

Dorman 420-193

Dorman 420-193 Engine Timing Belt Tensioner User Manual

Instructions for Installation, Maintenance, and Troubleshooting

1. PRODUCT OVERVIEW

The Dorman 420-193 Engine Timing Belt Tensioner is a direct replacement component designed to match the fit and function of the original tensioner in specific vehicle applications. This part is engineered from quality materials to ensure reliable performance and a long service life within your vehicle's engine system.

- **Direct Replacement:** Designed to match the fit and function of the original tensioner on specified applications.
- **Recommended Replacement:** Advised for replacement when a new timing belt and pulleys are installed.
- **Durable Construction:** Manufactured from quality materials for reliable performance and extended service life.
- **Trustworthy Quality:** Backed by a team of product experts with extensive automotive experience.
- **Ensured Fit:** Verify compatibility with your exact vehicle using the manufacturer's fitment tools.

Package Contents

- Dorman 420-193 Timing Belt Adjuster (Adjuster Only)



Figure 1: Front view of the Dorman 420-193 Engine Timing Belt Tensioner. This image displays the main body of the tensioner with its mounting points and the extending piston.



Figure 2: Side view of the Dorman 420-193 Engine Timing Belt Tensioner. This image provides a different angle, highlighting the cylindrical shape and additional mounting features of the component.

2. VEHICLE COMPATIBILITY

This Dorman 420-193 Engine Timing Belt Tensioner is compatible with the following Mitsubishi vehicle models and years. Always confirm fitment for your specific vehicle trim before installation.

- **Mitsubishi Eclipse:** 2006, 2007, 2008, 2009, 2010
- **Mitsubishi Galant:** 2004, 2005, 2006, 2007, 2008, 2009, 2010
- **Mitsubishi Lancer:** 2004, 2005, 2006
- **Mitsubishi Outlander:** 2004, 2005, 2006

3. INSTALLATION INSTRUCTIONS

Installation of an engine timing belt tensioner is a complex procedure that requires specialized tools and automotive knowledge. It is highly recommended that this component be installed by a qualified professional technician. Improper installation can lead to severe engine damage.

Safety Precautions:

- Always disconnect the vehicle's battery before beginning any work.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Ensure the engine is cool before starting work.
- Refer to the vehicle-specific service manual for detailed torque specifications and procedures.

General Installation Steps (Consult Service Manual for Details):

1. **Preparation:** Safely lift and support the vehicle. Remove necessary components to access the timing belt and tensioner (e.g., engine covers, accessory belts, crankshaft pulley).
2. **Timing Marks:** Rotate the crankshaft to align the engine's timing marks according to the vehicle service manual. This is critical to prevent engine damage.
3. **Tensioner Removal:** Carefully relieve tension on the timing belt and remove the old timing belt tensioner.
4. **New Tensioner Installation:** Install the new Dorman 420-193 tensioner. Ensure it is correctly seated and secured with the appropriate fasteners, torqued to manufacturer specifications.
5. **Timing Belt Installation:** Install the timing belt, ensuring it is correctly routed and aligned with all timing marks.
6. **Tensioner Adjustment:** Allow the new tensioner to apply proper tension to the timing belt as per the vehicle service manual's instructions. This often involves releasing a pin or clip on the new tensioner.
7. **Verification:** Manually rotate the engine through several full cycles (by hand, not starter) to confirm timing marks remain aligned and the belt operates smoothly. Recheck tension.
8. **Reassembly:** Reinstall all removed components in reverse order.
9. **Final Check:** Start the engine and listen for any unusual noises. Check for proper operation.

4. OPERATION

The Dorman 420-193 Engine Timing Belt Tensioner operates automatically once installed correctly. Its function is to maintain the correct tension on the engine's timing belt, ensuring precise synchronization of the crankshaft and camshaft(s). This precise timing is crucial for the engine's valves to open and close at the correct intervals relative to the piston's position, allowing for efficient combustion and preventing valve-to-piston contact.

There is no user interaction required for the operation of this component after proper installation.

5. MAINTENANCE

The Dorman 420-193 Engine Timing Belt Tensioner is designed to be a maintenance-free component throughout its service life. However, it is strongly recommended to inspect the tensioner for any signs of wear, leaks, or improper function whenever the timing belt is replaced. As a critical component of the timing system, it is often replaced along with the timing belt and other associated pulleys to ensure the longevity and reliability of the entire system.

6. TROUBLESHOOTING

Issues related to the timing belt tensioner typically manifest as symptoms affecting the engine's timing or overall operation. Due to the critical nature of this component, any suspected malfunction should be addressed immediately by a qualified technician.

Common Symptoms of a Failing Timing Belt Tensioner:

- **Engine Noise:** A rattling, squealing, or ticking noise coming from the timing belt area, especially at idle or during acceleration.
- **Timing Belt Slippage:** If the tensioner fails to maintain proper tension, the timing belt may slip, leading to incorrect engine timing. This can cause rough idling, misfires, reduced engine performance, or a check engine light.
- **Visible Wear:** Inspection may reveal excessive play in the tensioner pulley, fluid leaks (if hydraulic), or physical damage to the tensioner body.

If you experience any of these symptoms, cease operation of the vehicle and consult a professional mechanic for diagnosis and repair. Continuing to operate a vehicle with a faulty timing belt tensioner can result in catastrophic engine failure.

7. TECHNICAL SPECIFICATIONS

Specification	Detail
Manufacturer	Dorman Products
Brand	Dorman
Model Number	420-193
Item Weight	8.2 ounces
Product Dimensions	3 x 2.8 x 4.9 inches
Exterior Finish	Machined
OEM Part Numbers	85007; BTM001; KR-114002; SK420193; T42231; T43130; T66387; MD984375; MR984375
ASIN	B00ARUTZI6

Specification	Detail
Date First Available	October 27, 2010

8. WARRANTY INFORMATION AND SUPPORT

For specific warranty details regarding your Dorman 420-193 Engine Timing Belt Tensioner, please refer to the documentation provided with your purchase or visit the official Dorman Products website. Warranty terms typically cover manufacturing defects and vary by product and region.

For technical support, installation assistance, or to inquire about warranty claims, please contact Dorman Products directly through their official customer service channels. You can often find contact information on their website or by searching for 'Dorman Products customer support'.

Online Resources: For additional information and product support, visit the [Dorman Store on Amazon](#) or the official Dorman Products website.