

**2003/2004 MUSTANG COBRA**  
**BAP and Wiring Upgrade Step-by-Step Instructions**  
**VERIFY COLOR OF WIRE ON PLUG WITH PIN NUMBERS ON RELAY**

- 1) Remove driver's side and rear felt insulation panels from inside the truck area.
- 2) Decide on location in the trunk for mounting of BAP, Boost Controller, and Wiring Upgrade Adapter Plug, but do not mount them at this time. (The BAP should be located within 8" or so of the FPDM and the Adapter Plug is commonly attached to the lower mounting bolt of the FPDM. Some like to mount the Boost Controller inside the cabin, but the majority locates it in the trunk. Your choice.)



*Example of Common Mounting Points for BAP, Boost Controller, & Adapter Plug*

- 3) On a suitable work area, attach the ring terminal lugs to the BAP grounding wire (Black) and the Wiring Upgrade Adapter Plug grounding (Blue or White) wire (PIN 85).
- 4) In the same work area, solder and shrink-wrap the red 30amp fused wire from the BAP to the (Black or Blue) wire from the Wiring Upgrade Adapter Plug (PIN 30).
- 5) To have your BAP run full time, (the most common application), take the red and black wires which are inside of the BAP's other Black wire and solder and shrink wrap them together. This wire is approximately 16' long and you can cut this to 6-8" before soldering.
- 6) Disconnect negative terminal at battery.
- 7) In the trunk of your Terminator, disconnect the harness plug that goes into the FPDM and peel back the tape and loom on the harness for approximately 8". Locate the Green/Yellow wire in the harness and cut this wire so that you have equal length of it on both ends. (This is for attaching the BAP before the FPDM! To attach it after the FPDM, you will need to locate and cut the Brown/Pink wire.)



*Fuel Pump Driver Module & Harness*

- 8) Mount the BAP, Boost Controller, and Wiring Upgrade Adapter Plug to the locations you decided upon in Step #1.

9) Solder/shrink-wrap the following wires:

- Cut the Green/Yellow wire from the FPDM wire harness at least 4-inches from the connector. Connect the (Yellow or Black) wire (PIN 86) from the Wiring Upgrade Adapter Plug to the Green/Yellow wire from the wire harness side that you just cut.

-Connect the Non-fused Red wire form the BAP to the Green/Yellow wire on the factory connector side of the FPDM.

10) Reconnect the harness plug that goes into the FPDM

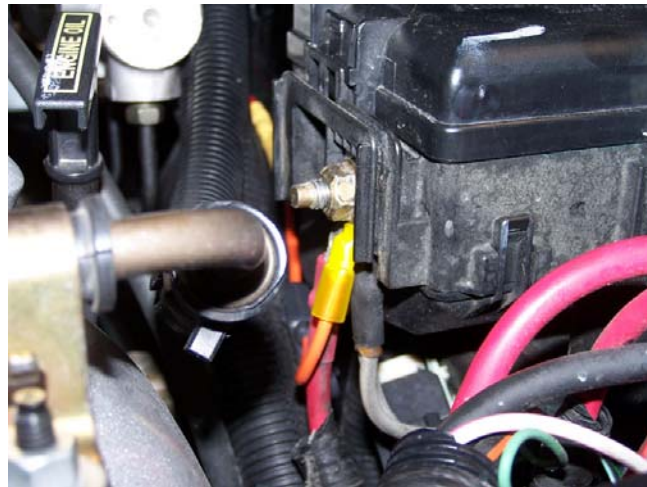
11) Attach the BAP grounding wire (Black) and the Wiring Upgrade Adapter Plug grounding (Blue or White) wire (PIN 85) to the location where the FPDM is grounded.



*BAP & Wiring Upgrade Grounding Location*

12) Time to run the 8-awg wire from the battery to the trunk:

-Attach the ring terminal lug to the Black 8-awg wire included in your upgrade kit.



*Under Hood Power Distribution Box Terminal*

-Decide on suitable location (within 12-16" of power distribution block on fuse box) for the 40-amp AGU fuse holder.



1) 40-amp AGU Fuse Holder & 2) Running the red 8-awg wire through the firewall – **Option 2**

-Attach the ring lug to one end of the red 8-awg wire and run to the fuse holder location and cut to length and attach to fuse holder.

-Attach other end of the red 8-awg wire to the other side of the 40-amp AGU fuse holder.  
 -Mount the 40-amp AGU fuse holder in the desired location that you've previously selected.

-Here are different 2 procedures that can be utilized for running the red 8-awg wire through the firewall. (See above picture for Option #2)

**Option 1:** Using a big screwdriver, gently work the top edge of the 2" diameter rubber grommet on the firewall outwards until you have enough room to feed the red 8-awg wire through to the interior. From under the dash, carefully pull the wire through to the interior. Wrap several layers of electricians tape around the red 8-awg wire that will be in contact with the firewall sheet metal for extra protection for the wire insulation. Reinstall the rubber grommet onto the firewall.

**Option 2 (preferred method):** Using a very sharp razor blade, carefully put a cut into the grommet on the topside. Be carefully not to go too deep and cut any of the factory wires. Use a metal coat hanger and tape the red 8-awg wire to it. Make sure you use enough tape so that when you pull the coat hanger from inside the car through the grommets you do not pull the coat hanger out of the tape. You can use WD-40 or a silicone spray lubricant on the grommet and electricians tape to help in this process.

-Install wire loom over all exposed 8awg wire in the engine compartment.

-Run the wire behind the driver's side kick panel and underneath the doorsill.

-Remove the rear seat by pulling it up slightly and reaching in and pressing in the two clips on either side of the transmission tunnel.

-Run the Red 8-awg into the trunk and to a location where it can be spliced with the (White or Yellow) wire from the Wiring Upgrade Adapter Plug (PIN 87). Solder and shrink-wrap these two wires.

13) Use wire ties and electricians tape to secure all the wires involved in the install process.

14) Replace the 20-amp mini-fuse in Slot #14 in the fuse box under the hood (right behind the battery), with the 30-amp mini-fuse supplied with the BAP kit.

15) Reconnect negative terminal at battery.

**Notes:** -These directions are intended for installation of the 40-amp BAP kit, which is the most commonly used for the 03/04 Cobra.

-The Red wire in the Wiring Upgrade Adapter Plug is NOT used. This is also the center plug on the relay so there is no need for it.

-The initial setting of your BAP Boost Controller can be anywhere from 25 to 30%, but to properly determine what you should set it at; you should datalog the car and pumps to indicate the proper setting for your application.

-If you would like the ability to have the BAP turn on and off based on boost pressure, eliminate Step #5 and wire the appropriate Hobbs switch to the red and black wires which are inside of the BAP black wire.

Instructions brought to you by IronTerp and Ricksvt

\*Special thanks goes to [BLK\\_03](#) & [sb03cobra](#) from modularfords.com for the installation pictures and to [TRBO VNM](#) for assisting in the write-up!