

## MOOG 512025

# MOOG 512025 Wheel Bearing and Hub Assembly Instruction Manual

Model: 512025 | Brand: MOOG

### 1. PRODUCT OVERVIEW

The MOOG 512025 Wheel Bearing and Hub Assembly is engineered for specific Nissan Sentra models. This assembly is designed to provide reliable performance, ensuring smooth operation and optimal ABS functionality. It features quality components tested for durability in various conditions.



Figure 1: MOOG 512025 Wheel Bearing and Hub Assembly. This image shows the complete hub assembly with the bearing, studs, and mounting flange.

## 2. COMPATIBILITY

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This wheel bearing and hub assembly is compatible with the following Nissan vehicles:

- 1991-1993 Nissan NX
- 1995-1996 Nissan 200SX
- 1997-1998 Nissan 200SX
- 1990-1999 Nissan Sentra

**Important:** Before purchasing and installing, verify compatibility with your specific vehicle by checking the year, make, model, engine, and trim.

## 3. FEATURES AND DESIGN ENHANCEMENTS

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The MOOG 512025 hub assembly incorporates several design features for enhanced durability and performance:

- **Precision Matched Components:** Manufacturing processes ensure exact matching of bearing raceways and rolling elements, minimizing noise and vibration for superior performance.
- **Application Specific Design:** Engineered to address common issues and deliver smooth, reliable operation tailored to specific vehicle applications.
- **Improved Sealing:** Designed to seal out water and contaminants, protecting against premature wear and lubricant breakdown, even in harsh conditions.



Figure 2: Diagram highlighting key features of the MOOG Hub Assembly, including abrasion-resistant ABS cord, roll form design, quad lip seal design, precision matched components, and wheel stud with protective coating.

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Video 1: Official MOOG video demonstrating the testing and design improvements of their hub assemblies, focusing on sealing against contaminants and durability under extreme conditions.

## 4. INSTALLATION GUIDELINES

Installation of a wheel bearing and hub assembly requires specialized tools and mechanical knowledge. It is recommended that installation be performed by a qualified technician.

### General Steps (Consult a service manual for detailed instructions):

1. Safely lift and support the vehicle.
2. Remove the wheel and tire assembly.
3. Remove the brake caliper and rotor.
4. Disconnect any ABS sensor wiring from the old hub assembly.
5. Remove the hub assembly mounting bolts.
6. Carefully remove the old hub assembly.
7. Clean the mounting surface on the steering knuckle.
8. Install the new MOOG 512025 hub assembly, ensuring proper alignment.
9. Torque all mounting bolts to manufacturer specifications.
10. Reconnect the ABS sensor wiring.
11. Reinstall the brake rotor, caliper, wheel, and tire.
12. Lower the vehicle and perform a test drive to ensure proper function.

**Caution:** Incorrect installation can lead to premature failure, compromised vehicle safety, and potential damage to other components. Always refer to your vehicle's specific service manual for precise torque specifications and procedures.

## 5. OPERATING CONSIDERATIONS

Once installed, the MOOG 512025 Wheel Bearing and Hub Assembly is designed for normal vehicle operation. No special operating procedures are required beyond standard vehicle maintenance practices.

## 6. MAINTENANCE

MOOG hub assemblies are designed to be maintenance-free units. Regular inspection of the wheel bearing and surrounding components during routine vehicle service is recommended to identify any signs of wear or damage.

### Inspection Points:

- Check for excessive play in the wheel bearing.
- Listen for unusual noises (grinding, humming, roaring) coming from the wheel area.
- Inspect for any signs of grease leakage around the hub.
- Ensure ABS sensor wiring is intact and free from damage.

*If any issues are detected, consult a qualified technician for diagnosis and repair.*

## 7. TROUBLESHOOTING COMMON SYMPTOMS

If you experience any of the following symptoms, your wheel bearing and hub assembly may require inspection or replacement:

- **Humming, Grinding, or Roaring Noise:** Often increases with vehicle speed or when turning.
- **Loose Steering or Excessive Play:** Feeling looseness in the steering wheel or excessive movement when wiggling the wheel.
- **ABS Light Illumination:** A faulty ABS sensor integrated into the hub assembly can trigger the Anti-lock Braking System warning light.
- **Uneven Tire Wear:** Can be an indication of a worn wheel bearing affecting wheel alignment.



Figure 3: Visual representation of common symptoms of a failing wheel bearing, including vehicle noise, steering vibration, illuminated ABS light, and uneven tire wear.

## 8. SPECIFICATIONS

Specification	Value
Brand	MOOG
Model Number	512025
Material	Metal
Item Dimensions (L x W x H)	6 x 3.8 x 5.9 inches

Specification	Value
Item Weight	3.4 Pounds
Bearing Number	6802
Bearing Type	Ball Bearing
Compatible Lubricant	Grease
UPC	614046099142
Manufacturer	Federal Mogul

## 9. WARRANTY AND SUPPORT

For information regarding product warranty, returns, or technical support, please refer to the official MOOG website or contact their customer service directly. Keep your purchase receipt for warranty claims.

**Online Resources:** [Visit the MOOG Store on Amazon](#)