

## 1G to 3G Alternator Upgrade

The following procedure documents in order the steps necessary to upgrade 1G with 3G Ford Alternator - using OEM wiring 1966-1981 Applications.

(This installation uses stock OEM wiring harnesses - for cars where no existing OEM wires are used see "no prior system" instructions)

We do not guarantee that these instructions are perfect nor guarantee the results; however the following instructions represent this same upgrade done in our shop by our staff.

As always, use care in working on any vehicle.

Take any necessary precautions you feel are needed in addition to any we mention - and remember - **SAFETY FIRST!**

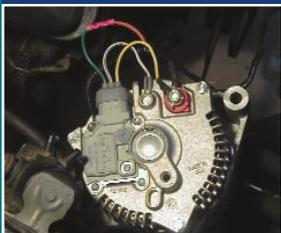


Step 2  
Picture 1



1. Disconnect the Battery (-) wire from the battery.
2. Locate the voltage regulator - typically mounted on the inner fender.
3. Unplug it and remove it from the vehicle.
4. Mount the Pa-Performance Regulator in its place.
5. Re-connect the plug.
6. Locate the alternator. Loosen the top and bottom mounting bolts
7. Remove the belt.
8. Locate the wires on the rear of the unit and disconnect them all.
9. Remove the threaded mounting bolt.
10. Remove the long mounting bolt while supporting the alternator - and remove the alternator from the vehicle.
11. Get the new 3G alternator and install the regulator plug included.
12. Yellow regulator wire to the B+ stud on the rear of the alternator. We put an eye or ring terminal on the yellow so it will attach to the B+ easily.
13. White/black wire to the stator plug, and the stator plug has been attached to the white / black wire for you. It plugs into the corresponding plug on the rear / side of the alternator. (if the vehicle has an electric choke, it should be attached to this wire with a crimp or solder connection)
14. Green/red wire to the original harness' ignition wire (typically red or blue/orange color), The provided red butt connector can be crimped to the ignition wire from the wiring harness. (On some vehicles the wire is not red. Fundamentally the wire to be connected will have positive voltage with the ignition key turned on - it should measure slightly less than 12 volts dc)

Steps 12-14  
Picture 2



**NOTE 1**  
**Picture 3**



**NOTE 1:** The LARGE ground terminal is top left, the power or B+ is next from the left and a black wire, the small red with a butt connector is the one from the fender regulator going to the green/red wire on our plug. Finally the small black wire at the bottom right is unused but **MUST** be taped or shrink wrapped so not to short to ground. It is still getting some current from the regulator circuit.

**NOTE 2:** The "larger" black (or black/orange) wire is the B+. Instead of upgrading it, add a 2nd wire (#6 or #4 gauge) to it, and run that from the B+ stud on the alternator over to the B+ (battery) side of the fender mounted starter solenoid. This new wire **MUST** include a fusible link (or a fuse) for protection rated at 150 amps minimum for a 95A 3G and 200 amps for a 130A 3G. PA-Performance offers this Power Wire Kit, or an auto parts store or stereo shop can supply you with one. The small black wire is cut off or taped back and unused. The ignition wire (see note on color from step #14) we connect to the green/red. The BIG eye terminal on the ground wire - (if present) is connected to the alternator mounting foot for a good clean direct ground path.

**NOTE 3:** In some cases the original # 10 black battery + wire actually runs through the amp gauge on the dash. You **MUST** run a 2nd wire as we described to handle the added current on a 130 amp 3G upgrade. Do not upgrade the original wire because it must go through the amp gauge - but the amp gauge will not handle the added amperage. The result is that the amp gauge will not be accurate once the jumper is run. It will be more accurate to add a volt gauge in the future.

**15. At this point** all of the wires should be connected.

**16. Mount the new alternator in place.** In some cases you may need to cut a small piece off of the thin spacer removed from the wide mounting foot from the old alternator installation - most times they are the same from the OEM unit. Just check as this determines belt alignment with the other pulleys. A quick way to check is to measure the wide mounting feet on the old and new alternator. The should match, if not, spacer shims may be needed.

**17. Tighten** the lower mounting bolt.

**18. Apply** the appropriate belt tension.

**19. Tighten** the threaded mounting bolt.

**20. Look it all over,** making sure the wires are not pinched.

**21. Reconnect** the negative battery wire.

**22. Start the vehicle** and connect a DC voltmeter positive lead to the positive (+) terminal of the battery and the negative lead to the negative (-) terminal of the battery. With all accessories off and a fully charged battery the DC voltmeter should register approximately 12.8 to 14.6 volts. (reference voltage measurements taken with stock diameter pulley)

*That completes the steps we took to upgrade a 1G with a 3G Ford Alternator.  
If you have any questions or observations you can e-mail us.*

**Steps 16-19**  
**Picture 4**

