

**WARNING**

Rider and passenger safety depend upon the correct installation of this kit. Use the appropriate service manual procedures. Improper installation of this kit could result in death or serious injury.

**INSTALLATION**

Prepare Motorcycle for Kit Installation

1. All models: See Figure 1. Position the bracket (3) onto the voltage regulator (4) and install the washer (2) and bolt (1). Tighten the bolts to 11.3–13.6 N·m (100–120 in-lbs).

2. See the service manual. Disconnect negative battery cable.

**WARNING**

To prevent accidental vehicle start-up, which could cause death or serious injury, disconnect battery cables (negative (-) cable first) before proceeding.

**WARNING**

Disconnect negative (-) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury.

3. See the service manual. Remove the Voltage Regulator.

**4. Replace oil cooler hose (air cooled models): (Note: Not included with kit)**

- Place a drain pan under motorcycle. Remove oil cooler.
- See Figure 2. Remove the hose clamp (1) and disconnect the oil cooler hose (2) from the oil cooler (3).
- See Figure 3. Release the hose clamp (1) and remove the oil cooler hose (3) from the oil filter adapter (2).
- Position the original hose clamp on the upper end of the new oil hose.
- Position the clamp on the lower end of the hose.
- Install the new oil cooler hose. Position and install the clamps.

**Replace the Stock Alternator (all models)**

1. All models: See the service manual. Remove the seat, starter, primary chaincase cover, primary chaincase housing, primary chain, clutch, compensating wheel, left footboard and bracket, jiffy stand alternator assembly and rotor assembly.

**NOTE**

Stator TORX screws and compensator screw are not reusable and must be replaced.

2. See the service manual. Using the new rotor assembly and stator assembly included in the kit install the alternator assembly.

3. See the service manual. Install the starter, primary chaincase cover, primary chaincase housing, primary chain, clutch, compensating wheel, left footboard and bracket, and the jiffy stand.

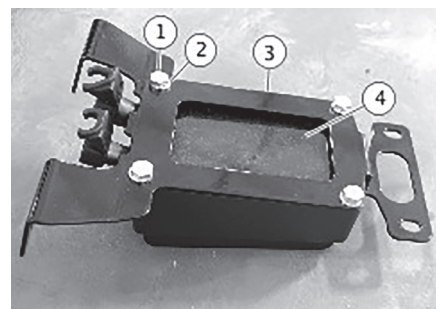
4. See Figure 4. Connect the stator connector [46]. Secure with the latch.

5. Connect the voltage regulator connector [77]. Secure with the latch.

6. See Figure 4. Position the voltage regulator assembly (6) and install the two voltage regulator nuts (1). Tighten the nuts to 7.9–11.3 N·m (70–100 in-lbs).

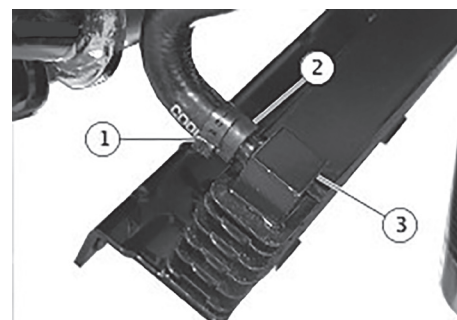
**NOTE**

Make sure that new oil cooler hose does not contact frame or regulator bracket.



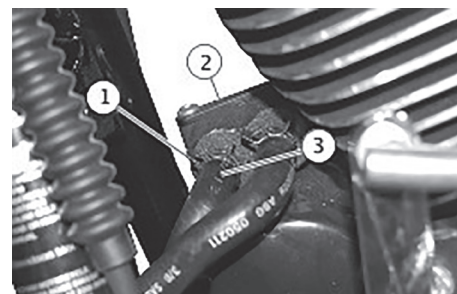
- Bolt
- Washer
- Bracket
- Voltage regulator

**Figure 1.** Voltage Regulator Bracket



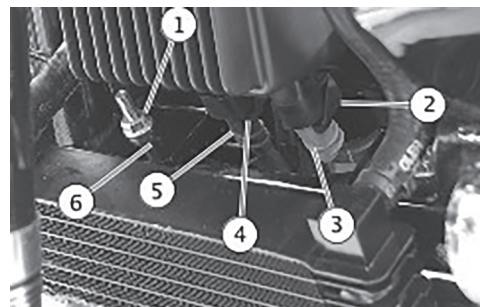
- Hose clamp
- Oil cooler hose
- Oil cooler

**Figure 2.** Oil Cooler Hose (Lower)



- Hose clamp
- Oil filter adapter
- Oil cooler hose

**Figure 3.** Oil Cooler Hose (Upper)



- Lock nut
- Stator connector latch
- Stator connector
- Voltage regulator connector
- Voltage regulator connector latch
- Voltage regulator assembly

**Figure 4.** Voltage Regulator Assembly

7. Twin-Cooled:

- a. Remove the downtube screws.
  - b. Position the coolant down tubes.
  - c. See Figure 5. Position the voltage regulator assembly (2) and install the downtube screws (1). Tighten the screws to 11.3–13.6 N·m (100–120 in-lbs).
8. Air cooled: Install screw, washer and locknuts in upper bracket holes.
9. See Figure 6. Secure cooler to frame with screws. Tighten to 27.1–29.8 N·m (20–22 ft-lbs).
10. Secure stator wire to frame using barbed cable strap.

WARNING

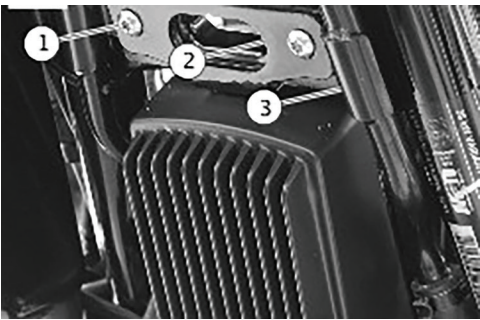
Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury.

11. Start the engine and check voltage across the battery terminals. Voltage measured must be 13-15 VDC.

WARNING

After installing seat, pull upward on seat to be sure it is locked in position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury.

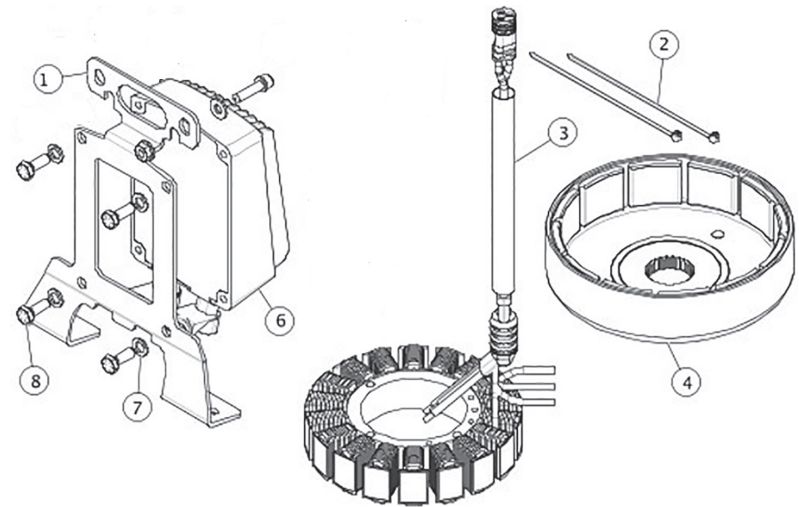
12. Install seat.



1 Down tube screws  
2 Voltage regulator assembly  
3 Down tubes  
**Figure 5.** Down Tube Screws



**Figure 6.** Lower Oil Cooler Screws



SERVICE PARTS

**Figure 7.** 54 Amp Charging System Upgrade Kit

Table 1. Service Parts Table		
Item	Description (Quantity)	Part Number
1	Voltage regulator bracket	12700087
2	Cable straps (2)	10065
3	3-Phase 54 AMP stator assembly	32-1459
4	Charging rotor assembly	29900033
6	54 AMP voltage regulator assembly	32-1460
7	Washer (4)	6771A
8	Hex cap screw SAE grade 8 (4)	4751