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Rareelectrical IA1117D4

RAREELECTRICAL Alternator Instruction Manual

Model: IA1117D4

PRODUCT OVERVIEW

This manual provides essential information for the installation, operation, and maintenance of your RAREELECTRICAL New Iskra Alternator. This high-quality replacement alternator is designed for compatibility with various agricultural and heavy-duty equipment, ensuring reliable power generation for your vehicle's electrical system.

It is compatible with a range of systems including BOSCH, JOHN DEERE, KHD, LETRIKA/ISKRA, and PERKINS.

Specifically, it is designed for John Deere Tractor models 6820 and 6920, among others. Always verify the OEM part number from your original unit to ensure proper fitment.

SAFETY INFORMATION

Always prioritize safety when working with electrical components and heavy machinery. Failure to follow safety precautions can result in serious injury or damage to equipment.

- **Disconnect Battery:** Before beginning any work, always disconnect the vehicle's battery (negative terminal first) to prevent electrical shock or short circuits.
- **Wear Protective Gear:** Use appropriate personal protective equipment (PPE) such as safety glasses and gloves.
- **Professional Installation:** If you are not experienced with automotive electrical systems, it is highly recommended to seek professional installation.
- **Secure Vehicle:** Ensure the vehicle is stable and properly supported before working underneath it.
- **Avoid Hot Surfaces:** Engine components can be extremely hot. Allow the engine to cool before servicing.

SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance and longevity of your new alternator. Follow these general steps, referring to your vehicle's specific service manual for detailed instructions.

Pre-Installation Checks:

- **Verify Part Number:** Confirm that the OEM part number of your original alternator matches one of the compatible numbers listed in the specifications section of this manual.

- **Inspect Packaging:** Check the alternator for any visible shipping damage before installation.
- **Gather Tools:** Ensure you have all necessary tools, including wrenches, sockets, and a battery terminal cleaner.

Installation Steps:

1. **Disconnect Battery:** Disconnect the negative (-) battery cable, then the positive (+) cable.
2. **Access Alternator:** Locate the alternator on your vehicle. Depending on the model, you may need to remove other components for access.
3. **Remove Drive Belt:** Loosen the tensioner and remove the serpentine or V-belt from the alternator pulley.
4. **Disconnect Wiring:** Carefully disconnect all electrical connections from the old alternator (main power wire, regulator wire, etc.). Note their positions for reinstallation.
5. **Remove Mounting Bolts:** Unbolt the old alternator from its mounting brackets.
6. **Remove Old Alternator:** Carefully remove the old unit from the engine compartment.
7. **Install New Alternator:** Position the new RAREELECTRICAL alternator into the mounting brackets. Secure it with the mounting bolts, but do not fully tighten yet.
8. **Reconnect Wiring:** Reconnect all electrical wires to the new alternator, ensuring secure and clean connections.
9. **Install Drive Belt:** Route the drive belt around the alternator pulley and other pulleys. Adjust the tensioner to achieve the correct belt tension as specified by your vehicle's manufacturer.
10. **Tighten Mounting Bolts:** Fully tighten all alternator mounting bolts.
11. **Reconnect Battery:** Reconnect the positive (+) battery cable, then the negative (-) cable.
12. **Test System:** Start the engine and check for proper charging system operation. Monitor the battery voltage and charging indicator light.



Image: The RAREELECTRICAL New Iskra Alternator. This image shows the main body of the alternator, including its cooling fins, mounting points, and the central shaft with the pulley nut.

OPERATING PRINCIPLES

The alternator is a key component of your vehicle's electrical system, responsible for generating electrical power to run the vehicle's accessories and recharge the battery while the engine is running. It converts mechanical energy from the engine's crankshaft (via the drive belt) into electrical energy.

Once installed, the alternator operates automatically when the engine is running. It continuously monitors the vehicle's electrical load and battery charge level, adjusting its output to meet demand. A properly functioning alternator ensures your battery remains charged and all electrical systems receive adequate power.

MAINTENANCE

While alternators are generally low-maintenance components, periodic checks can help ensure their longevity and prevent unexpected failures.

- **Belt Inspection:** Regularly inspect the drive belt for cracks, fraying, or excessive wear. Ensure it has the correct tension. A loose belt can lead to insufficient charging.
- **Wiring Connections:** Periodically check all electrical connections to the alternator for corrosion or looseness. Clean terminals if necessary.
- **Battery Health:** A weak or failing battery can put undue strain on the alternator. Ensure your battery is in good condition.
- **Cleanliness:** Keep the alternator free from excessive dirt, oil, and debris, which can impede cooling and affect performance.

TROUBLESHOOTING

If you experience issues with your vehicle's charging system, the alternator may be a contributing factor. Here are some common symptoms and basic troubleshooting steps:

| Symptom | Possible Cause | Action |
|-----------------------------------|--|--|
| Battery Warning Light On | Alternator not charging, loose belt, faulty wiring. | Check belt tension. Inspect all wiring connections. Test alternator output with a multimeter. |
| Dim Headlights / Slow Accessories | Low voltage output from alternator, weak battery. | Check battery voltage with engine off and running. If voltage doesn't increase when running, alternator may be faulty. |
| Grinding or Whining Noise | Worn bearings in alternator, loose or worn belt. | Inspect belt for wear. Listen carefully to pinpoint noise source. If from alternator, replacement may be needed. |
| Dead Battery | Alternator not charging, parasitic drain, old battery. | Charge battery. Test charging system. Check for current draw when vehicle is off. |

If basic troubleshooting does not resolve the issue, it is recommended to consult a qualified mechanic or automotive electrical specialist.

SPECIFICATIONS

Detailed technical specifications for the RAREELECTRICAL New Iskra Alternator:

| Specification | Value |
|-----------------------------|---|
| Item Description | Alternator |
| OEM Manufacturer | ISKRA |
| Voltage | 12 Volts |
| Amperage | 150 Amps |
| Fan Type | Internal |
| Regulator Type | Internal |
| Weight | 18 Lbs (approx. 8.16 kg) |
| Product Dimensions | 10 x 6 x 6 inches (approx. 25.4 x 15.24 x 15.24 cm) |
| Manufacturer Part Number | IA1117D4 |
| Compatible OEM Part Numbers | BOSCH: 0-123-515-501 JOHN DEERE: 1181741 KHD: 118-3185, 1183606 LETRIKA/ISKRA: 11.204.242, 11.204.065, 11.203.803, 11.203.590, 11201794, AAN5122, AAN5123, AAN5125, AAN5173, AAN5520 PERKINS: 3789645 |
| Applications | John Deere Tractor - Farm 6820, John Deere Tractor - Farm 6920 |

PRODUCT APPLICATIONS AND BRAND INFORMATION

RAREELECTRICAL specializes in providing reliable electrical components for a wide range of applications, from automotive to agricultural and marine. The brand focuses on quality and ensuring customers receive the correct part quickly to keep their equipment operational.



When your vehicle or machine is down and you need it up and running, **trust RareElectrical.**

We understand that time is of the essence - whether you need to drive the kids to practice or get the machine up and running at the shop – and we pride ourselves on quickly delivering your reliable replacement.

Contact us to confirm fitment or to address any concerns you may have.

Image: A collage depicting various applications for RAREELECTRICAL products, including heavy machinery, lawn mowers, boats, and cars, highlighting the versatility of their electrical components.

ALTERNATORS, STARTERS, DC MOTORS & RELATED COMPONENTS



Our vast inventory and technical knowledge enables us to help any customer with their needs.



Image: A banner from RAREELECTRICAL showcasing their focus on alternators, starters, DC motors, and related components, emphasizing their technical knowledge and inventory.

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Video: An official RAREELECTRICAL video demonstrating the importance of reliable electrical parts for various activities, from daily commutes to farming and recreation. It highlights the brand's commitment to quality and customer needs.

WARRANTY AND SUPPORT

For specific warranty terms and conditions related to your RAREELECTRICAL alternator, please refer to the documentation provided with your purchase or contact RAREELECTRICAL directly. RAREELECTRICAL is committed to providing quality products and customer support.

If you require further assistance, have questions about fitment, or need to address any concerns, you can reach out to the RAREELECTRICAL team. Their contact information can typically be found on their official website or through the retailer where the product was purchased.

You can also visit the Rareelectrical Store on Amazon for more information and to contact their support team.