

NOTE

When a connector is disconnected always inspect the socket and pin terminals for damage or corrosion.

1. Battery Test

1. Perform battery test. See BATTERY TESTING in the appropriate EDM.
2. Did battery pass test?
 - a. **Yes.** Go to Test 2.
 - b. **No.** Replace battery.

2. DC Connector [77] Clean and Test

1. Remove main fuse [5] and inspect connections.
2. Disconnect Direct Current (DC) connector [77] and inspect connections.
3. Clean both A and B connector sides with contact cleaner.
4. Connect [77] and verify it is fully seated.
5. Install main fuse.
6. Start engine and run at 3,000 rpm for 30 s.
7. With the engine still running at 3,000 rpm, test battery voltage.
8. Is average voltage above 13.8 V?
 - a. **Yes.** Replace [77B] DC lead.
 - b. **No.** Go to Test 3.

3. AC Connector [47] Clean and Test

1. Remove main fuse [5] and inspect connections.
2. Disconnect Alternating Current (AC) connector [47] and inspect connections.
3. Clean both A and B connector sides with contact cleaner.
4. Connect [47] and verify it is fully seated.
5. Install main fuse.
6. Start engine and run at 3,000 rpm for 30 s.
7. With the engine still running at 3,000 rpm, test battery voltage.
8. Is average voltage above 13.8 V?
 - a. **Yes.** Go to Test 6.
 - b. **No.** Go to Test 4.

4. DC Connector [77] Wiggle Test

1. Start engine and run at 3,000 rpm for 30 s.
2. With the engine still running at 3,000 rpm, test battery voltage.
3. While testing battery voltage, perform a wiggle test on [77].
4. Is voltage fluctuating above and below 13.8 V?
 - a. **Yes.** Replace [77B] DC lead.
 - b. **No.** Go to Test 5.

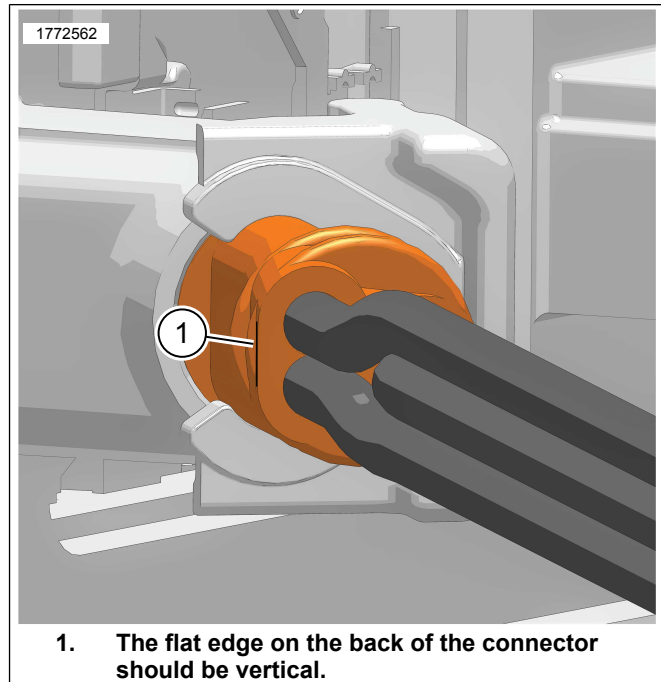
5. AC Connector [47] Wiggle Test

1. Start engine and run at 3,000 rpm for 30 s.

2. With the engine still running at 3,000 rpm, test battery voltage.
3. While testing battery voltage, perform a wiggle test on [47].
4. Is voltage fluctuating above and below 13.8 V?
 - a. **Yes.** Go to Step 6.
 - b. **No, below** 13.8 V go to Test 7.
 - c. **No, above** 13.8 V. System is working properly.

NOTE

Figure 2 Although [47B] can be inserted into voltage regulator in any orientation, the socket to pin fitment may be improved with connector in the orientation.



1. The flat edge on the back of the connector should be vertical.

Figure 2. Ideal AC Connector Orientation

6. Adjust AC Connector [47] Terminals

1. Disconnect [47].
2. Use a small flat tipped screwdriver to slide down the length of the socket, 90° from terminal gap.
3. Rock and twist screwdriver so that the terminal tightens along the entire length of the terminal.
4. Connect [47] verifying that it is fully seated.
5. Start engine and run at 3,000 rpm for 30 s.
6. With the engine still running at 3,000 rpm, test battery voltage.
7. Is average voltage above 13.8 V?
 - a. **Yes.** System is working properly.
 - b. **No.** Go to Test 7.

7. AC Output Test

1. Perform AC output test. See BATTERY CHARGING TESTS in the appropriate EDM

2. Did output test pass?
 - a. **Yes.** Go to Test 10.
 - b. **No.** Go to Test 8.

8. Stator Test

1. Perform stator test. See BATTERY CHARGING TESTS in the appropriate EDM
2. Is the stator good?
 - a. **Yes.** Go to Test 9.
 - b. **No.** Replace stator.

9. Rotor Inspection Test

1. Turn Ignition light/key switch position (IGN) OFF.
2. Inspect rotor magnets for damage.
3. Remove rotor assembly. Inspect rotor and shaft splines for excessive wear.
4. Verify stator bolts have not backed out and contacted rotor.
5. Is rotor in good condition?
 - a. **Yes.** Go to Test 10.
 - b. **No.** Replace rotor.

10. Voltage Regulator Power Circuit Test

1. Disconnect voltage regulator [77] and inspect connections.
2. Using TEST CONNECTOR KIT (PART NUMBER: HD-41404), test resistance between [77B] terminal (+) and battery (+).

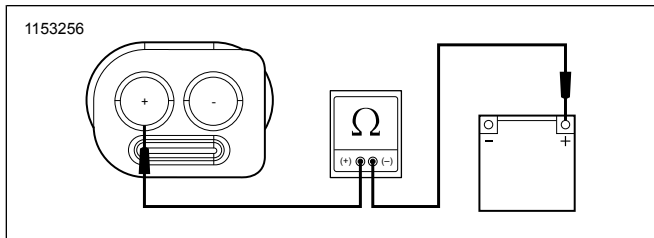


Figure 3.

3. Is resistance less than 0.5Ω ?
 - a. **Yes.** Go to Test 11.
 - b. **No.** Repair open wire between voltage regulator [77B] terminal (+) and battery.

11. Voltage Regulator Ground Circuit Test

NOTE

Voltage regulator ground must have a clean, tight connection for proper grounding.

1. Test resistance between [77B] terminal (-) and battery (-).

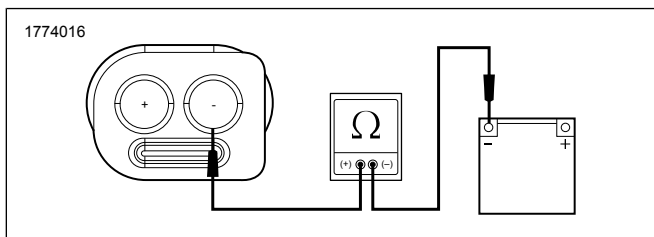


Figure 4.