

MOOG 512593

MOOG 512593 Wheel Bearing and Hub Assembly

User Manual

Brand: MOOG | Model: 512593

1. PRODUCT OVERVIEW

The MOOG 512593 Wheel Bearing and Hub Assembly is engineered for superior performance and durability in a wide range of foreign and domestic vehicles. Designed with advanced features, this assembly ensures longer life, smoother operation, and optimal ABS performance, providing a reliable solution for your vehicle's wheel system.



Figure 1: Front view of the MOOG 512593 Wheel Bearing and Hub Assembly.



Figure 2: Side view of the MOOG 512593 Wheel Bearing and Hub Assembly, showing the mounting flange and studs.



Figure 3: Rear view of the MOOG 512593 Wheel Bearing and Hub Assembly, highlighting the bearing and ABS sensor connection.

2. COMPATIBILITY

This MOOG 512593 Wheel Bearing and Hub Assembly is compatible with the following vehicle models:

- 2018-2022 Buick Enclave
- 2017-2022 Cadillac XT5
- 2020-2022 Cadillac XT6
- 2018-2022 Chevrolet Traverse
- 2017-2022 GMC Acadia

Important: Before purchasing, ensure this part fits your specific vehicle. Verify all vehicle information (year, make, model, engine, and trim) for compatibility and check any qualifier notes.

3. KEY FEATURES

The MOOG 512593 Hub Assembly incorporates several design enhancements for improved performance and longevity:

- **Innovative Roll Form Design:** Ensures consistent and optimal preload for reliable operation.
- **Precision Matched Components:** Rigorously controlled manufacturing processes ensure exact matching of bearing raceways and rolling elements, delivering superior performance and minimizing noise and vibration.
- **Enhanced Sealing:** Engineered with improved seals to protect against premature wear and lubricant breakdown, even in harsh conditions. This includes:
 - Molded grommet to protect ABS functionality.
 - Improved quad-lip inboard seal.
 - Improved 3-lip primary outboard seal.
 - Grime Defense outboard seal.
- **Abrasion-Resistant ABS Cord:** Designed for durability and reliable ABS signal transmission.
- **Wheel Studs with Protective Coating:** Provides added corrosion resistance and longevity.

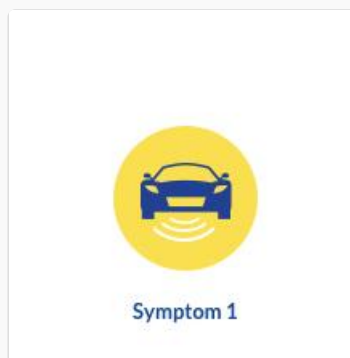


Figure 4: Diagram illustrating key features of the MOOG Hub Assembly, including the ABS cord, roll form design, quad lip seal, precision matched components, and protective coating on wheel studs.

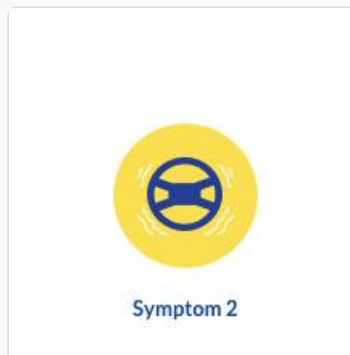


Figure 5: Cross-section view of a bearing, highlighting the internal components and precision matching.

4. INSTALLATION GUIDE

Installation of the MOOG 512593 Wheel Bearing and Hub Assembly should be performed by a qualified technician using appropriate tools and safety procedures. Refer to your vehicle's specific service manual for detailed, step-by-step instructions.

General Steps (Consult Vehicle Service Manual for Details):

1. Safely lift and support the vehicle.
2. Remove the wheel and brake caliper assembly.
3. Disconnect the ABS sensor wire (if applicable).

4. Remove the old hub assembly.
5. Clean the mounting surface thoroughly.
6. Install the new MOOG 512593 Hub Assembly, ensuring proper alignment.
7. Reconnect the ABS sensor wire.
8. Reinstall the brake caliper assembly and wheel.
9. Torque all fasteners to manufacturer specifications.
10. Lower the vehicle and perform a test drive to ensure proper function.



Figure 6: Illustration of a hub assembly's location within a vehicle's suspension system.

5. OPERATING CONSIDERATIONS

Once installed, the MOOG 512593 Wheel Bearing and Hub Assembly operates as an integral part of your vehicle's wheel and braking system. No specific user operation is required beyond normal vehicle use. However, it is crucial to be aware of potential symptoms that may indicate an issue with the hub assembly.

6. MAINTENANCE

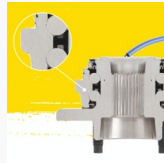
The MOOG 512593 Wheel Bearing and Hub Assembly is designed for maintenance-free operation. Regular inspection of your vehicle's suspension and wheel components during routine service is recommended to identify any signs of wear or damage early. Pay attention to:

- Unusual noises (grinding, humming, roaring) from the wheels.
- Vibration felt through the steering wheel or floorboard.
- Loose steering or poor handling.
- Uneven tire wear.
- Illumination of the ABS warning light.

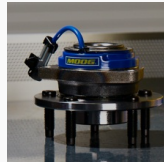
If any of these symptoms are observed, have your vehicle inspected by a qualified technician promptly.

7. TROUBLESHOOTING

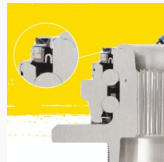
Common symptoms of a failing wheel bearing and hub assembly include:



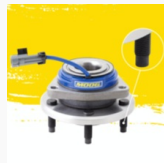
Symptom 1: Noise (e.g., grinding, humming, roaring) that changes with vehicle speed or turning.



Symptom 2: Vibration felt in the steering wheel, floorboard, or seat.



Symptom 3: ABS warning light illumination (due to sensor issues or damage).



Symptom 4: Uneven or abnormal tire wear.

If you experience any of these symptoms, it is recommended to have your vehicle inspected by a certified mechanic to diagnose and address the issue.

8. SPECIFICATIONS

Attribute	Value
Manufacturer	MOOG Hub Assemblies
Brand	MOOG
Model Number	512593
Item Weight	9.39 pounds
Product Dimensions	6 x 5.88 x 3.75 inches
Exterior	Machined
First Available Date	May 14, 2012

9. WHAT'S IN THE BOX

The MOOG 512593 Wheel Bearing and Hub Assembly package includes:

- 1 x Wheel Bearing and Hub Assembly


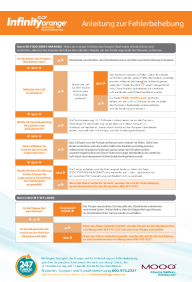


10. WARRANTY AND SUPPORT



For warranty information and technical support regarding your MOOG 512593 Wheel Bearing and Hub Assembly, please refer to the official MOOG website or contact their customer service directly. Keep your proof of purchase for any warranty claims.

You can visit the official MOOG Store for more information:[MOOG Store on Amazon](#)

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Related Documents - 512593

	<p>Moog Minimoog Voyager Analog Synthesizer User Manual - Setup, Features, and Operation</p> <p>Comprehensive user manual for the Moog Minimoog Voyager analog synthesizer, covering setup, connections, components, user interface, synthesis basics, MIDI implementation, and technical specifications.</p>
	<p>Infinityorange Enteral Feeding Pump Fehlerbehebungsanleitung</p> <p>Detaillierte Fehlerbehebungsanleitung für die Moog Infinityorange Enteral Feeding Pump, die gängige Alarme wie NO FOOD und LOAD SET abdeckt und Schritt-für-Schritt-Lösungen bietet.</p>
	<p>Moog Curlin 6000 Series PCA Therapy Clinician Guide</p> <p>Comprehensive clinician guide for the Moog Curlin 6000 Series Ambulatory Infusion Pump, detailing PCA therapy setup, programming, options, and troubleshooting.</p>
	<p>Build Your Own Minimoog Model D Paper Synth</p> <p>A comprehensive guide to building a paper model of the iconic Moog Minimoog Model D synthesizer. This DIY project includes printable templates and step-by-step assembly instructions for creating your own miniature replica.</p>

	<p>Moog GR1200-E 1200ml Gravity Enteral Delivery Set with ENFit Connector - Instructions for Use</p> <p>Detailed instructions and safety precautions for the Moog GR1200-E 1200ml Gravity Enteral Delivery Set with ENFit Connector. Learn how to properly set up and use this medical device.</p>
	<p>Infinity Enteral Feeding Pump Operator's Manual</p> <p>Operator's Manual for the Moog Infinity Enteral Feeding Pump, detailing its features, operation, safety warnings, and troubleshooting for healthcare professionals and caregivers.</p>