

## Aries 993/03300

# Aries Front Hub Wheel Bearing Kit

Model: 993/03300 | Brand: Aries

## 1. OVERVIEW

This instruction manual provides essential information for the proper installation and maintenance of your Aries Front Hub Wheel Bearing Kit. This kit is a high-quality replacement part designed to meet OEM standards for various JCB models, specifically the front hub assembly.

The kit includes all necessary components for replacing the front wheel bearing, ensuring smooth and reliable operation of your machinery's wheel assembly. Please verify the part number against your equipment's manual for compatibility before proceeding with installation.

## 2. SAFETY INFORMATION

**Warning:** Installation of automotive or heavy machinery parts can be complex and dangerous if not performed correctly. It is highly recommended that installation be performed by a qualified professional or experienced mechanic.

- Always wear appropriate personal protective equipment (PPE), including safety glasses, gloves, and sturdy footwear.
- Ensure the vehicle or machinery is securely supported on jack stands or a lift before beginning any work. Never rely solely on a jack.
- Disconnect the battery if working near electrical components.
- Use the correct tools for each step of the installation process.
- Refer to your specific machinery's service manual for detailed torque specifications and additional safety procedures.
- Keep children and pets away from the work area.

## 3. KIT CONTENTS

Your Aries Front Hub Wheel Bearing Kit (Part No. 993/03300) typically includes the following components. Please inspect all parts upon receipt to ensure everything is present and undamaged.

- Tapered Roller Bearings (Inner and Outer)
- Bearing Races (Inner and Outer)
- Wheel Seal

- Hub Cap / Dust Cap
- Retaining Nut / Castle Nut
- Washer



Figure 3.1: Complete Aries Front Hub Wheel Bearing Kit components, including bearings, races, seal, hub cap, nut, and washer.



Figure 3.2: A closer look at the individual components of the bearing kit, highlighting the tapered roller bearings and their corresponding races.



Figure 3.3: Another perspective of the Aries Front Hub Wheel Bearing Kit, showing the arrangement of parts.



Figure 3.4: Overhead view of the Aries Front Hub Wheel Bearing Kit components, providing a clear layout of all included items.

## 4. INSTALLATION GUIDE

This section provides a general guide for the installation of the front hub wheel bearing kit. Specific steps and torque values may vary depending on your JCB model. Always consult your machinery's official service manual for precise instructions.

### 1. Preparation:

- Park the machinery on a level surface and engage the parking brake.
- Loosen the lug nuts on the wheel to be serviced.
- Raise the front of the machinery using a suitable jack and secure it with jack stands.
- Remove the wheel and tire assembly.

### 2. Disassembly:

- Remove the brake caliper and rotor (if applicable) and secure them out of the way without straining the brake hose.
- Remove the dust cap, cotter pin, and castle nut from the spindle.
- Carefully slide the hub assembly off the spindle.
- Remove the old inner and outer bearings, seal, and races from the hub. Clean the hub thoroughly, removing all old grease and debris.

### 3. Bearing Race Installation:

- Using a bearing race driver or a suitable socket, carefully tap the new inner and outer bearing races into the clean hub until they are fully seated. Ensure they are not cocked.

#### 4. Bearing and Seal Installation:

- Pack the new inner and outer bearings thoroughly with high-quality wheel bearing grease. Ensure grease is forced into all voids of the bearing.
- Place the packed inner bearing into the hub.
- Install the new wheel seal using a seal driver or a block of wood and hammer, ensuring it is seated flush.

#### 5. Hub Assembly Installation:

- Carefully slide the hub assembly onto the spindle.
- Install the packed outer bearing, washer, and castle nut.
- **Bearing Adjustment:** Tighten the castle nut to the manufacturer's specified torque, then back it off slightly (typically 1/4 to 1/2 turn) to align the cotter pin hole. Insert a new cotter pin. This step is critical for proper bearing life and function.
- Install the new dust cap.

#### 6. Reassembly:

- Reinstall the brake rotor and caliper.
- Mount the wheel and tire assembly, hand-tighten the lug nuts.
- Lower the machinery to the ground and torque the lug nuts to the manufacturer's specifications in a star pattern.

#### 7. Final Check:

- Test drive the machinery at low speeds to ensure proper function and listen for any unusual noises.
- Recheck lug nut torque after 50-100 miles of operation.

### 5. POST-INSTALLATION & MAINTENANCE

Proper maintenance ensures the longevity and performance of your new wheel bearing kit.

- **Regular Inspection:** Periodically inspect the wheel hub area for any signs of grease leakage, unusual wear, or looseness.
- **Noise Monitoring:** Pay attention to any new noises coming from the wheel area, such as grinding, humming, or roaring sounds, which could indicate bearing issues.
- **Temperature Check:** After extended operation, carefully check the temperature of the hub. Excessive heat can be a sign of bearing problems.
- **Lubrication:** Depending on your machinery's service schedule, wheel bearings may require periodic re-greasing. Consult your machinery's manual for recommended intervals and grease types.

### 6. TROUBLESHOOTING COMMON ISSUES

If you experience issues after installation, consider the following common problems and potential causes:

Symptom	Possible Cause
Grinding or roaring noise from wheel	Improper bearing preload (too tight or too loose), lack of lubrication, or damaged bearing.
Excessive wheel play/wobble	Loose castle nut, worn bearings, or improper installation.

Symptom	Possible Cause
Hub overheating	Bearings too tight, insufficient lubrication, or incorrect bearing type.
Grease leakage from hub cap/seal	Damaged or improperly installed seal, excessive grease packing.

If troubleshooting does not resolve the issue, or if you are unsure, it is best to consult a professional mechanic.

## 7. PRODUCT SPECIFICATIONS

Specification	Detail
Brand	Aries
Part Number (Primary)	993/03300
Associated Part Numbers	907/04100, 907/05700, 904/06200, 904/06201, 1340/0905Z, 120/30006, 120/30009
Material	Alloy Steel
Fastener Type	Wheel
Manufacturer	Aries
Grade Rating	Aerospace (as per product specifications)

## 8. SUPPORT & WARRANTY

**Product Quality:** This Aries Front Hub Wheel Bearing Kit is manufactured to OEM standards. We source our stock from Top Quality Manufacturers (TQM) with OEM contracts, ensuring you receive an OEM specification product.

**Compatibility Check:** If you are unsure about the suitability of this part for your specific machinery, it is highly recommended to message the seller with your JCB Machine Serial Number (VIN) before purchase. The seller can assist in verifying compatibility.

**General Inquiries:** For any questions regarding the product, its application, or if you are looking for other JCB parts not listed, please contact the seller directly through the platform where the purchase was made. They are JCB specialty super stockists and can assist with a wide range of parts.