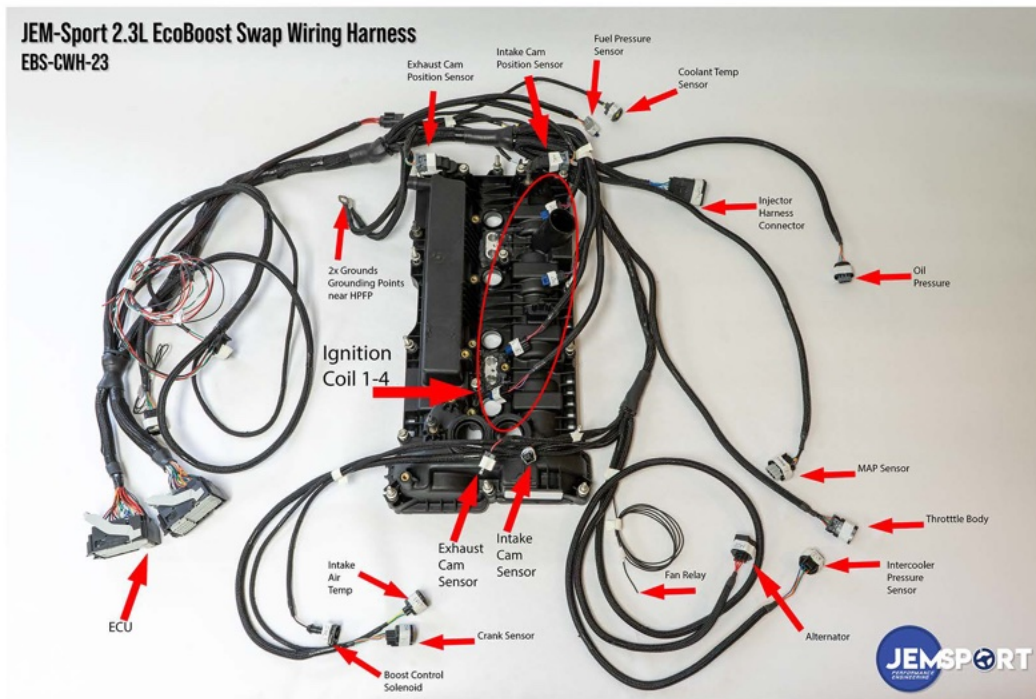


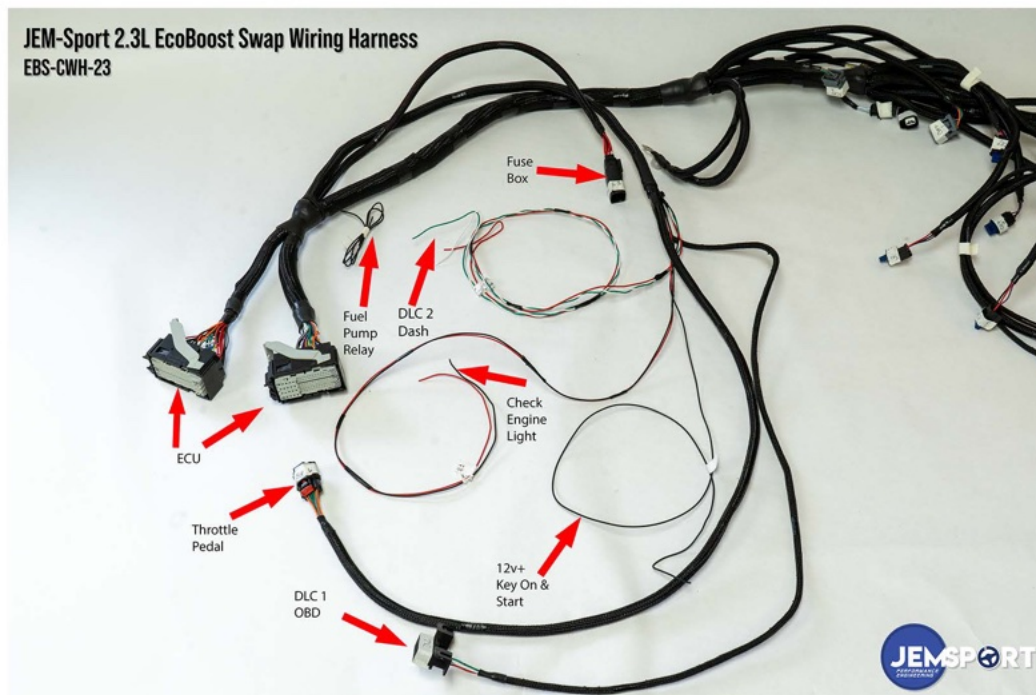


## ECOBOOST SWAP WIRING HARNESS INSTALL GUIDE EBS-CWH-23

## EBS-CWH-23 OVERVIEW



ENGINE SIDE OVERVIEW



CHASSIS SIDE OVERVIEW

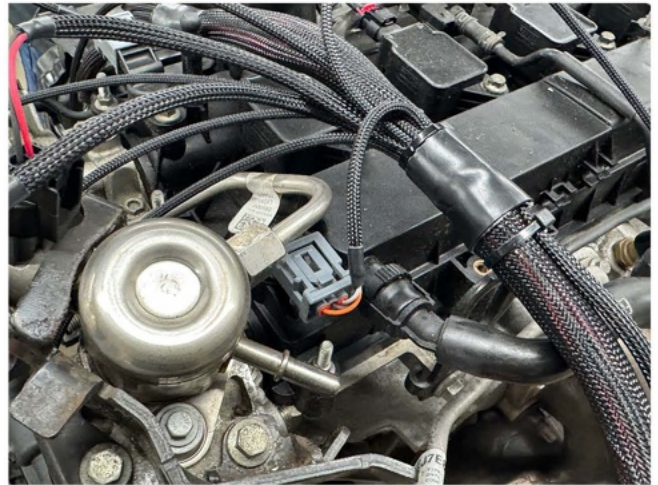


## INSTALLATION INSTRUCTIONS

1. LAY HARNESS ACROSS ENGINE AS SHOWN, THIS WILL PLACE LEADS AND BRANCHES NEAREST THEIR CORRECT LOCATION.



2. EXHAUST CAM POSITION SENSOR WILL BE CLOSEST AND FIRST CONNECTED. PLUG IN AS SHOWN.



3. PRIMARY O2 SENSOR CONNECTION TO O2 SENSOR IN DOWNPIPE OFF OF THE TURBOCHARGER.



## INSTALLATION INSTRUCTIONS

4. CYLINDER HEAD TEMPERATURE SENSOR IS LOCATED ABOVE TURBOCHARGER HEADIFOLD.



5. COOLANT TEMPERATURE SENSOR IS LOCATED ON BACK OF BLOCK. 2.3L MUSTANG BLOCKS WILL HAVE THIS LOCATED ON THE INTAKE MANIFOLD SIDE. ALL OTHERS WILL BE LOCATED ON TURBOCHARGER SIDE.



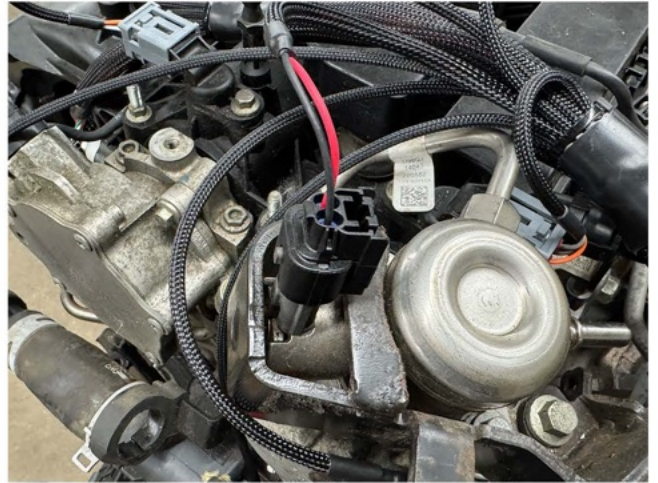
6. HARNESS GROUNDS ARE GROUNDED TO HIGH PRESSURE FUEL PUMP BOLT AS SHOWN.



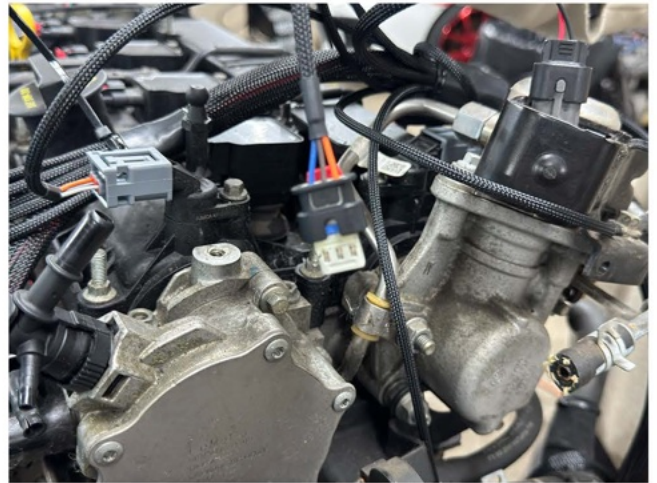


## INSTALLATION INSTRUCTIONS

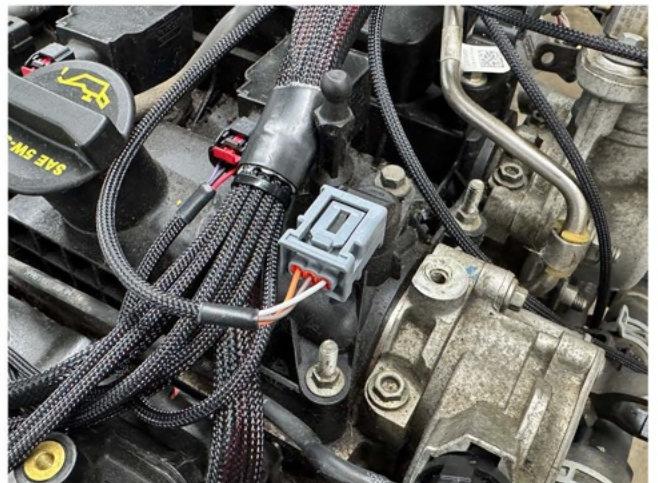
7. FUEL PUMP CONTROL SOLENOID IS LOCATED ON TOP OF THE HIGH PRESSURE FUEL PUMP. PLUG IN AS SHOWN.



8. FUEL LINE PRESSURE SENSOR IS LOCATED IN THE TUBING CONNECTING THE HPFP AND REGULATOR (NOT SHOWN) THIS IS NOT NECESSARY TO RUN THE VEHICLE.



9. INTAKE CAM POSITION SENSOR IS LOCATED ON THE REAR OF THE ENGINE AND PLUGS IN AS SHOWN.



## INSTALLATION INSTRUCTIONS

10. FUEL INJECTOR SUB HARNESS IS LOCATED BENEATH THE INTAKE MANIFOLD. NOTE PN: **FU5Z14A411F** (FITMENT UP TO 23 ECOBOOST MUSTANG) WILL NEED TO BE SOURCED FOR CORRECT CONNECTION.



11. OIL PRESSURE SENSOR IS LOCATED ON THE OIL FILTER HOUSING. NOTE PN: **CM5Z9D290B** (FITMENT FOR ALL YEARS ECOBOOST MUSTANG) WILL NEED TO BE SOURCED FOR CORRECT CONNECTION.



12. MAP SENSOR IS LOCATED ON THE INTAKE MANIFOLD. NOTE: 4 WIRE FOR MAP SENSOR (PN **BV6Z9F479A** FITMENT UP TO 23 ECOBOOST MUSTANG). 3 WIRE FOR OIL PRESSURE SENSOR.





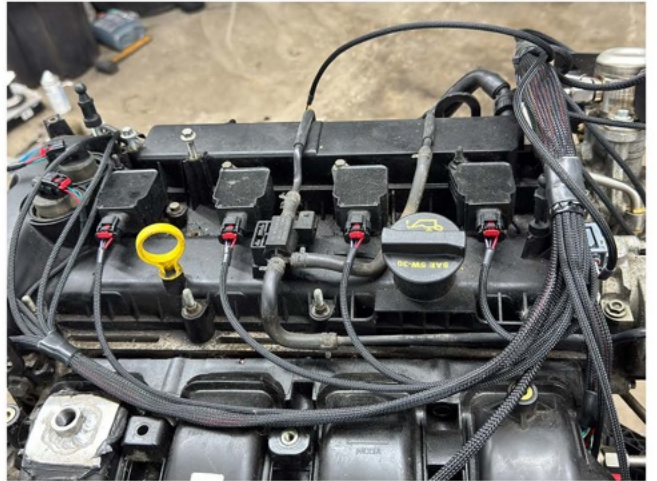
## INSTALLATION INSTRUCTIONS

13. THROTTLE BODY CONNECTS AS SHOWN

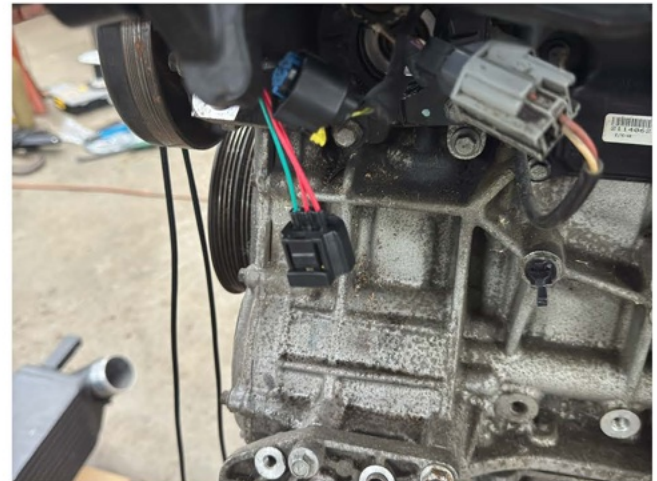
**NOTE: THIS HARNESS IS DESIGNED AROUND THE GEN 1 2.3 ENGINE. AS SUCH THE ANALOG THROTTLE BODY WILL NEED TO BE USED  
PN: GB8Z-9E926-A**



14. IGNITION COILS CONNECT AS SHOWN. SHORT-EST LEAD TO THE REAR OF THE ENGINE, LONGEST TO THE FRONT OF THE ENGINE.



15. ALTERNATOR IS LOCATED ON THE INTAKE SIDE OF THE ENGINE,



## INSTALLATION INSTRUCTIONS

16. BLACK FLYING LEAD LABELED FAN CONNECTS YOUR SUPPLIED FAN RELAY GROUND.



17. 3 WIRE TIP SENSOR (PN **AG9Z9F479B** FITMENT UP TO 23 ECOBOOST MUSTANG) IS LOCATED ON THE COLD SIDE OF THE INTERCOOLER. 3 WIRE PLUGS IN AS SHOWN.



18. VVT SOLENOIDS ARE LOCATED ON THE FRONT OF THE ENGINE. SHORTEST VVT SOLENOID PLUG IS FIRST, PLUGGED INTO THE SOLENOID ON THE INTAKE SIDE OF THE ENGINE.



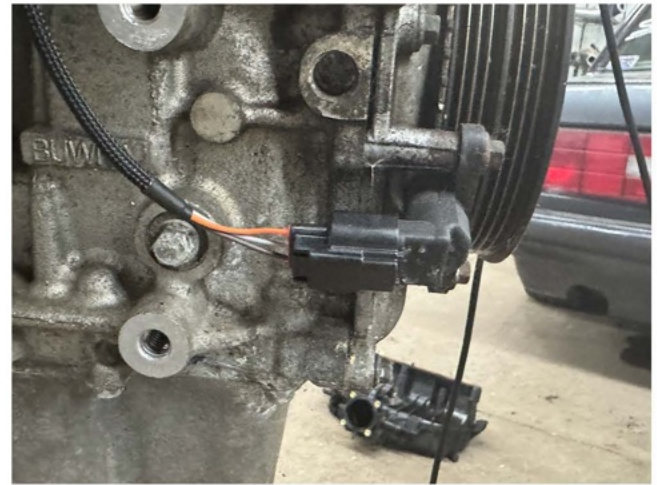


## INSTALLATION INSTRUCTIONS

19. BOOST CONTROL SOLENOID IS LOCATED ON MOST FACTORY TURBOS AND PLUGS IN AS SHOWN. SOME 2.0T WILL HAVE THE SOLENOID LOCATED ON THE VALVE COVER



20. CRANKSHAFT POSITION SENSOR IS LOCATED ON THE BOTTOM OF THE ENGINE, TURBOCHARGER SIDE AND PLUGS IN AS SHOWN.

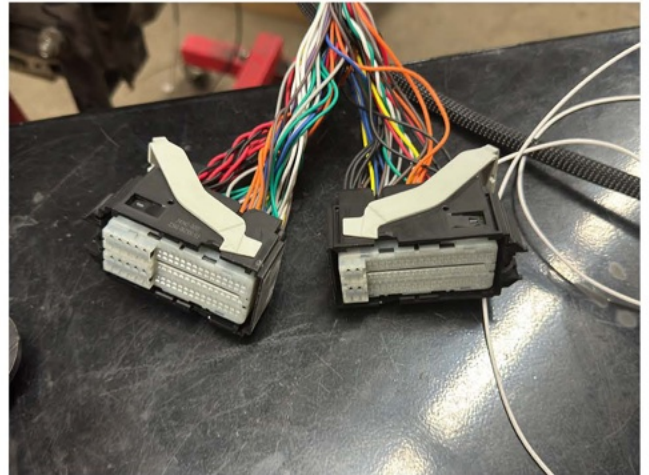


21. INTAKE AIR TEMPERATURE SENSOR (PN **DS7Z12A697A** FITMENT UP TO 23 ECOBOOST MUSTANG) WILL BE LOCATED BETWEEN AIR FILTER AND TURBOCHARGER AIR INLET.



## INSTALLATION INSTRUCTIONS

22. 2 ECU PLUGS CONNECT TO THE FORD ECU. THESE ARE KEYED AND WILL ONLY FIT ONE WAY.



23. THROTTLE PEDAL CONNECTOR PLUGS IN AT THE TOP OF THE THROTTLE PEDAL WITHIN THE CABIN OF THE VEHICLE AS SHOWN.



24. PROVIDED OBD2 CONNECTOR SHOULD BE MOUNTED FOR EASE OF ACCESS. FLYING LEAD PROVISIONS ARE ALSO PROVIDED AND ARE LABELED DLC2. DLC2 WIRING IS AS FOLLOWS:

RED 12V IGNITION ON  
BLACK GROUND  
GREEN CAN L  
WHITE CAN H



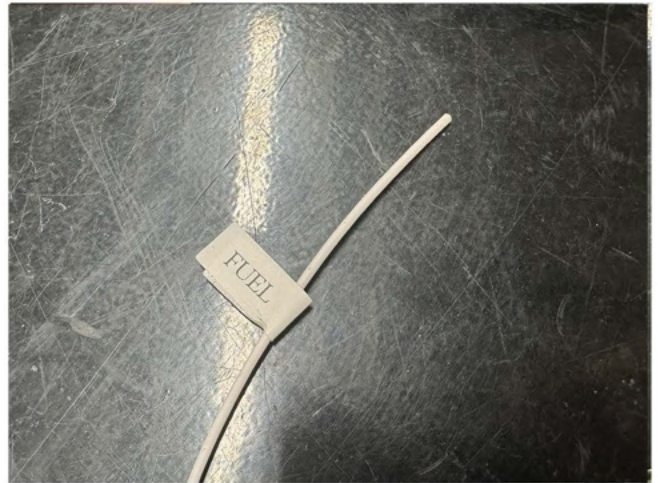


## INSTALLATION INSTRUCTIONS

25. RED FLYING LEAD LABELED KEY ON NEEDS TO BE RAN TO AN IGNITION SOURCE, SWITCH, BUTTON, KEY, ETC



26. WHITE FLYING LEAD LABELED FUEL IS FUEL PUMP RELAY. RUN AND CONNECT ACCORDINGLY. SUPPLIES 12V TO FUEL PUMP RELAY COIL.



27. BLACK LEAD WITH RING TERMINAL IS FUSE BOX 12V+. MUST BE BATTERY HOT.

