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HIGH AMPERAGE ALTERNATOR KIT (140-190 AMPS)

This alternator kit provides necessary components needed when upgrading your vehicle's charging system with a larger amperage alternator.

These instructions can be applied to factory/OEM wiring or to a Painless Performance chassis harness. Wire numbers (#900 series number) have been provided for those with a Painless chassis harness.

Painless Performance recommends these instructions be read in their entirety before any installation or cutting takes place. Things like routing and re-using some of your existing wires going to the alternator and battery need to be taken into account before some steps should be performed; an example being mounting the fuse. Reading these instructions beforehand will give you considerable insight into making the installation of this product as "Painless" as possible.

This kit can be installed using a pair of wire strippers, crimpers, 1/4" & 5/16" socket, a ratchet, and a heat source. An electric drill with a 1/8" drill bit or 1/4" nut driver will make installation of the fuse holder easier but is not necessarily needed.

Begin by assessing the components found in the kit. They should include:

10' of red 6 gauge wire

(1) fuse holder w/cover, (1) 200 amp fuse & (2) Self tapping mounting screws

(6) non-insulated ring terminals: (3) 6-10, (2) 4-10, (1) 6-38

(2) insulated heat shrinkable ring terminals

(4) pieces of heat shrink: (2) large diameter, (2) medium diameter

(1) rubber boot

(25) zip ties

BEFORE ANY INSTALLATION TAKES PLACE, DISSCONNECT THE NEGATIVE CABLE FROM THE VEHICLES BATTERY. Not doing so could lead to shorting out electronic equipment in the vehicle during installation.

Alternator Output Connection- Locate the wire of your vehicle's chassis harness that provides power from the alternator to the vehicles battery. Painless chassis harnesses have this wire designated as #915. This output wire, along with the large gauge wire found in this High Output Alternator kit, will need to be installed

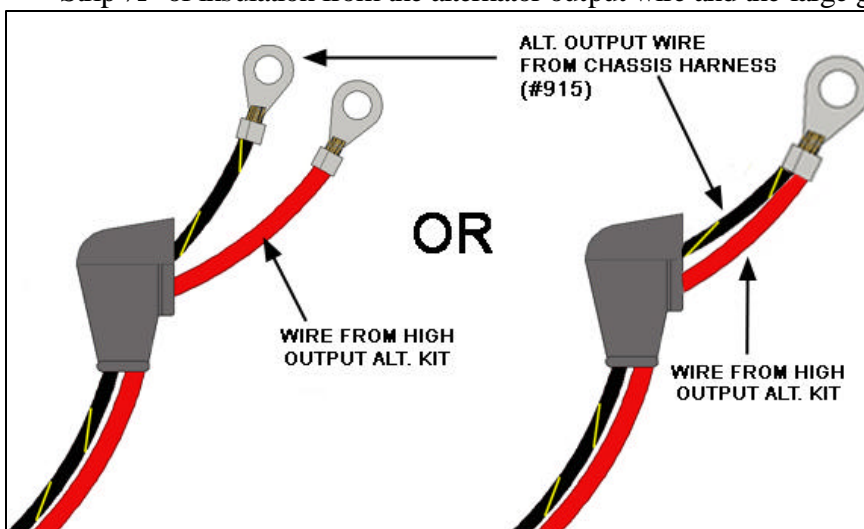
onto the output post of the alternator. This connection can be seen in Figure 1 on the next page and can be accomplished one of two ways:

#1 Install each wire separately

- Slide the rubber boot and/or a piece of the smaller sized heat shrink onto the wire found in the kit. The boot will need to have the small opening trimmed off in order to slide back over the heat shrink and ring terminal after installation.
- Strip about ½” of insulation from the large gauge wire from the kit.
- Crimp on an appropriate non-insulated ring terminal and pull the heat shrink over the barrel of the terminal and apply heat.
- There will be no changes to the factory Output wire. It will connect to the alternator as it did before.
- Install both wires, the factory output (wire #915) and the large wire from the kit, on the alternator output post.

#2 Double both wires into a single ring terminal

- Remove the factory terminal on the alternator output wire. Cut it as close to the terminal as possible.
- Strip ½” of insulation from the alternator output wire and the large gauge wire from the kit.



- Locate the appropriate size ring terminal from the kit and crimp both wires into the ring terminal.
- Slide one of the larger pieces of heat shrink over the ring terminal, and apply heat to shrink down over the barrel of the terminal.

Figure 1 Alternator Output Connection

Charge Wire routing- With one end of the large red gauge now attached to the alternator, route the remaining wire towards the vehicle’s battery.

- Keep the charge wire away from exhaust, sharp edges, and pinch points such as hinges and moving suspension components. If the charge wire must pass through any metal panels be sure to use a grommet (not provided) to avoid chaffing the wire and causing a short.
- Use the zip ties supplied with the kit to secure the charge wire along its routed course.

Fuse Holder Mounting- Find a suitable location for the inline fuse. In most cases, it is best to place it near the battery. This is important for those doing the install with a pre-existing wire harness in the vehicle as

the wire feeding the vehicle's fuse block (wire #916) from the battery will be re-used. Those installing this kit into a vehicle equipped with a Painless chassis harness, this inline fuse will replace the Maxi Fused provided with those kits.

- When a suitable location has been found, install the fuse holder using the 2 self tapping screws provided with the kit. An electric drill will make the installation of the fuse holder easier. A 1/8" drill bit can be used to drill pilot holes for the screws after their locations have been marked, or a 1/4" nut driver can be used to allow the screw to drill through the mounting surface. If you do not have a drill, or if pilot holes were drilled, use a 1/4" socket and a good bit of pressure to penetrate through the mounting surface and to securely fasten the fuse holder.
- Install the 200 amp fuse by removing the pre-installed nuts and lock washers from the fuse holder. These nuts will require a 5/16" socket. Do not remove the bottom nuts or re-install the lock washers and nuts at this time.

Fuse Holder Connections- Begin by locating the power wire feeding the chassis harness' fuse block (wire #916). In most cases this wire will be found at the battery or starter solenoid.

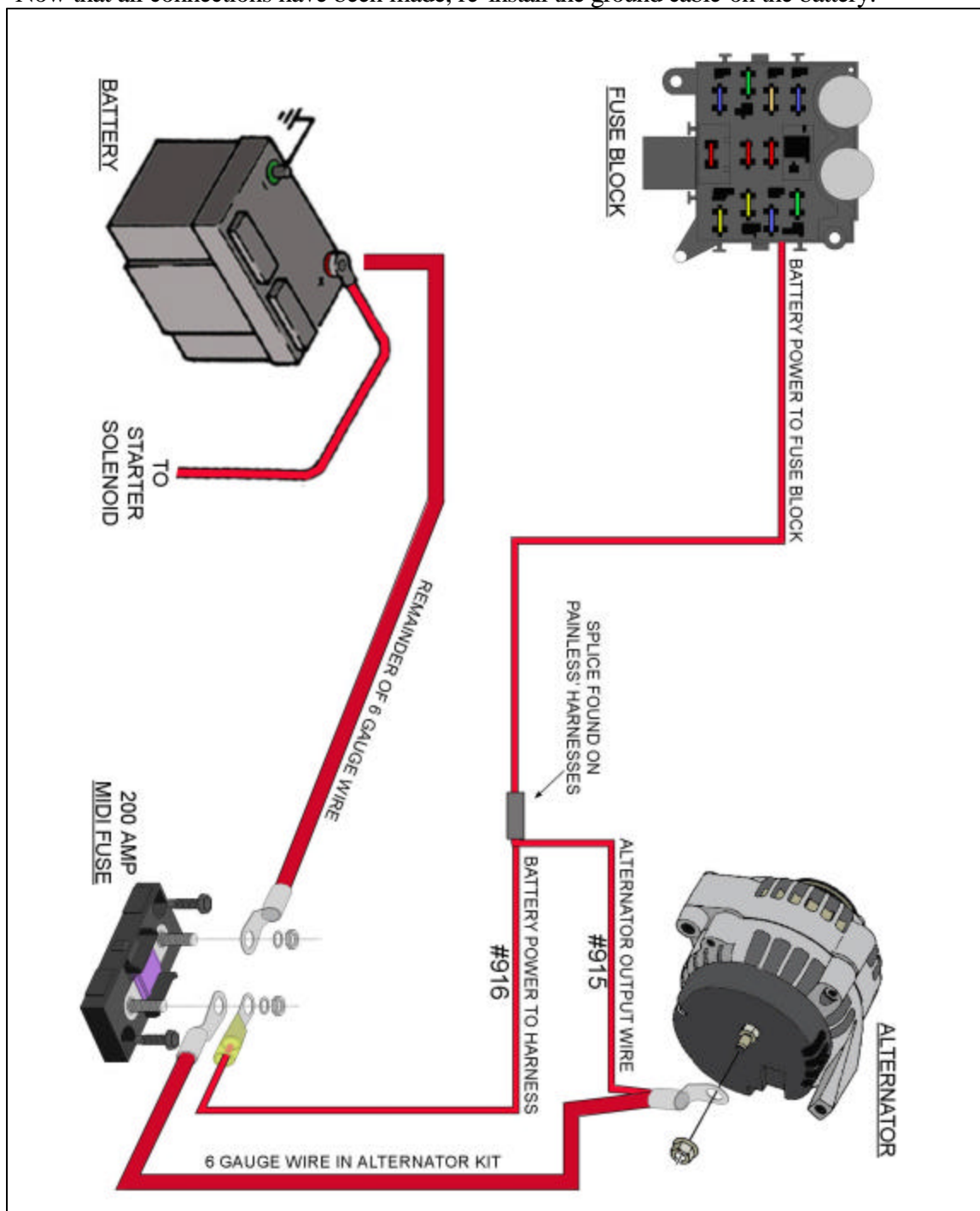
- Remove this power wire from its power source and rout it to the fuse holder.
- If the factory termination will not fit over a stud on the fuse holder, remove it and replace it with one of the heat shrinkable, insulated ring terminals supplied with the kit.
- Route the large gauge charge wire from the alternator to one side of the fuse holder and cut to length. Ensure the charge wire is properly routed and secured along its entire routing course before any cutting is done. Retain the cut off piece of wire as it will be used to connect the opposite side of the fuse to the battery.
- Place a piece of the smaller sized heat shrink onto the wire coming from the alternator and strip about 1/2" of insulation from the large gauge wire.
- Crimp on an appropriate non-insulated ring terminal and pull the heat shrink over the barrel of the terminal and apply heat.
- Install the large gauge charge wire as well as the power wire feeding the chassis harness (#916) to one side of the fuse holder. At this time the lock washer and nut on this side of the fuse holder can be tightened down.
- With the cut off piece of 6 gauge wire in hand, place a piece of the smaller sized heat shrink and strip about 1/2" of insulation from wire.
- Crimp on an appropriate non-insulated ring terminal and pull the heat shrink over the barrel of the terminal and apply heat.
- Install this wire to the opposite side of the fuse holder. At this time the lock washer and nut on this side of the fuse holder can be tightened down.

The cover of the fuse holder may need to be trimmed in order to properly fit over the wires.

Battery Connections- The end of the wire coming from the fuse holder will be connected to the positive side of the battery.

- Route the wire from the fuse holder to the battery and cut to length.
- Install a piece of the smaller heat shrink and strip about 1/2" of insulation from the wire.

- Crimp on an appropriate ring terminal and pull the heat shrink over the barrel of the terminal and apply heat.
- Connect this wire to the positive side of the battery.
- Now that all connections have been made, re-install the ground cable on the battery.



**Painless Performance Limited Warranty
and Return Policy**

Chassis harnesses and fuel injection harnesses are covered under a lifetime warranty. All other products manufactured and/or sold by Painless Performance are warranted to the original purchaser to be free from defects in material and

workmanship under normal use. Painless Performance will repair or replace defective products without charge during the first 12 months from the purchase date. No products will be considered for warranty without a copy of the purchase receipt showing the sellers name, address and date of purchase. You must return the product to the dealer you purchased it from to initiate warranty procedures