



J05632

# **CHARGING SYSTEM SERVICE KIT**

#### PURPOSE

1. **Fitment:** 2009 and 2010 1125R and 1125CR models as well as 2008 1125R models that have been refitted with a 2009 or 2010 replacement engine.

# Kits 94753Y Contents

#### Table 1. Service Parts

Quantity	Part NO.	Description
1	Y0474.3AM	Wire harness assembly, stator relay
1	Y0475.3AM	ECM wire lead w/connect- or
4	Y0303/2B	Cable strap
1	CO144.T	Clamp, clutch cable
2	10177	Wire mounting clip

# Prepare the Motorcycle

- 1. Remove:
  - a. The seat.
  - b. The passenger seat.
  - c. The left radiator shroud.
  - d. The main (battery) fuse.
- 2. CAL Models: Remove the tail section bodywork.

# **Disconnect and Route Stator Harness**

- 1. See Figure 1. Disconnect:
  - a. The stator connector [47] (1).
  - b. The active intake solenoid connector [178] (2).
- 2. Cut the cable strap securing the main harness to the subframe.
- 3. See Figure 1. Pull the voltage regulator stator connector socket housing [47B] (2) back under the subframe cross member and route the wire harness (3) along the DC lead to the voltage regulator connector [77] (4).

# Install the Relay Sub-Harness

- 1. See Figure 2. Install and route the sub-harness:
  - a. The 4-place socket housing [47BB] (1), the 2-place socket housing [178BB] (2), the 2-place pin housing [178AA] (3), and the 2-place ECM lead socket housing [360A] (4) forward under the subframe cross member.
  - b. The relay sub-harness (5) and the relay (6) along the side of the voltage regulator harness.
  - c. The 4-place pin housing [47AA] to the stator connector (7) on top of the starter solenoid cover and the main harness fuse block branch.

- 2. See Figure 3. Connect the housings:
  - a. [47AA] to [47B] (1)
  - b. [178AA] to [178B] (2)
  - c. [178BB] to [178A] (3)
  - d. [47BB] to [47A] (4)



- housing
- 3. Wire harness
- 4. Voltage regulator harness to connector [77]

#### Figure 1. Stator Connector [47B] and Harness Routing



- 4. [360A]
- 5. Relay sub-harness
- 6. Relay [260B]
- 7. [47AA]

Figure 2. Relay Sub-Harness and Connectors



Figure 3. Relay Sub-Harness and Connectors

#### Install the Relay

- 1. CAL Models: Install the relay.
  - a. Route the relay and harness through the right side subframe.
  - b. Replace the two clips around the battery cable and ground with barbed cable straps (Part No. 10177).
  - c. See Figure 4. Orient the relay mounting tab and strap the sub-harness to the battery cable and the ground at the rearmost cable strap (1).
  - d. Strap the relay harness branch to the battery cable at the forward cable strap (2).
  - e. Trim the cable straps flush.



- 2. Non-CAL Models:
  - a. Install the snap-in fastener in the subframe upright.
  - b. Cable strap a barbed fastener to the hole in the relay mounting tab.
  - c. See Figure 5. Push the barb (1) into the hole in the subframe upright.
  - d. Clamp the relay wire harness in the snap-in fastener (2).
  - e. Trim the cable strap.



Figure 5. Non-CAL Models: Clamp Fastener and Cable Strap

#### Install the ECM Lead (Part No. Y0475.3AM)

- 1. Route the ECM lead:
  - a. Bend a 0.40 inch (1 cm) hook at the end of a length of mechanic's wire 36 inch (91 cm) long and hook the socket terminal of the ECM lead.

- b. See Figure 6. Insert the mechanic's wire between the left side of the frame and the rear cylinder head (1).
- c. Angle the mechanic's wire to exit over the top of and in front of the engine mount (2).
- d. Thread the mechanic's wire through the PVC sleeve on the engine harness (3) and pull the ECM lead through the PVC sleeve.
- e. Separate the ECM lead from the mechanic's wire and remove the mechanic's wire.
- 2. Disconnect the J1 [11B] gray and J2 [10B] black connectors from the ECM.
- 3. See Figure 7. Unwrap the engine harness tape from the PVC sleeve to the J2 [10B] black connector.
- 4. Install the ECM lead terminal in the ECM J2 [10B] connector:
  - a. Bend back the wires to access the cavity.
  - b. See Figure 8. Remove the white seal pin from cavity 21.
  - c. Push the ECM lead terminal into cavity 21 until it stops. Do not damage the ECM lead insulation.
  - d. See Figure 9. To unlock the terminals, push in the white strip (1) until it clicks. Do not unseat the original terminals while all the terminals are unlocked.
  - e. Seat the ECM lead terminal. The socket is seated when it is flush with the housing face.
  - f. To lock the terminals, push in the two white pins (2) on the side opposite the white strip.
- 5. Wrap the harness tape around the engine harness and the ECM lead.
- 6. Connect the ECM J1 [11B] gray and J2 [10B] black connectors to the ECM.
- 7. Connect the ECM lead socket connector housing [360B] to the relay sub-harness pin connector [360A].



- 2. Over top of engine mount
- 3. PVC sleeve

Figure 6. Route the ECM Lead



Figure 7. Unwrap Engine Harness Tape



Figure 8. ECM J2 [10B] Black Connector Cavity 21



Figure 9. ECM J2 [10B] Black Connector Cavity 21

#### **Cable Strap the Sub-Harness**

- 1. See Figure 10. Cable strap the relay wire harness, the wire harness and the connector, {47B] to [47AA]. and the negative battery cable to the voltage regulator DC lead (1).
- 2. Cable strap the stator connector wire lead to the main wire harness fuse block wire lead (2).
- 3. Cable strap the sub-harness stator connector pin housing, the main wire harness, and the starter power cable to the subframe cross member (3).
- 4. Cable strap the ECM lead to the main harness, the sub-harness, and the active intake convolute tubing (4).
- 5. Trim the cable straps flush.

# **Return to Service**

- 1. CAL MODELS: Install the tail section body work.
  - a. All Models: Install: The main (battery) fuse.
  - b. The seat.
  - c. The passenger seat.
  - d. The left radiator shroud.
- 2. Test ride the motorcycle.



Figure 10. Cable Strap Locations

# **ECM Calibration**

 The calibration activates the relay and shuts off one leg of the alternator system under certain conditions preventing the overheating [of the alternator] that may lead to an alternator failure.

#### NOTE

Do not connect the A/C power to the Tech Link until prompted during the reflash procedure.

Verify the current calibration using Digital Technician and reflash the calibration if updated calibration is not present.

#### Diagnostics

NOTE

These procedures supplement those found in the service manual and the electrical diagnostic manual and support motorcycles equipped with the relay sub-harness.

# **Sub-Harness Relay Troubleshooting**

#### NOTE

Using DT II, identify the current calibration and, if necessary, flash with the calibration listed in this service bulletin. Refer to Table 2 and Table 3.

 When the charging system fails to charge or does not charge at the normal rate (low battery voltage indicator lamp and SYSTEM VOLTAGE LCD message), test the charging system, the battery, the stator and the voltage regulator before performing these tests.

# **Sub-Harness Continuity Test**

- 1. Disconnect:
  - a. See Figure 11. The sub-harness 4-place pin connector [47AA] from the stator connector [47B].
  - b. The sub-harness 4-place socket housing [47BB] from the stator connector [47A] pin housing.
- 2. Turn the ignition key to ON.
- 3. Test for continuity between pin 1 of the sub-harness 4-place pin housing [47AA] and socket 1 of the sub -harness 4-place socket housing [47BB].
- 4. Is there continuity?
  - a. Yes. Perform the Sub-Harness Resistance Test.
  - b. NO. Perform the Relay 12V Test.

# **Sub-Harness Resistance Test**

- 1. Test for resistance between pin 1 of the sub-harness 4-place pin housing [47AA] and socket 1 of the sub-harness 4-place socket housing [47BB].
- 2. Is the resistance greater than 0.5 Ohm?
  - a. Yes. Replace the stator sub-harness relay.
  - b. No. Perform the Relay 12V Test.

# **Relay 12V Test**

1. Remove the stator sub-harness relay.

#### NOTE

The sub-harness relay is controlled by a switch to ground: 12 V is present at pin 4 with the ignition key ON.

2. Test fpr 12 VDC betweem spclet 4 (GY wire) relay terminal 86 and socket 2 (BK wire) relay terminal 85 of the relay connector [260B].

- 3. Is 12 V present?
  - a. Yes. Perform a ECM Circuit Continuity Test.
  - b. No. Perform the Active Intake Solenoid 12V Test.

# **ECM Circuit Continuity Test**

- 1. Disconnect the ECM J2 [10B] black connector from the ECM.
- Test for continuity between socket 2 (BK wire) relay terminal 85 of the stator sub-harness relay connector [260B] and socket 21 of the ECM J2 [10B] black connector.

- 3. Is there continuity?
  - a. Yes. Replace the stator sub-harness relay.
  - b. No. Find and repair the open circuit.

#### Active Intake Solenoid 12V Test

- 1. Disconnect the stator sub-harness 2-place socket housing [178BB] from the active intake [178A] pin housing.
- 2. Test for 12 VDC between pin 2 (GY wire) and pin 1 (GY/O wire) of the active intake [178A] pin housing.
- 3. Is 12 Volt present?
  - a. Yes. Find and repair the open circuit.
  - b. No. Troubleshoot the engine wire harness.



Figure 11. Relay Sub-Harness and Circuit