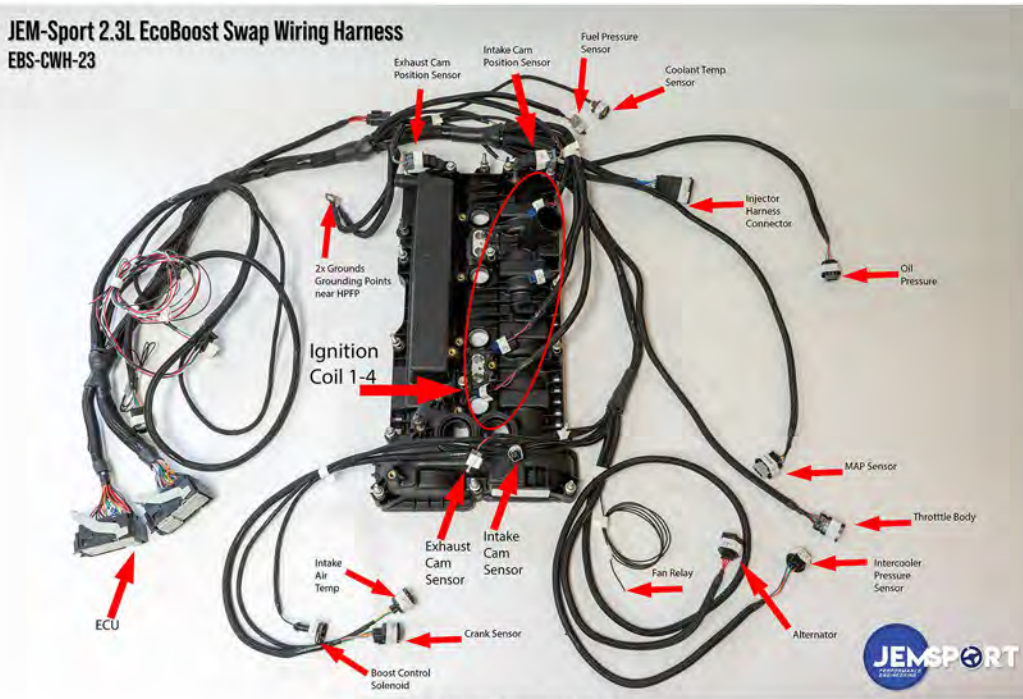


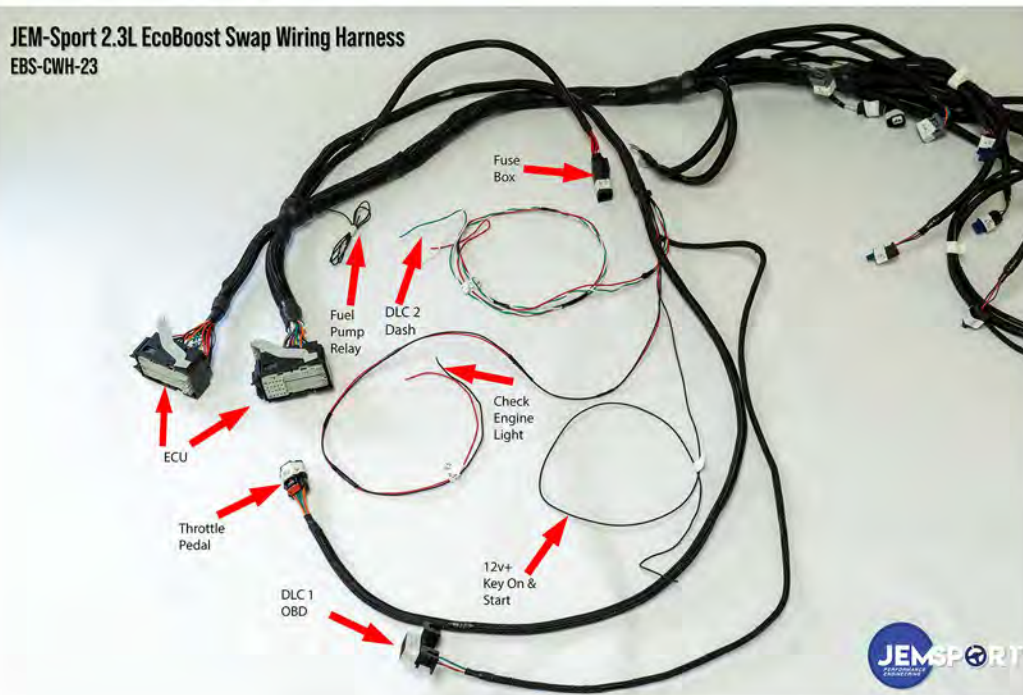


ECOBOOST SWAP WIRING HARNESS INSTALL GUIDE EBS-CWH-23

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



14. IGNITION COILS CONNECT AS SHOWN. SHORTEST 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 **AG9Z9F476B** 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 (PN **6M8Z6C315AA** FITMENT UP TO 23 ECOBOOST MUSTANG) IS LOCATED ON THE BOTTOM OF THE ENGINE, TURBOCHARGER SIDE AND PLUGS IN AS SHOWN.

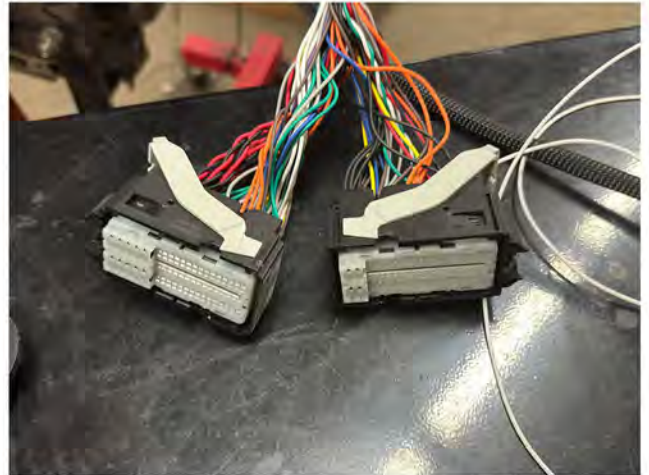


21. INTAKE AIR TEMPERATURE SENSOR (PN **DS7Z12A697A** FITMENT UP TO 23 ECOBOOST MUSTANG) WILL BE LOCATED BETWEEN AIR FILTER AND TURBOCHARGER AIR INLET.



INSTALLATION INSTRUCTIONS

22. 2 ECU PLUGS CONNECT TO THE FORD ECU. THESE ARE KEYED AND WILL ONLY FIT ONE WAY ON ECOBOOST MUSTANG ECUS. SOME 2.0T USERS MAY FIND THEY NEED TO SHAVE THESE KEYS FOR LOCKED CONNECTION.



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 OPERATES AS INTENDED FROM FACTORY AND 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

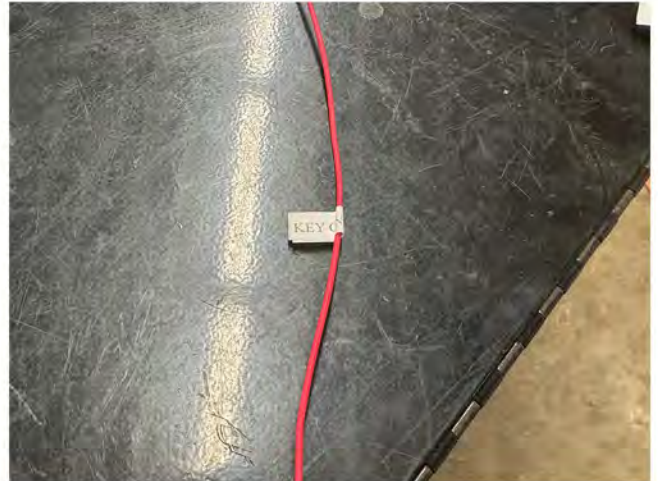
DLC2 IS MEANT FOR DIGITAL DASH OR SIMILAR AND AS SUCH IS ONLY POWERED WHEN VEHICLE IS KEYED ON



INSTALLATION INSTRUCTIONS

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

THIS NEEDS TO BE CONNECTED TO 12V HOT KEY ON AND START



26. BLACK FLYING LEAD LABELED MIL IS CHECK ENGINE LIGHT. THIS IS NOT 100% NECESSARY FOR OPERATION. NOTE: THIS FUNCTIONALITY IS ONLY PROVEN WITH JEM SPORT UNLOCKED ECU, THIS MAY NOT WORK WITH YOUR DONOR ECU.



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



INSTALLATION INSTRUCTIONS

26. BLACK LEAD EXITING THE FUSE BOX WITH RING TERMINAL IS FUSE BOX 12V+ POWER SUPPLY. MUST BE CONNECTED DIRECTLY TO BATTERY 12V+



27. FUSE BOX CONNECTION FROM MAIN HARNESS. MUST BE PLUGGED IN FOR CORRECT OPERATION.

