

Name _____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

1) What is the procedure for replacing an alternator?

2) How does a technician measure the amperage output of a alternator?

3) How does a technician test the voltage drop of the charging circuit?

4) What tests can be performed to determine whether a diode or stator is defective before removing the alternator from the vehicle?

5) Why could a defective overrunning alternator pulley (OAP) or dampener (OAD) cause a lack of proper charging?

Answer Key

Testname: AEE6_SHORT23

1) A typical removal procedure includes the following steps.

STEP 1 - Before disconnecting the negative battery cable, use a test light or a voltmeter and check for battery voltage at the output terminal of the alternator. A complete circuit must exist between the alternator and the battery. If there is no voltage at the alternator output terminal, check for a blown fusible link or other electrical circuit fault.

STEP 2 - Disconnect the negative (-) terminal from the battery. (Use a memory saver to maintain radio, memory seats, and other functions.)

STEP 3 - Remove the accessory drive belt that drives the alternator.

STEP 4 - Remove electrical wiring, fasteners, spacers, and brackets, as necessary, and remove the alternator from the vehicle.

A typical installation procedure includes the following steps.

STEP 1 Verify that the replacement alternator is the correct unit for the vehicle.

STEP 2 Install the alternator wiring on the alternator and install the alternator.

STEP 3 Check the condition of the drive belt and replace, if necessary. Install the drive belt over the drive pulley.

Page Ref: 287; 291

2) To test the amperage output of the alternator, use a carbon-pile tester, such as a Sun VAT-40 to provide the load with the engine running at 2,000 RPM.

Page Ref: 286

3) To test the voltage drop of the insulated charging circuit, attach one voltmeter test lead to the output terminal of the alternator and the other test lead to the positive terminal of the battery. Start the engine and turn on the headlights and observe the voltmeter. Repeat the test for the ground side.

Page Ref: 285

4) If a rectifier diode or stator is defective, an excessive amount of AC voltage (ripple voltage) will be measured at the output terminal of the alternator.

Page Ref: 284

5) If low or no alternator output is found, remove the alternator drive belt and check the overrunning alternator pulley (OAP) or overrunning alternator dampener (OAD) for proper operation. Both types of overrunning clutches use a one-way clutch. Therefore, the pulley should freewheel in one direction and rotate the alternator rotor when rotated in the opposite direction.

Page Ref: 282