

DNJ PR1170

DNJ PR1170 Piston Rings Standard Instruction Manual

Model: PR1170 | Brand: DNJ

1. INTRODUCTION TO PISTON RINGS

Piston rings are critical components within an internal combustion engine, designed to seal the combustion chamber, transfer heat from the piston to the cylinder wall, and regulate engine oil consumption. The DNJ PR1170 Piston Rings are manufactured to meet standard specifications for compatible engines, ensuring reliable performance and longevity.



This image displays the DNJ PR1170 Piston Rings. The product comes in a red and blue box labeled 'DNJ Piston Rings'. Three sets of piston rings, each individually sealed in clear plastic bags (red, blue, and yellow patterns), are shown in front of the box. These rings are crucial components for engine performance.

2. PRODUCT COMPATIBILITY

The DNJ PR1170 Piston Rings are designed for specific vehicle applications. Please verify your vehicle's make, model, and engine specifications before installation.

- **Vehicle Fitment:** 2013-2022 Chrysler, Dodge, Fiat, Jeep, Ram 200, 500X, Cherokee
- **Engine Type:** 2.0L-2.4L L4 16V SOHC 2360cc
- **Fitment Notes:** 1.2x1.2x2.0 (referring to ring thickness dimensions)

3. SETUP AND INSTALLATION

Installation of piston rings requires specialized knowledge, tools, and adherence to manufacturer specifications. It is highly recommended that installation be performed by a certified automotive technician.

General Installation Guidelines:

1. **Preparation:** Ensure the cylinder bores are clean, free of debris, and within specified tolerances. Inspect pistons for wear or damage.
2. **Ring Orientation:** Piston rings often have specific top and bottom orientations. Refer to the engine service manual for correct placement and gap positioning.
3. **Ring Gaps:** Measure and adjust piston ring end gaps according to engine manufacturer specifications.
4. **Lubrication:** Lightly lubricate piston rings and cylinder walls with clean engine oil before installation.
5. **Compression:** Use a piston ring compressor tool to carefully install the piston and ring assembly into the cylinder bore.

Failure to follow proper installation procedures can lead to engine damage or premature component failure.



This image shows four engine pistons, each with its wrist pin, alongside three packaged sets of piston rings. This illustrates the components that work together within an engine cylinder.

4. OPERATING PRINCIPLE

Piston rings perform several vital functions during engine operation:

- **Sealing:** They create a gas-tight seal between the piston and the cylinder wall, preventing combustion gases from escaping into the crankcase and maintaining compression.
- **Heat Transfer:** Piston rings conduct heat from the piston to the cooler cylinder walls, helping to regulate piston

temperature.

- **Oil Control:** Oil control rings scrape excess oil from the cylinder walls, preventing it from entering the combustion chamber and being burned, thus controlling oil consumption.



This icon symbolizes engine performance and power, which can be restored or maintained with properly functioning piston rings.



This icon represents the quality and protection offered by reliable engine components like DNJ piston rings, ensuring engine longevity.

5. MAINTENANCE

Proper engine maintenance is crucial for the longevity and performance of piston rings. While piston rings themselves are not typically a maintenance item, their function is directly affected by overall engine health.

- **Regular Oil Changes:** Use the recommended engine oil and adhere to the manufacturer's oil change intervals. Clean oil prevents sludge buildup that can stick rings.
- **Quality Fuel:** Use appropriate octane fuel to prevent pre-ignition and detonation, which can damage pistons and rings.
- **Air Filter Replacement:** A clean air filter prevents abrasive particles from entering the engine and causing cylinder bore wear.
- **Cooling System Health:** Ensure the engine cooling system is functioning correctly to prevent overheating, which can lead to ring damage.

6. TROUBLESHOOTING

Symptoms of worn or damaged piston rings can include:

- **Excessive Oil Consumption:** Burning oil due to poor oil control.
- **Blue/Gray Exhaust Smoke:** Indicates oil burning in the combustion chamber.
- **Reduced Engine Power/Compression:** Loss of seal leads to lower compression and power output.
- **Increased Blow-by:** Combustion gases escaping past the rings into the crankcase.

If you experience these symptoms, it is advisable to have your engine inspected by a qualified mechanic to diagnose the issue accurately.



This icon represents common symptoms of worn piston rings, such as excessive exhaust smoke, indicating potential engine issues.

7. SPECIFICATIONS

Attribute	Detail
Manufacturer	DNJ ENGINE COMPONENTS
Brand	DNJ
Item Model Number	PR1170
Manufacturer Part Number	PR1170
Item Weight	8 ounces
Product Dimensions	5 x 5 x 3 inches

8. WARRANTY INFORMATION

DNJ Engine Components products are designed for quality and durability. For specific warranty terms and conditions, please refer to the official DNJ Engine Components website or contact their customer service directly. Warranty coverage typically applies to manufacturing defects and does not cover damage due to improper installation, misuse, or normal wear and tear.

9. SUPPORT

For technical assistance, product inquiries, or support, please contact DNJ Engine Components through their official channels.

- **Manufacturer Website:** Visit the [DNJ Store on Amazon](#) for more information and contact options.
- **Professional Assistance:** Always consult with a certified automotive technician for installation and complex troubleshooting.

ASK A QUESTION ABOUT THIS MANUAL

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Question

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