



**IF IT FAILS, WE'LL REPLACE IT. GUARANTEED!\***

## Mitsubishi Electric Heavy Duty Brushless Alternator

*Dear Valued Customer,*

*We at Mitsubishi Electric would like to thank you for purchasing one of our high quality HD Alternators and the warranty protection that comes with it. It's the best warranty in the business. This is a manufacturer's direct warranty between you and us.*

### **Some of the highlights of this warranty are:**

- The Product is covered under warranty for 3 years from date of installation.
- Diamond Gard part numbers are warranted against all mechanical failures.
- We will reimburse the purchaser for the cost of replacing a defective Diamond Gard product with another Diamond Gard product.
- Defective product must be returned for analysis. Mitsubishi Electric will pay the freight.  
Go to [http://www.diamond-gard.com/claim\\_form.asp](http://www.diamond-gard.com/claim_form.asp) to file claim and for shipping label.

Visit **[WWW.DIAMOND-GARD.COM](http://WWW.DIAMOND-GARD.COM)** for complete program details.

---

## Installation Instructions



**WARNING** Understand and follow safety procedures as outlined by your shop or employer when ever working with this product, including wearing proper eye protection. Remove all metal jewelry prior to any repair of the charging system. Failure to do so may result in serious and permanent injury. The components listed in these instructions may continue to have power supplied to them even when the ignition switch is in the off position.



**DANGER** Disconnect the vehicle's battery ground cables at the battery before any service to the charging system. Failure to disconnect the battery ground cables can result in serious and permanent injury.



Clean all connections with a wire brush prior to reinstallation to ensure low resistance connections.

If dielectric grease or other corrosion-inhibiting product is applied to terminals, apply after tightening terminals to proper torque. This procedure ensures low resistance connections.

### **Step 1 – Alternator Removal**

1. Disconnect all ground cables connected to the vehicle's batteries.
2. Remove cables connected to alternator.
  - Identify and tag all cables.
  - Cables must be install on the same terminal of the new alternator.
3. Disconnect accessory belt from alternator pulley.
  - Visually inspect belt for cracking and fraying, replace if needed.



**IF IT FAILS, WE'LL REPLACE IT. GUARANTEED!\***

4. Remove four mounting bolts connecting alternator to engine.
  - Note the length of the bolt and location that it came from.
  - Note the location of any bracket that may be held on by the bolt.
5. Remove pulley from alternator using an 8 mm hex wrench and a 24 mm socket.
  - Pulley will be reinstalled on the replacement alternator.
  - Replace pulley with a new one if damaged.

## **Step 2 – Alternator Installation**

1. Install pulley removed from alternator in Step 1 onto new alternator. Tighten the nut to 98-137 Nm (72-101 ft. lbs.) using an 8mm hex and a 24 mm socket.
2. Attach alternator to engine using four mounting bolts removed in Step 1.
  - Follow vehicle/engine manufacturer's specification for bolt torque.
3. Connect accessory belt to the alternator's pulley.
4. Connect cables to alternator.
  - Cables must be installed on the same terminal of the new alternator.  
Reference "Terminal Description" below for proper wrench size and torque.
  - The alternator may have more terminals than the alternator it replaced.  
The B+ and B- terminal are required.  
The S, I and R terminals are optional.

NOTE: The "S" is "remote Sense". Do not connect the remote Sense to the "R" terminal.
5. Reconnect vehicle's batteries.
6. Test alternator.
  - See our Diagnostic Manual for testing procedures, available at [www.Diamond-Gard.com](http://www.Diamond-Gard.com).

### **Terminal Descriptions:**

- B+** - Positive Battery  
12mm 5.8 - 8.0 ft. lbs. (7.8 - 10.8 Nm)
- B-** - Negative Battery  
12mm 2.6 - 5.0 ft. lbs. (3.5 - 6.8 Nm)
- S** - Sense (Remote Sense)  
10mm 1.3 - 2.1 ft. lbs. (1.7 - 2.8 Nm)
- I** - Indicator (L - Lamp)  
10mm 1.3 - 2.1 ft. lbs. (1.7 - 2.8 Nm)
- R** - Relay  
10mm 1.3 - 2.1 ft. lbs. (1.7 - 2.8 Nm)

