



# 1336 REGEN 78A and 180A Converter DC Bus Fuse & Diode Replacement

This publication will guide you through the replacement of the DC bus fuse and diode for 1336 REGEN Converters

Each 1336R-F1-SP1A kit consists of:

- (1) 180A 1336 REGEN Bus Fuse (PN 25178-315-16)
- (1) 180A 1336 REGEN Bus Diode Module (PN 24808-676-01)

Each 1336R-F1-SP2A kit consists of:

- (1) 78A 1336 REGEN Bus Fuse (PN 184972-Q02)
- (1) 78A 1336 REGEN Bus Diode (PN 184938)



**ATTENTION:** Only personnel familiar with the 1336 REGEN Line Regen Package and associated equipment should plan or implement the installation, start-up and subsequent maintenance of the system. Failure to comply may result in personal injury and/or equipment damage.

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**ATTENTION:** This product and its associated equipment contains ESD (Electrostatic Discharge) sensitive parts and assemblies. Static control precautions are required when installing, testing, servicing or repairing this assembly. Component damage may result if ESD control procedures are not followed. If you are not familiar with static control procedures, reference publication 8000-4.5.2 "*Guarding Against Electrostatic Damage*" or any other applicable ESD protection handbook.

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**ATTENTION:** Electric Shock can cause injury or death. Remove all power before working on this product.

For all 1336 REGEN Line Regeneration Packages, a separate 120V AC user power supply is required.

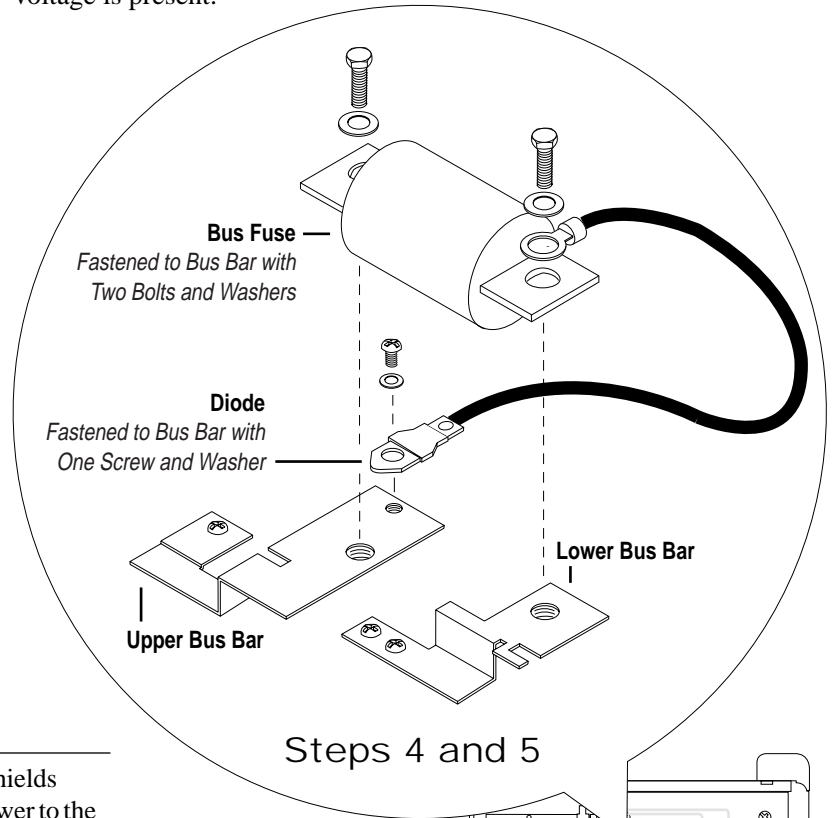
Hazards of electrical shock exist if accidental contact is made with parts carrying bus voltage. Before proceeding with any installation or troubleshooting activity, allow at least one minute after input power has been removed for the bus circuit to discharge. Bus voltage should be verified by using a voltmeter to measure the voltage between the DC+ and DC- Converter Output Terminals. Do not attempt any servicing until bus voltage has diminished to zero volts.

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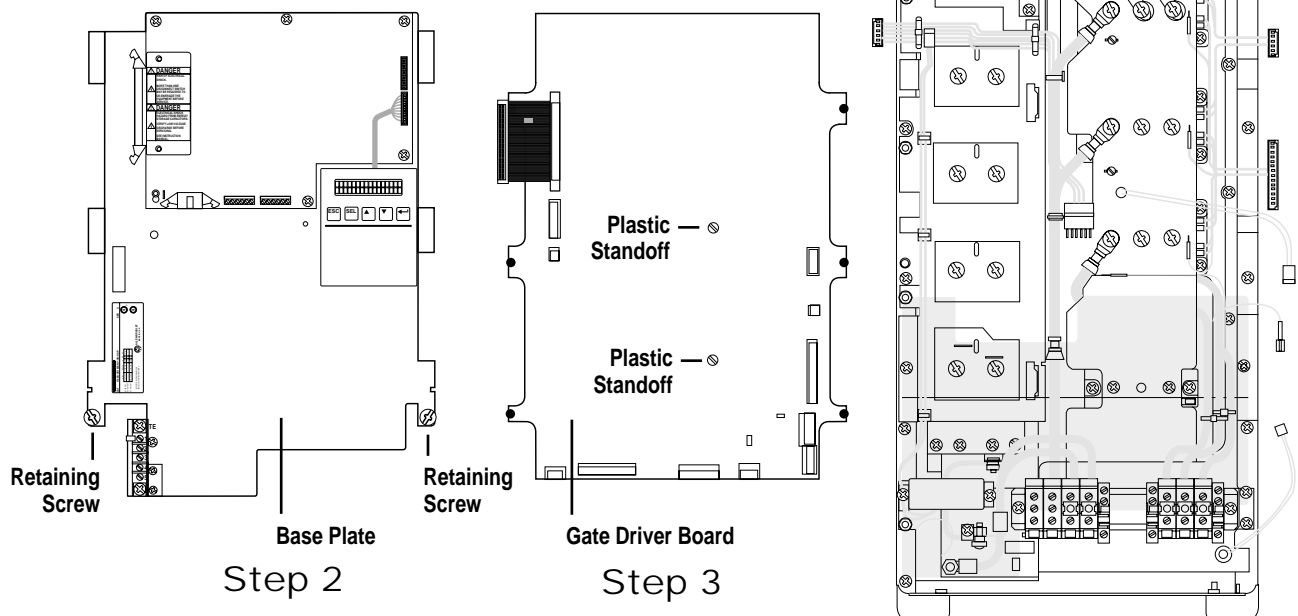
## 78A DC Bus Fuse & Diode Replacement

2. Disconnect leads, unplug connectors and loosen the (2) retaining screws to remove the Base Plate.
3. Disconnect leads, unplug connectors and loosen the (2) plastic standoffs to remove the Gate Driver Board.
4. Remove the open DC bus fuse and diode even if the diode appears good. Removing the diode assures that undetected damage will not cause failure at a later date.
5. Install the new DC bus fuse and diode included with the kit. Torque the fuse bolts to 11.0-12.5 N-m (97-111 lb.-in.). Torque the diode screw to 4 N-m (35.4 lb.-in.).
6. Reinstall the Converter Base Plate and Gate Driver Board, reconnecting all leads and connectors. Reinstall the Converter front cover.

1. Remove and lock-out all incoming power to the 1336 REGEN Line Regeneration Package.
  - a. Remove the Precharge Unit front cover. Measure the voltage at input power terminals R1-S1-T1 and terminal block TB1 with a voltmeter to ensure that no voltage is present.
  - b. Remove the Converter front cover. Measure the voltage at input power terminals R2-S2-T2 with a voltmeter to ensure that no voltage is present.



**ATTENTION:** Replace any guards or shields previously removed before reapplying power to the Converter or 1336 REGEN Line Regeneration Package. Failure to replace guards or shields may result in death or serious injury.

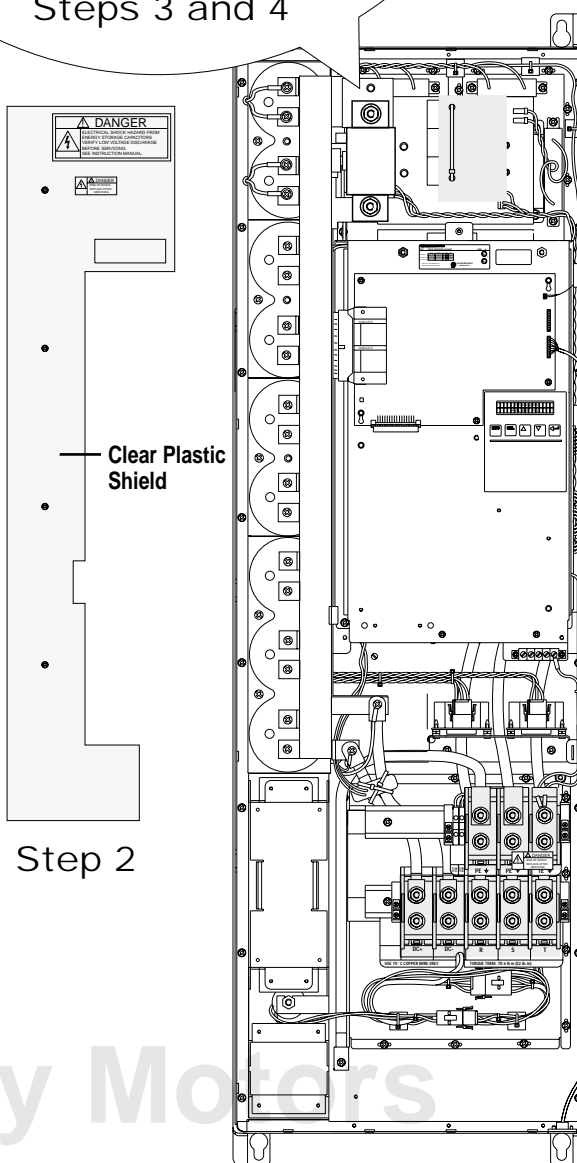
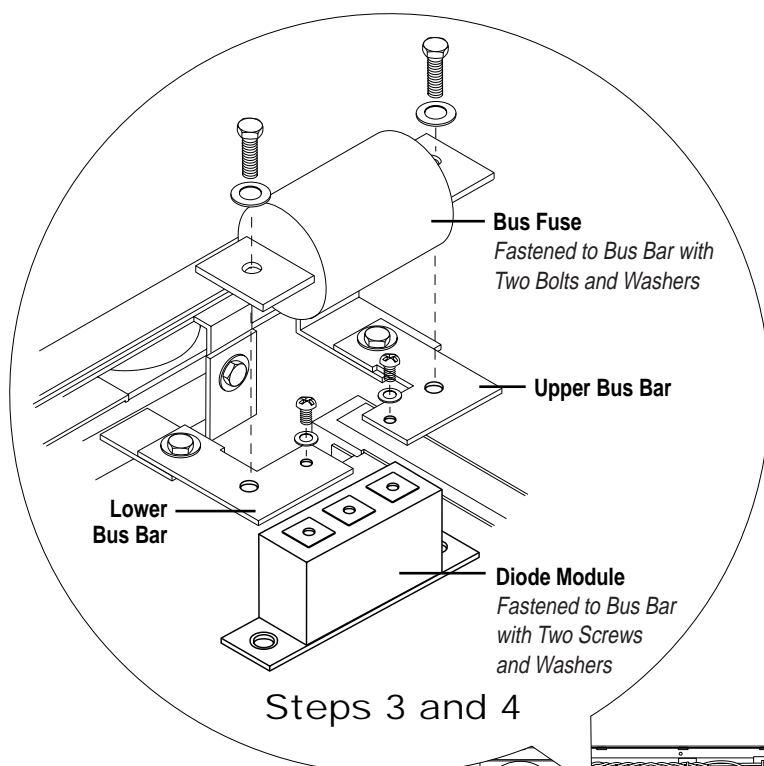


## 180A DC Bus Fuse & Diode Replacement

1. Remove and lock-out all incoming power to the 1336 REGEN Line Regeneration Package.
  - a. Remove the Precharge Unit front cover. Measure the voltage at input power terminals R1–S1–T1 and terminal block TB1 with a voltmeter to ensure that no voltage is present.
  - b. Remove the Converter front cover. Measure the voltage at input power terminals R2–S2–T2 with a voltmeter to ensure that no voltage is present.
2. Remove the clear plastic shield.
3. Remove the open DC bus fuse and diode module even if the module appears good. Removing the diode module assures that undetected damage will not cause a malfunction at a later date.
4. Install the new DC bus fuse and diode module included with the kit. Torque the fuse bolts to 11.0-12.5 N-m (97-111 lb.-in.). Torque the diode module screws to 4 N-m (35.4 lb.-in.).
5. Reinstall the protective shield and Converter cover.



**ATTENTION:** Replace any guards or shields previously removed before reapplying power to the Converter or 1336 REGEN Line Regeneration Package. Failure to replace guards or shields may result in death or serious injury.





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