



N O S T R U M
HIGH PERFORMANCE



Ford 1.6L EB HPFP & Pressure Sensor Install Guide Rev1

PRODUCT PART SKU#: H086-1213 & E460-1579

Warning! Please follow all warnings and instructions found in your vehicle owner's manual. The following instructions must be read and fully understood before beginning installation. Failure to follow these instructions may result in vehicle damage, personal injury, or death. If these instructions are not fully understood, do not attempt installation.

Please note that this product does require vehicle calibration. Please ensure provisions are made prior to installation, Nostrum Tuning Guides are available upon request. If you are already in touch with a tuner, please have them reach out to support@nostrumshop.com or access the Tuning Guide via the dealer portal on the Nostrum website. If you do not currently have a tuner, we will gladly connect you with someone within the Nostrum dealer network.

Ford 1.6L EB HPFP Install Guide Rev4 | 1145 Oak Valley Drive, Suite B, Ann Arbor, MI 48108
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Required Tools:

- Socket wrench
- 7mm socket
- 8mm socket
- 10mm socket
- 12mm wrench
- 17mm wrench
- 5mm Allen socket
- 5/16th In quick connect removal tool
- Trim removal tool

Consumables:

- Absorbent towels

NOTE: For installation of just the fuel pressure sensor skip to **steps 29-32.**

1. Use a 10mm socket to disconnect the negative battery terminal on the battery.

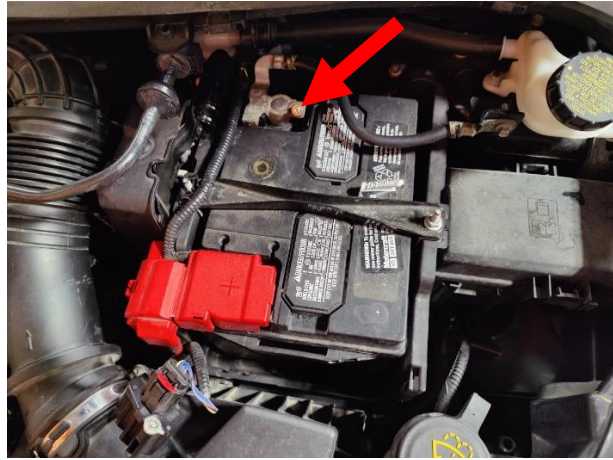


Figure 1

2. Pull up on the engine cover from the sides to release it from its grommets. Remove the engine cover from the engine bay.



Figure 2

3. Use a 7mm socket to loosen the hose clamp on the cold air intake tube that connects directly to the airbox.



Figure 3

4. Use a 7mm socket to loosen the hose clamp on the cold air intake tube that connects the rubber tube to the hard plastic one at the back of the engine. Pull the rubber intake tube from the engine bay.



Figure 4

5. Push down on the green tabs to release the vacuum hose connectors. Pull on each connector to release it from the cold air intake tube.

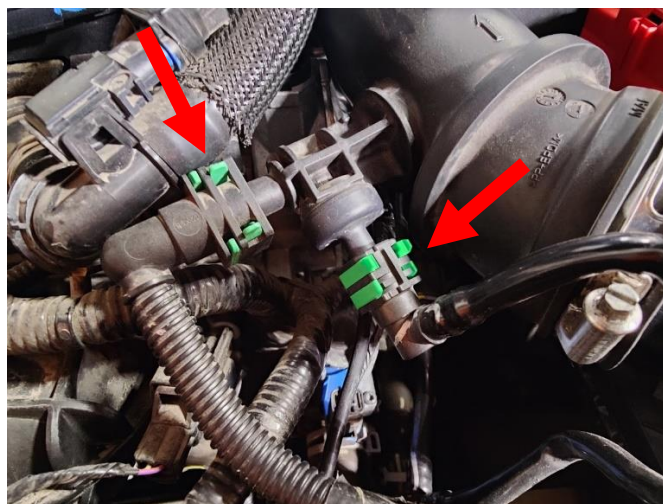


Figure 5

6. Disconnect the vacuum hose from the hard plastic intake tube at the back of the engine. Push on the tabs at the top and bottom of the connector to disconnect.



Figure 6

7. Use a 10mm socket to remove the nut that is securing the intake tube bracket.



Figure 7

8. Use a 12 mm wrench to remove the grommet seat that also secures the intake tube bracket.



Figure 8

9. Use a 7mm socket to remove the second hose clamp on the hard plastic intake tube. This is located on the passenger side of the engine at the back towards the bottom of the engine. Once the clamp is loose, pull the intake tube free of its seat. Push it towards the firewall to gain better access to the high-pressure fuel pump.



Figure 9

10. Pull the gray tabs back and then push down to release the connectors on the coil packs. Pull the connector away to remove it. Repeat this step for all 4 coil packs.



Figure 10

11. Disconnect the CMP electrical connector by pressing down on the tab and pulling the male and female connectors apart.

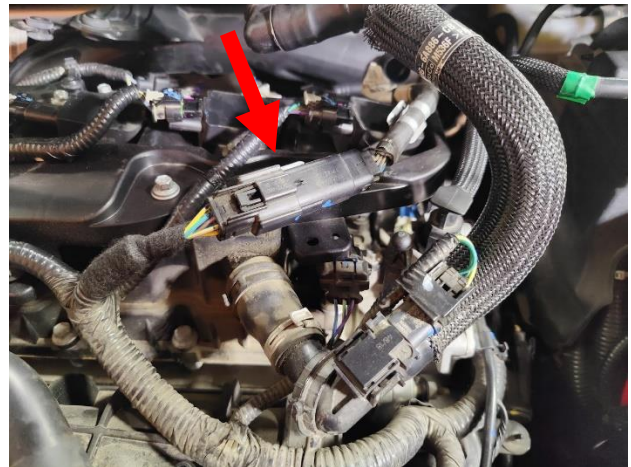


Figure 11

12. Disconnect the FRP sensor electrical connector located next to the oil dip stick. Push on the tab and pull up to disconnect.



Figure 12

13. Disconnect the high-pressure fuel pump solenoid connector by pushing on the tab and pulling the connector away from the solenoid.

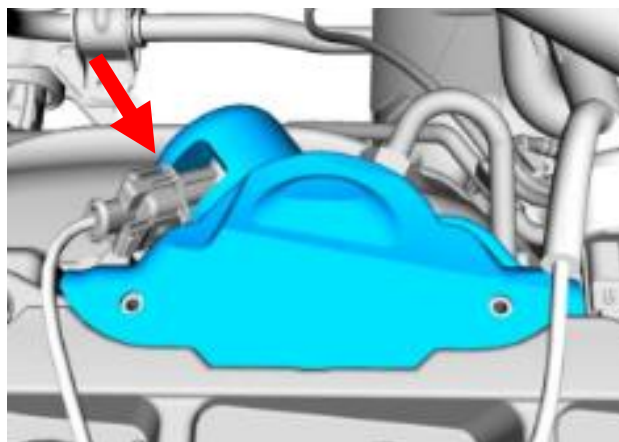


Figure 13

14. Loosen all the bolts holding the coil pack cover in place using an 8mm socket (Red) and 10mm socket (Blue).
Torque Spec: 10 Nm

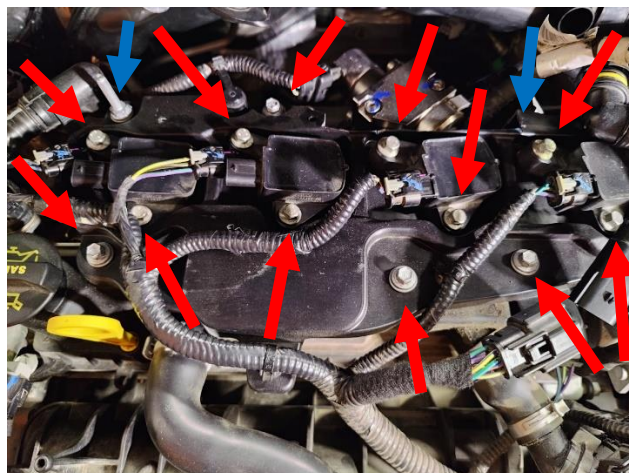


Figure 14

15. Disconnect the plastic clips that connect the electrical harness to the coil pack cover using a trim removal tool. Remove the coil pack cover from the engine bay.



Figure 15

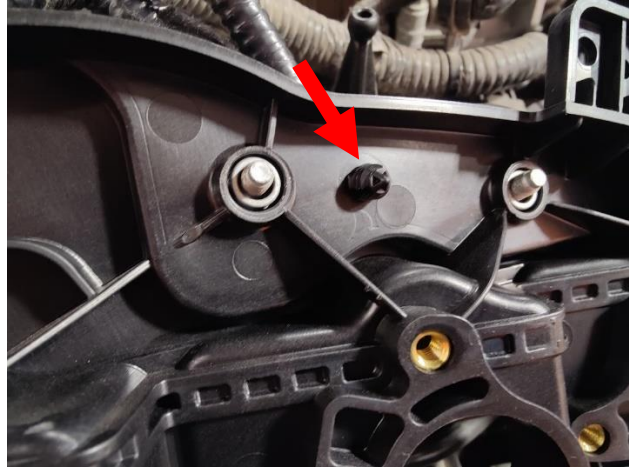


Figure 16

16. Modify the coil pack cover removing the area boxed in red shown in figure 17. Do so with a Sawzall or other similar methods. This provides clearance for the Nostrum fuel pump.

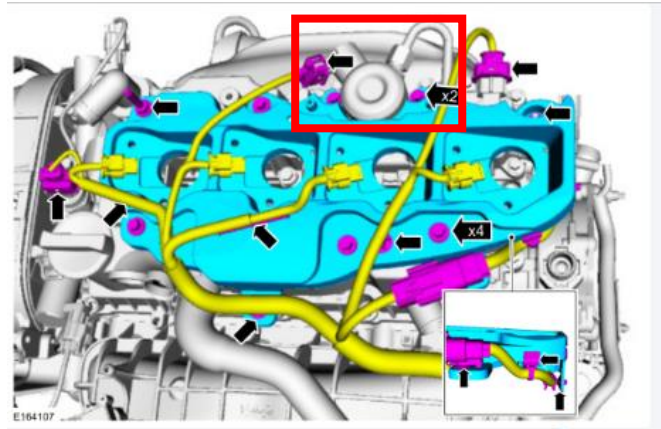


Figure 17

17. The modified coil pack cover should look similar to figure 18.

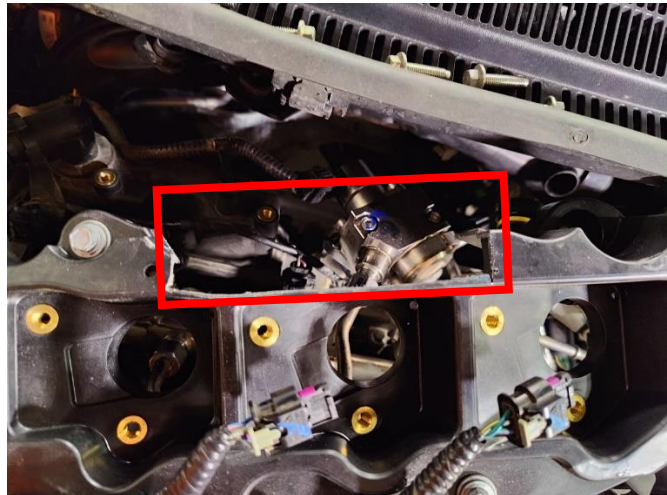


Figure 18

18. Disconnect the high-pressure fuel line by loosening the compression nuts on the fuel rail and fuel pump with a 17mm wrench. Make sure to wrap the ends of the line with an absorbent towel when loosening to prevent fuel from spraying.

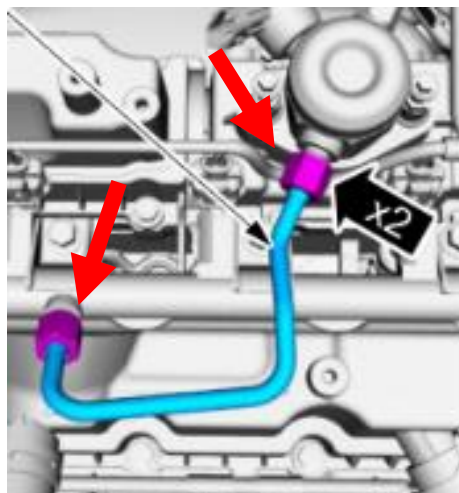


Figure 19

19. On the back of the pump loosen the compression nut on the low-pressure line with a 17mm wrench.
20. Use a 5/16th Quick Connect removal tool (shown in figure 21) to disconnect the metal low-pressure line from the soft line.

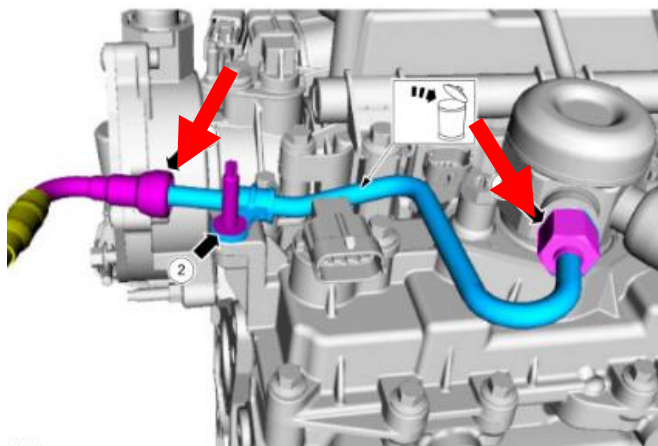


Figure 20



Figure 21

21. Remove the bolts holding the fuel pump in place using a 7mm socket. Remove the stock fuel pump from the engine bay.

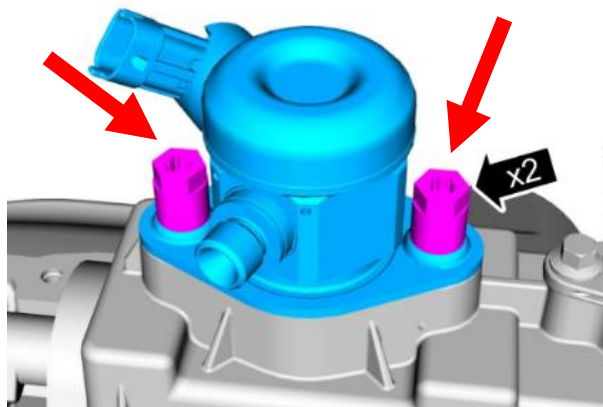


Figure 22

22. Place Nostrum flange onto the mounting location on the cylinder head. Place the alignment tool in the bore hole for the piston and then tighten down the mounting bolts with a 5mm Allen socket. **Torque spec: 15 Nm**



Figure 23

23. Place the pump on the flange and align the through holes on the pump with the threaded holes on the flange. Tighten down the mounting bolts with a 5mm Allen socket to secure the pump. **Torque Spec: 14Nm**



Figure 24

24. Reuse the stock high pressure fuel line for use with the Nostrum fuel pump. The line will need to be bent to work with new pump. First secure the pump side of the line to the fuel pump and tighten it down with a 17mm wrench. The fuel rail end of the line should be positioned as close to the fuel rail fitting as possible to minimize the bend require to make it fit.



Figure 25

25. Place wrenches along the fuel line and pull in the necessary directions to bend the fuel rail side of the fuel line in alignment with the fuel rail fitting. You may need to bend the line in several different directions to get the best fit possible.

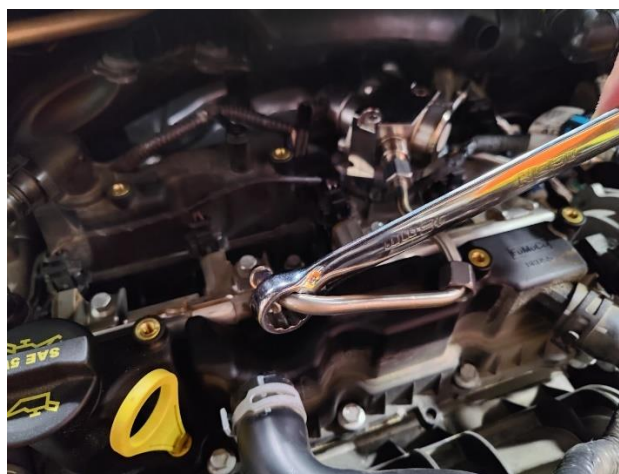


Figure 26

26. Once you have bent the line to line up with the high-pressure pump's fitting and the fuel rails fitting, verify its accuracy using the included test fixture. The fuel line should align with the fixture after it has been bent. This will ensure that it will fit in vehicle with the Nostrum pump kit.



Figure 27

27. Once the fuel line has been properly bent to align with the fuel rail fitting and pump fitting secure the compression nuts with a 17mm wrench. **Torque Spec: 21Nm**

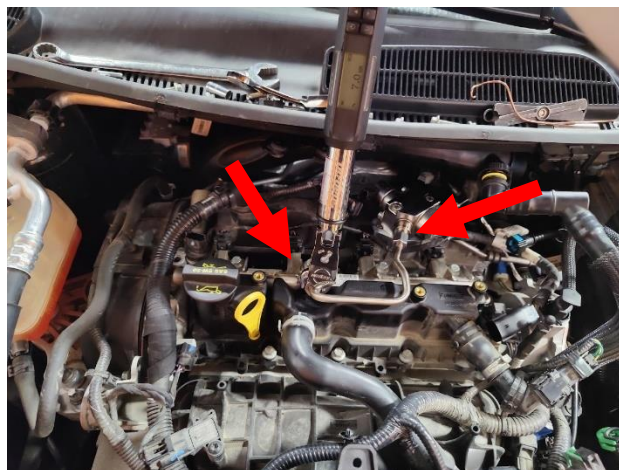


Figure 28

Fuel Pressure Sensor Installation Steps

28. Steps 29-32 are installation of the fuel pressure sensor. If your kit does not include a pressure sensor skip to step 32.
29. cutting the zip tie off the electrical connector on the fuel pressure sensor. This sensor is located on the drivers end of the fuel rail.

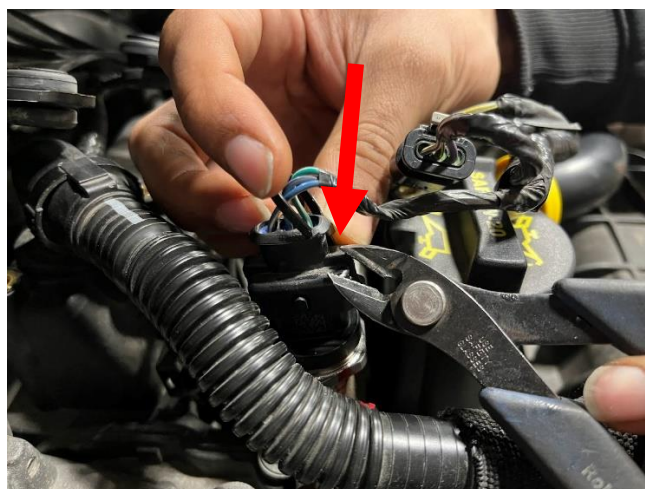


Figure 29

30. Push the tab on the pressure sensor electrical connector and pull up on it to disconnect it.

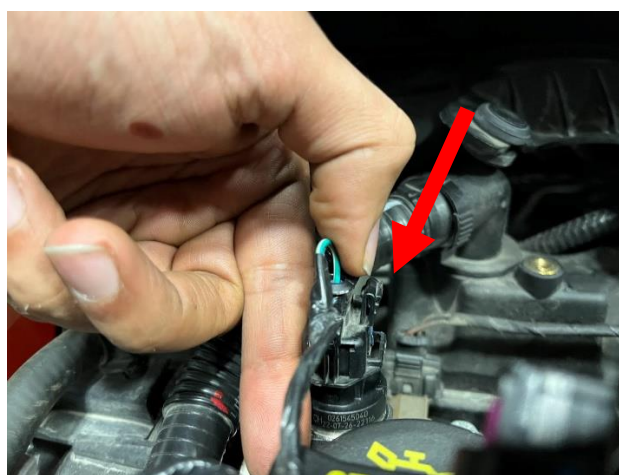


Figure 30



Figure 31

31. Use a 27mm socket to remove the stock fuel pressure sensor.



Figure 32

32. Once the stock pressure sensor is removed use a 27mm socket to install the Nostrum fuel pressure sensor. Install to a torque spec of 33Nm.



Figure 33

33. Once step 27/31 has been completed reinstallation of all remaining components can begin. Follow the steps of disassembly listed above in reverse to re-install components starting with step 15. Follow all torque specs that are included in each step where applicable. If a torque spec is not included in a step where it seems applicable assume snug fit with a wrench or socket wrench.

Hardware installation is complete.**Calibration**

Do not start your vehicle, this product requires calibration. Please refer to the Nostrum supplied tuning guide to make the necessary changes prior to starting the vehicle. Once calibration is complete, please proceed to the next step.

First Start-Up

1. Be sure to remove all installation tools and loose items from the engine compartment. Follow good, safe practices when working on your vehicle. Be sure to reassemble all parts and components according to your OE maintenance manual.
2. Key cycle the vehicle into the "Accessory On" position (do not go to Ignition position). The low- pressure fuel pump will activate and the low-pressure side of the pump will pressurize. Check the high-pressure fuel pump and the low-pressure side for leaks. If OK, proceed to step 3.
3. Key cycle to ignition and let the car attempt several start cycles. Remember that the fuel lines, pump and part of the fuel rail are filled with air, therefore this step is necessary to evacuate that air and get the system charged. If it starts, OK. If it does not, key off the vehicle. Check the high- pressure lines to the fuel rail, to the pump and the pump itself for leaks. If OK, proceed to step 4.
4. Key cycle one more time all the way to ignition. Engine should start-up and idle. If not, proceed with steps 2-4 again.
5. Let the car idle for a few minutes. Check for leaks on low and high-pressure portions again.
6. Installation is complete!

NOTE: a fault code may appear at the first key cycle due to the long ignition time or the low pressure in the fuel rail, both due to the air in the fuel system.

This code should self-clear after the OEM defined quantity of key cycles.

NOTE: Please check for fuel leaks after driving the car and letting it cool for an extended period of time, fittings may loosen after the first heat cycle due to thermal expansion and contraction. Retighten fittings if needed.

For additional technical & software support please contact:

Email: support@nostrumshop.com

Phone: 734-548-8677 (during normal business hours)

Revision	Notes	Date
Rev1	Prototype	10/18/22
Rev2	Pressure Sensor Steps Added	1/11/23
Rev3	Added Calibration Details	2/16/23
Rev4	Notation for Pressure Sensor Steps	6/6/23