

## JIARUIXIN 550 6V 20000RPM

# JIARUIXIN 550 20000RPM 6V Motor Gearbox Instruction Manual

## 1. INTRODUCTION

---

This instruction manual provides essential information for the proper installation, operation, and maintenance of your JIARUIXIN 550 20000RPM 6V Motor Gearbox. This product is designed as a replacement or upgrade component for children's electric ride-on cars and motorcycles. Please read this manual thoroughly before installation and use to ensure safe and effective operation.

## 2. SAFETY INFORMATION

---

- **Electrical Safety:** Always disconnect the battery power from the ride-on vehicle before attempting any installation or maintenance. Failure to do so may result in electrical shock or damage to the product or vehicle.
- **Professional Installation:** If you are unfamiliar with electrical components or mechanical installations, it is recommended to seek assistance from a qualified professional.
- **Component Matching:** Ensure that the voltage (6V) and RPM (20000RPM) of this motor gearbox match the specifications required by your ride-on vehicle. Using an incompatible motor may lead to malfunction or damage.
- **Secure Connections:** All electrical connections must be secure and properly insulated to prevent short circuits.
- **Child Safety:** Keep small parts and tools out of reach of children during installation.

## 3. PRODUCT OVERVIEW AND COMPATIBILITY

---

The JIARUIXIN 550 20000RPM 6V Motor Gearbox is a high-speed drive engine made from a high-strength plastic board combined with a quality motor. It is widely used in children's ride-on cars.

To ensure this gearbox fits your specific ride-on vehicle, carefully compare the appearance and dimensions of your existing gearbox with the images and specifications provided below. The model number (550) can often be found directly on the motor casing of your original unit.



**Figure 3.1: Gearbox Output Shaft Dimensions.** This image displays the inner diameter measurements of the gearbox output shaft, crucial for matching with your vehicle's wheel assembly. The inner diameter measures 4.9 cm and 5.8 cm, with a central shaft width of 1.44 cm.



**Figure 3.2: Overall Gearbox Dimensions.** This image shows a top-down view of the gearbox, indicating its total length of 18.5 cm. Key mounting points and internal structure dimensions are also shown, including an aperture of 1.2 cm, and other measurements of 9.2 cm, 7 cm, and a diameter of 3.6 cm.



**Figure 3.3: Gearbox Side View with Motor.** This image presents a side view of the gearbox assembly, clearly showing the attached 550 motor and its electrical wiring with a standard connector. This view helps in assessing the physical fit within the vehicle's chassis.

## 4. SPECIFICATIONS

Specification	Value
Brand	JARUIXIN
Model Number	550
Voltage	6 Volts
Speed	20000 RPM
Material	Plastic
Item Weight	1.04 Pounds (approx. 0.47 kg)
Product Dimensions	7.2 x 3.65 x 4.7 inches (approx. 18.3 x 9.3 x 11.9 cm)

Specification	Value
UPC	716294394076
ASIN	B07DB9YJNN

## 5. INSTALLATION GUIDE

---

This section outlines the general steps for replacing an existing motor gearbox. Specific procedures may vary depending on your ride-on vehicle model.

- 1. Prepare the Vehicle:** Ensure the ride-on vehicle is turned off and the battery is disconnected to prevent accidental operation or electrical hazards.
- 2. Access the Gearbox:** Locate and remove the necessary covers, seats, or body panels to gain access to the existing motor gearbox assembly. This may involve unscrewing fasteners.
- 3. Disconnect Wiring:** Carefully disconnect the electrical wires from the old motor. Note the polarity (positive/negative) if not color-coded, or if the new motor's connector differs. The provided motor typically uses a standard connector as shown in Figure 5.1.
- 4. Remove Old Gearbox:** Unscrew and remove the mounting bolts or clips securing the old gearbox to the vehicle chassis. Gently pull the gearbox out, ensuring no other components are damaged.
- 5. Install New Gearbox:** Position the new JIARUIXIN 550 20000RPM 6V Motor Gearbox into the mounting location. Ensure the output shaft aligns correctly with the wheel assembly. Secure it with the original mounting bolts or clips.
- 6. Connect Wiring:** Connect the electrical wires from the vehicle to the new motor. Ensure the connections are firm and correct polarity is maintained. If the connectors do not match, you may need to splice the wires, ensuring proper insulation with electrical tape or heat shrink tubing.
- 7. Test Functionality:** Before reassembling the vehicle, reconnect the battery and perform a brief test to ensure the motor operates correctly. Check for smooth rotation and appropriate speed.
- 8. Reassemble Vehicle:** Once confirmed operational, reattach all covers, seats, and body panels that were removed.



**Figure 5.1: Motor Gearbox with Connector.** This image shows the side profile of the 550 motor gearbox, highlighting the motor unit, the gearbox housing, and the attached electrical wires terminating in a standard white connector. This view is helpful for understanding wiring connections during installation.



**Figure 5.2: Angled View of Motor Gearbox.** An angled perspective of the 550 motor gearbox, providing a comprehensive view of its compact design and the integration of the motor with the gearbox. This helps in visualizing how the unit fits into tight spaces.

## 6. OPERATION

---

Once correctly installed, the JIARUIXIN 550 20000RPM 6V Motor Gearbox operates automatically when power is supplied from the ride-on vehicle's control system. The motor provides the necessary rotational force to the gearbox, which then drives the wheels of the vehicle. Ensure the vehicle's battery is fully charged for optimal performance.

## 7. MAINTENANCE

---

Regular maintenance helps prolong the lifespan and ensure consistent performance of your motor gearbox.

- **Keep Clean:** Periodically inspect the gearbox and motor for dirt, dust, or debris accumulation. Clean with a dry cloth or soft brush. Avoid using water or harsh chemicals.
- **Check Connections:** Ensure all electrical connections remain secure and free from corrosion. Loose connections can lead to intermittent operation or power loss.
- **Inspect for Damage:** Regularly check the gearbox housing and motor for any signs of cracks, wear, or

physical damage. Replace the unit if significant damage is observed.

- **Avoid Overloading:** Do not exceed the weight capacity or intended use of the ride-on vehicle, as this can put excessive strain on the motor and gearbox, leading to premature wear.

## 8. TROUBLESHOOTING

---

If you encounter issues with your motor gearbox, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Motor not running	No power to motor; Loose electrical connection; Faulty motor/gearbox; Discharged battery	Check battery charge; Verify all electrical connections are secure; Inspect wiring for damage; Test motor with a direct 6V power source if possible; Replace if faulty.
Reduced speed or power	Low battery charge; Excessive load on vehicle; Worn gears in gearbox; Partial electrical connection issue	Charge battery fully; Reduce load on vehicle; Inspect gearbox for wear; Check electrical connections for corrosion or looseness.
Unusual noise from gearbox	Worn or damaged gears; Debris inside gearbox; Improper installation	Disassemble and inspect gears for wear or damage; Clean out any debris; Reinstall ensuring proper alignment.
Motor overheating	Excessive load; Prolonged continuous use; Inadequate ventilation	Reduce load; Allow motor to cool down between uses; Ensure motor area has sufficient airflow.

If troubleshooting steps do not resolve the issue, contact customer support or a qualified technician.

## 9. WARRANTY AND SUPPORT

---

For warranty information, returns, or technical support regarding your JIARUIXIN 550 20000RPM 6V Motor Gearbox, please refer to the purchase documentation or contact the seller directly through the platform where the product was purchased. Provide your order number and product details for faster assistance.