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› RAREELECTRICAL Starter Motor Instruction Manual for John Deere Equipment

Rareelectrical 16644*2

RAREELECTRICAL Starter Motor Instruction Manual

Model: 16644*2

This manual provides essential information for the installation, operation, and maintenance of your RAREELECTRICAL starter motor, designed for various John Deere equipment.

PRODUCT OVERVIEW

The RAREELECTRICAL starter motor is a high-quality replacement unit compatible with specific John Deere applications. It is engineered to meet or exceed original equipment specifications, ensuring reliable starting performance for your machinery.



Image of the RAREELECTRICAL starter motor, showing the main body and solenoid.



Image of the RAREELECTRICAL starter motor, showing the drive gear and mounting flange.

COMPATIBILITY

This starter motor is compatible with the following John Deere models and OEM part numbers. Please verify your original unit's part number to ensure correct fitment.

Replaces OEM Part Numbers:

- DENSO REMY: 1046993
- JOHN DEERE: AR63341, SE01421, SE501415, TY25961, TY6613, TY6712
- ND REMAN: 9702800-397, 9702800397
- NIPPONDENSO: 028000-3970, 028000-3971, 0280003970, 0280003971

Compatible John Deere Equipment Models:

- **Backhoe:** 415B (1983-1986), 515B (1983-1986), 610B (1983-1986)
- **Crawlers:** 455G, 550 (1976-1981), 550A (1982-1985), 550B (1986-1988), 550G, 555 (1974-1981), 555A (1982-1985), 555B (1985-1992), 555G, 650G
- **Engines - Industrial:** 4276D/T, 6414D/T
- **Loader:** 344E (1988-1995), 444E (1988-1995)
- **Skidder:** 340D 276 Diesel (1984-1988), 440C 276 Diesel (1976-1984), 440D 276 Diesel (1984-1992), 448D (1984-1985), 540B 276 Diesel (1976-1981), 540D (1985-1992), 548D (1985-1992), 640 414 Diesel (1975-1985), 640D 414 Diesel (1985-1992), 648D 6068 Engine (1985-1992)
- **Tractor - Industrial:** 410B (1983-1986)

TECHNICAL SPECIFICATIONS

Feature	Specification
Unit Type	DENSO
Type	DD
Voltage	12V
Power	4 KW
Rotation	Clockwise

Tooth Count	10
Gear OD	40mm / 1.575in
Mounting Ear 1	10.4mm ID Unthreaded
Mounting Ear 2	10.4mm ID Unthreaded
Mounting Ear 3	10.4mm ID Unthreaded
Weight	21.20 kg / 46.65 lbs
Country of Origin	CN

INSTALLATION GUIDE

Warning: Disconnect the battery before beginning any electrical work. Improper installation can lead to damage, fire, or injury. Professional installation is highly recommended.

1. **Safety First:** Ensure the vehicle's battery is completely disconnected (negative terminal first) to prevent electrical shorts or accidental starting.
2. **Locate Starter:** Identify the location of the existing starter motor on your John Deere equipment.
3. **Disconnect Wiring:** Carefully disconnect all electrical wiring from the old starter motor. Note the position of each wire for correct reinstallation.
4. **Remove Mounting Bolts:** Remove the bolts securing the old starter motor to the engine block or transmission housing.
5. **Remove Old Starter:** Carefully extract the old starter motor from its mounting position. It may be heavy.
6. **Position New Starter:** Align the new RAREELECTRICAL starter motor with the mounting holes.
7. **Secure New Starter:** Insert and tighten the mounting bolts, securing the new starter motor in place. Refer to your equipment's service manual for specific torque specifications.
8. **Reconnect Wiring:** Reconnect all electrical wiring to the new starter motor, ensuring all connections are clean, tight, and correctly polarized.
9. **Reconnect Battery:** Reconnect the vehicle's battery (positive terminal first, then negative).
10. **Test Operation:** Attempt to start the engine to verify proper operation of the new starter motor.

OPERATION

The starter motor is designed to engage the engine's flywheel, initiating the combustion process. To operate, turn the ignition key to the 'START' position. The starter will crank the engine. Release the key once the engine starts.

Important: Do not engage the starter for more than 10-15 seconds at a time. Allow a brief cool-down period (at least 30 seconds) between starting attempts to prevent overheating and potential damage to the starter motor.

MAINTENANCE

Regular inspection of the starter motor and its electrical connections can significantly prolong its lifespan and ensure reliable performance.

- **Check Connections:** Periodically inspect all electrical connections to the starter motor and battery for

signs of corrosion, looseness, or damage. Clean and tighten connections as necessary.

- **Battery Health:** Ensure your vehicle's battery is in good condition, adequately charged, and its terminals are clean and secure. A weak battery is a common cause of starter issues.
- **Listen for Noises:** Pay attention to any unusual grinding, whirring, or clicking noises during starting. These can indicate wear or a developing issue with the starter motor or flywheel.
- **Keep Clean:** Keep the starter motor free from excessive dirt, oil, and debris, which can affect its operation and heat dissipation.

TROUBLESHOOTING COMMON ISSUES

Problem	Possible Causes	Solution
Starter does not engage or makes a single clicking sound.	Low battery charge, loose or corroded battery terminals, faulty solenoid, faulty ignition switch.	Check battery charge and connections. Inspect solenoid wiring. If issues persist, consult a professional.
Starter cranks slowly.	Low battery charge, heavy engine oil (especially in cold weather), worn starter motor.	Charge/test battery. Ensure correct oil viscosity for conditions. Consider professional inspection of starter.
Starter spins but engine does not crank.	Faulty starter drive (bendix), damaged flywheel teeth.	Inspect starter drive and flywheel. Replacement of starter or flywheel may be necessary.
Starter motor overheats.	Excessive cranking time, short circuit, worn internal components.	Limit cranking time. Check for electrical shorts. If problem persists, professional inspection is required.

PRODUCT INFORMATION VIDEO

Your browser does not support the video tag.

This video provides a general overview of Rareelectrical products and their commitment to quality. While not specific to installation, it highlights the brand's focus on reliable electrical components.

WARRANTY INFORMATION

RAREELECTRICAL products typically come with a manufacturer's warranty. For specific warranty terms and conditions, including coverage duration and claim procedures, please refer to the documentation included with your purchase or contact RAREELECTRICAL directly through their official channels.

CUSTOMER SUPPORT

For technical assistance, compatibility questions, or warranty claims regarding your RAREELECTRICAL starter motor, please contact RAREELECTRICAL customer support.

You can also visit the official Rareelectrical store on Amazon for more information and to explore other products: [Rareelectrical Amazon Store](#)

