

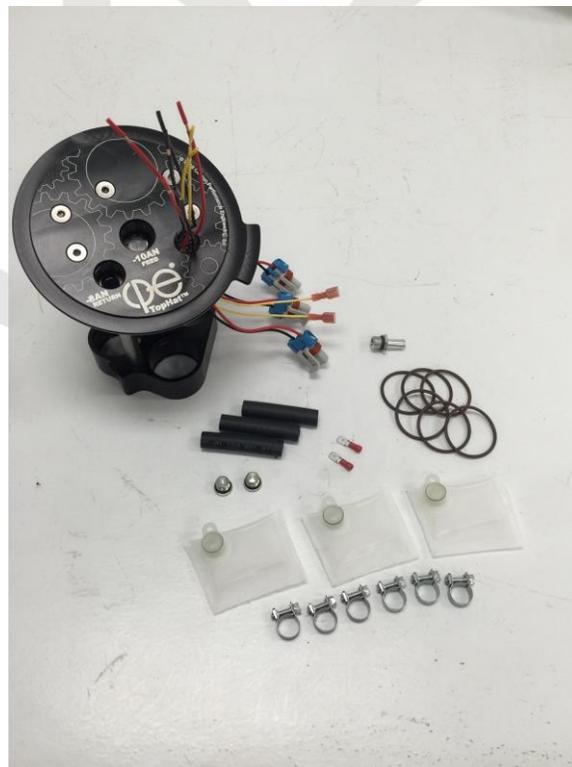
'11 - '14 Mustang TopHat™

MATERIALS INCLUDED:

1. (1) cp-e™ Instruction Booklet
2. (1) cp-e™ Sticker
3. (1) cp-e™ Informational Postcard
4. (1) TopHat with Wiring Harness
5. (3) Fuel Pump Filter Socks
6. (6) -129 Orings
7. (2) 4 ORB Plugs
8. (1) 4 ORB to 5/16 Nipple
9. (3) 5/16 ID Viton Hoses (2.5" Length)
10. (6) 13 Clamps
11. (2) Red Male Disconnects (18 - 22 AWG)



NOTE: Please check for these materials before installing this product. If any of the above listed materials are missing from your package, please contact cp-e™ before attempting to install the product at: support@cp-e.com or 301-477-1933.



WARNING

This document and the images within it are the copyrighted intellectual property of Custom Performance Engineering, Inc. They may not be reproduced or distributed in anyway, including electronic duplication and publication, without the express written consent of Custom Performance Engineering, Inc. By installing this product the end user is agreeing to hold Custom Performance Engineering, Inc., its staff, and business associates (hereto referred as cp-e™) harmless from any and all damages that may result, both directly and/or indirectly, from the use and or installation of this product. cp-e™ will not be held responsible for any damages whatsoever. This is a performance enhancing product, and it is understood that the user is aware of, and liable for, any damages that result from the use and/or misuse of this product.

PROCEDURE OVERVIEW:

I. PLEASE READ DIRECTIONS ONE TIME COMPLETELY BEFORE INSTALLING. *(This is an overview of the installation.)*

NOTE: *This product should be installed by, or under the supervision of, a qualified performance automotive specialist. Failure to do so may result in major property damage, serious injury, and or death. Be sure to exercise caution when driving your vehicle. Safety must be your primary concern! Always obey posted traffic laws and limits. Drive within the limits of the law, the limits of safety, and the limits of your ability.*

II. ACQUIRE NECESSARY INSTALLATION TOOLS

NOTE: *Not all tools listed will be absolutely necessary; however, for the best and easiest installation recommended tools may be listed.*

III. INSTALL cp-e™ '11 - '14 Mustang TopHat™

- *****DISCONNECT THE NEGATIVE BATTERY CABLE BEFORE BEGINNING INSTALLATION*****

The car battery stores a tremendous amount of energy and must be treated with respect. Disconnect the NEGATIVE, BLACK, wire from the car's battery. Be extremely careful NOT to short the battery with your tools while removing the negative cable. Shorting the battery by touching the terminal will almost certainly cause severe burns, a fire, or even an explosion. FYI, the reason to remove the negative terminal of the battery is so that if the wrench were to slip while on the nut of the battery terminal, and accidentally contact the frame of the car (ground) the result would not be a short from positive to ground, but a much less harmful short from negative-to-negative. Be careful to not slip and hit anything.

- Uninstall the stock Mustang fuel pump assembly.
 - Install the cp-e™ '11 - '14 Mustang TopHat™.

IV. START VEHICLE

Instructions for:
cp-e™ Mustang TopHat™
'11 – '14

II. TOOLS NEEDED FOR INSTALLATION:

- (1) Wire Strippers
- (1) Flat Head Screwdriver
- (1) 3/16" Allen Key
- (1) Tape Measurer

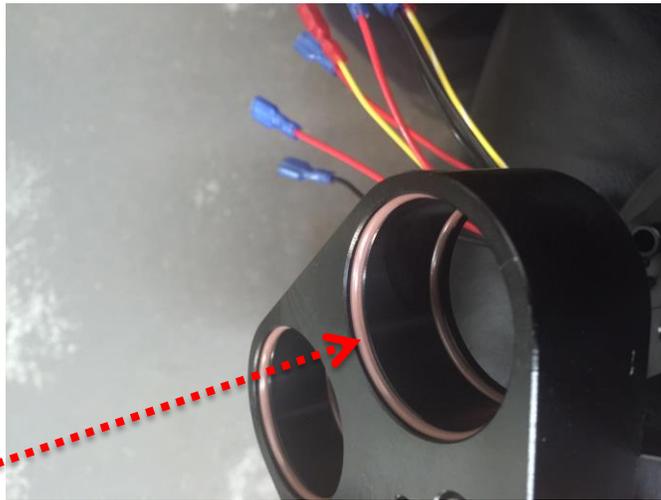
**Indicates that these tools are optional and are not needed to complete the install depending on the installer's preference.*

III. INSTALL cp-e™ Mustang TopHat™

- *****DISCONNECT THE NEGATIVE BATTERY CABLE BEFORE BEGINNING INSTALLATION*****

The car battery stores a tremendous amount of energy and must be treated with respect. Disconnect the NEGATIVE, BLACK, wire from the car's battery. Be extremely careful NOT to short the battery with your tools while removing the negative cable. Shorting the battery by touching the terminal will almost certainly cause severe burns, a fire, or even an explosion. FYI, the reason to remove the negative terminal of the battery is so that if the wrench were to slip while on the nut of the battery terminal, and accidentally contact the frame of the car (ground) the result would not be a short from positive to ground, but a much less harmful short from negative-to-negative. Be careful to not slip and hit anything.

1. It is probably easier to do the wiring before you install the pumps so let's start with the wiring. It is fairly straight forward. You will need to supply each pump with switched power that is capable of around 25 amps. Essentially all you need to do is hookup the two or three pumps and the fuel level sender.
2. The red spade connectors are used with the fuel level sender. The good news here is that there is no polarity for the Fuel Level Sender, simply make sure you hook up the fuel level sender to the yellow wires on the fuel hat. Follow the spade quick disconnect directions at the end of this manual for installed the quick disconnect terminals.
3. The 14 AWG wires are for your fuel pump, if you have one of the TI Auto F90000274, TI Auto F90000267, or the TI Auto 10000302, the fuel hat comes with a connector that plugs right in.
4. If you are running one of the TI F90000262, Walbro GSS342, AEM 320 or the AEM 320E pumps then you will need to cut off the supplied connector and install the blue spade quick disconnects onto the red and black 14 awg wires. These are purchased separately from a hardware store like lowes/home depot or radio shack.
5. Be sure to install the 5/16" hoses with the supplied clamps and tighten the clamps down firmly on the fuel hat side.



6. Be sure to install the -129 O-Rings into the grooves on the bottom of the fuel hat. There are 6 O-Rings, or if you are only running two pumps you can install 4 of them.
7. Once you have the wiring figured out and connected, you can then slide the pumps all the way into the fuel hat. Make sure that you have the polarity figured out and correct on the fuel pump wires, especially if you had to install the quick disconnect terminals. The fuel pump itself is typically labeled so this should not be hard to do.



8. Install the fuel pump filter socks and insert fuel pump into the fuel hat. Verify the socks are $\frac{1}{2}$ " to $\frac{3}{4}$ " above the bottom of the tank and trim the hose as necessary. This can be done with a tape measure.



9. If you are only running two fuel pumps you will need to install the provided 4 ORB plug as pictured in the location where the third pump would reside.

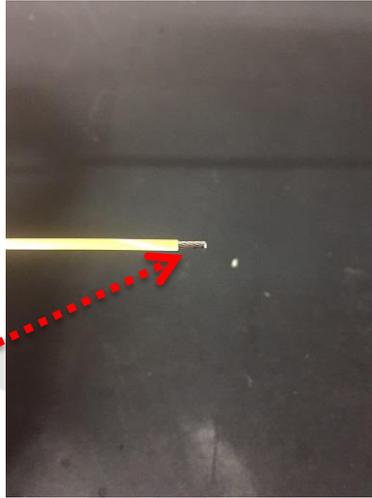


10. You also need to determine if you are planning a bottom exit or side exit fuel return location. We recommend the side exit as it seems to help with fuel aeration and tuning. In the picture the plug is installed on bottom so that the fuel will exit out the side. This is also a 4 ORB plug.
11. With the hat partially inside the tank, be sure to install the siphon line from the other side of the tank, this will click into place on the fuel hat.
12. Make sure you click the fuel level sender into place before installing the hat into fuel tank for final time. This is where patience comes into play. Make sure you take your time and install this gently without bending the fuel level sender float bar.

Spade quick disconnect installation directions:

Note: If you are running the TI Auto F9000274, TI Auto F9000267, or the TI Auto 1000302 pumps you will only be installing the red quick disconnects on the fuel level sender wires. These are supplied with the kit.

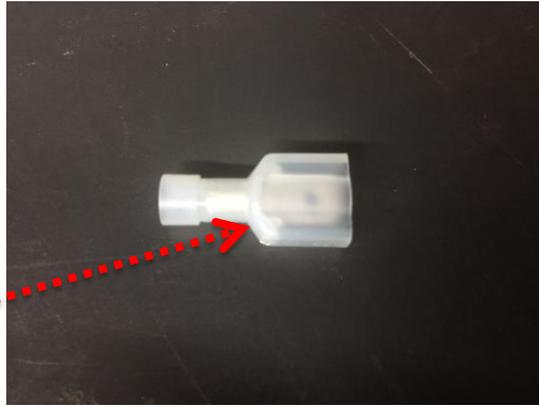
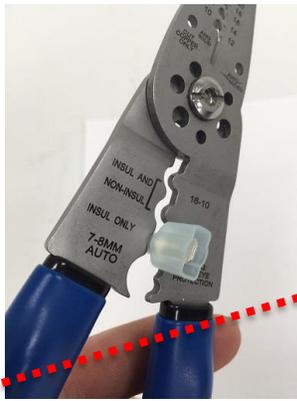
If you are running the TI F9000262, Walbro GSS342, AEM 320 or the AEM 320E pumps you will be installing the red quick disconnects on the fuel level sender and the blue quick disconnects on the fuel pumps. The blue quick disconnects are not included with the kit so you will have to source them from Ace, Lowes, or the Home Depot or similar. Use 0.250" wide terminals when you are looking for these.



1. Strip all wire's back 0.1875" or 3/16" of an inch in preparation for crimping.



2. Using a set of wire strippers like the above will allow you to provide a secure crimp for the connectors and enjoy long term trouble free operation. These are available at hardware stores for \$15-25 if you don't already have a set.

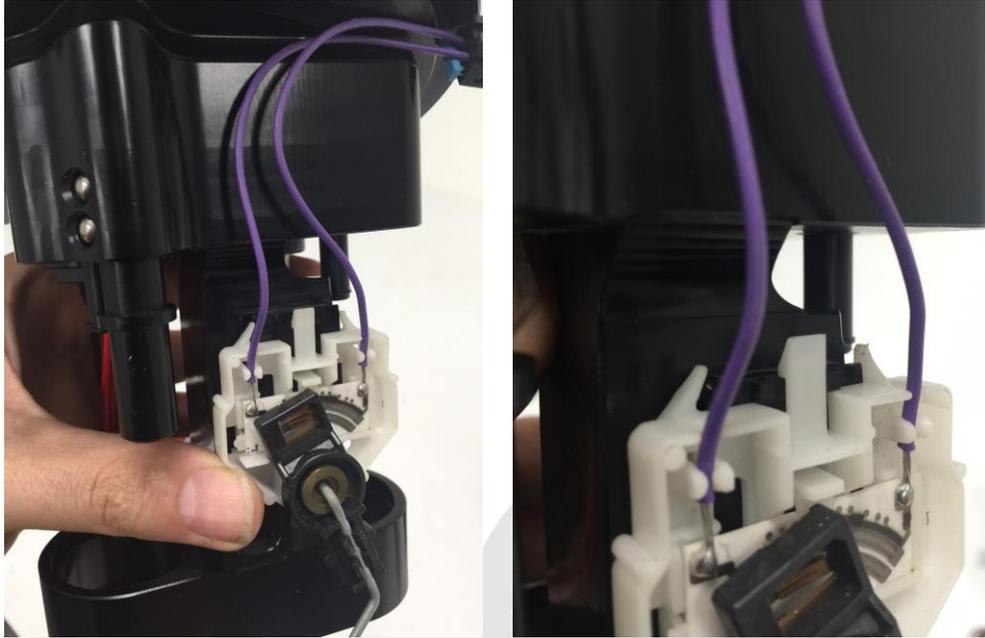


3. Be sure to crimp on the metal tube part of the connector for a good secure hold. Insert wire in until insulation bottoms out on metal tube and squeeze. After the crimp be sure to tug on the wire and verify that the crimp will hold. Most of the time 15-20 pounds of pull force will verify a solid crimp.
4. If you mess one of these up don't stress, this type of connector is available at your local hardware store.



Fuel Level Sender Notes

1. Below is an example of the correct fuel level sender installation.
2. Slide fuel level sensor onto tabs and press up until it locks in place.



***** WARNING*****

Please be careful when first driving with the addition of the cp-e™ Mustang TopHat™. The vehicle's driving characteristics will be different. The change in vehicle power and performance may take the inexperienced driver by surprise. The user must be careful, and above all, obey all posted speed limits, laws, and regulations.