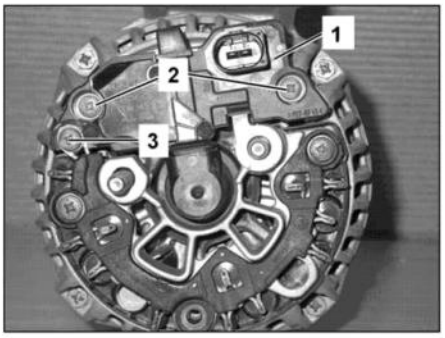
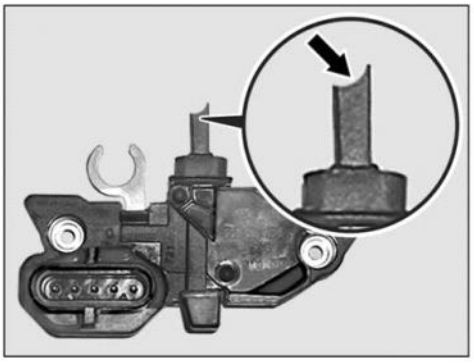
1. Remove the two nuts (1, Figure 16) from studs and one Philips head screw (2); remove the plastic cover from the rear of the alternator.

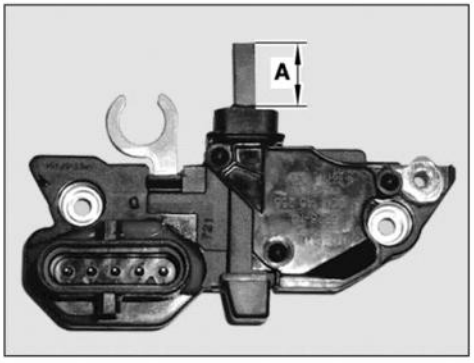
Note:
Observe which nut is removed from either stud.



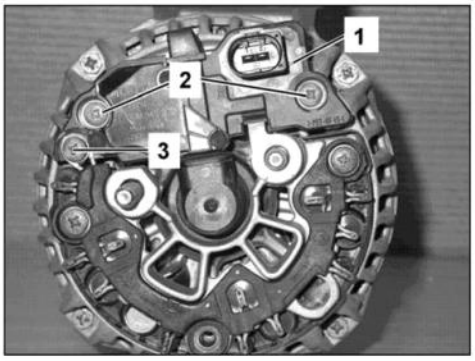
2. Remove three Philips head screws (2, 3, Figure 17); remove voltage regulator (1) from the alternator.



3. Inspect wear shape (arrow, Figure 18) of carbon brushes: If brushes have worn at an angle (arrow), alternator bearing damage is indicated and the alternator must be replaced. If brushes wear is normal, continue with regulator replacement.



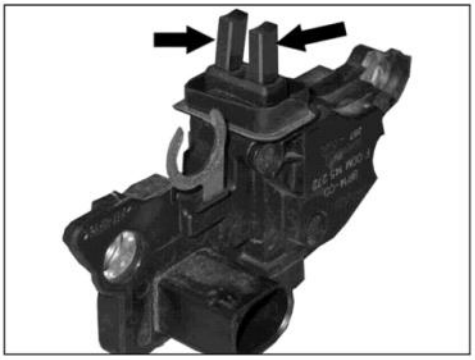
NOTE:
Minimum regulator brush dimension (A, Figure 19) = 5 mm.



4. Install new voltage regulator (1, Figure 20) and torque Philips head screws to:

   ^ (2) = 2.0-2.4 Nm

   ^ (3) = 1.0-1.4 Nm



Caution!:
Ensure the carbon brushes (arrows, Figure 21) are not damaged during the installation procedure.

5. Install the plastic cover on the back of the generator and torque the Philips head screw (2, Figure 16) to: 2.2 - 2.6 Nm and the two nuts (1, Figure 16) as follows:

   ^ On long stud: 29.0 - 32.0 Nm

   ^ On short stud: 11.0 - 13.0 Nm

6. Reinstall the alternator in reverse order

7. Reinstall components in reverse order.

8. Reconnect battery cable to negative battery terminal, reinitialize vehicle systems (e.g., steering angle sensor, power windows etc.); refer to WIS: AR00.19-P-0200P

9. Connect SDS and erase any faults that may have been stored.

Note:
Refer EPC for replacement part numbers.

Warranty Information

Note:
The following allowable labor operations should be used when submitting a warranty claim for this repair.