

## 05-17 Mustang Fuel System Wire Upgrade Installation



### PARTS LIST:

- 10AWG INLINE FUSE HOLDER WITH 30AMP BLADE FUSE
- 16FT 10AWG HIGH CURRENT PRIMARY WIRE
- 40AMP AUTOMOTIVE RELAY
- 1FT 10AWG GROUND WIRE
- 1FT 10AWG HIGH CURRENT PRIMARY WIRE OUTPUT TO FPDM
- 1FT 10AWG INPUT WIRE FROM FUEL INERTIA SWITCH
- 2 PIECES OF HEAT SHRINK TUBING
- 5 ZIPTIES

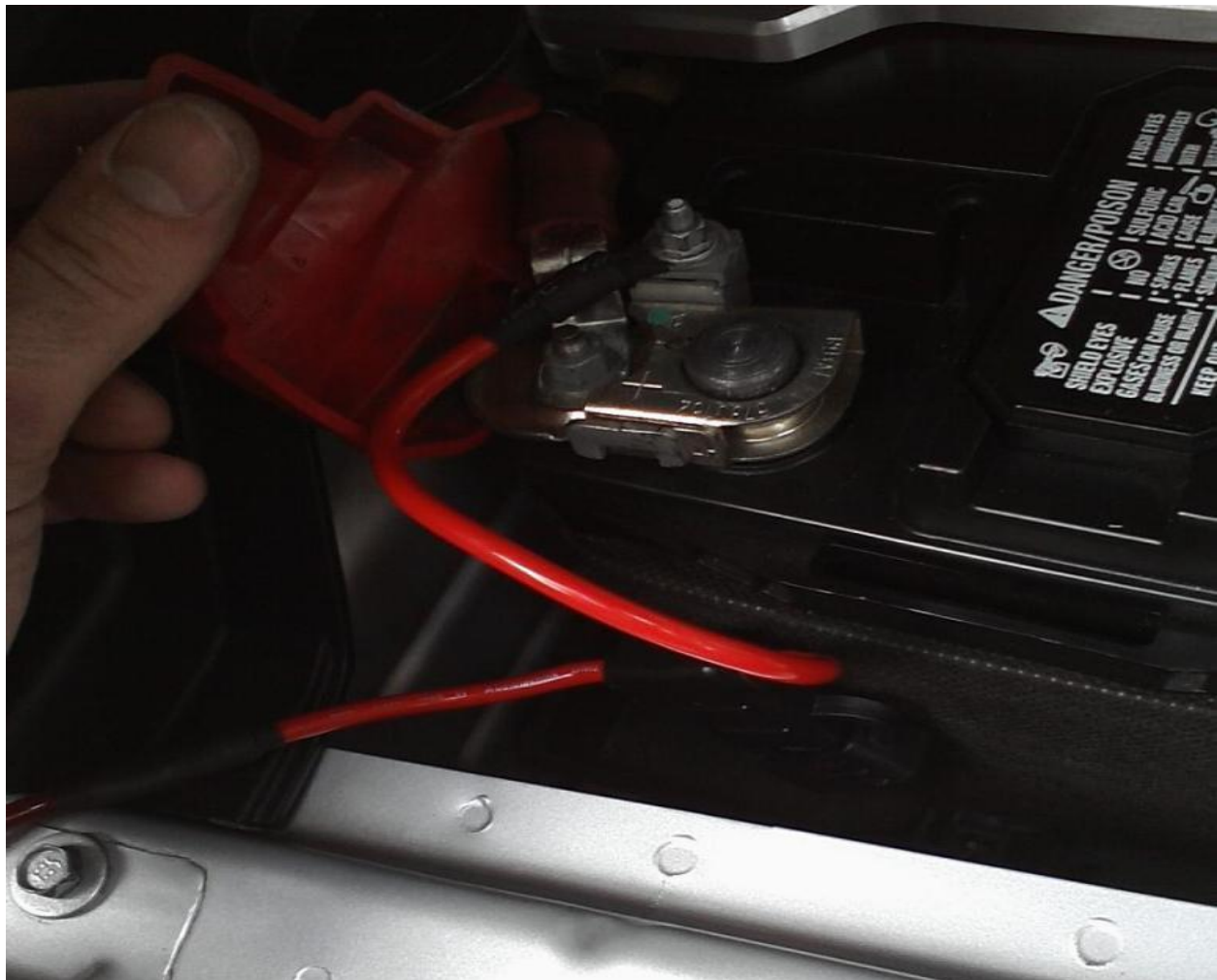
### TOOLS NEEDED:

- WRENCH/SOCKET 8MM, 10MM
- WIRE CUTTER/STRIPPER
- CRIMP TOOL
- PHILLIPS AND FLATHEAD SCREWDRIVERS

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## INSTALLATION:

1. YOU WILL NEED TO ACCESS BEHIND THE PASSENGER SIDE REAR FENDER TRIM. YOU CAN DO SO BY REMOVING THE TIRE OR CLOCKING THE STEERING ALL THE WAY TO THE RIGHT/LEFT TO ALLOW ACCESS TO REMOVE THE FENDER GUARD. IF YOU CHOSE TO CLOCK THE STEERING DO SO, THEN DISCONNECT THE NEGATIVE WIRE TERMINAL AT THE BATTERY. REMOVE THE FENDER GUARD. IT IS ATTACHED WITH PHILLIPS SCREWS AND FLAT PUSH PINS THAT CAN BE REMOVED WITH SCREWDRIVERS.
2. USING 8MM SOCKET REMOVE THE NUT ON THE BATTERY POSTIVE TERMINAL. LOCATE THE INLINE FUSE HOLDER ATTACHED TO THE 16FT OF PRIMARY WIRE AND INSTALL THE FUSED SIDE'S RING TERMINAL ON TO THE BATTERY'S POSITIVE POST AND REINSTALL NUT. ROUTE THE WIRE OUT AND REINSTALL THE RUBBER TERMINAL GUARD OVER THE POSITIVE TERMINAL.



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3. ROUTE THE OTHER END OF THE 16FT PRIMARY WIRE DIRECTLY OUTBOARD OF THE BATTERY THROUGH THE GAP DOWN INTO THE PASSENGER SIDE FENDER WELL (THIS IS THE EASIEST WAY YOU CAN ROUTE IT DOWN UNDER THE BATTERY AS WELL). LOCATE THE LARGE WIRING HARNESS GROMMET GOING INTO THE CABIN. USING A SCREWDRIVER PUNCH A HOLE THROUGH THE GROMMET AND FEED THE OTHER END OF THE WIRE WITH THE FEMALE BLADE CONNECTOR THROUGH THE GROMMET AND INTO THE CABIN. THE WIRE WILL COME UNDER THE DASH JUST ABOVE THE SMART JUNCTION BOX INSIDE THE CAR. FEED AS MUCH WIRE THROUGH AS YOU CAN TO MAKE IT FLUSH AND USE A ZIPTIE AS NECESSARY TO SECURE THE WIRE TO THE EXISTING WIRING HARNESS. YOU CAN NOW REINSTALL THE PLASTIC FENDER GUARD WITH THE SCREWS AND PUSH PINS.

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4. MOVING ON TO INSIDE THE CAR. REMOVE THE DOOR JAM BOTTOM TRIM BY EVENLY PULLING UP TO POP OUT THE LOCKING TABS AND THEN REMOVE THE DOOR JAM SIDE TRIM BY THE SJB THE SAME WAY. ROUTE THE WIRE AS FLUSH AS POSSIBLE PAST HE SJB AND DOWN TO WHERE THE WIRING HARNESS RUNS JUST UNDER THE CARPET DOWN THE DOOR SILL. RUN THE WIRE WITH THE EXSISTING HARNESS UNDER THE CLIPS THAT HOLD THE CARPET IN PLACE BACK TOWARDS THE REAR SEAT.

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5. AT THIS POINT REMOVE THE REAR SEAT BOTTOM SECTION BY SLIGHTLY PULLING UP AND PUSHING THE 2 CLIPS TO RELEASE THE SEAT ON EITHER SIDE IN THE CENTER OF THE SEATS. FOR 2015 OR NEWER THE FPCM IS UNDER THE REAR SEAT ON THE DRIVER SIDE SO NO NEED TO GO IN THE TRUNK. JUST ROUT OVER TO THE FPCM.

FOR 05-14 HEAD INTO THE TRUNK AND REMOVE THE TRUNK CARPET AND REAR TRUNK TRIM. THE REAR TRIM IS HELD ON IN PLACE BY 2 PUSHINS AND TWO PLASTIC SCREW CAPS.

6. RUN THE WIRE BEHIND THE REAR SEAT SIDE TRIM ALONG THE EXSISTING WIRE HARNESS INTO THE TRUNK AREA, USE A ZIPTIE TO SECURE THE WIRE AS NECESSARY. ONCE THE WIRING IS ALL RAN INTO THE TRUNK AREA GO AHEAD AND REINSTALL THE REAR SEAT BOTTOM AND LOCK THE CENTER TABS BACK DOWN.



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7. IN THE TRUNK CONTINUE TO RUN THE WIRE ALONG THE EXSISTING HARNES DOWN THE PASSENGER SIDE TO THE REAR OF THE CAR AND THEN OVER TO THE FPDM ON THE DRIVERS SIDE, USING A ZIPTIE TO SECURE THE WIRE AS NECESSARY.

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8. NEXT LOCATE THE CHASIS GROUND BOLT DIRECTLY ABOVE THE FPDM INBOARD OF THE TAILLIGHT AND REMOVE THE 10MM BOLT. INSTALL THE RING TERMINAL END OF THE BLACK 1FT SECTION OF 10AWG GROUND WIRE AND REINSTALL THE 10MM BOLT. FOR 2015 + YOU CAN USE THE FPCM MOUNTING BOLT UNDER THE REAR SEAT.

9. THE OTHER END OF THIS BLACK GROUND WIRE CONNECTS TO PIN 86 ON THE RELAY.



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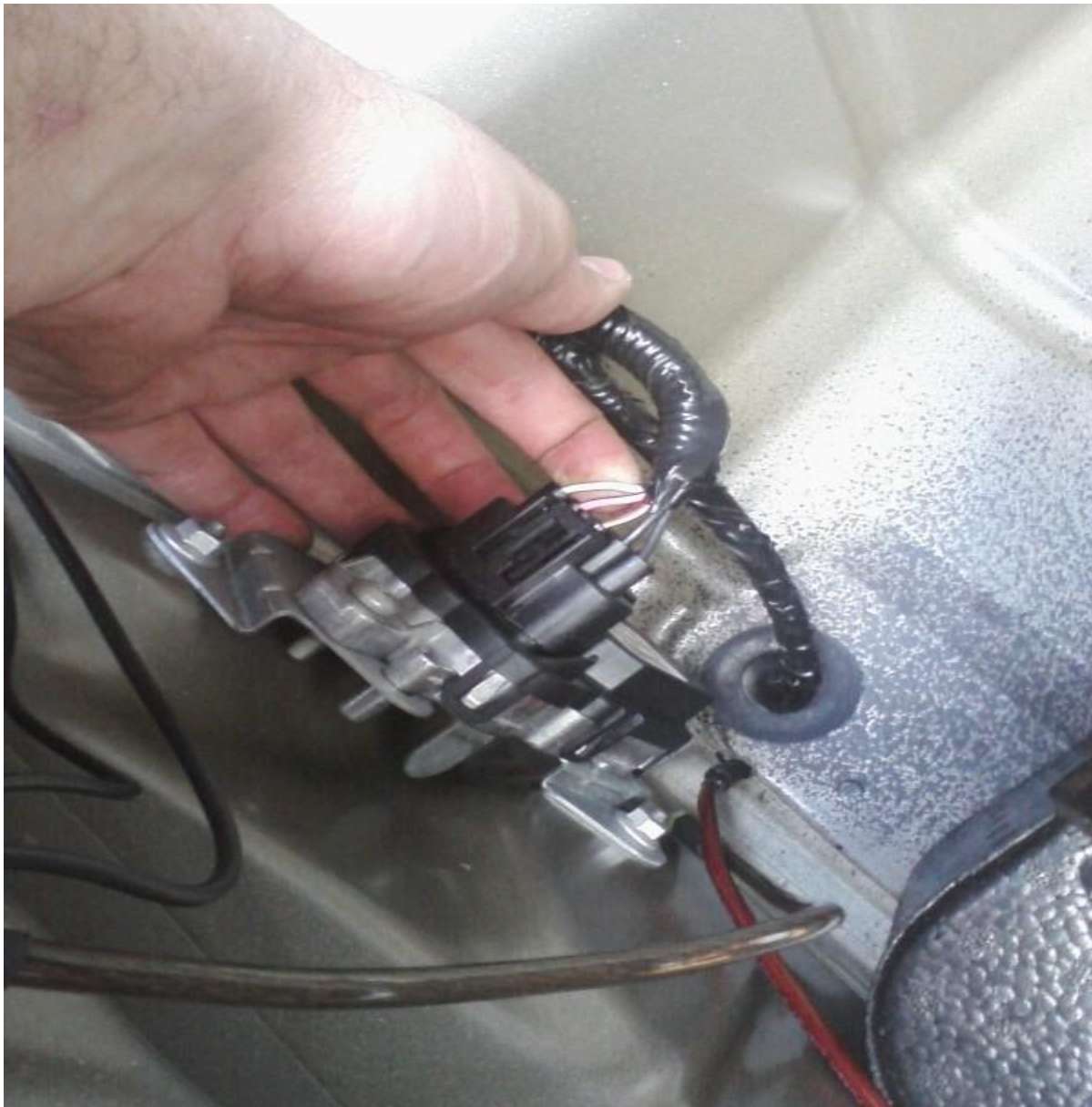




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10. LOCATE THE FPDM PLUG AND REMOVE A FEW INCHES OF ELECTRICAL TAPE FROM AROUND THE HARNESS. FOR 05-09 THE SOLID WHITE (sometimes yellow) WIRE ON THE FAR LEFT IS THE FUEL INERTIA WIRE. (ON A 2010-2014 IT IS A PURPLE WIRE WITH GREEN STRIPE AND 2015+ IT IS A PURPLE WIRE). USING WIRE CUTTERS CUT THE WIRE ABOUT 1-2 INCHES FROM THE FPDM PLUG. STRIP A HALF INCH OF SHEATHING OFF THE WIRE ON EACH SIDE.

NOTE: IF YOU HAVE A DUAL FPDM SETUP THIS IS A RED WIRE ON THE SECOND FPDM IN THE SAME LOCATION, THIS IS YOUR POWER IN TO THE FPDM.



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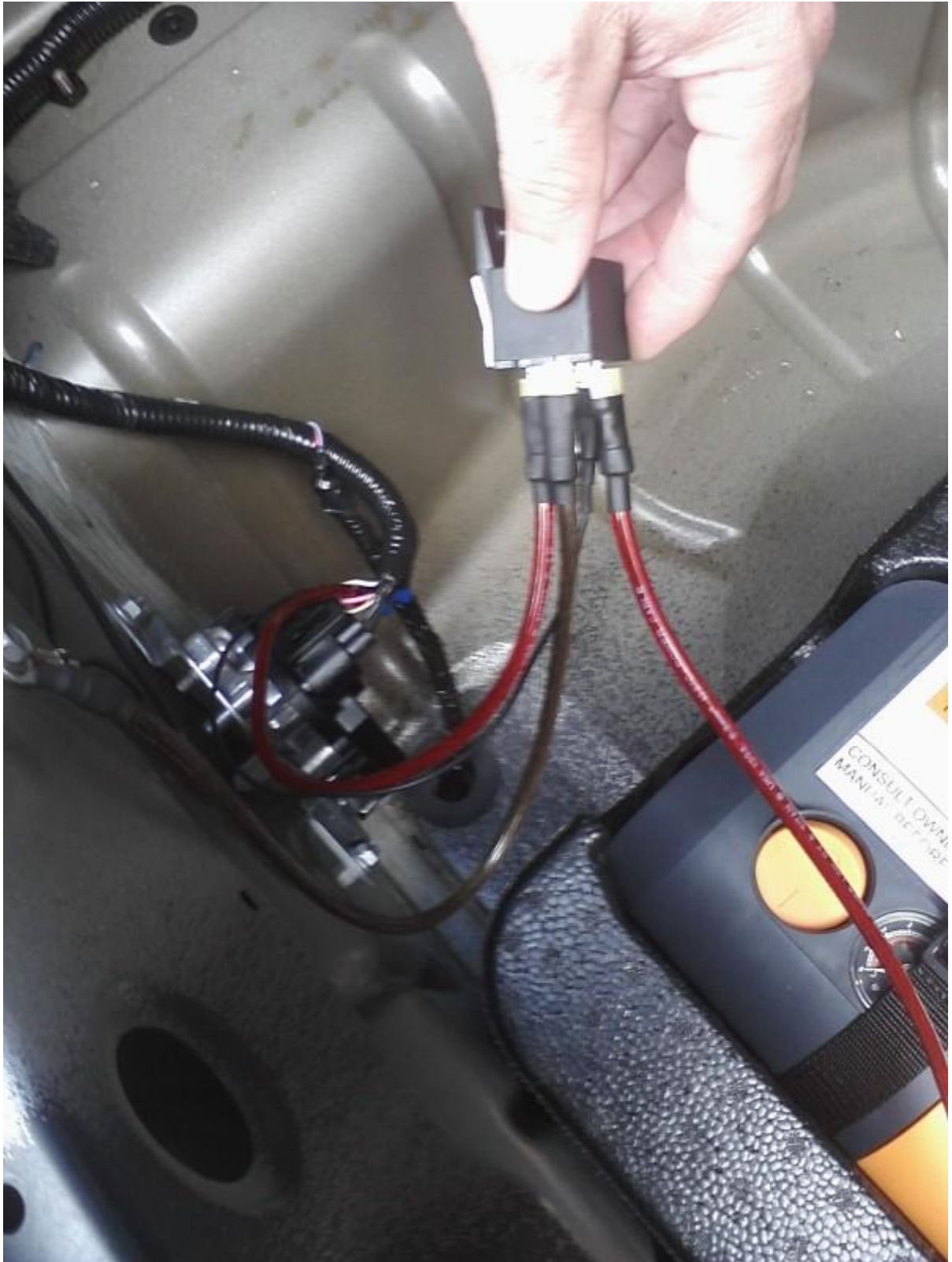
11. INSTALL ONE OF THE SUPPLIED PIECES OF HEAT SHRINK OVER THE EXPOSED WHITE WIRE ON THE FPDM/PLUG SIDE. LOCATE THE 1FT SECTION OF 10AWG PRIMARY WIRE, INSERT THE BLUE CRIMP CONNECTOR END OVER THE EXPOSED WHITE WIRE AND USING A CRIMPING TOOL MAKE THE CONNECTION, ENSURING THE TOOL CRIMPS THE WIRE INTO THE METAL TERMINAL INSIDE. SLIDE THE HEAT SHRINK OVER THE CONNECTOR AND SHRINK THE TUBING. THE OTHER END OF THIS WIRE PLUGS INTO PIN 87 ON THE RELAY.

NOTE: IF YOU ARE USING A BAP, THIS 1FT SECTION OF RED 10AWG WIRE GOES FROM PIN 87 ON THE RELAY TO THE BAP INPUT, AND THE BAP OUTPUT GOES TO THE FPDM(S) (IF YOU HAVE 2 FPDMS WITH A SINGLE BAP THERE IS AN ADDITIONAL SPLIT WIRE HARNESS THAT GOES FROM THE BAP TO EACH FPDM)

12. USING THE 1FT SECTION OF 10AWG BLACK WIRE WITH THE BLUE CRIMP CONNECTOR ON IT MAKE THE CONNECTION TO THE EXPOSED WHITE WIRE ON THE HARNESS SIDE, THE SAME WAY. THE OTHER END OF THIS WIRE PLUGS INTO PIN 85 ON THE RELAY.

13. THE 10AWG RED WIRE COMING FROM THE BATTERY PLUGS INTO PIN 30 ON THE RELAY. (NOTE THE MIDDLE PIN ON THE RELAY IS NOT USED.)

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14. NOW MOUNT THE RELAY, YOU CAN USE USE 3M TAPE OR A SELF TAPPING SCREW. THERE ARE MULTIPLE PLACES TO MOUNT IT, YOU CAN EVEN USE AN EXSISTING FPDM MOUNT BOLT TO SECURE IT. USING THE REMAINING ZIPTIE(S) SECURE THE NEW WIRING TO THE FPDM HARNESS.



(FOR THIS PICTURE I DID NOT CUT THE WHITE WIRE AS IT WAS A MOCK UP)

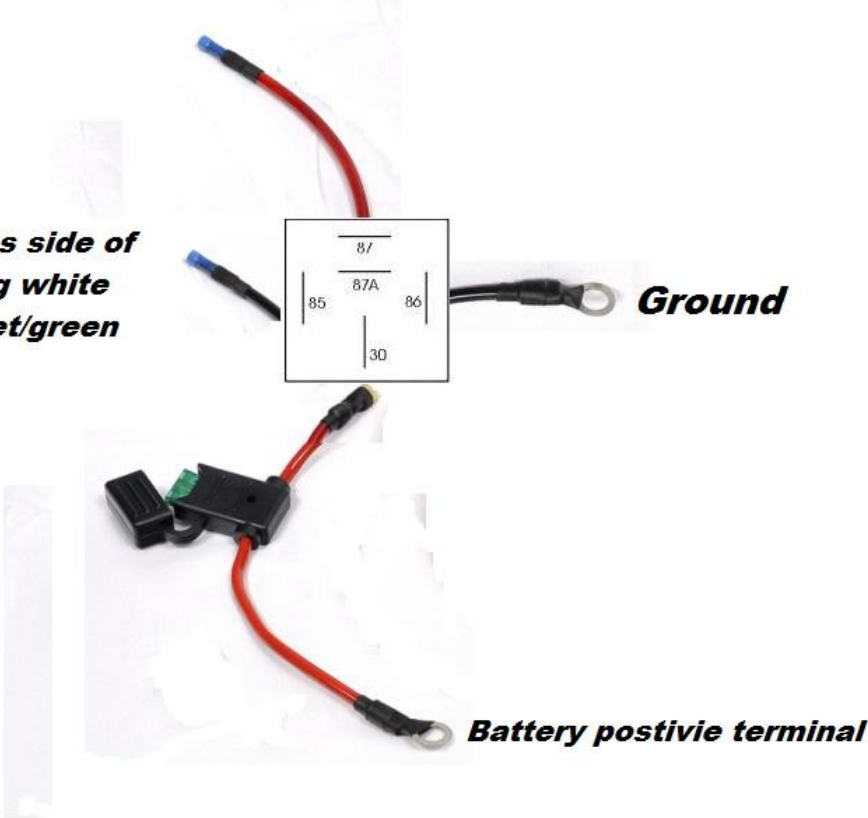
15. REINSTALL TRUNK REAR TRIM AND TRUNK CARPET. RECONNECT NEGATIVE BATTERY TERMINAL. TURN THE KEY TO THE ON POSITION AND LISTEN FOR THE RELAY AND FUEL PUMP TO COME ON, START THE CAR TO ENSURE PROPER WIRING AND FUEL SUPPLY. ALL DONE!

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## Relay Diagram Quick View

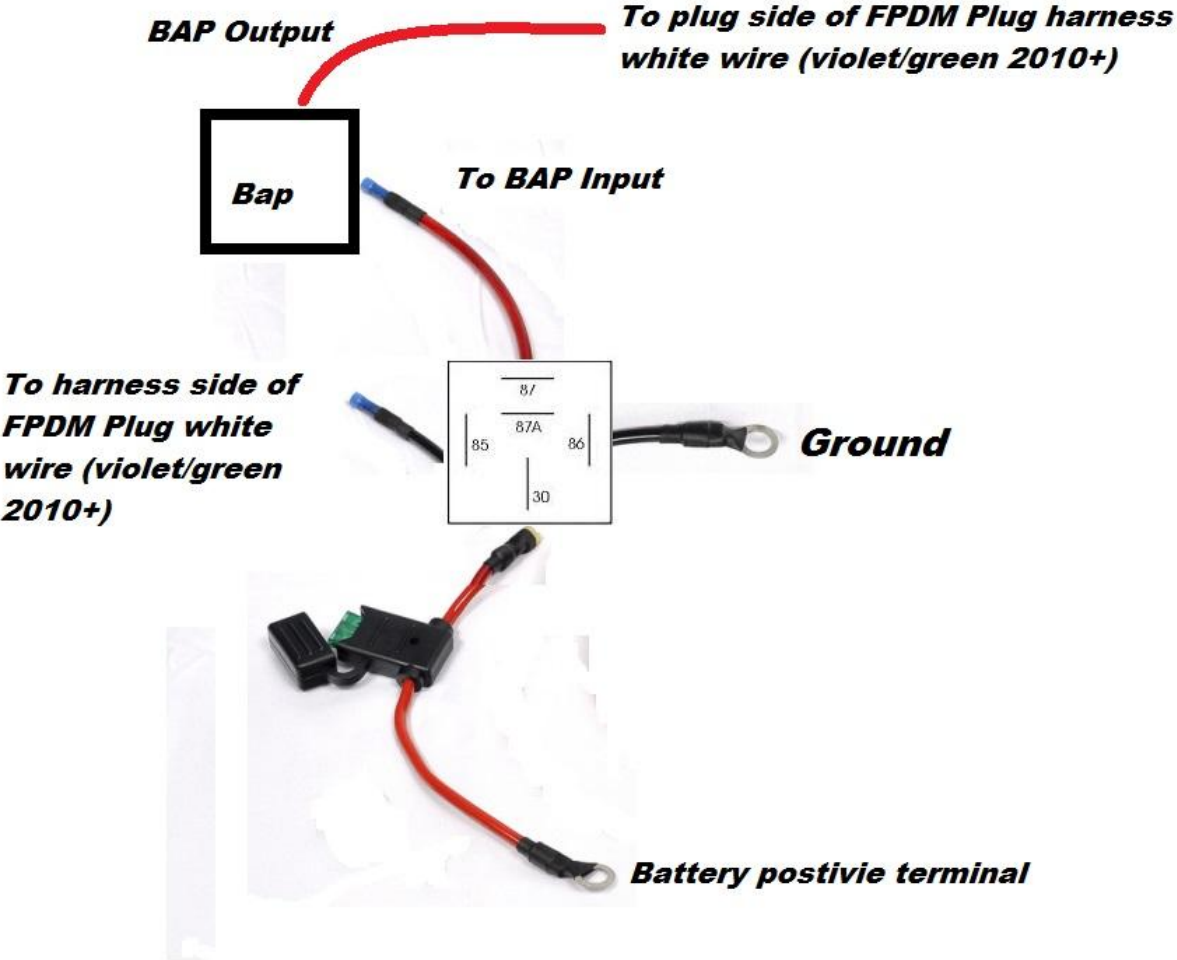
**To plug side of FPDM Plug harness  
white wire (violet/green 2010+)**

**To harness side of  
FPDM Plug white  
wire (violet/green  
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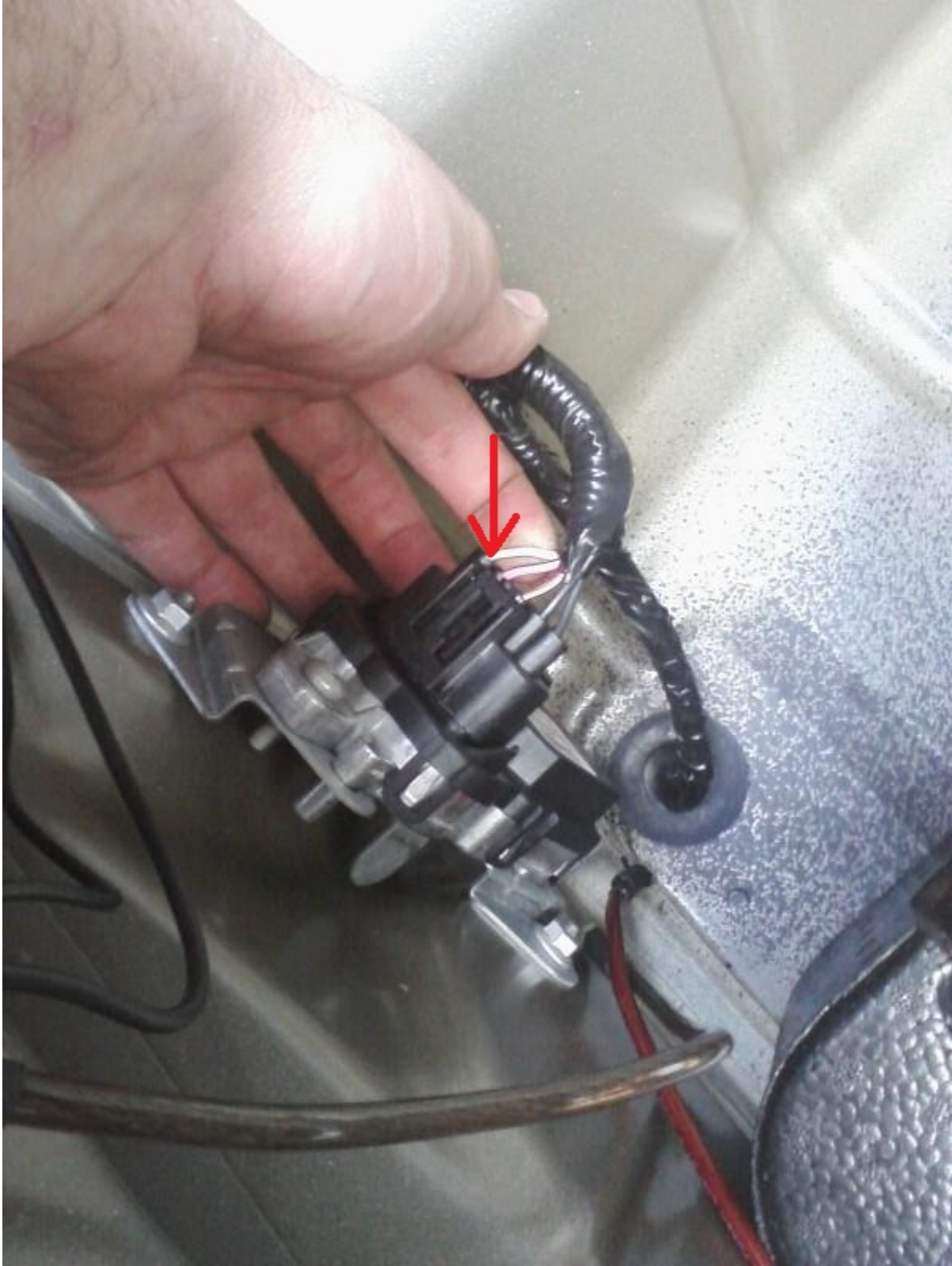
Relay Diagram Quick View, Alternate with BAP



2005-2010 Inertia wire location FPDM in trunk.



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2011-2014 FPCM wire location in trunk.

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2015+ FPCM Inertia wire location under rear seat on drivers side.

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