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DNJ WP868

DNJ WP868 Water Pump Instruction Manual

For 2013-2016 Audi, Volkswagen A6 Quattro, A7 Quattro, A8 Quattro, Q5, Q7, Touareg 3.0L V6 DOHC Engines

1. Introduction

This manual provides essential information for the proper installation, operation, maintenance, and troubleshooting of the DNJ WP868 Water Pump. This component is critical for maintaining the optimal operating temperature of your vehicle's engine by circulating coolant. Adhering to these instructions will help ensure the longevity and performance of the water pump and your vehicle's cooling system.

2. Product Overview

The DNJ WP868 is a high-quality replacement water pump designed to meet or exceed OEM specifications for the specified Audi and Volkswagen models. It is engineered for precise fitment and efficient coolant circulation.

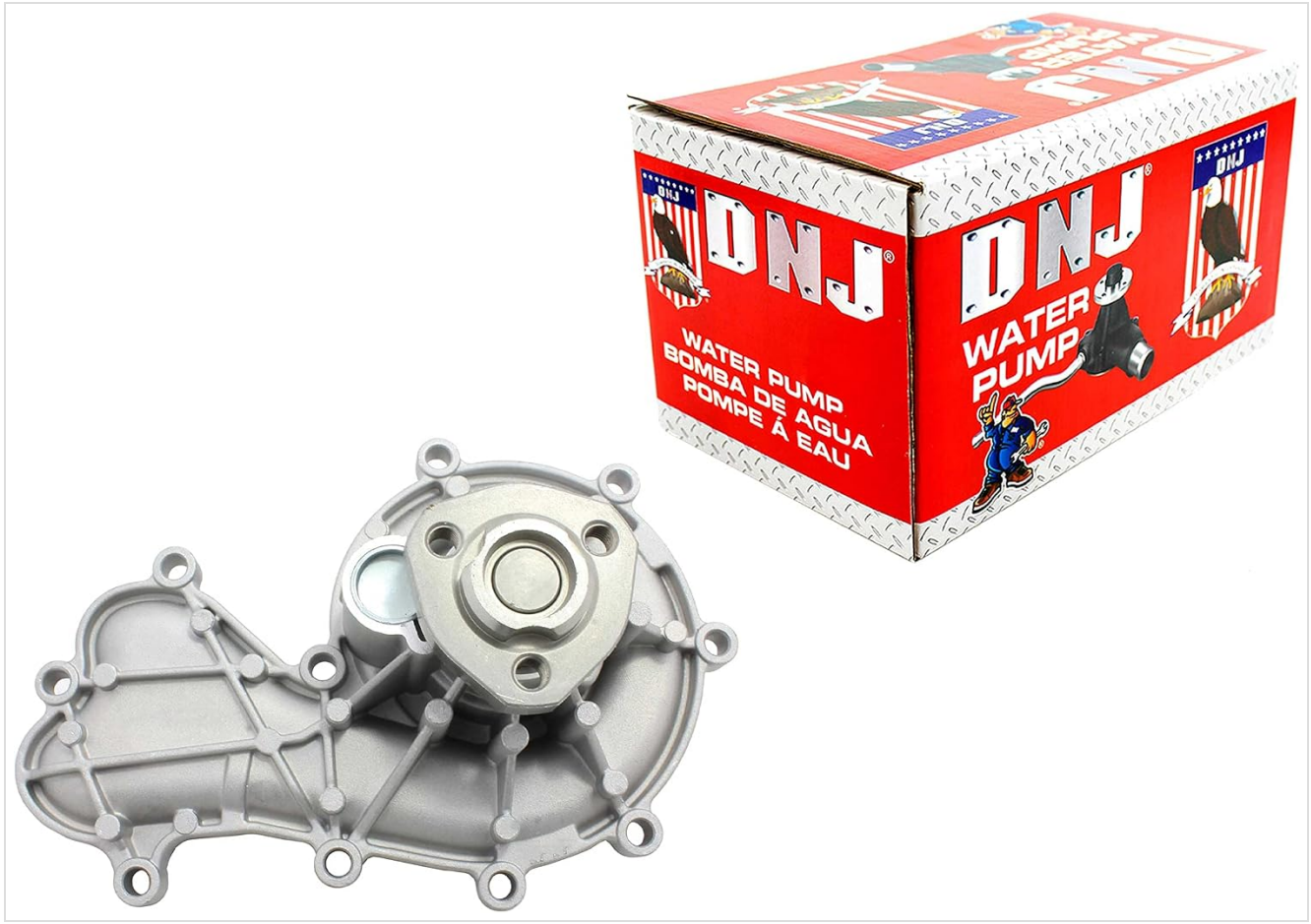

Figure 2.1: The DNJ WP868 Water Pump shown with its retail packaging. This image provides a general view of the product as it would appear when unboxed, highlighting both the pump and the brand's box.

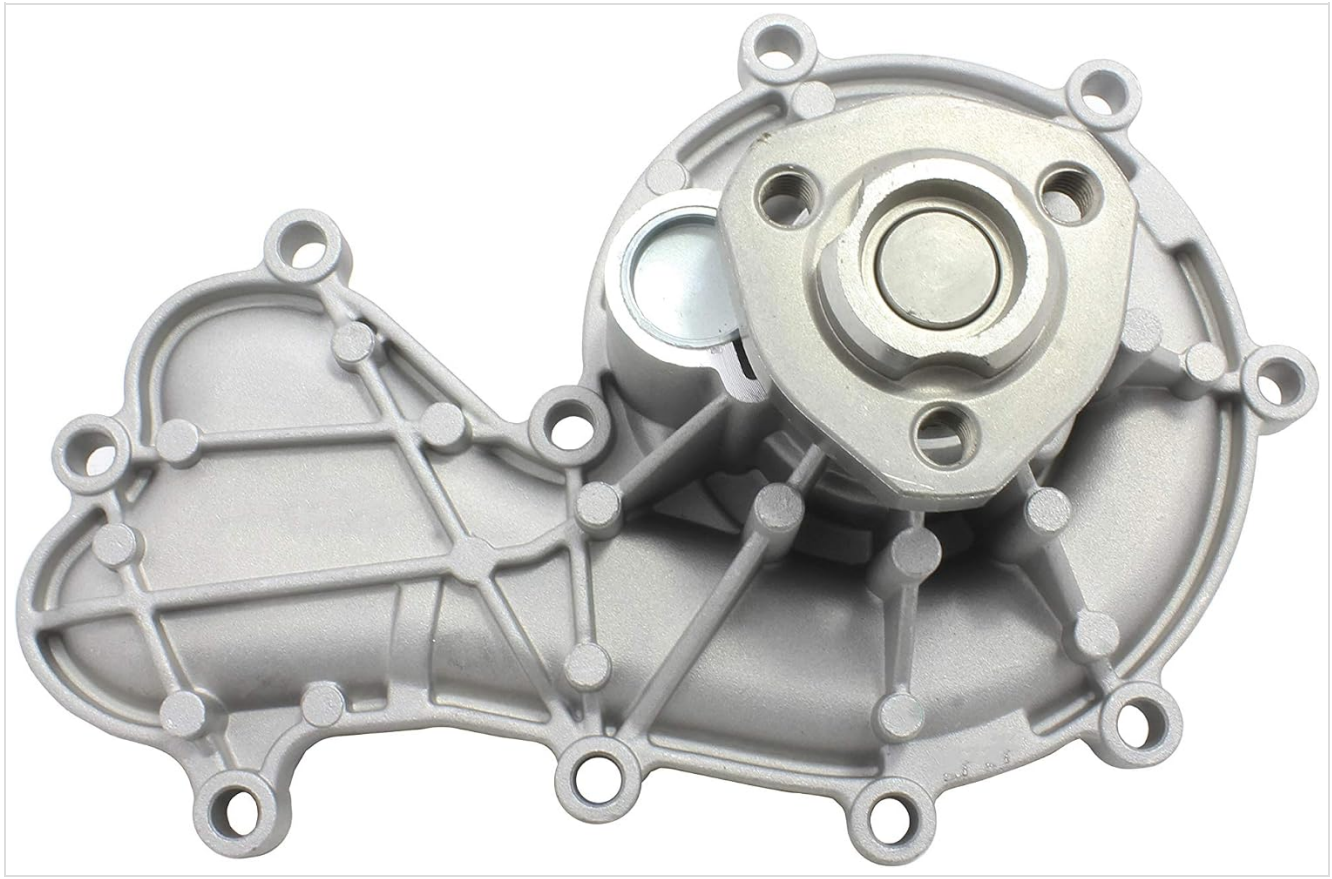

Figure 2.2: A top-down view of the DNJ WP868 Water Pump, showcasing the mounting points and the central shaft where the pulley attaches. This perspective is useful for identifying the pump's overall shape and bolt pattern.

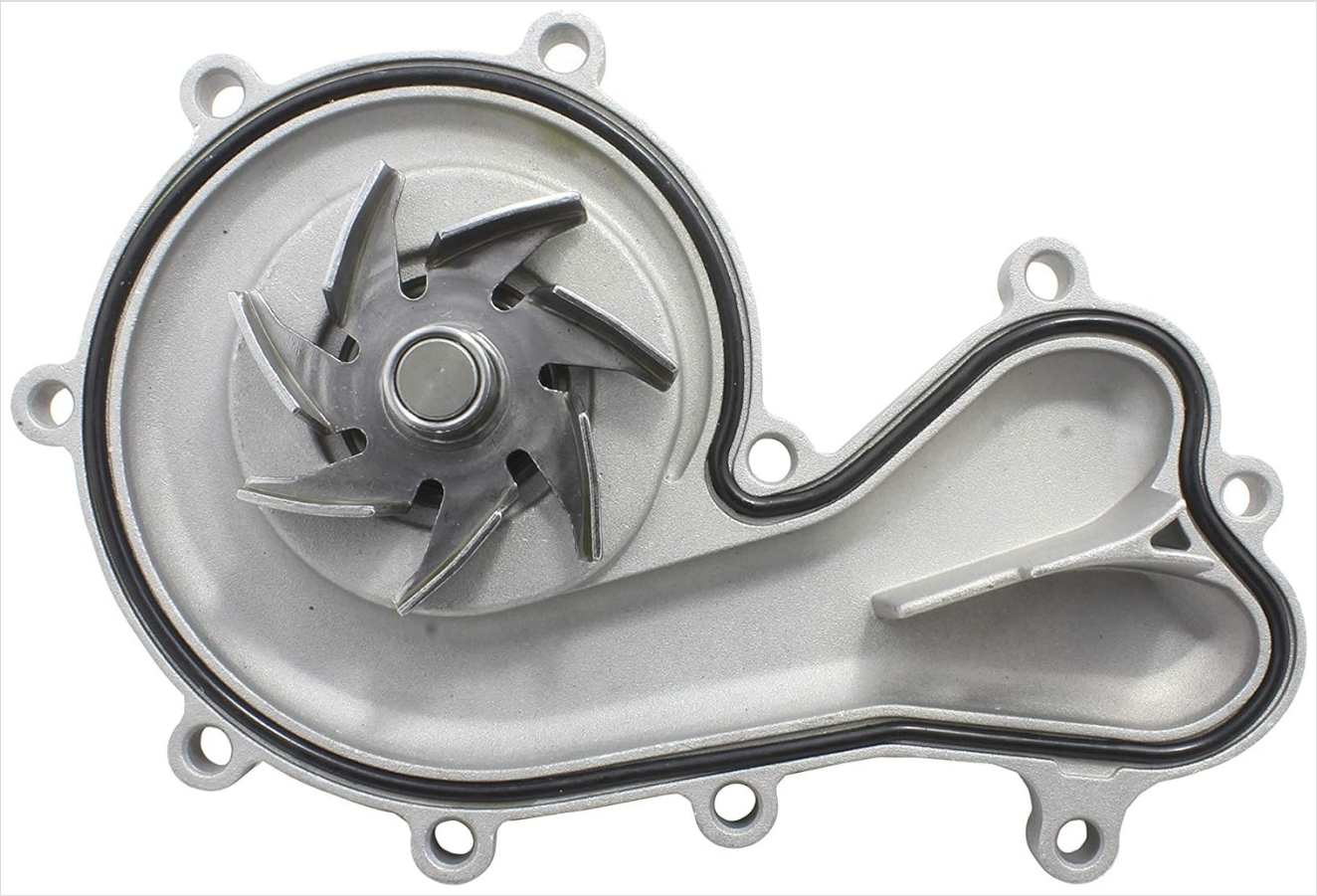

Figure 2.3: The impeller side of the DNJ WP868 Water Pump, revealing the vanes responsible for circulating coolant and the integrated gasket for sealing against the engine block. This view is crucial for understanding the pump's internal mechanism.

3. Installation

Installation of a water pump requires mechanical expertise and specialized tools. It is highly recommended that installation be performed by a certified automotive technician. Improper installation can lead to engine damage.

3.1. Safety Precautions

- Always disconnect the vehicle's battery before beginning work.
- Allow the engine to cool completely before draining coolant. Hot coolant can cause severe burns.
- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Dispose of old coolant responsibly according to local regulations.

3.2. General Installation Steps (Consult Service Manual for Specifics)

1. **Drain Coolant:** Place a drain pan under the radiator and open the drain cock to drain the cooling system.
2. **Remove Components:** Carefully remove any components obstructing access to the water pump (e.g., belts, hoses, pulleys, covers).
3. **Remove Old Pump:** Unbolt and remove the old water pump. Be prepared for residual coolant to drain.
4. **Clean Mounting Surface:** Thoroughly clean the engine block's mounting surface, removing all traces of old gasket material and corrosion. A clean surface is critical for a proper seal.
5. **Install New Pump:** Apply a thin, even coat of RTV sealant (if required by OEM specifications) to the new gasket or the pump's mating surface. Carefully position the new DNJ WP868 water pump and install the mounting bolts.
6. **Torque Bolts:** Tighten the mounting bolts to the manufacturer's specified torque settings in the correct sequence. Refer to your vehicle's service manual for precise values and patterns.

7. **Reinstall Components:** Reattach all previously removed components, ensuring all hoses are securely clamped and belts are properly tensioned.
8. **Refill Coolant:** Refill the cooling system with the correct type and mixture of coolant for your vehicle.
9. **Bleed Air:** Start the engine and allow it to reach operating temperature with the heater on full. Monitor the coolant level and add more as needed to purge air from the system. Follow vehicle-specific air bleeding procedures.
10. **Inspect for Leaks:** After the engine has cooled, re-check the coolant level and inspect all connections for leaks.

4. Operating Principles

The water pump is a vital part of the engine's cooling system. Its primary function is to circulate coolant from the radiator through the engine block and cylinder head, absorbing heat, and then back to the radiator to dissipate that heat into the ambient air. The impeller inside the pump creates centrifugal force, pushing the coolant through the system. A properly functioning water pump ensures the engine maintains its optimal operating temperature, preventing overheating and potential damage.

5. Maintenance

Regular maintenance of your vehicle's cooling system is crucial for the longevity of the water pump and overall engine health.

- **Coolant Level Check:** Regularly check the coolant level in the reservoir and top up as needed with the correct coolant type.
- **Coolant Quality:** Follow your vehicle manufacturer's recommendations for coolant flush and replacement intervals. Old or contaminated coolant can lead to corrosion and premature pump failure.
- **Belt Inspection:** Inspect the serpentine belt (which often drives the water pump) for cracks, fraying, or excessive wear. Ensure proper belt tension.
- **Leak Detection:** Periodically inspect the water pump area for any signs of coolant leaks (e.g., drips, stains, or a sweet smell).
- **Noise Monitoring:** Listen for unusual noises (e.g., grinding, squealing) coming from the water pump area, which could indicate bearing failure.

6. Troubleshooting

Common issues related to water pump malfunction and their potential causes:

- **Engine Overheating:**
  - **Cause:** Failed water pump (no circulation), low coolant, clogged radiator, faulty thermostat, air in system.
  - **Action:** Check coolant level, inspect for leaks, verify pump operation (e.g., by feeling hose temperature differences), consult a technician.
- **Coolant Leaks:**
  - **Cause:** Worn pump seal, loose hose clamps, cracked housing, damaged gasket.
  - **Action:** Locate the source of the leak. If from the pump's weep hole, the pump needs replacement. Tighten clamps or replace hoses/gaskets as necessary.
- **Squealing or Grinding Noises:**
  - **Cause:** Worn or failing water pump bearings, loose or worn serpentine belt.
  - **Action:** Inspect the belt tension and condition. If the noise persists and originates from the pump,

replacement is likely needed.

- **Steam from Engine Bay:**
  - **Cause:** Severe coolant leak, engine overheating.
  - **Action:** Immediately and safely pull over. Do not open the radiator cap when hot. Allow the engine to cool before inspecting. Seek professional assistance.

7. Specifications

Attribute	Value
Brand	DNJ
Model Number	WP868
Manufacturer	DNJ ENGINE COMPONENTS
Item Weight	2.06 pounds
Package Dimensions	10.24 x 6.06 x 6.02 inches
Country of Origin	China
UPC	889881023021
Vehicle Service Type	Car, Truck
Compatible Engines	3.0L V6 DOHC Turbocharged CPNB, CNRB, CPNA
Compatible Years	2013-2016

8. Warranty and Support

DNJ Engine Components stands behind the quality of its products. For specific warranty information, claims, or technical support, please refer to the official DNJ Engine Components website or contact their customer service directly. Keep your purchase receipt as proof of purchase for any warranty claims.
For further assistance, you may also contact the seller, Partsology, through the platform where the product was purchased.

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