

## RATION RE506197



# RATION RE506197 12V Alternator Instruction Manual

For John Deere Skid Steer Models: 240, 250, 260, 8875

## 1. INTRODUCTION

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This manual provides essential information for the proper installation, operation, and maintenance of your RATION RE506197 12V Alternator. This alternator is designed as a direct replacement part for specific John Deere Skid Steer models. Please read this manual thoroughly before attempting any installation or service to ensure safe and correct usage.

## 2. SAFETY INFORMATION

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Always observe the following safety precautions to prevent injury or damage to the product and equipment:

- **Disconnect Battery:** Before beginning any work on the electrical system, always disconnect the negative (-) battery cable first to prevent accidental short circuits or electrical shock.
- **Wear Protective Gear:** Use appropriate personal protective equipment, including safety glasses and gloves, during installation and maintenance.
- **Professional Installation:** If you are not experienced with automotive electrical systems, it is recommended to have the alternator installed by a qualified technician.
- **Avoid Contact with Moving Parts:** Ensure the engine is off and cooled down before working near belts or other moving components.
- **Check Wiring:** Verify all wiring connections are secure and correctly routed to prevent damage from heat or vibration.

## 3. PACKAGE CONTENTS

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Verify that all items are present upon opening the package:

- 1 x RATION RE506197 12V Alternator

*Note: Additional mounting hardware or tools are not included and must be sourced separately if needed.*

## 4. SETUP AND INSTALLATION

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This section outlines the general steps for replacing an alternator. Specific procedures may vary depending on your John Deere Skid Steer model. Refer to your vehicle's service manual for detailed instructions.

1. **Preparation:** Park the skid steer on a level surface, engage the parking brake, and turn off the engine. Allow the engine to cool completely.
2. **Disconnect Battery:** Disconnect the negative (-) battery cable, followed by the positive (+) battery cable.
3. **Access Alternator:** Locate the alternator on your skid steer. You may need to remove other components to gain access.
4. **Remove Drive Belt:** Loosen the tensioner and remove the serpentine or V-belt from the alternator pulley.
5. **Disconnect Wiring:** Carefully disconnect all electrical connections from the old alternator. Note their positions for reinstallation.
6. **Remove Old Alternator:** Unbolt and remove the old alternator from its mounting brackets.
7. **Install New Alternator:** Position the RATION RE506197 alternator into the mounting brackets. Secure it with the appropriate bolts, but do not fully tighten yet.
8. **Connect Wiring:** Reconnect all electrical wires to the new alternator, ensuring they are secure and correctly attached.
9. **Install Drive Belt:** Route the drive belt over the alternator pulley and adjust the tensioner to the manufacturer's specifications. Tighten the alternator mounting bolts.
10. **Reconnect Battery:** Reconnect the positive (+) battery cable, then the negative (-) battery cable.
11. **Test System:** Start the engine and check for proper charging system operation. Observe the battery warning light and use a voltmeter to confirm charging voltage (typically 13.5-14.5V).



Image 1: The RATION RE506197 12V Alternator. This image shows the complete alternator unit with its pulley and mounting points, ready for installation.

## 5. OPERATING INSTRUCTIONS

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Once correctly installed, the RATION RE506197 12V Alternator operates automatically as part of your skid steer's electrical system. Its primary function is to convert mechanical energy from the engine into electrical energy to power the vehicle's electrical components and recharge the battery.

- **Automatic Operation:** The alternator begins charging the battery and supplying power to the electrical system as soon as the engine starts.
- **Monitoring:** Pay attention to your skid steer's dashboard warning lights. A battery or charging system warning light indicates a potential issue with the alternator or charging circuit.

## 6. MAINTENANCE

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Regular inspection and basic maintenance can help prolong the life of your alternator:

- **Belt Inspection:** Periodically check the drive belt for proper tension, cracks, fraying, or excessive wear. A loose or worn belt can lead to insufficient charging.
- **Wiring Connections:** Inspect all electrical connections to the alternator for corrosion, looseness, or damage. Ensure they are clean and secure.
- **Cleanliness:** Keep the alternator free from excessive dirt, oil, and debris, which can affect cooling and performance.
- **Battery Condition:** Ensure your battery is in good condition. A failing battery can put undue strain on the alternator.

## 7. TROUBLESHOOTING

If you experience issues with your charging system, consider the following common problems and solutions:

Symptom	Possible Cause	Action
Battery warning light on	Loose or worn drive belt	Check belt tension and condition; replace if necessary.
Battery warning light on	Corroded or loose wiring connections	Inspect and clean all electrical connections. Tighten as needed.
Battery warning light on	Faulty alternator	Test alternator output with a multimeter. If output is low or absent, replacement may be required.
Battery warning light on	Dead or failing battery	Test battery condition. Recharge or replace if faulty.
Dim lights or electrical issues	Insufficient charging from alternator	Perform checks as above for faulty alternator or connections.

If troubleshooting steps do not resolve the issue, it is recommended to consult a qualified mechanic or electrical specialist.

## 8. SPECIFICATIONS

- **Part Number:** RE506197
- **Voltage:** 12V
- **Manufacturer:** RATION
- **Compatible John Deere Skid Steer Models:** 240, 250, 260, 8875
- **Specific Model Fitment:** 240 (W/3029D ENG), 250 (W/3029T ENG)

## 9. WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the documentation provided at the time of purchase or contact your retailer directly. RATION stands behind the quality of its products, and any warranty claims or technical assistance requests should be directed through the appropriate channels.



