belt) or a slipping belt can cause the engine to overheat.
- **Dead Battery or Electrical Issues:** The alternator, which charges the battery, is driven by the serpentine belt. A failing belt can lead to a dead battery or other electrical problems.
- **Vehicle Won't Start:** In severe cases, a completely failed serpentine belt can prevent the engine from starting if critical

components like the alternator or water pump are not functioning.

If you experience any of these symptoms, it is recommended to have your vehicle inspected by a qualified service technician promptly.

7. SPECIFICATIONS

Specification	Detail
Brand	Gates
Model Number	38216
Item Weight	2.23 pounds
Exterior	Machined
Manufacturer Part Number	38216
OEM Part Numbers	1662028010, 1662028011, 1662028070, 1662028071, 1662028090
Belt Style	Spring Belt
Color	Silver

8. WARRANTY AND SUPPORT

Gates is a global leader in Original Equipment system design, ensuring high-quality and durable products. For further assistance with part identification or technical support, consider utilizing the Gates Automotive Catalogue App, an online and app-based catalog designed to help you find the right parts efficiently.

For warranty information or specific product inquiries, please refer to the official Gates website or contact their customer support directly.