



## **BIG 3 + Battery Cable Upgrade**

Thank you for choosing **Quadstar Tuning LLC** for your battery cable upgrade kit!

### **Kit Contents:**

1. Red crossover cable (+)
  - a. This is the longest cable in the kit and connects the 2 battery (+) posts together, running across the top of the fan shroud
2. Red starter feed cable (+)
  - a. This cable is used to attach the starter to the passenger side battery (+) terminal
3. Black driver side ground cable (-)
  - a. Connects driver side battery (-) post to any available engine lower intake manifold stud
4. Black passenger side ground cable (-)
  - a. Connects passenger side battery (-) post to any available engine lower intake manifold or thermostat crossover housing stud AND the passenger side fender ground point
  - b. This is the ground cable that has a 10ga jumper wire coming out of it for attaching to the fender
5. Red alternator feed cable (+) with silicone terminal cover
  - a. This cable is the shorter 1/0 cable (read the printed insulation to see the marked size)
  - b. 1995 & Earlier - This cable connects the alternator to the driver side (+) battery post
  - c. 1996 & Later - This cable connects the alternator to the passenger side (+) battery post
6. New hardware for side post battery connections
  - a. Stainless bolts and nuts. This is a common modification for side post batteries to make the connections much more reliable 1-1/4" bolts are for positive connections. 1" bolts are for the negative connections. Screw the bolt until it bottoms out then tighten the nut to secure cables. This takes the load off of some threads and distributes it across all threads. This will alleviate 99% of side post issues when done correctly **!(see appendix B)**
7. 1995 & Later Kits Only
  - a. Red under hood fuse box feed cable
  - b. This is the longer 1/0 cable where applicable and is used to connect the under hood fuse box to the driver side battery (+) terminal
8. 1994 Kits only - Will have an eyelet to crimp onto the firewall distribution block feed wire **(see instructions below) (See Appendix A)**



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### **General Removal Procedure:**

1. **Detach factory battery ground cables at the battery side post connections FIRST. This will deactivate the electrical system!**
2. Detach factory ground cables from the engine by removing the nuts that secure the cables to the lower intake manifold and or thermostat crossover housing studs.
  - a. This can be a pain if the entire stud tries to come out! You may need to cut the factory cables out and allow the studs to unscrew so you can disassemble them. Alternatively, you can get or make a wrench that will fit under the cables to hold the studs while you remove the nuts (**15mm**)
3. Detach the factory passenger side ground cable on the inner fender. Save the bolt/screw for re-use
4. Remove factory ground cables from the truck and recycle
5. Detach the alternator charge cable from the back of the alternator. Save the nut for re-use
6. Detach the driver side positive battery cable from the driver side battery. You can now remove the driver side (+) cable which is integrated with the alternator charge cable.
7. Detach the passenger side (+) connection which connects both the starter feed wire and the crossover cable. You can now remove the crossover cable
8. Remove the starter feed cable from the starter.
  - a. You may need to remove the starter to gain access to the connections
  - b. This is a great time to upgrade the starter!
  - c. 1994 & Older models have an additional wire integrated into the starter feed cable that is addressed in later notes

### **General Installation Procedure:**

Installation will consist of installing all RED positive (+) cables first. Black ground (-) cables get CAREFULLY installed last to complete the circuit(s) safely.

1. Start by attaching the red 1/0 alternator feed cable to the back side of the alternator. Leave the other end free
  - i. The smaller loop connector goes toward the alternator. The larger one goes toward the battery
2. Install the starter power feed cable
  - i. Snake the power feed cable thru the factory adel clamps along the passenger side frame rail to safely retain it between the battery and starter
  - ii. Connect the feed cable to the starter



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- a. It may help to slightly bend the loop connector for stock starter installations so the cable clears the exhaust manifold easier
3. 1995+ models install the positive cable from the drivers side battery + terminal to the fuse box next to the brake booster.
  - i. Small end goes to the fuse block, the large end goes to the battery.
  - i. Upgraded starters are much easier to connect as the solenoid is moved away from the exhaust manifold
4. Attach red cables to the passenger side battery using the supplied hardware (**see appendix B for reference image**)
  - a. 1996+ Trucks will have 3 cables attached to the passenger side + battery connection
    - i. Alternator charge cable
    - ii. Starter power feed cable
    - iii. Crossover cable
  - b. 1995 Trucks will have 2 cables attached respectively
    - i. Starter power feed cable
    - ii. Crossover cable
  - c. 1994 & Older trucks will have 2 cables and 1 wire attached respectively
    - i. Starter power feed cable
    - ii. Crossover cable
    - iii. 10ga power distribution block feed wire (re-used from factory wiring) (**See Appendix A**)
5. STOP AND ENSURE ALL RED POSITIVE CABLES ARE ATTACHED BEFORE PROCEEDING TO GROUND CABLE INSTALLATION
6. Attach the engine side of both black ground cables to available studs on the engine intake manifold or coolant thermostat housing
  - a. The ground cable with the 10ga wire coming out of it is the passenger side
7. Attach ground cables to the batteries using supplied hardware (**See Appendix B**)
  - a. NOTE, This will complete the circuit and power up the truck
8. Attach the 10ga ground wire from the passenger side ground cable to the factory point on the inner fender where you removed the factory cable from. Re-use the factory bolt/screw.
9. Make sure all connections are tight and secure the crossover cable to the fan shroud with zip ties. YOU ARE DONE!

### **Year specific installation notes:**

1. 1994 & Older
  - a. These models have a power distribution block on the passenger side of the firewall. There is a power feed wire that runs down past the engine bellhousing



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and up the frame rail to the passenger side battery. This cable has a fusible link on it and will be re-used by crimping the included eyelet onto it

- i. This 10 ga wire will need to be cut at or near the passenger side battery (+) connection when removing the factory battery feed cable. (**See Appendix A**)
  - b. 1994 models have a driver side alternator and do NOT have an under hood fuse block
2. 1995
    - a. 1995 models have a driver side alternator and under hood fuse block. Both the alternator and the under hood fuse box will get connected to the driver side (+) battery post on this model year
  3. 1996+
    - a. The late model trucks have a passenger side alternator and a driver side under hood fuse block



Appendix A



Appendix B