

# VOLVO PENTA

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Chesapeake, Virginia 23320-9810

## Service Bulletin

Group	Number	Version
32-1	13	01

### Battery Isolators, Correct Installation

EFI Engines (See List)

Distribution: M

Date: 04-2005

Binder: C

#### Engines Affected

4.3GXi: -C, -CF, -D, -DF, -E, -EF  
4.3OSi: -C, -CF, -D, -DF, -E, -EF  
5.0GXi: -C, -CF, -D, -DF, -E, -EF  
5.0OSi: -C, -CF, -D, -DF, -E, -EF  
5.7Gi: -C, -CF, -D, -DF, -E, -EF  
5.7Gil: -C, -D, -E  
5.7GXi: -D, -DF, -E, -EF, -F, -FF  
5.7GXil: -D, -E, -F

5.7OSi: -B, -BF, -C, -CF, -D, -DF  
5.7OSXi: -B, -BF, -C, -CF, -D, -DF  
8.1Gi: -C, -CF, -D, -DF, -E, -EF, -F, -FF  
8.1Gil: -C, -D, -E, -F  
8.1GXi: -B, -BF, -C, -CF, -D, -DF, -E, -EF  
8.1GXil: -B, -C, -D, -E  
8.1OSi: -A, -AF, -B, -BF

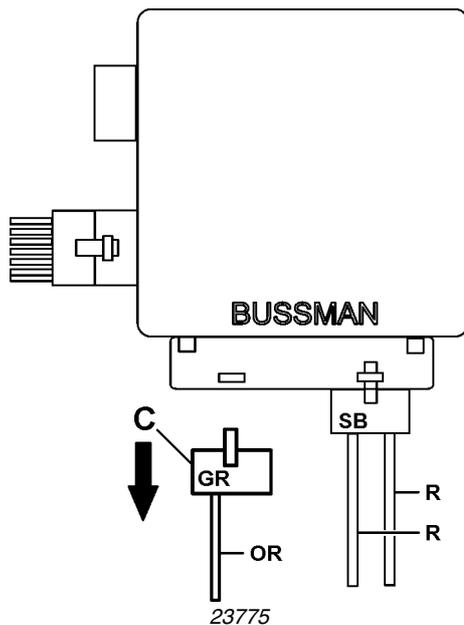
EFI engines have been found in the field with incorrectly installed battery isolators. This can lead to voltage drops in the electrical system and poor battery charging. If these symptoms are present, check the installation of the isolator. The installation should comply with the guidelines below.

#### Correct Installation of Battery Isolators

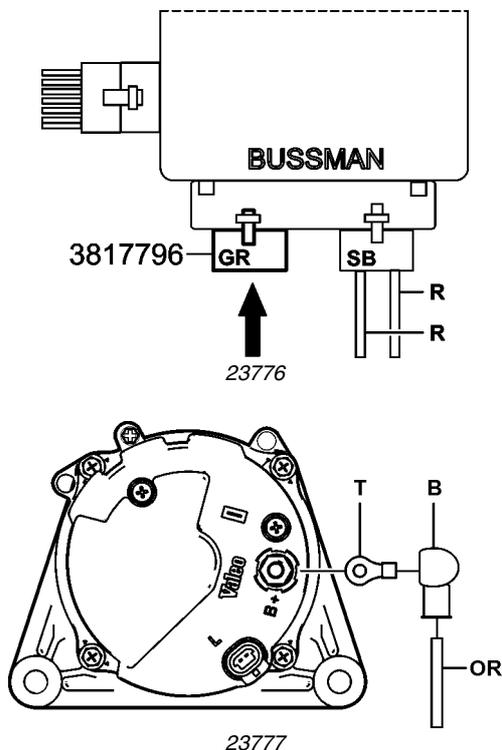


**WARNING! Disconnect all power to the engine before proceeding.**

##### Disconnect Alternator from Engine Harness



1. At Bussman fuse/relay box, remove gray connector with orange wire (C) from box.
2. Tape or tie strap the connector/wire to engine harness.



3. Install sealed connector **3817796** in box where gray connector/wire was removed.

4. At rear of alternator, remove ring terminal/orange wire/boot (**OR**) from the B+ terminal.
5. Remove ring terminal (**T**) and boot (**B**) from wire. Save boot.
6. Seal cut end of wire with electrical tape or liquid tape. Tape or tie strap the wire (**OR**) to engine harness.
7. Alternator and wire (**OR**) are now disconnected from the engine harness.

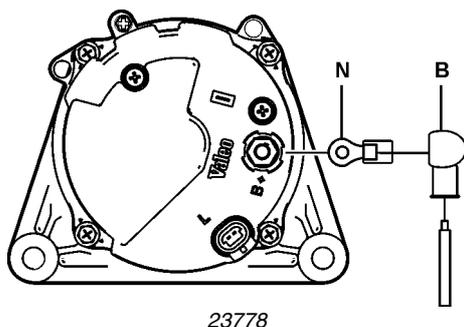
### Connect Alternator to Isolator

**NOTE!** The alternator output wire assembly, which carries alternator output to the isolator, is critical to correct operation of the charging system. The wire must meet all current ABYC specifications regarding materials, attaching terminals and routing and protecting the wire.

**NOTE!** Wire size of the output wire is critical to correct operation of the isolator and charging system. Wire size is determined by the total length of wire. The size of the output wire used in the installation must meet these ABYC standards:

<b>0 - 3m (0-10 ft)</b>	<b>6 AWG</b>
<b>3m to 6m (11-20 ft)</b>	<b>4 AWG</b>
<b>over 6m (over 20 ft)</b>	<b>2 AWG</b>

Using the correct wire size ensures that voltage drop occurs through the isolator diodes, and not in the wire.



1. Place boot (**B**) over output wire. Install a 5/16" or 8mm ring terminal (**N**) on output wire. Recommended terminal has mechanical crimping of the wire's conductor and a heat shrink seal.
2. Install ring terminal/boot/wire on B+ stud on alternator. Nut torque = 7-13 ft. lb. (10-17 Nm). Route the wire to avoid sharp edges or other chafe points. Sheathing the wire is recommended.
3. Complete the wiring of the battery isolator per manufacturer's recommended procedures.