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## DNJ PR900

# DNJ PR900 Piston Rings User Manual

Model: PR900 | Brand: DNJ

## 1. PRODUCT OVERVIEW

The DNJ PR900 Piston Rings are precision-engineered components designed for optimal engine performance and longevity. This set provides a complete solution for engine rebuilds, ensuring proper compression and oil control within the cylinders.



Image: DNJ PR900 Piston Rings in their packaging, alongside three individual sets of piston rings, each sealed in a clear plastic bag with color-coded inserts (red, blue, yellow).

Key features include:

- **Brand New:** Each set of DNJ Piston Rings is new and ready for installation.
- **Comprehensive Set:** This set services a complete engine, providing all necessary rings for the specified applications.
- **Quality Assurance:** DNJ Engine Components has over 30 years of experience, ensuring high-quality and reliable parts.

## 2. COMPATIBILITY

The DNJ PR900 Piston Rings are designed to fit specific vehicle models and engine configurations. Verify your vehicle's specifications against the list below to ensure proper fitment.

### Compatible Vehicles:

- **1985-1995 Toyota:** 4Runner, Pickup, Celica (2.4L-2.6L L4 SOHC Naturally Aspirated, Turbocharged 22RE, 22R, 22REC, 22R-TEC engines)
- **1985-1995 Mazda:** MPV, B2600 (2.4L-2.6L L4 SOHC Naturally Aspirated, Turbocharged engines)

### Fitment Notes:

- Ring dimensions: 1.5x1.5x4.0
- Engine code: G6

## 3. INSTALLATION GUIDELINES (GENERAL)

Installation of piston rings requires specialized knowledge and tools. It is highly recommended that installation be performed by a certified automotive technician. The following are general guidelines and not a substitute for a detailed service manual for your specific vehicle.

1. **Preparation:** Ensure the engine block, pistons, and cylinder bores are thoroughly cleaned and inspected for wear or damage. Measure cylinder bore taper and out-of-roundness.



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*Engineered with professional installers in mind, Partsology provides top-tier, dependable engine components for your vehicle. Our commitment to exceptional performance goes beyond just products; With an extensive inventory of engine parts, we make finding the right fitment easier, faster, and cost-effective. Count on Partsology for exceptional engine parts and superior expertise.*

Image: A mechanic in blue overalls is shown working on an open car engine, emphasizing the need for professional

installation.

2. **Ring Gap Measurement:** Before installing, measure the end gap of each ring by inserting it into the cylinder bore and checking with a feeler gauge. Adjust if necessary according to manufacturer specifications.
3. **Ring Orientation:** Pay close attention to the orientation of each ring (top, second, oil control). Many rings are marked with a "TOP" or dot indicating the side facing upwards. Incorrect orientation can lead to oil consumption or loss of compression.
4. **Installation onto Piston:** Use a piston ring expander tool to carefully install the rings onto the piston. Avoid over-expanding the rings, which can cause breakage or distortion.



Image: A collection of pistons and piston rings, illustrating the components involved in the installation process.

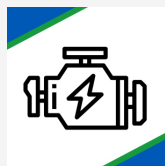
5. **Ring Gap Staggering:** Stagger the ring end gaps around the piston circumference according to the engine manufacturer's recommendations to prevent blow-by.
6. **Piston Installation:** Lubricate the piston and rings with clean engine oil. Use a piston ring compressor tool to carefully guide the piston assembly into the cylinder bore.

**Warning: Improper installation can lead to severe engine damage, reduced performance, and premature component failure. Consult a professional if you are unsure.**

## 4. OPERATING PRINCIPLES OF PISTON RINGS

Piston rings are critical components in an internal combustion engine, performing several vital functions:

- **Sealing the Combustion Chamber:** The top compression ring forms a seal between the piston and the cylinder wall, preventing combustion gases from escaping into the crankcase (blow-by). This ensures maximum power output.



Engine Performance

- **Heat Transfer:** Piston rings transfer heat from the piston to the cylinder walls, which are cooled by the engine's cooling system. This helps to regulate piston temperature.
- **Oil Control:** The oil control ring scrapes excess oil from the cylinder walls on the piston's downstroke, preventing it from entering the combustion chamber where it would burn and cause smoke and carbon

deposits.



Reduced Emissions

- **Lubrication:** While controlling oil, the rings also ensure a thin film of oil remains on the cylinder walls for lubrication of the piston and rings themselves.

## 5. MAINTENANCE AND LONGEVITY

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Proper engine maintenance is crucial for the longevity of your piston rings and overall engine health. While piston rings themselves do not require direct maintenance after installation, their performance is heavily dependent on the condition of other engine components and regular servicing.

- **Regular Oil Changes:** Use the recommended type and viscosity of engine oil and adhere to the manufacturer's oil change intervals. Clean oil prevents sludge and carbon buildup that can stick rings in their grooves.
- **Maintain Cooling System:** Ensure your engine's cooling system is functioning correctly to prevent overheating, which can warp cylinders and compromise ring seal.
- **Air Filter Replacement:** A clean air filter prevents abrasive particles from entering the engine and causing premature wear to cylinder walls and rings.
- **Fuel Quality:** Use high-quality fuel to minimize carbon deposits that can accumulate on pistons and rings.
- **Professional Inspections:** Periodically have your engine inspected by a qualified mechanic to catch potential issues early.



Ensured Durability

## 6. TROUBLESHOOTING COMMON ISSUES

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If you experience any of the following symptoms after piston ring replacement or during general engine operation, it may indicate an issue with the rings or related engine components. Professional diagnosis is recommended.

Symptom	Possible Cause	Recommended Action
Excessive Blue Smoke from Exhaust	Worn or stuck oil control rings, worn valve seals, or excessive cylinder wear.	Perform compression test and leak-down test. Inspect cylinder walls and piston rings.
High Oil Consumption	Similar to blue smoke; rings not sealing properly, or oil control issues.	Check for external leaks. Conduct engine diagnostics to pinpoint internal oil consumption.
Loss of Engine Power / Poor Acceleration	Poor compression due to worn or broken compression rings, or cylinder damage.	Conduct a compression test to identify cylinders with low compression.
Excessive Crankcase Pressure (Blow-by)	Compression gases leaking past the piston rings into the crankcase.	Inspect PCV system. Perform a leak-down test to confirm ring seal integrity.

## 7. PRODUCT SPECIFICATIONS

Attribute	Detail
Manufacturer	DNJ ENGINE COMPONENTS
Brand	DNJ
Item Model Number	PR900
Manufacturer Part Number	PR900
Item Weight	5.3 ounces
Product Dimensions	8.5 x 4.26 x 2.65 inches
ASIN	B00TM26C18
Date First Available	October 1, 2008

## 8. WARRANTY AND SUPPORT

DNJ Engine Components stands behind the quality of its products. For specific warranty information regarding the PR900 Piston Rings, please refer to the official DNJ Engine Components warranty policy available on their official website or contact their customer service directly.

For technical support, installation queries, or warranty claims, please contact DNJ Engine Components through their official channels. It is recommended to have your product model number (PR900) and purchase details ready when contacting support.

*Note: This product is from a small business brand. Your support contributes to their continued innovation and quality.*