

Goodyear 1040290

Goodyear 1040290 Serpentine Belt

Instruction Manual

1. INTRODUCTION

The Goodyear 1040290 Serpentine Belt is an essential component designed for automotive engine systems. This multi V-belt is engineered to meet or exceed Original Equipment (OE) requirements, ensuring reliable power transmission and quiet operation. It is suitable for specific Nissan models from 1985-1989 and Smart models from 2008-2015, with 2.0L L4 (1974cc) and 1.0L L3 (999cc) engines, respectively. This manual provides detailed information to help users understand the product's features, proper handling, and maintenance.



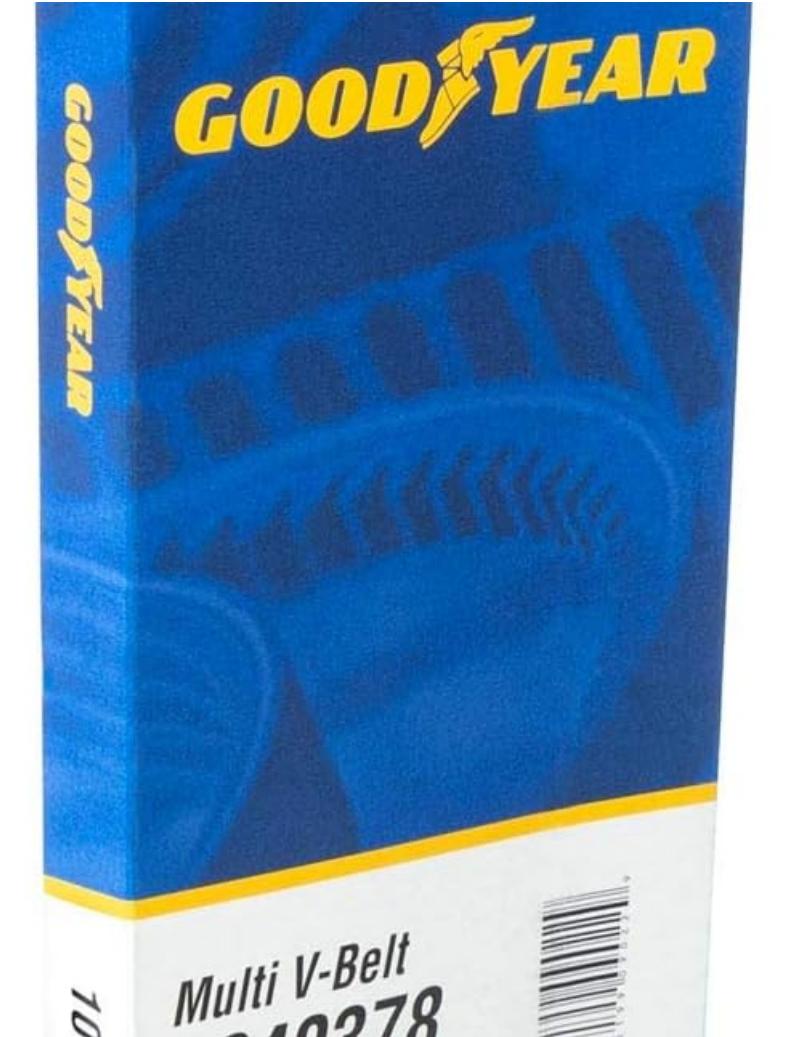


Figure 1: Goodyear 1040290 Serpentine Belt in its packaging.

2. PRODUCT FEATURES AND BENEFITS

The Goodyear 1040290 Serpentine Belt incorporates advanced materials and design to deliver superior performance and durability:

- **EPDM Rubber Compound:** Engineered for outstanding resistance to heat, ozone, weathering, and abrasion, ensuring long-lasting durability and reliability even in extreme operating conditions.
- **Balanced Twist Polyester Cord:** Provides superior tensile strength and resistance to stretching, which is crucial for reliable power transmission and reduced maintenance requirements in automotive applications.
- **Multi V-Belt Design:** Optimizes contact with pulleys for efficient power transfer and quiet operation, enhancing overall driving comfort and smoothness.
- **Precision Ground Ribs:** Ensures maximum pulley contact, contributing to efficient power transfer and reduced slippage.

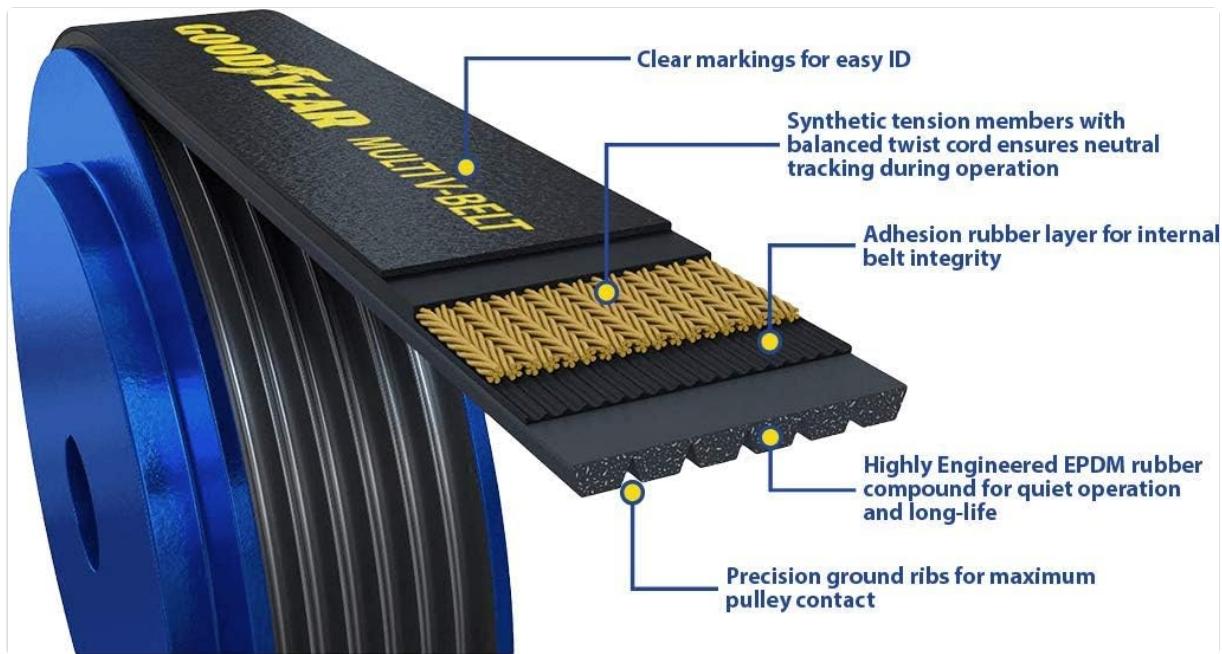


Figure 2: Cross-section diagram illustrating the internal components of the Goodyear Multi V-Belt, including EPDM rubber, synthetic tension members, and precision ground ribs.

3. INSTALLATION GUIDELINES

Proper installation is critical for the serpentine belt's performance and longevity. It is highly recommended that installation be performed by a qualified automotive technician.

General Steps (Consult Vehicle Service Manual for Specifics):

- 1. Safety First:** Ensure the engine is off and cool. Disconnect the battery's negative terminal.
- 2. Diagram Belt Routing:** Before removal, make a clear diagram or take a photo of the existing belt's routing around all pulleys. This is crucial for correct re-installation.
- 3. Release Tension:** Locate the tensioner pulley and use the appropriate tool (e.g., a breaker bar or wrench) to release the tension on the old belt.
- 4. Remove Old Belt:** Carefully slide the old belt off the pulleys once tension is released. Inspect the old belt for wear patterns that might indicate issues with other components.
- 5. Inspect Pulleys:** Check all pulleys (crankshaft, alternator, power steering, A/C compressor, idler, tensioner) for wear, damage, or excessive play. Replace any worn pulleys.
- 6. Install New Belt:** Route the new Goodyear 1040290 belt according to your diagram, ensuring it sits correctly in all pulley grooves. Start with the crankshaft pulley and work your way around.
- 7. Apply Tension:** Re-apply tension to the tensioner pulley, allowing it to automatically tension the new belt. Double-check that the belt is seated properly on all pulleys.
- 8. Final Checks:** Reconnect the battery. Start the engine and observe the belt's operation for a few minutes. Listen for any unusual noises and ensure the belt tracks smoothly.

Warning: Incorrect installation can lead to belt failure, engine damage, or loss of vehicle functions. Always refer to your vehicle's specific service manual for detailed instructions and safety precautions.

4. OPERATION PRINCIPLES

The serpentine belt is a single, continuous belt used to drive multiple peripheral devices in an automotive engine, such as the alternator, power steering pump, air conditioning compressor, and water pump. It

transfers power from the engine's crankshaft to these accessories, allowing them to function correctly.

The Goodyear 1040290 Serpentine Belt's multi V-ribbed design ensures maximum contact area with the pulleys, providing efficient power transfer and minimizing slippage. The EPDM rubber compound maintains flexibility and grip across a wide range of temperatures and operating conditions, contributing to the belt's quiet and smooth operation.

5. MAINTENANCE AND INSPECTION

Regular inspection and timely replacement of your serpentine belt are crucial for preventing unexpected breakdowns and maintaining vehicle performance.

Inspection Checklist:

- Cracks and Fraying:** Look for visible cracks, splits, or fraying on the belt's ribbed surface and edges. Even small cracks can indicate wear.
- Glazing:** Check for a shiny or glazed appearance on the belt's surface, which indicates slippage and hardening of the rubber.
- Missing Ribs or Chunks:** Any missing sections of the belt's ribs are a clear sign of severe wear and necessitate immediate replacement.
- Contamination:** Inspect for oil, grease, or coolant contamination, which can degrade the belt material.
- Tension:** While the belt tensioner is automatic, ensure the tensioner arm is not at its extreme limit, which could indicate a stretched belt or worn tensioner.
- Pulley Alignment:** Visually check that all pulleys are aligned and that the belt runs straight without wobbling.

It is generally recommended to inspect your serpentine belt every 15,000 miles or once a year, and replace it according to your vehicle manufacturer's recommendations, typically between 50,000 to 100,000 miles, or sooner if signs of wear are present.



Figure 3: Close-up of the belt surface, showing the Goodyear branding and the EPDM Poly-Cord markings, which are important for identification and quality assurance.

6. TROUBLESHOOTING COMMON ISSUES

While the Goodyear 1040290 Serpentine Belt is designed for durability, certain symptoms may indicate a problem with the belt or related components.

| Symptom | Possible Cause | Action |
|-------------------------------------|--|--|
| Squealing or Chirping Noise | Worn belt, misaligned pulleys, worn tensioner, or contaminated belt surface. | Inspect belt for wear/glazing. Check pulley alignment and tensioner operation. Clean or replace belt if necessary. |
| Loss of Power Steering/A/C/Charging | Belt slippage or complete belt failure (breakage). | Immediately pull over safely. Inspect belt for breakage or severe slippage. Replace broken belt. Check for seized pulleys. |
| Visible Cracks or Fraying | Normal wear and tear, excessive heat, or improper tension. | Replace the belt promptly to prevent sudden failure. Inspect pulleys and tensioner. |
| Belt Wobbling or Vibrating | Misaligned pulleys, worn tensioner, or damaged belt. | Check pulley alignment and tensioner. Replace any worn components. |

If you experience any of these symptoms, it is advisable to have your vehicle inspected by a professional technician to diagnose and resolve the issue.

7. PRODUCT SPECIFICATIONS

| Specification | Value |
|---------------------|--|
| Brand | Goodyear |
| Model Number | 1040290 |
| Belt Style | Serpentine Belt (Multi V-Belt, 4-Rib) |
| Length | 29 inches (737 mm) |
| Material | EPDM Rubber, Balanced Twist Polyester Cord |
| Item Weight | 2.24 ounces |
| Product Dimensions | 1 x 1 x 1 inches (packaging/approximate) |
| Compatible Vehicles | 1985-1989 Nissan (2.0L L4 1974cc), 2008-2015 Smart (1.0L L3 999cc) |
| OEM Part Numbers | A001.993.45.96, 56992-PV0-0030, E1EE-8620-HB, 11720-16E02, E1FZ-8620-N |

8. WARRANTY AND SUPPORT

For information regarding the warranty of your Goodyear 1040290 Serpentine Belt, please refer to the official Goodyear Belts website or contact their customer support directly. Warranty terms and conditions

may vary based on region and purchase location.

For technical support or further inquiries, please visit the Goodyear Belts official website or consult with a certified automotive professional.



Figure 4: Official Goodyear Belts logo.

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Related Documents

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|  | <p><u>Goodyear Hydraulic Trolley Jack SUV (Model 10640) - User Manual</u></p> <p>This document provides comprehensive instructions for the Goodyear Hydraulic Trolley Jack SUV (Model 10640). It includes detailed safety guidelines, operating procedures for lifting and lowering vehicles, maintenance advice, troubleshooting tips, and disposal information. The manual is presented in multiple languages, with English as the primary language.</p> |
|  | <p><u>Goodyear 2021 Racing Media Guide: Tires, Staff, and History</u></p> <p>Explore the Goodyear 2021 Racing Media Guide, detailing NASCAR, NHRA, and sports car racing involvement, tire manufacturing, key personnel, and the company's rich racing history.</p> |
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[Manual de Usuario Compresor de Aire Goodyear GY2248CD/GY2508CD Series](#)

Guía completa de usuario para los compresores de aire Goodyear modelos GY2248CD, GY2248CDS, GY2248CDH, GY2508CD, GY2508CDS, GY2508CDH. Incluye instrucciones de seguridad, montaje, operación, mantenimiento y solución de problemas.