

Cycle Electric Inc.

50 AMP THREE PHASE CHARGING KIT

CE-81A Kit Instructions

Fitment

The CE-81A will fit

ALL 89-98 FLT* FLH* 89-94 FXR*

These are generalized instructions and are not intended to be all-inclusive. For more detail on your model see service manual.

Kit Contains

QTY DESCRIPTION

1 Stator
1 Retainer clamp
1 Rotor
1 Regulator
1 .360" Shim
1 Wire kit
1 50 Amp Breaker
1 Circuit Breaker Clamp
4 Stator Mounting Screws
2 ¼ -28 x 1¼ Bolts
2 ¼ -28 Locknuts
2 ¼ Flat washers
6 Wire Ties.

Note: You will need a primary gasket

Alternator Removal

- 1) Disconnect negative battery cable.
 - 2) Consult appropriate service manual and remove outer primary cover.
 - 4) Consult appropriate service manual and remove compensator sprocket.
- Note: After several thousand miles it may be possible to remove the compensator sprocket and chain adjustor shoe without removing the clutch. Caution: Do not put excessive side force on chain.*
- 5) Remove output shaft extension.
 - 6) Remove rotor and all spacers under rotor.
 - 7) Unplug the regulator from the stator
 - 8) Remove the stator

Determine if you have a short or a long sprocket shaft spacer.

The sprocket shaft spacer is a collar that protrudes from the crank case oil seal. The 32 amp systems on 1989-96 models use a shorter spacer. If you have the short spacer add the .360" shim included in

this kit under the rotor. The 38 and 45 amp systems on 1995 and later FLH & FLT's come with the long sprocket shaft spacer. Do not add any shims with the long spacer. Note: all 1997 and later FLH/FLT models came with the longer spacer. See pictures below.



Short spacer: Add the .360" shim under the rotor if you have this spacer.



Long Spacer: Do not add shims if you have this spacer.

Alternator Installation

1) Install new stator. Feed wires through hole in crankcase. Use a dull flat blade screwdriver and push on the flat surface of the grommet while gently pulling on the wires until grommet slides into position. The wire clamp area should line up.

Do not slide the grommet too far because it may not slide back without causing grommet damage.

Note: the retaining clamp area on the CE-8011 stator has been enlarged and requires a modified clamp. Use the clamp supplied in kit.

5) Install the grommet retainer clamp. Use lock-tight 222 (purple) on the retainer screws.

Note: If your cases do not have wire clamp screw holes, use high temp silicone sealer (preferably black) to hold grommet in place.

When using sealer the grommet will slide in the hole very easy. Do not let first lip on grommet to come out the top of case hole.

6) Install the four new stator-mounting screws (supplied). Torque to 30-40 In-Lb.

CAUTION!

When installing the rotor, keep fingers away from edge. The magnetic force may cause rotor to suddenly be drawn inward and could pinch fingers if in the way.

7) Install rotor.

8) Install output shaft extension.

9) Install compensator sprocket adjuster shoe and clutch if removed and check chain alignment. Adjust shims as necessary.

10) After confirming that the primary chain is properly aligned, apply red lock-tight #262 to threads on output shaft and torque to 150 to 165 ft/lb.
If clutch was removed, use locktight number 262 and torque to 70-80 ft-lb (left-hand thread).

11) Adjust the primary chain.

12) Assemble the primary cover and all other components previously removed.

13) Fill the primary with oil. The Oil should be level with the bottom edge of clutch plates.

Regulator Removal

1) Disconnect battery negative terminal.

2) Remove old regulator.

A- Disconnect regulator B+ wire from the main circuit breaker (See chart for location).

Year and model Breaker Location

89-92 all FL under right side cover on battery tray or oil tank

93-Up all FL Under seat on frame cross rail

89-94 FXR Under left side cover

Note how regulator wire is routed and cut necessary wire ties and remove wire.

Note: If you tie a piece of nylon cord or fishing line to the ring terminal before pulling wire out, you can use this cord to

pull new wire in place.

Mounting 50 amp breaker

3) Remove the regulator. On 1996 and earlier remove the steel regulator mount bracket from lower frame cross member.

89-96 models must add the 50A auxiliary breaker supplied in this kit. This is optional on 97-up. We recommend that new accessories that use a lot of amps be connected to the silver terminate on the new 50A breaker. If you want these accessories to activate from your ignition switch, use a relay.

1989-92 mount the breaker bracket on front side of battery tray. Remove battery, drill hole and secure the breaker bracket with the pop rivet.

1993-96 models mount breaker bracket on upper frame cross member (near stock breaker). If your pop riveter won't fit between the frame secure the bracket with a sheet metal screw.

- Insert the new 50A breaker in breaker bracket.

Connect small end of 13" wire to copper color terminal on circuit breaker.

Connect large end to battery positive terminal.

Regulator Installation

Note: The bottom of the feet on the regulator is cut at an angle to lean the regulator away from the oil filter. Be sure to mount the regulator so it leans forward away from the oil filter.

1) Connecting wires to regulator

Note: When connecting wires, place regulator upside down with something soft under fins so paint won't be scratched.

A- Regulator B+ wire is 50" long. One end has yellow marker on it. Connect end labeled B+ to B+ terminal on regulator.

B- This kit comes with two wires labeled GND.

1989 to 92 models use the shorter 32" wire.

1993 to 98 models use the longer 48" wire. Determine which GND wire you need. Connect the end with the smaller ring terminal to regulator GND terminal on regulator.

C- To connect the AC wires place the regulator upside-down on suitable stand in front of front motor mount. The regulator- shipping box should work. Connect one AC wire from the stator to each AC terminal on the regulator. It doesn't matter which one goes where.

Note: For best appearance, position wires to follow the contour of the regulator legs

2) Mounting Regulator

Flip the regulator up onto the frame cross member so it straddles the motor mount.

On 1989-94 models use 1/4-28x 1 1/4 bolts

(supplied) to mount regulator. On 1995-98 models slide regulator on 1/4 -20 studs and use stock nuts.

3) 89-92 route B+ wire the same way as old regulator wire. Connect yellow end to silver terminal of new 50-amp breaker. Route the GND wire along lower right frame rail. Follow crossover bracket to the left side. Connect to 5/16 bolt where braided ground cable connects. This bolt also connects your inner primary to frame.

93-98 routes B+ and the GND wire together the same way as the old regulator wires. Connect yellow end of B+ wire to silver post of new 50A breaker (94& up may connect to stock 50A breaker).

On 93-96 models, connect GND wire to grounding bolt on frame above oil filler cap.

On 97-98 models, connect GND wire to left side ground post located under seat in front of the battery.

4) Check all wires to be sure they are not in a vulnerable position. Keep wires away from front motor mount and exhaust pipes. Do not run wires on the bottom of frame rail where they will get pinched if you bottom out. Replace all wire ties previously cut and add new where necessary.

Testing Reconnect battery and start motor. Check voltage at the battery terminals.

With a good battery you should get 14.3 to 14.6 VDC.

Have a Good Ride