



## INSTALLATION INSTRUCTIONS

### COMPU-FIRE® 32 AMP CHARGING SYSTEMS (Twin Cam Engines)

**Part # 55522 1999 – 2003 Dyna & 2000 Softail Models**

#### **READ THESE INSTRUCTIONS COMPLETELY BEFORE BEGINNING INSTALLATION!**

Check the contents of the kit:

Alternator Rotor  
Large Washer  
Small Washer  
32 Amp Stator  
Compu-Fire Voltage Regulator  
# 10 Insulated ring terminal  
1/4" Un-insulated ring terminal  
3/8" Un-insulated ring terminal

**NOTE:** REFER TO THE FACTORY SHOP MANUAL ELECTRICAL SECTION FOR SAFETY INSTRUCTIONS PRIOR TO PERFORMING ANY ELECTRICAL SYSTEM REPAIRS OR MODIFICATIONS!

**CAUTION!** ALWAYS DISCONNECT THE BATTERY CABLES BEFORE PERFORMING ANY ELECTRICAL SYSTEM REPAIRS OR MODIFICATIONS. THIS WILL PREVENT DAMAGE TO THE ELECTRICAL SYSTEM OR COMPONENTS IN CASE OF AN ELECTRICAL ARC CAUSED BY SHORTING THE BATTERY POWER TO GROUND.

**WARNING!** SEVERE DAMAGE TO THE ELECTRICAL SYSTEM OR PERSONAL INJURY MAY OCCUR BY NOT FOLLOWING THE ABOVE SAFETY INSTRUCTIONS.

**CAUTION!** The installation of the Compu-Fire 32 Amp Charging System requires factory Harley Davidson® service tools in the disassembly of the clutch and primary chain sprocket. If you are not familiar with the disassembly of the primary drive assembly, or do not have the proper tools, Compu-Fire recommends the installation be performed by a trained Harley Davidson® technician.

**NOTE:** When replacing stator you will need to reuse the stock stator plug housing.

#### **REMOVAL:**

1. Disconnect the cables at the battery. Remove the ground (-) cable first and then the positive (+) cable.
2. Drain the oil in the primary chain case and remove the outer primary cover, compensating sprocket, primary drive and clutch as described in the factory manual. **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 the chain.
3. Remove the alternator rotor using Harley Davidson® puller part no. 95960-52B. Note the location of the washers.
4. Unplug the regulator from stator. Remove the stator plug housing and blue secondary lock. Use a small hook or long #6 wood screw in the small hole in the middle and the secondary lock tab will pull out. Using a small screwdriver, release the terminal locking tab and remove each wire one at a time. Save the plug housing for reassembly.
5. Remove the four Torx head screws attaching the stator. Remove 2 stator plug clamp screws and remove the stator.

**NOTE: THE FACTORY SHOP MANUAL RECOMMENDS THAT THE TORX HEAD FASTENERS SHOULD NOT BE REUSED. ALWAYS REPLACE THE TORX HEAD FASTENERS WITH NEW PARTS.**

#### **STATOR AND ROTOR INSTALLATION:**

**WARNING!** The Compu-Fire rotor uses extremely strong magnets that may be damaged if the rotor is placed near any metal parts, tools, or hardware in the work area.

**WARNING!** Special tools are required in the installation of the rotor. The Compu-Fire rotor uses extremely strong magnets that may cause the installer to lose hold of the rotor during installation. Severe injury may occur if the installer's fingers become pinched between the rotor and the engine case or the stator during installation. Use H-D tool P/N 41771 or Jim's tool P/N 758-147 when installing the rotor.

6. Install the Compu-Fire 32 Amp stator using new fasteners (H-D Part no. 2720). Torque the mounting screws to the specs in the service manual. **NOTE: Make sure the cable from the stator is routed so it does not pinch between the stator and the case, and so that the rotor does not rub it.**
7. Re-install the stator plug housing.
8. Place the small washer supplied in the kit over the sprocket shaft.

**NOTE:** Be careful that the magnets in the rotor do not pick up small metal parts or hardware from the work area.

9. Install the rotor on the sprocket shaft.
10. Re-install the primary drive assembly per factory service manual. **NOTE:** Use Loctite® 262 (red) on the threads of compensating sprocket nut.
11. Check sprocket alignment per factory service manual.

## REGULATOR INSTALLATION:

12. Remove the original regulator.
13. Measure the length of the output lead on the original regulator. Cut output lead on Compu-Fire regulator to same length. Strip wire and crimp #10 ring terminal to wire. **Note:** Terminal must be properly crimped for proper operation of regulator.
14. Install Compu-Fire voltage regulator using the original hardware.  
Note: The voltage regulator must be mounted in a location with good air flow.

## VOLTAGE REGULATOR GROUND must be connected to a good engine ground for proper operation.

15. Locate a good engine ground. Crimp proper ring terminal to ground wire and attach.
16. Plug the connector to stator. **Be sure it is connected properly.**
17. Connect output lead to battery (+) positive.  
This can be done at the battery cable terminal on the starter solenoid.
18. Reconnect the battery ground cable.

## TROUBLE SHOOTING

### Stator

1. The stator has 2 Pins, the pins should have continuity to each other, but the pins should **NOT** have continuity to ground.
2. With a volt meter on AC volts, the stator should be putting out 14 volts per 1,000 RPM.  
(Check at 1,000 and 3,000 RPM)
3. If all this test out properly your installation of the stator was successful.

### Regulator

1. Do not use test procedure found in the factory shop manual. The Compu-Fire voltage regulator uses high efficiency series circuitry. The electronic circuitry is completely different.
2. With the main switch OFF, measure the voltage from the regulator output terminal to ground. The reading should be 12 - 13 volts. If there is no voltage reading, the battery is disconnected.
3. Start the engine and bring the RPM to 1500. The voltage should rise 1/2 to 1 volt. This indicates that the voltage regulator is charging. This completes the test.

**NOTE:** Compu-Fire Products are manufactured and inspected under strict procedures specified in the Compu-Fire Quality Assurance Program and are packaged and shipped in specially designed boxes to insure against damage. Therefore, Compu-Fire will not accept any rotors returned with chipped or broken magnets as the cause of this can only be due to careless handling or improper installation techniques.

**For technical assistance call  
(913) 808-2376**



#### LIMITED WARRANTY

PerTronix, LLC. Warrants to the original Purchaser of its solid-state ignition system (product) that the module, trigger rotor and wiring (components) shall be free from defects in material and workmanship for a period of (12) months from the date of purchase.

If within the period of the foregoing warranty PerTronix finds, after inspection, that the product or any component thereof is defective, PerTronix will, at its option, repair such products or component or replace them with identical or similar parts PROVIDED that within such period Purchaser Promptly Notifies PerTronix, in writing, of such defects.