

Installation Instructions for VT No. 32-1281

32-1281 is designed to upgrade the charging system on 1999 -2003 FLH-FLT Twin Cam models.

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

Alternator Removal

1) Disconnect negative battery terminal.

2) Drain primary case oil.

3) 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 adjuster shoe without removing the clutch. Caution: Do not put excessive side force on chain.

5) Remove output shaft extension. Take note of all shims and spacers between output shaft extension and rotor.

6) Remove the rotor.

Note: the magnets in the 48 amp rotors are significantly stronger than normal rotors. It is recommended that you use a special rotor remover/installer tool such as **VT No. 16-1054**.

7) Unplug regulator from stator and remove the plastic plug receptacle from stator side. On 1999 to 2001 models, remove the blue secondary lock us a small hook or long #6 wood screw in the small hole in the middle. The blue lock plate will pull out. Using a small screwdriver release the plastic locking tab and remove each wire one at a time. On 2002 to 2003 models remove the terminal position assurance clip on the backside of plug. Each terminal has 2 lock tabs. Using 2 paper clips or #16 gage solid wires. Insert one on each side of a terminal from the front side of the plug receptacle and pull the wire out the backside.

8) Remove 4 stator-mounting screws. From the out side of the case, push the protruding lip of the stator wire grommet into the engine case using a small flat blade screw diver. Pull the wires through the case while removing the stator.

Alternator Installation

1) Install stator wire through the in case. Pull gently on the wires to seat the case sealing grommet. On twin cam models the first lip on the grommet well come all the way through and seat on the out side of the case.

2) Mount the stator to engine case with new mounting screws supplied. Screws have thread-locking compound already applied. Torque screws to 50-70 in-lbs.

!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.

4) Install the rotor slowly. Take care not to let the magnets hit the stator. Do not let the rotor snap in to place or magnet damage may occur.

Note: no shims are used under the rotor on Twin Cam models.

5) Install shims removed in step 6 of removal.

Note: This kit is designed as a direct replace for the stock charging system on 2004 –2005 FLH-FLT. No primary chain alignment should be necessary

7) Install compensator sprocket with chain adjuster shoe, and clutch if removed.

8) Adjust primary chain.

9) Check primary chain alignment.

10) Install outer primary and other parts removed.

11) Add oil to primary case.

Regulator

Remove Old Regulator

- 1) Disconnect negative battery terminal
- 2) Unplug regulator/stator connectors.
- 3) Disconnect regulator B+ wire from the main circuit breaker located under the seat.
- 4) Disconnect regulator GND. Wire from the ¼' ground stud located under the seat.

Take note of the wire routing and cut the necessary wire ties and remove wires.

Note: if you tie a piece of fishing line to the ring terminal of old regulator wire before pulling wire out. You can use this cord to pull the new wire in place.

- 5) Unbolt regulator and remove.

Install New Regulator

Regulator Installation

Note: The bottom of the feet on the regulator are 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 the 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- The ground wire is labeled GND on both ends. Connect the end with the smaller ring terminal to regulator GND terminal on regulator.

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

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 stator to each AC terminal on the regulator. It doesn't matter which one goes where.

- 2) Mount the new regulator. The regulator should sit directly on the frame and lean forward. If it leans back turn it around. Reuse the old wire claps. Install them on top of the regulator mounting foot. Reuse the stock ¼' nuts to fasten the regulator to the frame.

- 3) Rout wire labeled "Silver post main breaker" to the main circuit breaker under the seat and connect to the silver post.

- 4) Rout wire labeled GND. and connect it to the ¼" ground stud on the frame under the seat.

- 5) Check the routing of all wires to be sure they are not in a vulnerable position. Keep wires away from exhaust pipes and moving parts. Be sure wires are not in the very bottom of lower frame or they will get pinched if you