NOSTRUM
HIGH PERFORMANCE

Ford Mustang 2.3EB SB+ HPFP Install Guide

PRODUCT PART SKU#: H086-1516-1

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.

Required Tools:

- 8mm socket
- 10mm socket
- 13mm socket
- 5mm Allen socket
- 17mm wrench

Consumables:

- Absorbent towels

1. Remove the retainers holding the battery cover in place. Pull the cover off to allow access to the battery.

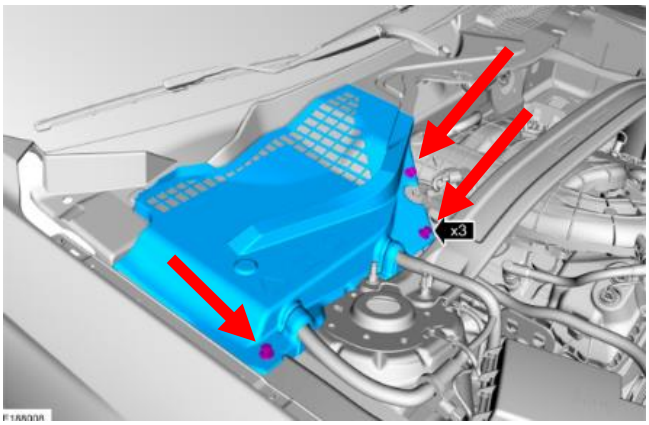

Figure 1

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

Figure 2

3. Use an 8mm and 10mm socket to remove the nuts and bolts respectively holding the engine cover in place. Remove the engine cover from the engine bay.

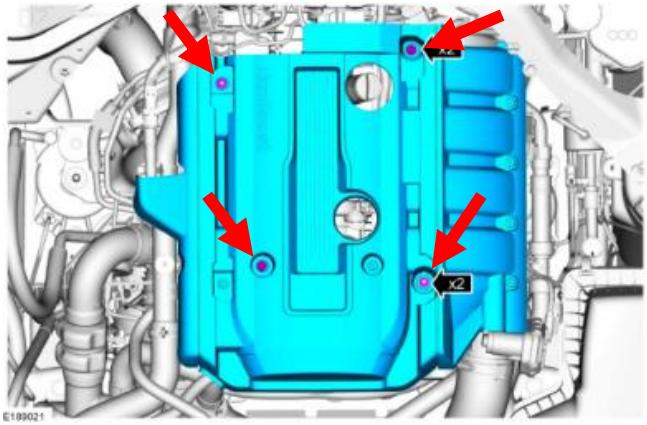

Figure 3

4. Remove the sound dampening foam around the stock fuel pump.

Figure 4

5. Remove the sound dampening foam surrounding the vacuum pump that is below the fuel pump at the back of the engine.

Figure 5

6. Remove the pump electrical connector by squeezing its tab while gently pulling the housing.

Figure 6

7. Remove the rubber low-pressure tube from the pump. The low-pressure line attaches to the pump using a quick connect fitting.

   To remove this quick connect fitting, retract the blue quick connect clip first and press in the white clip firmly. The connector will slide off the low-pressure fitting with a firm pull. Disengaging the clips is critical to removing this Ford quick connect style fitting. Make sure to catch spilled fuel with absorbent towels.

Figure 7

8. Remove the heavy gauge black crash bracket surrounding the high-pressure fuel pump by removing the two bolts with a 10mm socket. The two bolts are located on the left side of the pump.

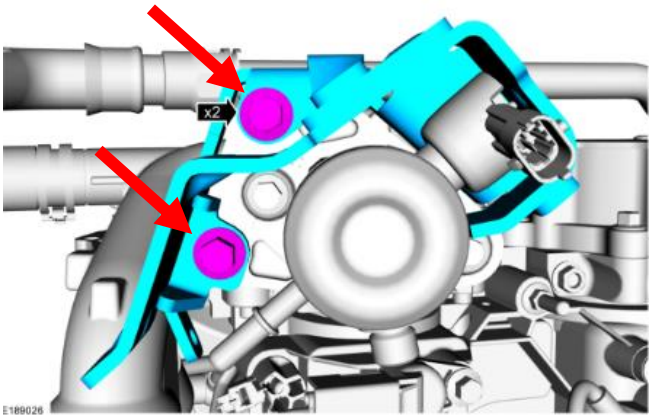

Figure 8

9. To remove the Ford factory high pressure fuel tube first locate the two brackets attaching the tube to the back of the cylinder head. To remove the brackets, you will need a 13mm and 8mm socket. Be careful to not drop the fasteners into the engine bay when removing them from the assembly. Figure 9 shows the bracket locations on the tube once removed from the vehicle.

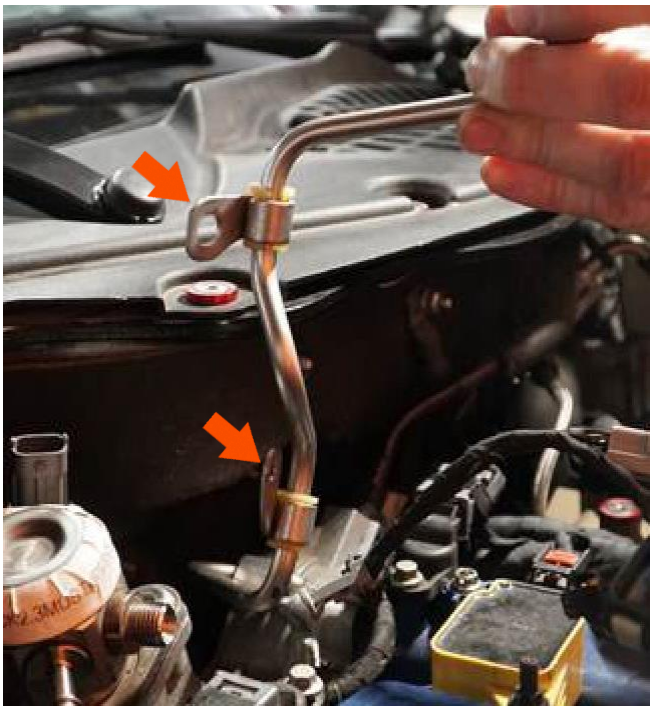

Figure 9

10. Use a 17mm wrench to loosen the compression nuts holding the fuel line to the pump and the fuel rail.

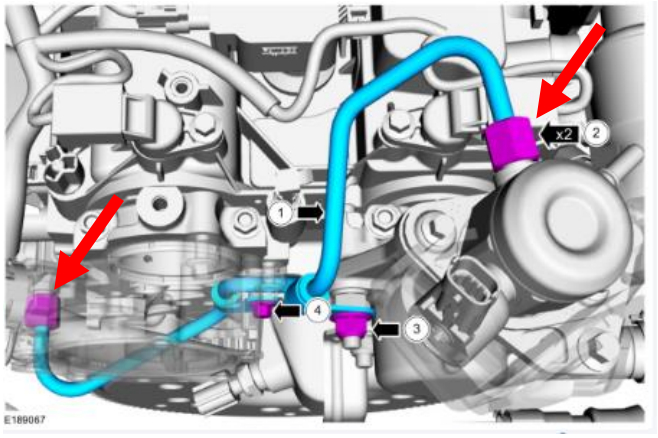

Figure 10

11. Remove the two pump bolts using a 10mm socket. To ensure the pump spring load is centered during removal, alternate between loosening each bolt 2-3 full rotations at a time. Once removed, slowly and carefully remove the high-pressure fuel pump from its housing.

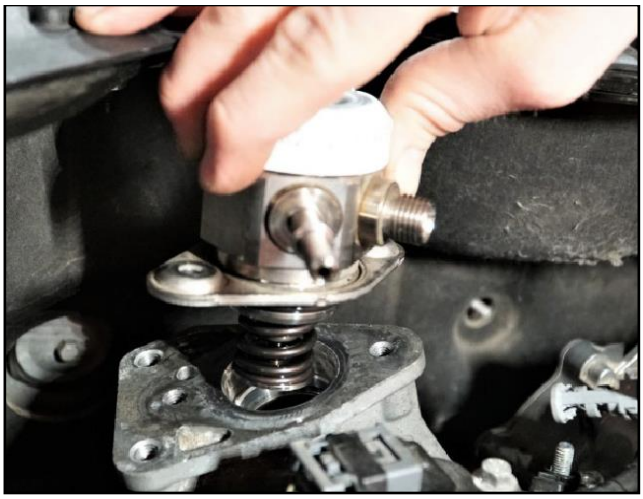

Figure 11

12. Clean the flange mating surface of debris and oil. Place the flange on the pad and start threading the two M6 x 25mm bolts supplied with an 5mm Allen socket

Figure 12

13. Install the Nostrum pump flange alignment tool into the center of the flange until the stop. This will align the flange pump bore to the cylinder head pump bore. Ensure the tool is fully seated into the flange before screwing the two M6 bolts in. Torque the bolts to 14Nm using a 5mm Allen socket.

Figure 13

14. Before installing the new pump, lubricate the Nostrum pump O-ring seal with engine oil.

Figure 14

15. Seat the pump onto the flange, ensuring that it is properly aligned and firmly seated. Ensure the pump solenoid is facing vehicle Front (away from the vehicle firewall) as pictured in Figure 15. Hand start and seat the pump to the flange with the two 45mm M6 bolts supplied in the kit.

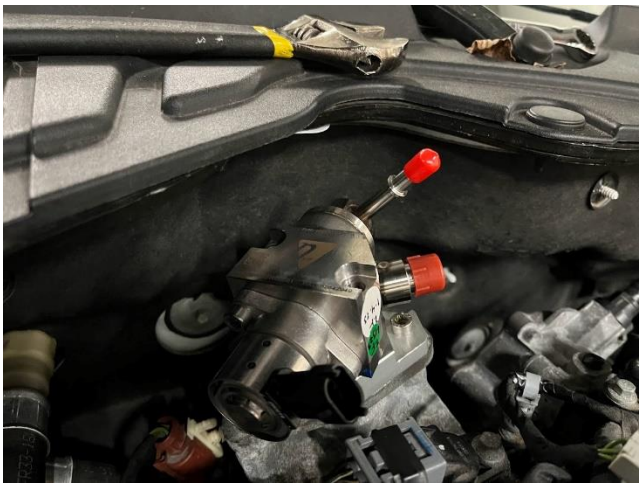

Figure 15

16. To secure the pump, alternate tightening each 45mm pump bolt by applying 2-3 rotations at a time. This will ensure the pump is installed evenly as you apply load to the pump spring. Torque both bolts to 14Nm using a 5mm Allen wrench and torque wrench. Note: a standard 3/8" drive 5mm Allen socket will NOT clear the cowl to torque the rear bolt attaching the fuel pump to the flange. A low profile 5mm Allen socket may be required.

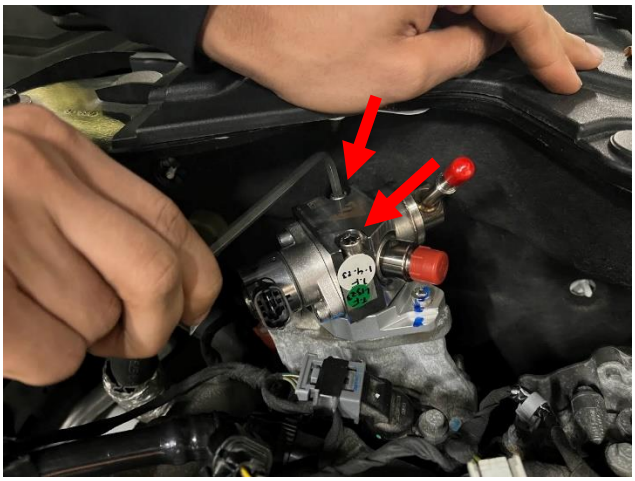

Figure 16

17. Install the Nostrum high-pressure fuel line by inserting the fuel rail side of the tube under the passenger side of the vacuum pump housing and over to the inlet of the fuel rail.

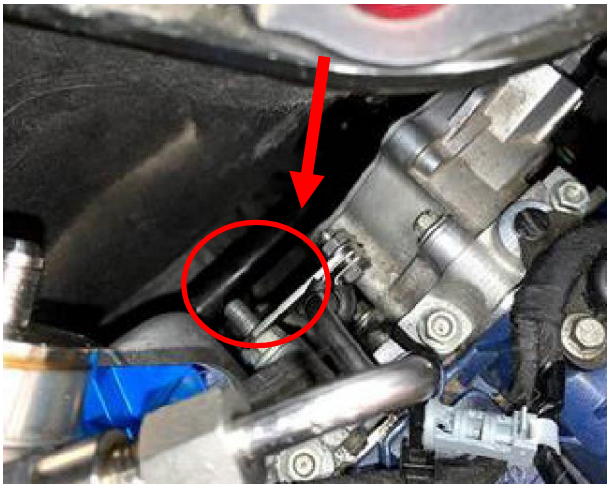

Figure 17

18. Before installing the tube nuts, position the tube bracket by seating the bracket plate onto the stud located on the back of the cylinder head. Figure 18 shows the location of this stud.

Figure 18

19. Aligning the tube: Seat the fuel line spherical fitting on the pump side first, followed by the fuel rail. Do not start the compression nuts yet. Ensure the spherical fittings are centered, straight, and in full contact with the pump fitting cone surface as shown in Figure 19.

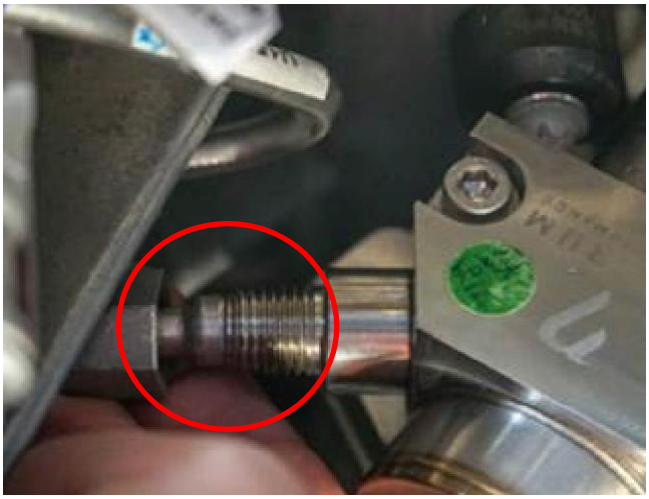

Figure 19

20. While holding the line & spherical fitting in proper position, seated firmly in the cone, hand tighten both compression nuts (fuel rail first, pump second). Fitting alignment is essential. Do not force the compression nuts. The nuts should spin freely and without resistance. If there is resistance, ensure the globe fittings are straight and centered to the cones, and try again. It is critical that the spherical fittings are aligned with the female cone, DO NOT USE THE NUT TO "CENTER" THE FITTING.

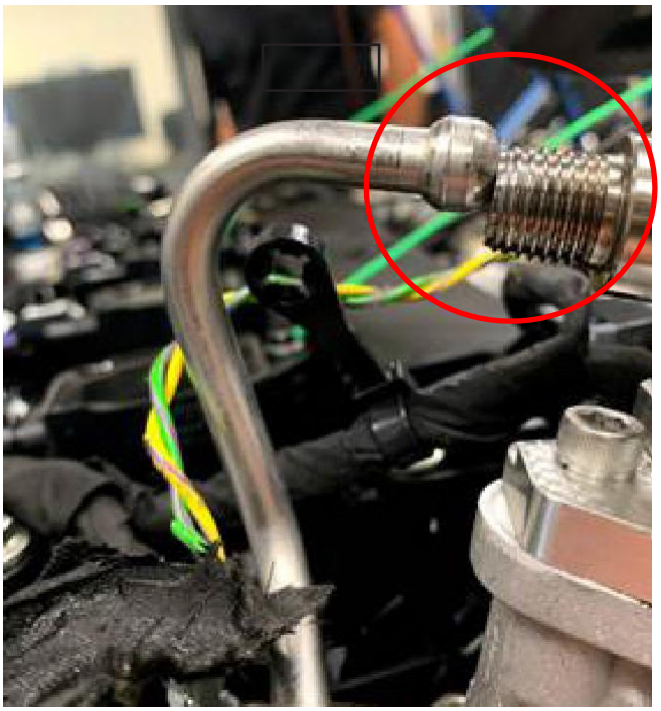

Figure 20

21. Torque both tube compression nuts to 28 Nm. Attempt to gently move the high-pressure hard line at both ends near the fittings. They should not move inside the compression nut. If they do move, remove the line, and return to Step 20.

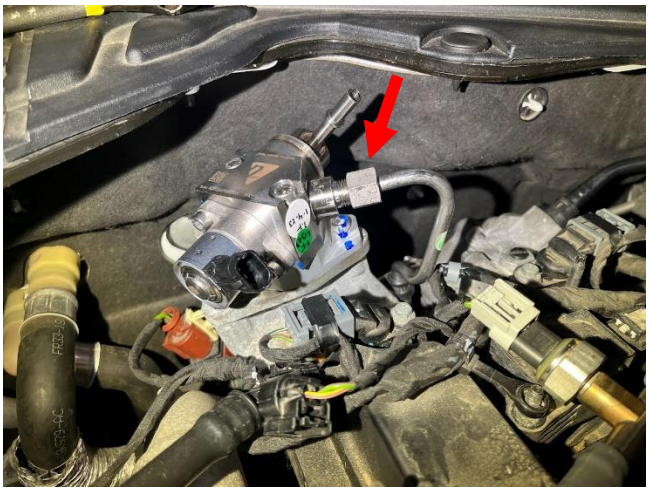

Figure 21

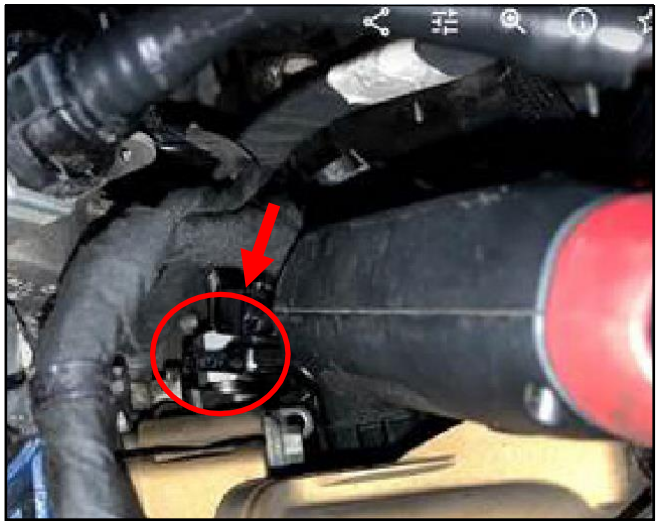

Figure 22

22. Secure the high-pressure tube bracket. Now that the high-pressure tube has been seated and torqued to the inlet and outlet, return to the tube bracket on the cylinder head stud. Thread the upper bracket on with the factory nut using a 13mm wrench or socket. Torque to 17Nm. Thread the bolt on the lower tube bracket using an 8mm wrench or socket. Torque to 10 Nm.

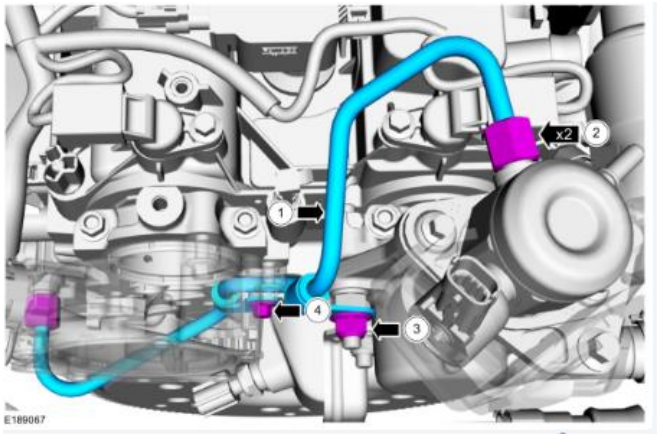

Figure 23

23. Install the Nostrum low pressure fuel line by connecting the female quick connect end to the male quick connect on the fuel pump.

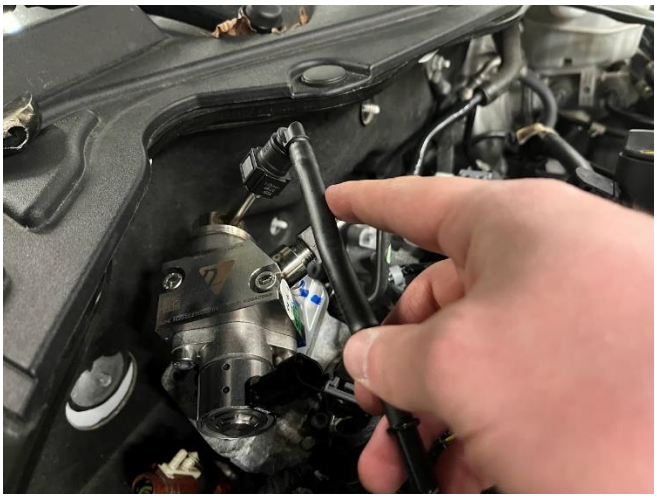

Figure 24

24. Connect the male quick connect of the Nostrum low pressure line to the female end of the stock low pressure line.

Figure 25

25. Place the blue clip back into place on the stock low pressure quick connect to secure the connector.

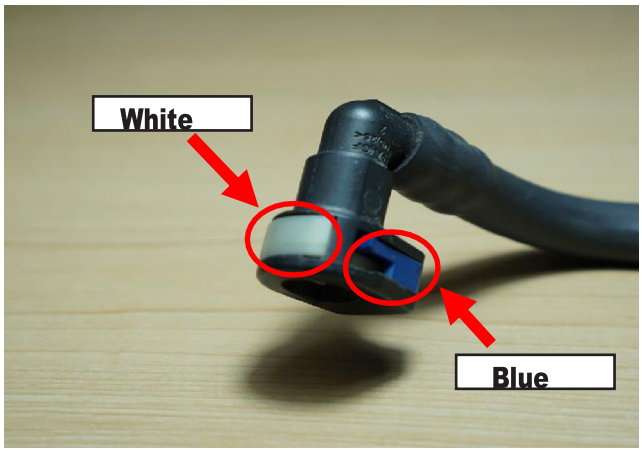

Figure 26

26. Hook the Nostrum retainment clip to the solenoid connector on the Nostrum fuel pump.
27. Reconnect the solenoid electrical connector.

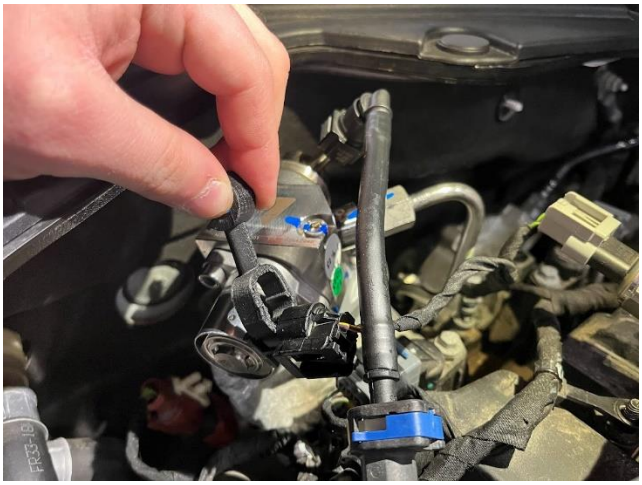

Figure 27

Figure 28

28. Pull the 2 low pressure lines over so that the Nostrum line can be clipped into the retainment clip.

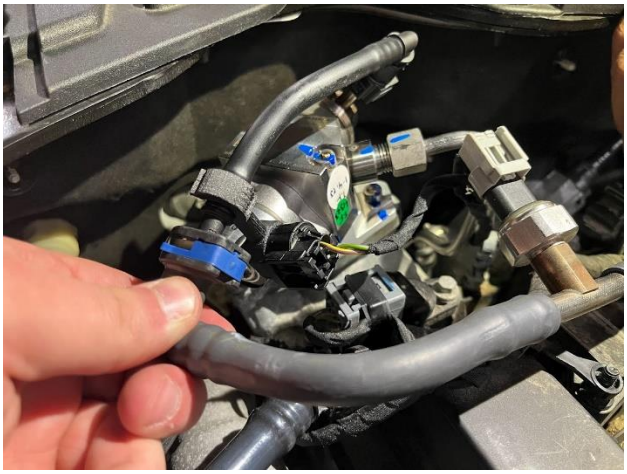

Figure 29

29. Once the low-pressure lines have been installed, reinstallation of all remaining components can begin. Follow the steps of disassembly listed above in reverse to re-install components. Start with step 3. Follow all torque specs that are included in each step where applicable. If 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 with 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
Rev 1	Prototype Release	2/1/23
Rev 2	Added Calibration Details	2/16/23

NOSTRUM
HIGH PERFORMANCE

Ford 2.3EB and 2.0EB Stage 1 Injector Install Guide

PRODUCT PART SKU#: H750-1466-1

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.

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This is the beginning of the Ford Mustang 2.3 Ecoboost Stage 1 Injector Install Guide.

For the Ford Focus RS Stage 1 Injector Install Guide skip ahead to page 15.

For the Ford Focus ST Stage 1 Injector Install Guide skip ahead to page 30.

Required Tools:

- Socket wrench
- 10mm socket
- 13mm socket
- 15mm socket
- 17mm socket
- Teflon seal compression tool

Consumables:

- Clean engine oil

Applications:

- 2015-2023 Ford Mustang 2.3L Ecoboost
- 2016-2018 Ford Focus RS 2.3L Ecoboost
- 2013-2018 Ford Focus ST 2.0L Ecoboost

1. Disconnect the negative battery terminal.
2. Disconnect the positive battery terminal.

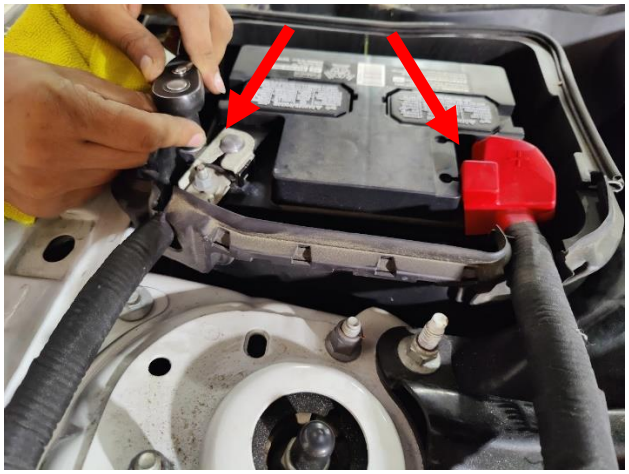

Figure 1

3. Remove the 4 nuts holding down the engine cover.
4. Remove the engine cover.

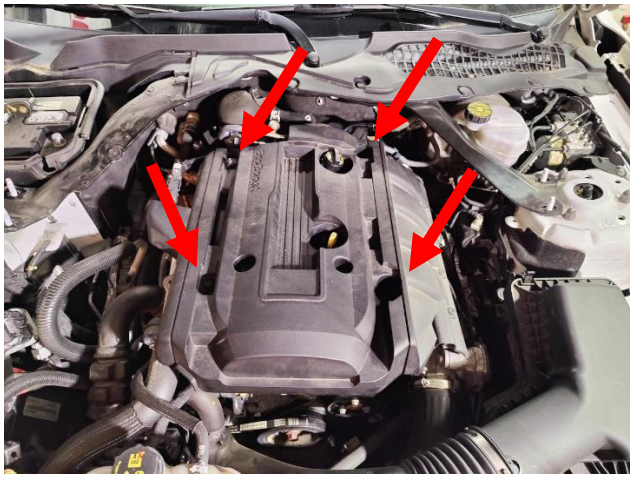

Figure 2

5. If equipped remove the 4 nuts holding down the strut tower brace. Socket: 15mm
6. Remove the strut tower brace.

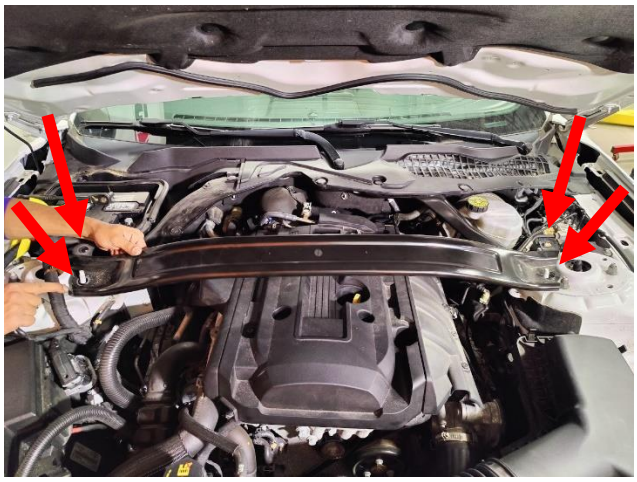

Figure 3

7. Disconnect the EVAP canister purge valve quick release coupling at the front of the intake manifold.

Figure 4

8. Disconnect the EVAP canister purge valve electrical connector.

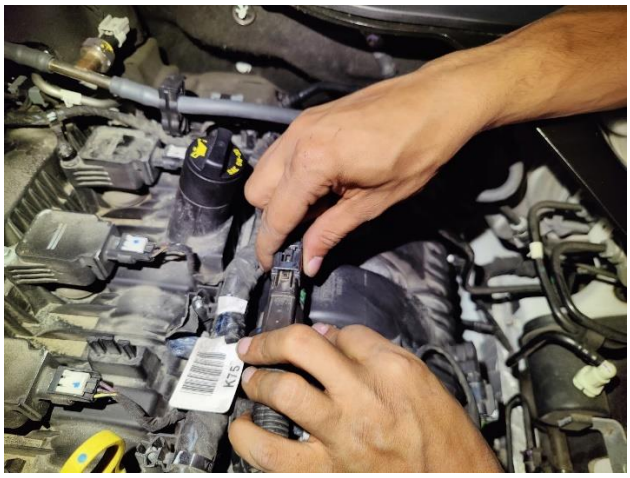

Figure 5

9. Detach the fuel tube and EVAP tube from the retainer on the back of the intake manifold.

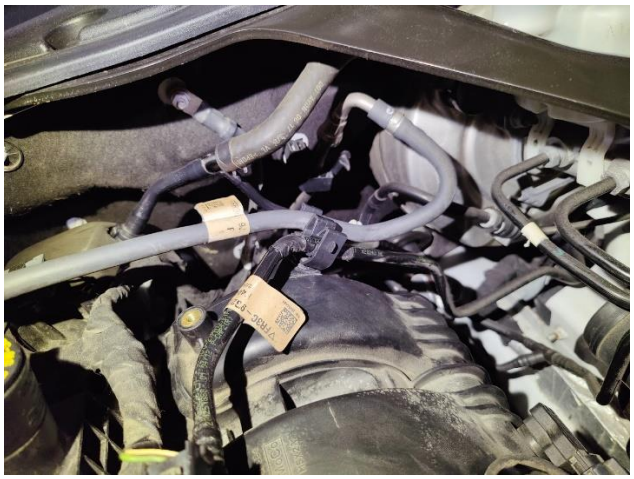

Figure 6

10. Remove the bolt and place the EVAP canister purge valve aside. **Socket: 10mm *Torque*: 71 in.lb (8Nm)**

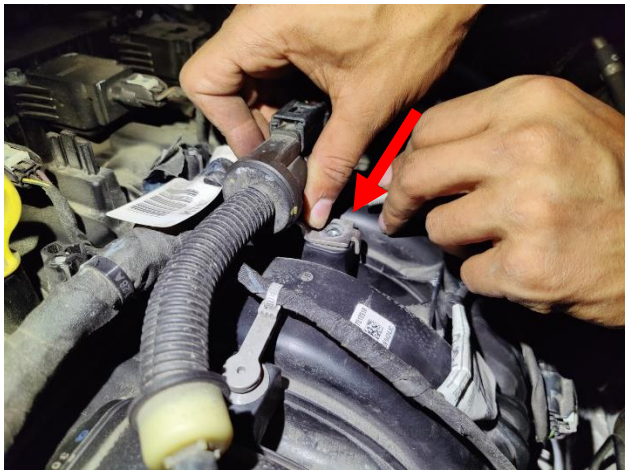

Figure 7

11. Disconnect the MAPT connector and retainers holding down the wiring harness.

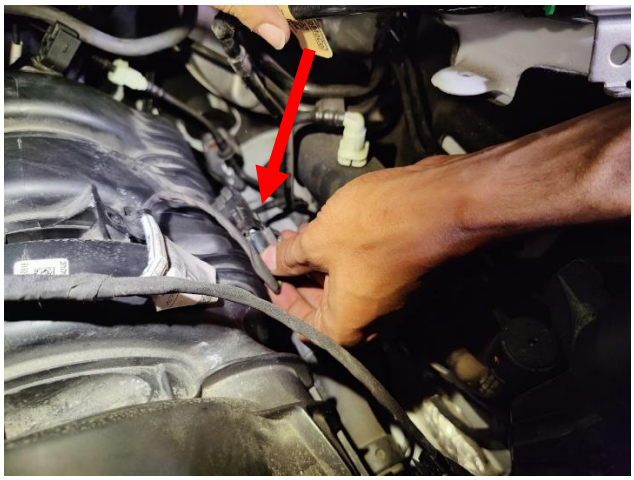

Figure 8

12. Disconnect the throttle body connector and retainer holding down the wiring harness.

Figure 9

13. Loosen the clamp holding down the CAC tube to the throttle body and set the tube aside.

Figure 10

14. Disconnect the vacuum tube by using the quick release coupling at the rear of the intake manifold.

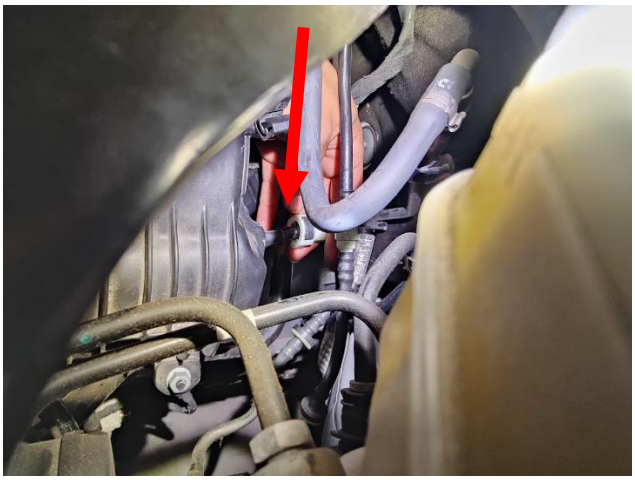

Figure 11

15. Remove the nut from the coolant tube on the bottom of the intake manifold.
Socket: 13mm *Torque*: 106 in.lb (12Nm)

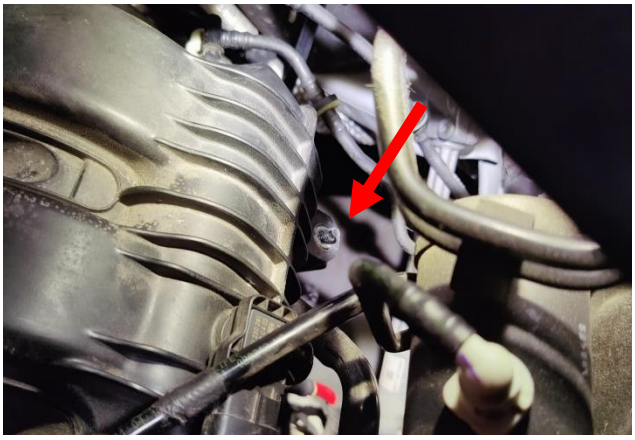

Figure 12

16. Remove the 5 bolts holding down the intake manifold. **Socket: 10mm *Torque*: 177 in.lb (20Nm)**

Figure 13

17. Lift the intake manifold and disconnect the PCV hose using the quick release coupling.

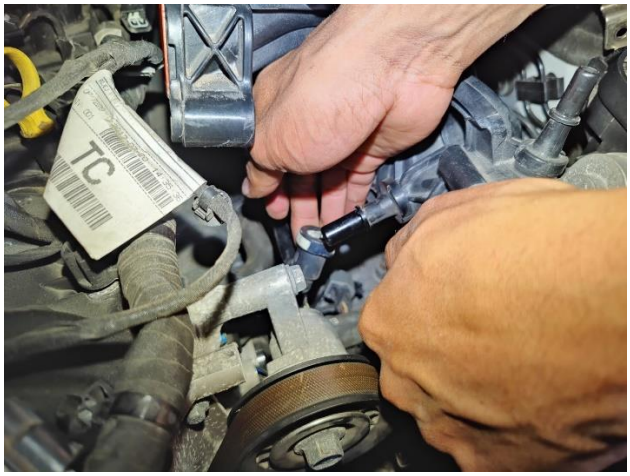

Figure 14

18. Disconnect the KS electrical connector retainers from the intake manifold.
19. Remove the intake manifold. Place tape over the intake wholes on the cylinder head to ensure that nothing falls into the combustion chamber.
20. Be sure to check the intake manifold for worn or damaged gaskets.

Figure 15

21. Remove the fuel rail insulator.

Figure 16

22. Disconnect the fuel injector and fuel pressure sensor electrical connectors.

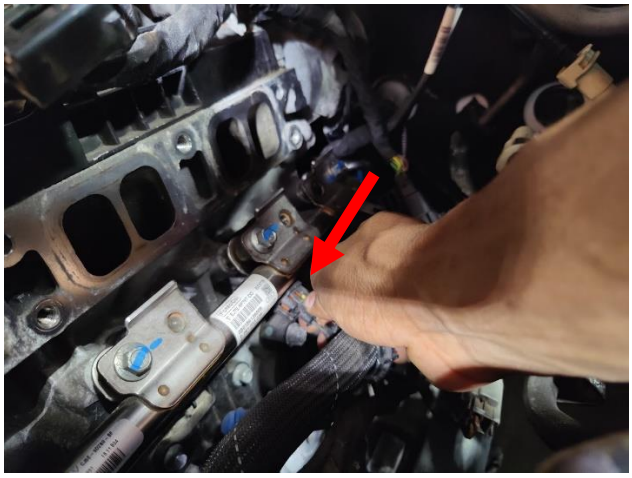

Figure 17

Figure 18

23. Disconnect the high-pressure fuel line flare nut from the fuel rail. Make sure to cover the compression nut with an absorbent towel to prevent fuel from spraying from the line.
Wrench: 17mm *Torque*: 133 in.lb (15Nm) +30

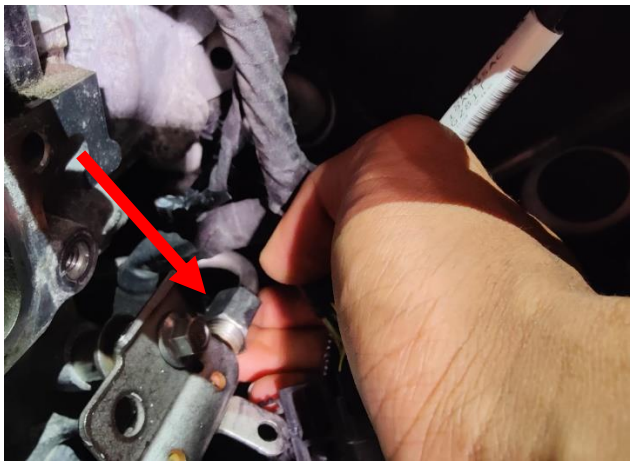

Figure 19

24. Remove the 5 fuel rail bolts. **Socket: 10mm *Torque*: 71 in.lb (8Nm) +26°**
25. Pull the fuel rail with the injectors attached from the engine bay. Make sure to pull the injectors straight out and do bend the injectors side to side while pulling them out. This avoids any potential damage to the injectors. Once the rail is removed place it on a clean surface.

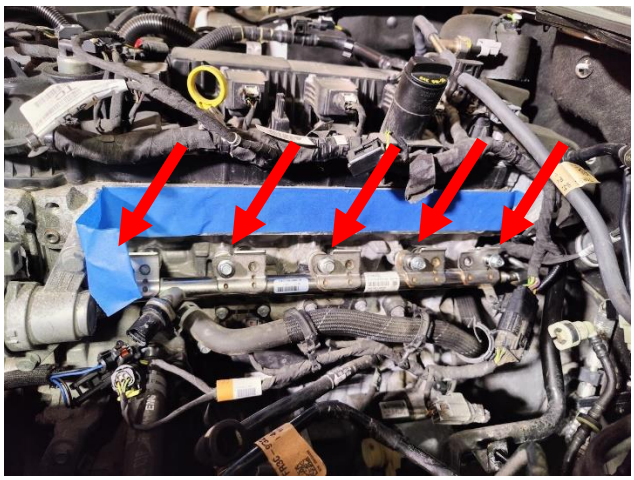

Figure 20

26. Remove the fuel injectors from the fuel rail.

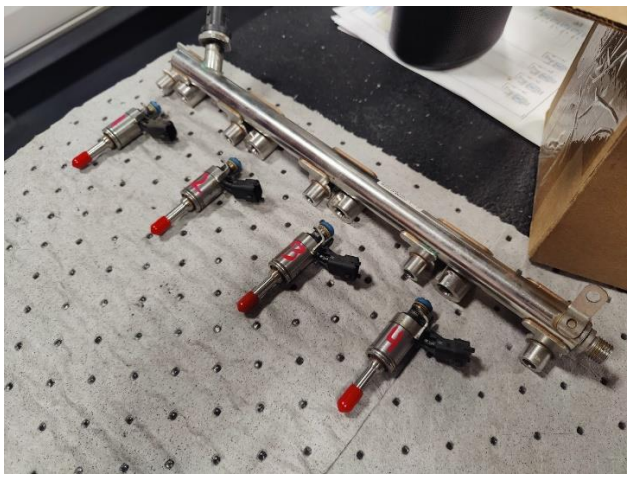

Figure 21

27. Remove the clips from the top of the stock injectors.

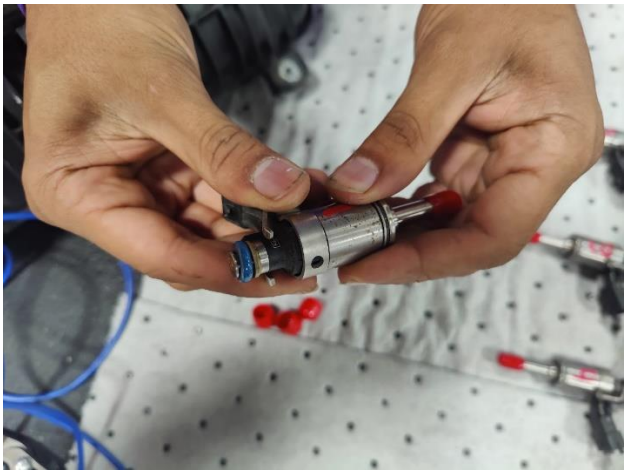

Figure 22

28. Place clips onto the Nostrum injectors in the correct orientation.

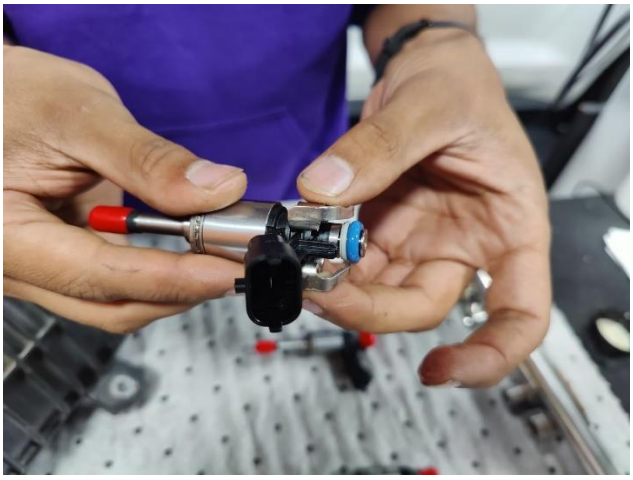

Figure 23

29. Lubricate the O-rings on top of the injectors with clean engine oil.

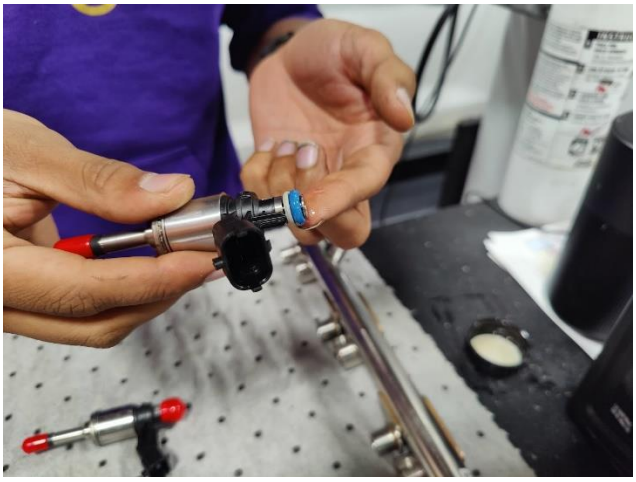

Figure 24

30. Place injectors into the fuel rail. Line up the tab on the injector (located on the same side as the injectors electrical connector) with the slot on the fuel rail seen in figure 25.

Figure 25

31. Lubricate the Teflon seals with clean engine oil. Place the injector compression tool over the stem of each Nostrum injector. Keep the compression tool there for 30 seconds for each injector.

Figure 26

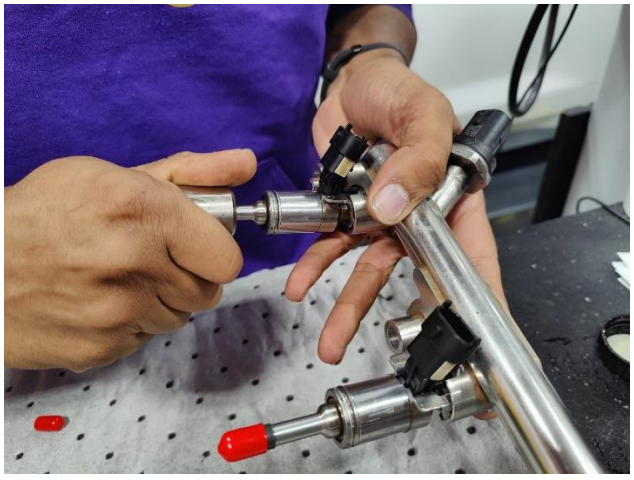

Figure 27

32. Once all the injectors are ready press the fuel rail and injectors back into their seated position on the cylinder head. Ensure you press the fuel rail and injectors straight into their seated position on the cylinder head. This will prevent any potential damage to the injector.

Figure 28

33. Once the fuel rail is reinstalled, reinstallation of all remaining components can begin. Follow the steps of disassembly listed above in reverse to re-install components starting with step 21. 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 with 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)

NOSTRUM
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Ford 2.3EB and 2.0EB Stage 1 Injector Install Guide
PRODUCT PART SKU#: H750-1466-1

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.

This is the beginning of the Ford Focus RS Stage 1 Injector Install Guide.

For the Ford Mustang 2.3 Ecoboost Stage 1 Injector Install Guide go back to page 2.

For the Ford Focus ST Stage 1 Injector Install Guide skip ahead to page 33.

Required Tools:

- Drive Ratchet
- 10mm Socket
- 8mm Socket
- 17mm wrench
- Trim Removal Tool
- Injector Compression Tool

Expendables:

- Clean Engine Oil
- Absorbent Towels

Applications:

- 2015-2023 Ford Mustang 2.3L Ecoboost
- 2016-2018 Ford Focus RS 2.3L Ecoboost
- 2013-2018 Ford Focus ST 2.0L Ecoboost

1. Disconnect positive terminal using a 10mm socket.

Figure 29

2. Loosen the hose clamps securing the air intake tubes. Remove the air intake tube from the engine bay.

Figure 30

3. Remove the air intake tube connected to the air box. Use an 8mm socket to loosen the hose clamp. Remove the intake tube from the engine bay.

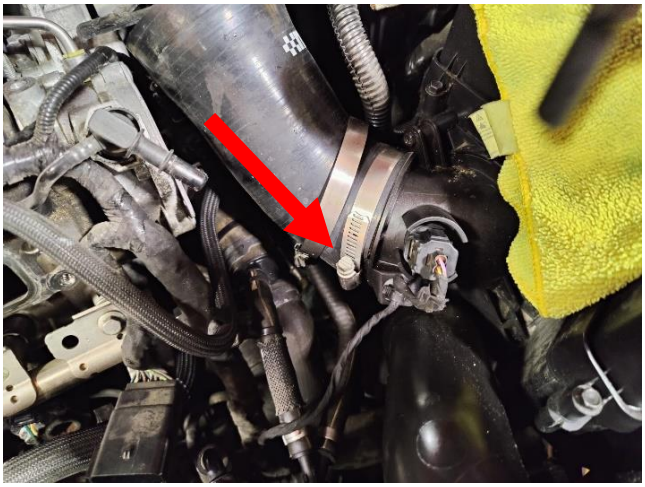

Figure 31

4. Pull the vacuum hose from the clips located on the top and passenger side of the intake manifold.

Figure 32

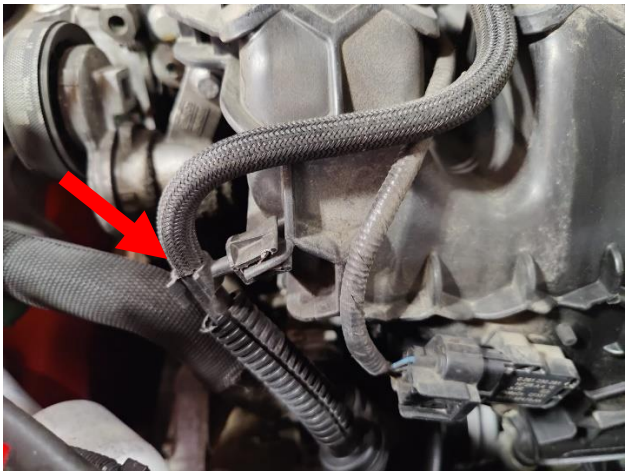

Figure 33

5. Disconnect the electrical connector on the front passenger side of the intake manifold.

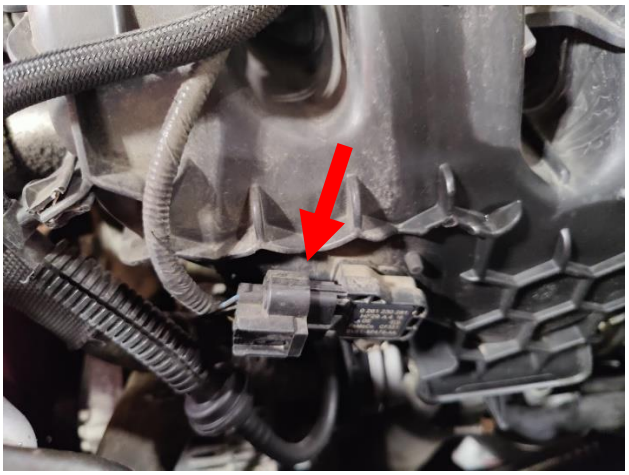

Figure 34

6. Pull out on the white tabs and then pull down to release the vacuum tube quick connect. Disconnect the vacuum hose connector.

Figure 35

7. Use an 8mm socket to loosen the hose clamp on the intake tube at the bottom of the manifold. This tube connects to the throttle body.

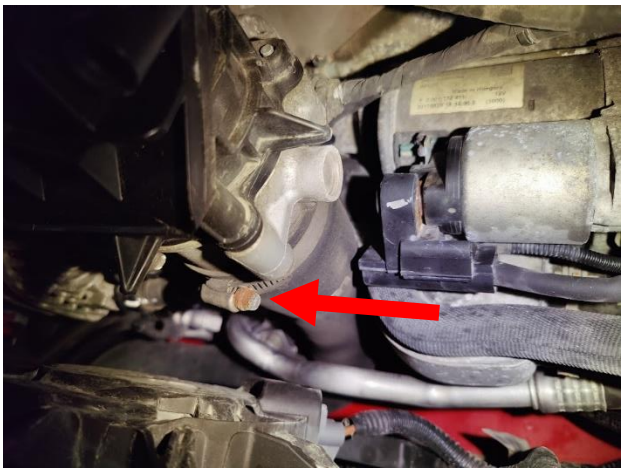

Figure 36

8. Use a **10mm socket** to remove the 5 bolts that secure the intake manifold to the cylinder head. **Torque Spec: 177 in.LB (20 Nm)**

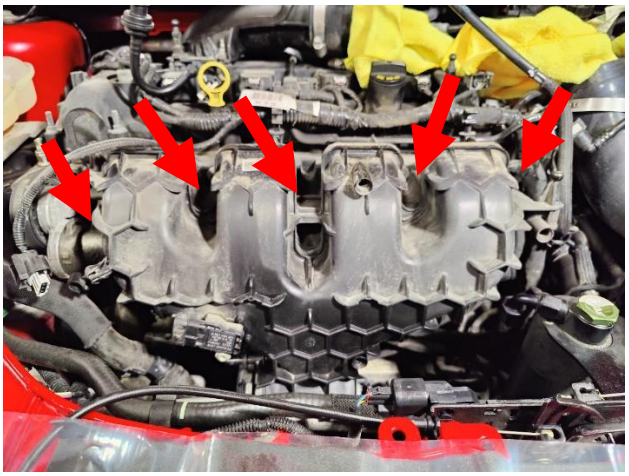

Figure 37

9. Pull the intake manifold away from the cylinder head. This gives access to connectors and vacuum hoses located on the back of the manifold. Place tape over the intake wholes on the cylinder head to ensure that nothing falls into the combustion chamber.

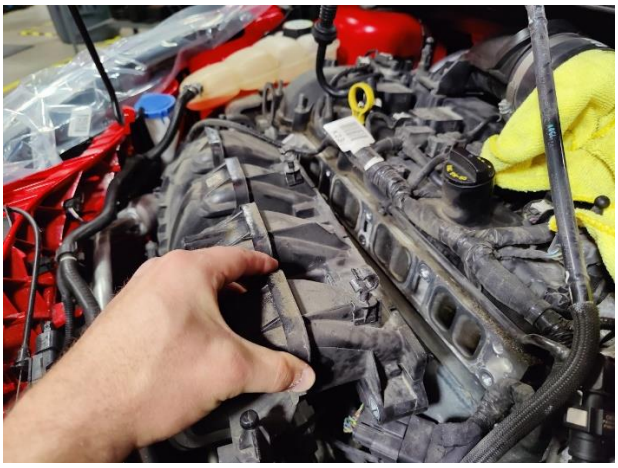

Figure 38

10. Use a trim removal tool to unclip the connectors on the driver and passenger side of the manifold.

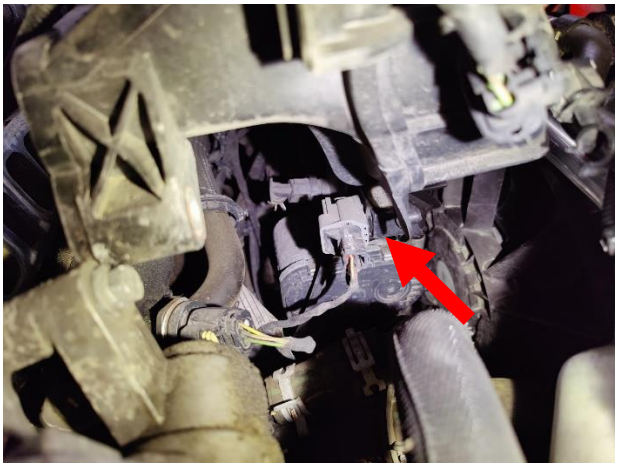

Figure 39

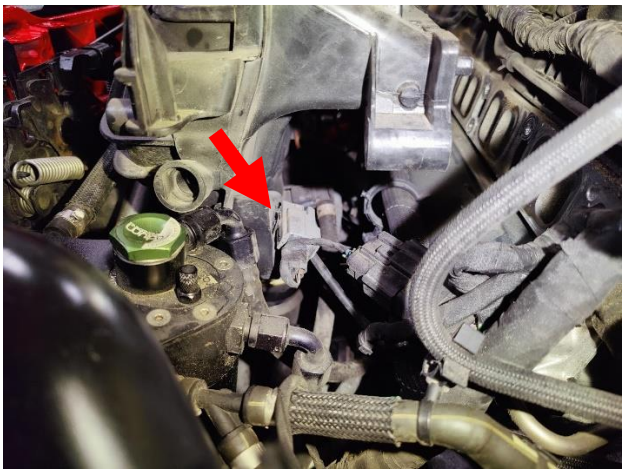

Figure 40

11. Disconnect the vacuum hose on the back of the manifold just above the throttle body. Push on the sides of the connector and pull out to release the hose.

Figure 41

12. Pull on the red tab to disconnect the throttle body connector.
13. The intake manifold should be free from the rest of the engine and can now be removed from the engine bay.

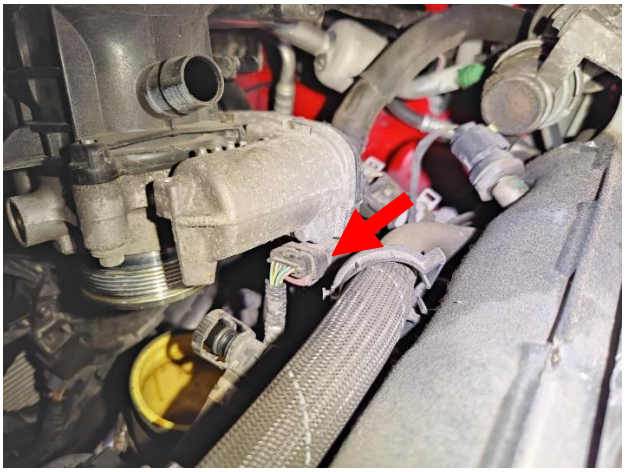

Figure 42

14. Disconnect the fuel rail pressure sensor.

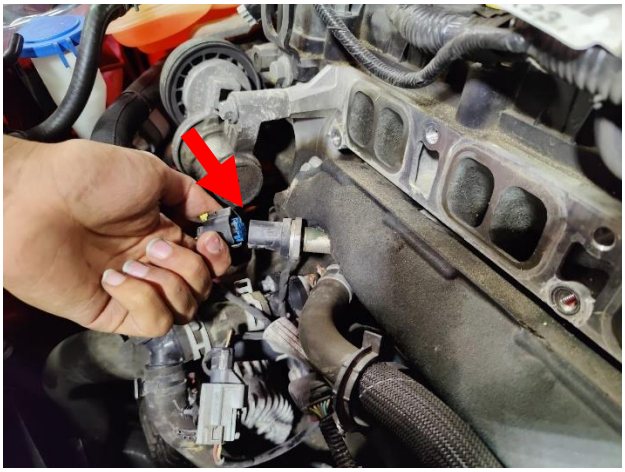

Figure 43

15. Remove the fuel rail insulator.

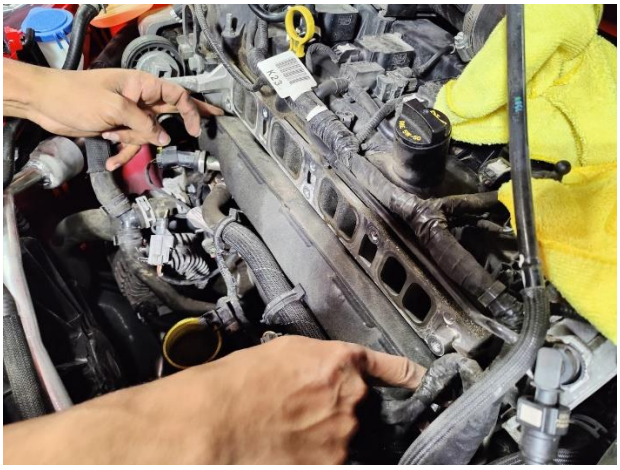

Figure 44

16. Disconnect the electrical connector retainer from the fuel rail tab.

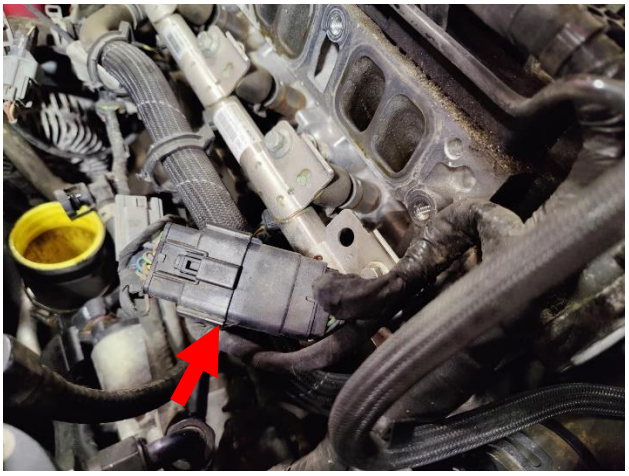

Figure 45

17. Disconnect the high-pressure tube from the fuel rail using a **17mm wrench**. Make sure to cover the compression nut with an absorbent towel to prevent fuel from spraying from the line. **Torque Spec: 133 in.lb (15Nm) +30 degrees**

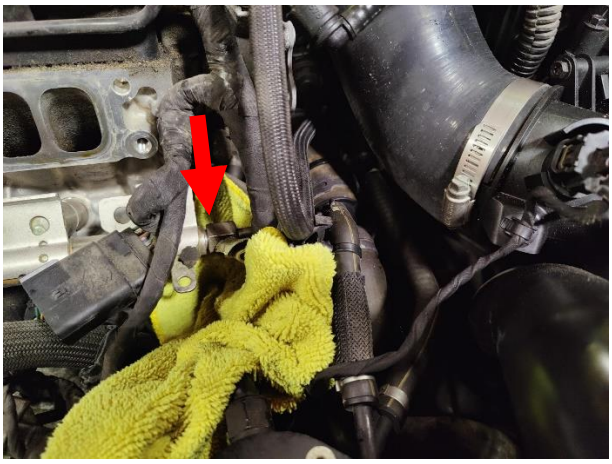

Figure 46

18. Remove the 5 bolts holding the fuel rail to the cylinder head using a **10mm socket**. ***Torque Spec: 71 in.lb (8Nm) +26°***

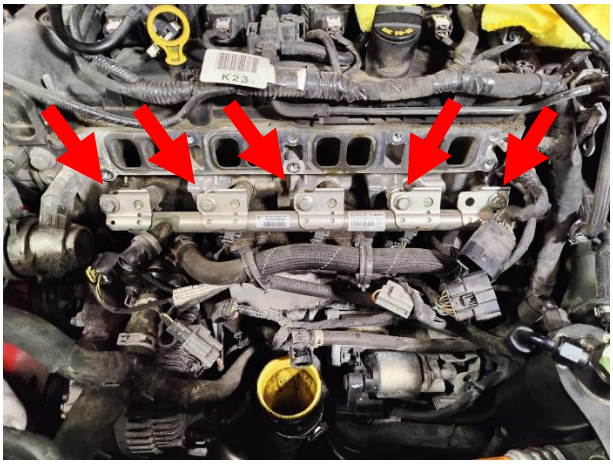

Figure 47

19. Disconnect the connector for each of the 4 injectors on the fuel rail.

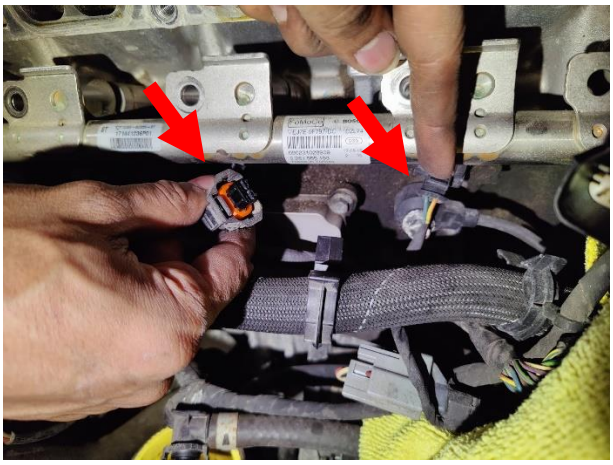

Figure 48

20. Pull the fuel rail with the injectors attached from the engine bay. Make sure to pull the injectors straight out and do bend the injectors side to side while pulling them out. This avoids any potential damage to the injectors. Once the rail is removed place it on a clean surface.

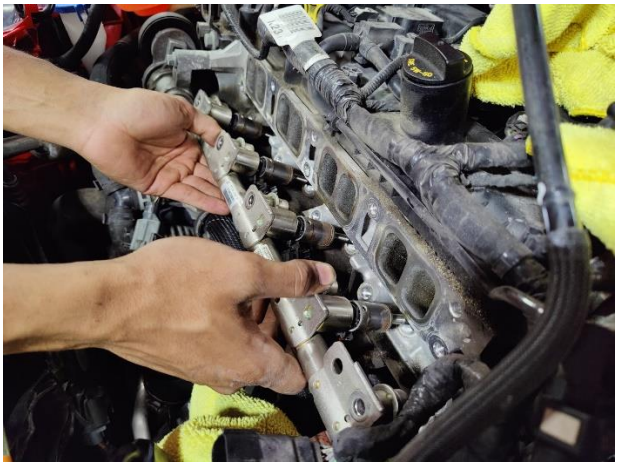

Figure 49

21. Pull all 4 injectors out from their seats in the fuel rail.

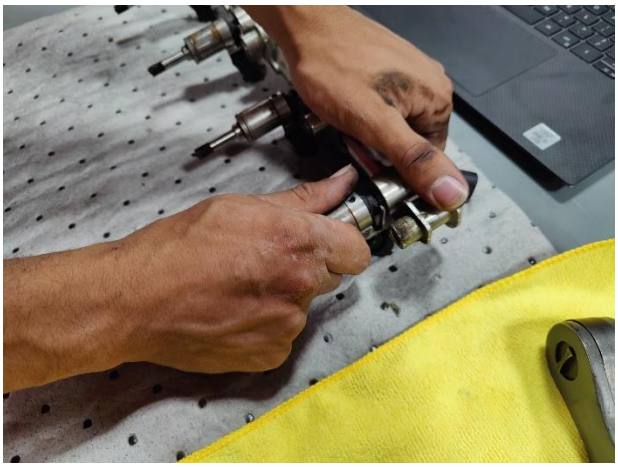

Figure 50

22. Pull the injector clip from each of the stock injectors.

Figure 51

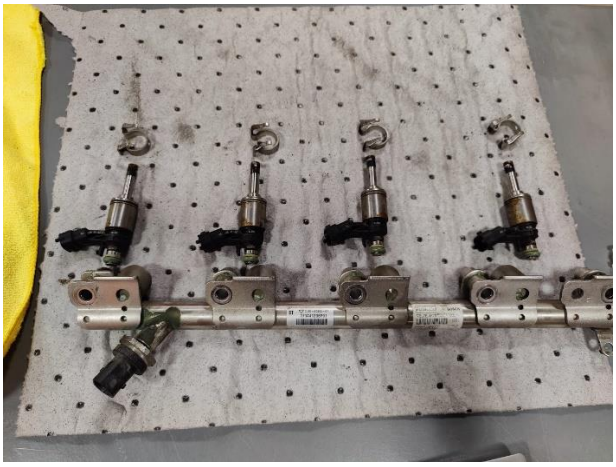

Figure 52

23. Place an injector clip onto each Nostrum fuel injector. Make sure that the prongs of the clip are facing towards the connector.

Figure 53

24. Use clean engine oil to lubricate the o-ring on the back of each Nostrum injector.

Figure 54

25. Place Nostrum injectors into the fuel rail. Line up the tab on the injector (located on the same side as the injectors electrical connector) with the slot on the fuel rail

Figure 55

26. Use clean engine oil to lubricate the seal of the stem of each Nostrum injector.

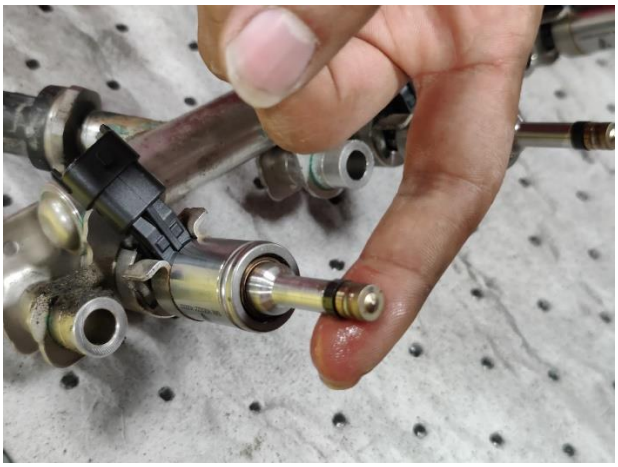

Figure 56

27. Place the injector compression tool over the stem of each Nostrum injector. Keep the compression tool there for 30 seconds for each injector.

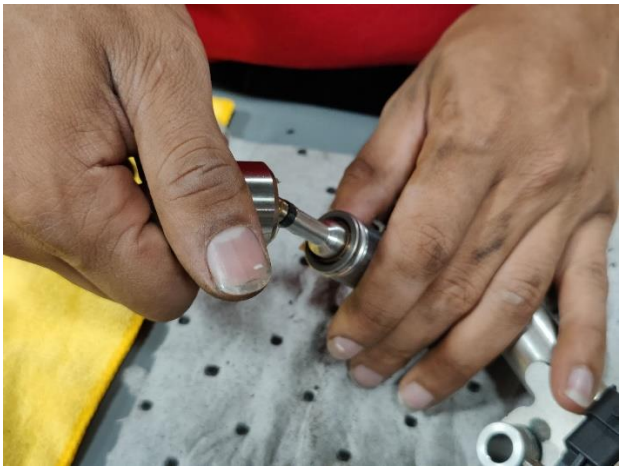

Figure 57

Figure 58

28. Once all the injectors are ready press the fuel rail and injectors back into their seated position on the cylinder head. Ensure you press the fuel rail and injectors straight into their seating position on the cylinder head. This will prevent any potential damage to the injector.

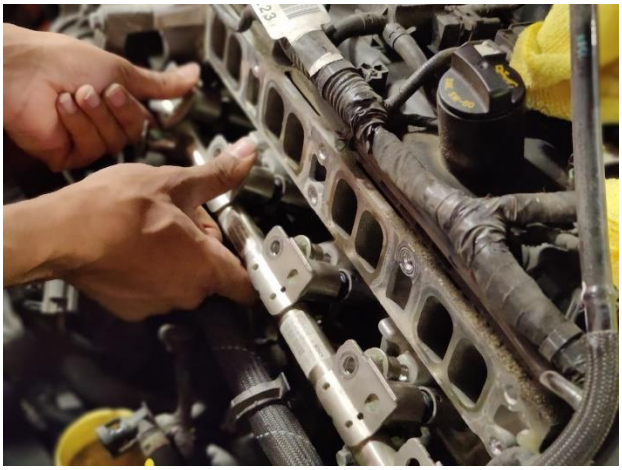

Figure 59

29. Once the fuel rail has been installed, reinstallation of all remaining components can begin. Follow the steps of disassembly listed above in reverse to re-install components. Start with step 19. Follow all Torque specs that are included in each step where applicable. If 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 with 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.

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

Revision	Notes	Date
Rev 1	Production Release	2/16/23
Rev 2	Added Calibration Details	2/16/23

NOSTRUM
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Ford 2.0EB Injector Install Guide Rev 1

PRODUCT PART SKU#: H750-1466-1

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.

This is the beginning of the Ford Focus ST Stage 1 Injector Install Guide

For the Ford Mustang 2.3 Ecoboost Stage 1 Injector Install Guide go back to page 2.

For the Ford Focus RS Stage 1 Injector Install Guide. Go back to page 15.

Required Tools:

- Socket Wrench
- 7mm Socket
- 10mm Socket
- 17mm Wrench
- Injector Compression Tool

consumables:

- Absorbent Towel

Applications:

- 2015-2023 Ford Mustang 2.3L Ecoboost
- 2016-2018 Ford Focus RS 2.3L Ecoboost
- 2013-2018 Ford Focus ST 2.0L Ecoboost

1. Pull the cover over the battery off by hand with a slight upward motion.

Figure 60

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

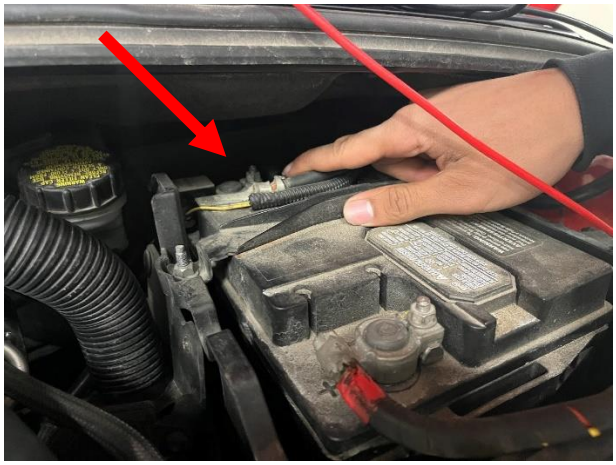

Figure 61

3. Pull the terminal away and cover it with a towel to prevent the battery from reconnecting.

Figure 62

4. Disconnect the MAP sensor electrical connector on the passenger side of the intake manifold near the front.

Figure 63

5. Disconnect the fuel tank vent tube from the 3 clips holding it to the manifold.

Figure 64

Figure 65

Figure 66

6. Use a 7mm socket to loosen the hose clamp holding the charge tube to the throttle body at the bottom of the intake manifold.

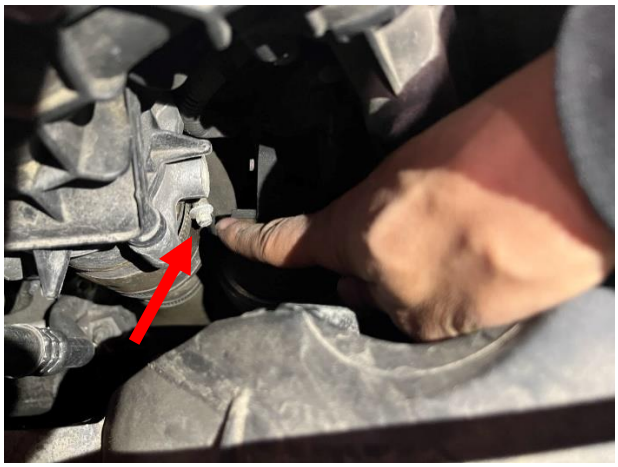

Figure 67

7. Disconnect the FRP sensor electrical connector by squeezing the retaining clip and carefully unseating the connector. The connector is located on the passenger side of the intake manifold.

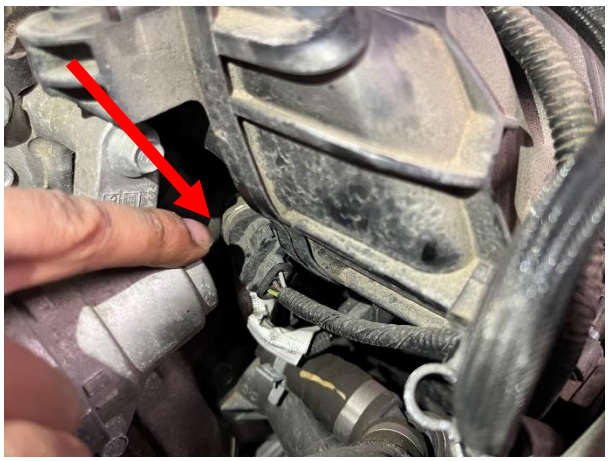

Figure 68

8. Use a 10mm socket to remove the 5 bolts holding the intake manifold in place.
Torque Spec: 20 Nm

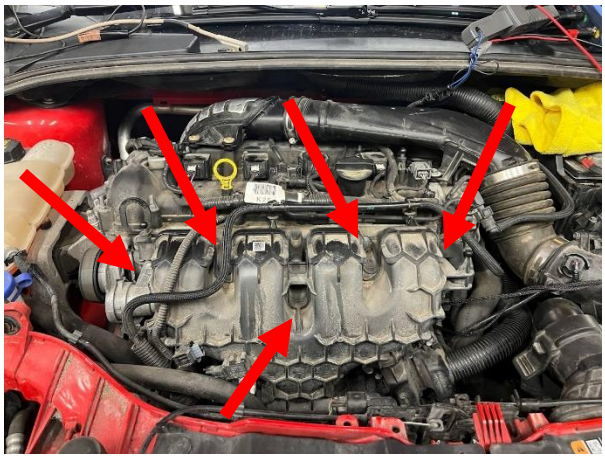

Figure 69

9. Now that the manifold is free pull the throttle body from the charge tube at the bottom of the manifold.

Figure 70

10. Disconnect the fuel evaporative tube quick release coupling.

Figure 71

11. Pull out the bottom white tab and then press on the top of the other white tab to release the connector from its fitting.

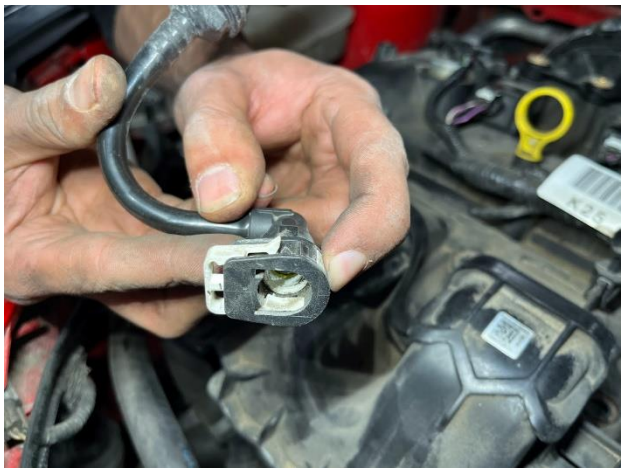

Figure 72

12. Use a trim removal tool to disconnect the electrical connector retainer on the passenger side of the manifold facing the engine/firewall

Figure 73

13. Disconnect the PCV tube coupling at the back of the manifold by squeezing on both sides of the vacuum tube connector.

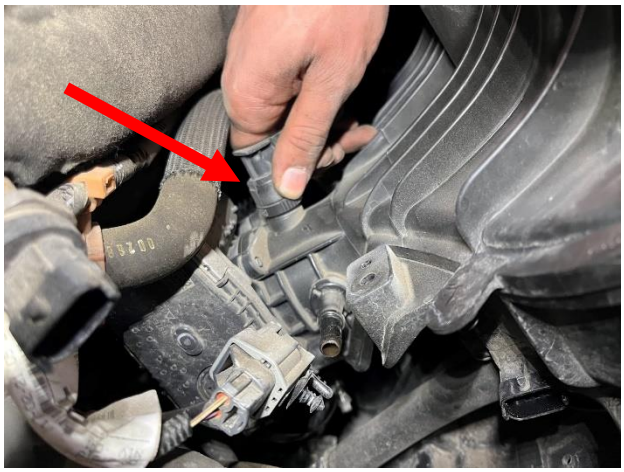

Figure 74

14. Use a trim removal tool to disconnect the electrical connector retainer on the driver side of the manifold facing the back.

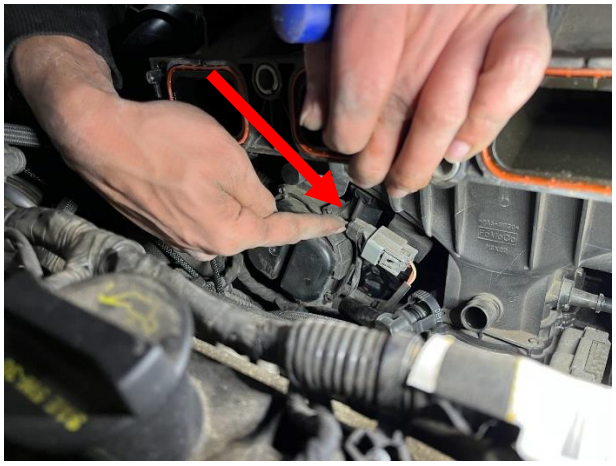

Figure 75

15. Disconnect the throttle body connector at the bottom of the throttle body.

Figure 76

16. Now pull the intake manifold off and place it to the driver side of the engine bay. to the side of the engine bay on the driver side. This allows access to the fuel rail. Ensure that no vacuum hoses kink or are damaged during this process.

Figure 77

17. Remove the fuel rail insulator.

Figure 78

18. Use a 17mm wrench to remove the compression nut on the fuel rail end of the high-pressure fuel line. This nut is located on the driver side end of the fuel rail.

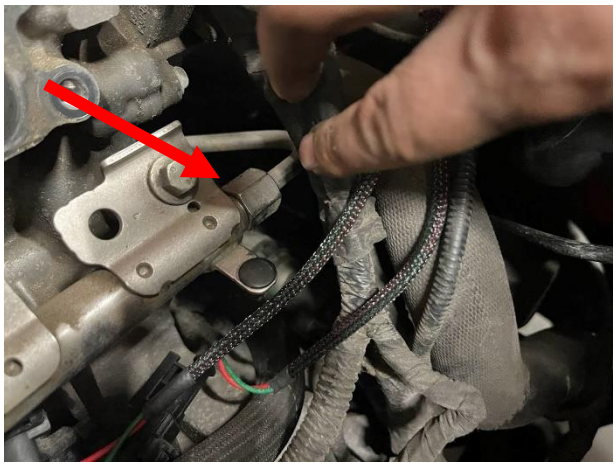

Figure 79

19. Use a 10mm socket to remove the 5 bolts holding the fuel rail in place. **Torque Spec: 8 Nm + 26°**

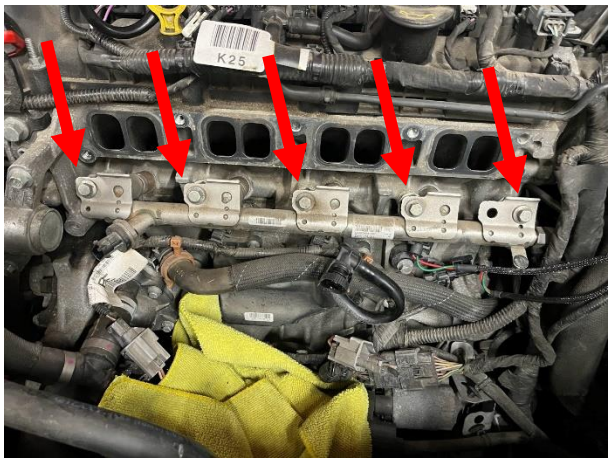

Figure 80

20. Pull the rail from its seated position in the cylinder head.

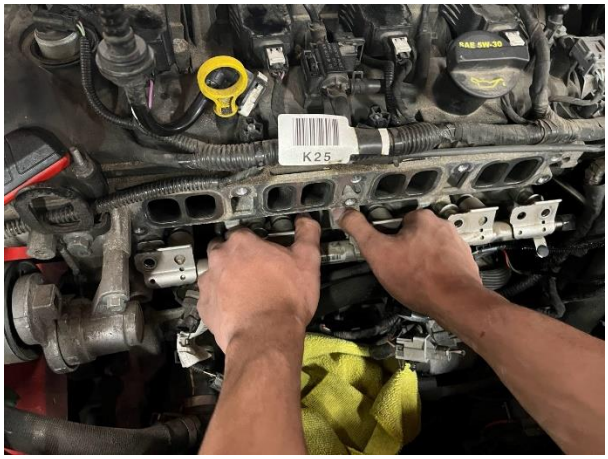

Figure 81

21. Disconnect the electrical connectors for each injector. Once completed pull each injector from its seated position in the cylinder head.

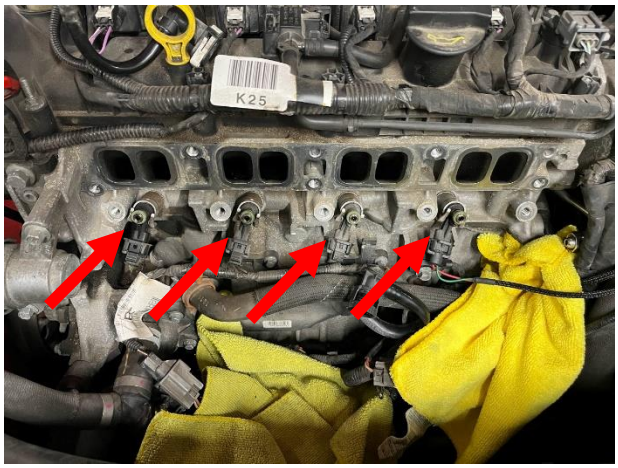

Figure 82

22. Lay the injectors and the fuel rail on an absorbent towel in a clean space. Have the new Nostrum injectors ready to be installed in the fuel rail.

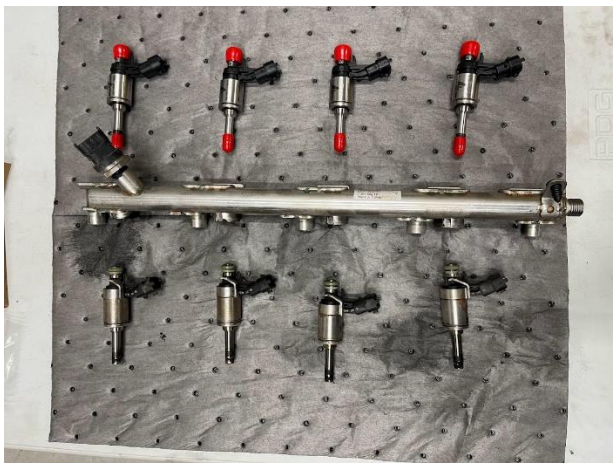

Figure 83

23. Remove the spring spacer from the end of the stock injectors for use on the Nostrum injectors.

Figure 84

24. Place the spacers onto the Nostrum injectors. The open end of the spacers should face the solenoid electrical connector on each injector.

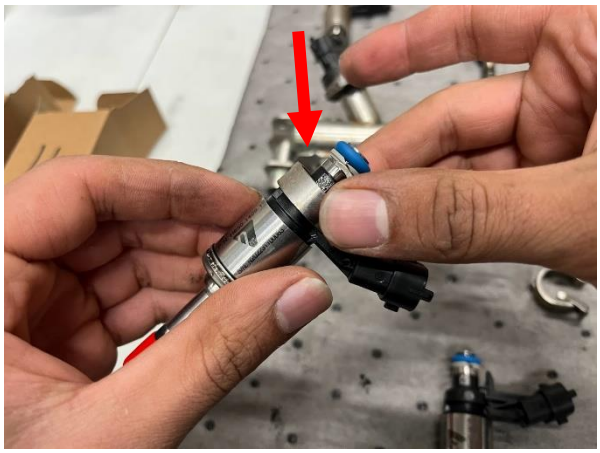

Figure 85

25. Lubricate the O-rings that will be inserted into the fuel rail with clean engine oil.

Figure 86

26. Press the Nostrum injectors into the fuel rail. Ensure that the alignment tab on the injector Is properly slotted into the recessed slot on the fuel injector rail cup. This ensures proper injector alignment when installed.

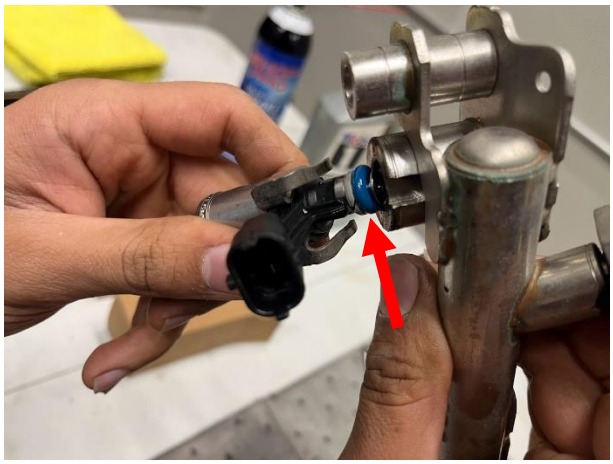

Figure 87

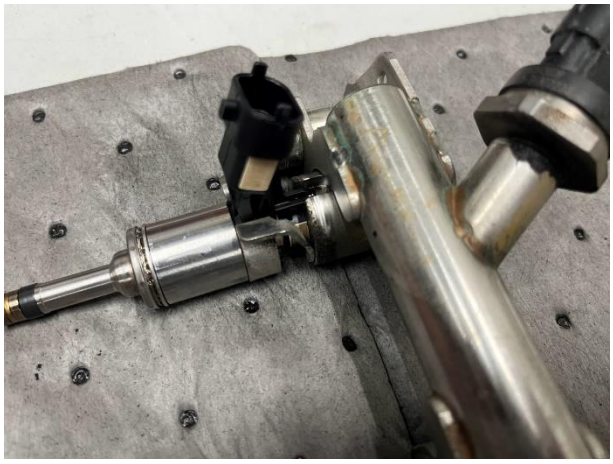

Figure 88

27. Lubricate the black Teflon seal of the Nostrum injectors with clean engine oil.

Figure 89

28. Use the injector compression tool to prepare the seals for reinstallation.

Figure 90

29. Press the tool over the stem of the injector until hard stop. Leave the tool on each injector for 30 seconds.

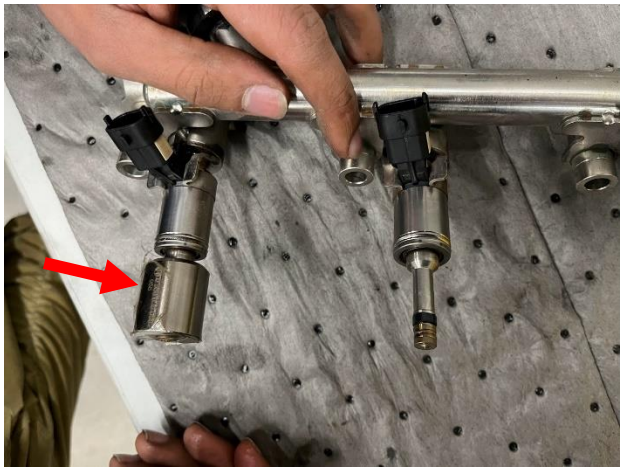

Figure 91

30. Once all the seals have been compressed reinstall the injectors and fuel rail into their seated positions on the cylinder head as quickly as possible. If the black Teflon seals are not properly compressed for install seal damage may occur.

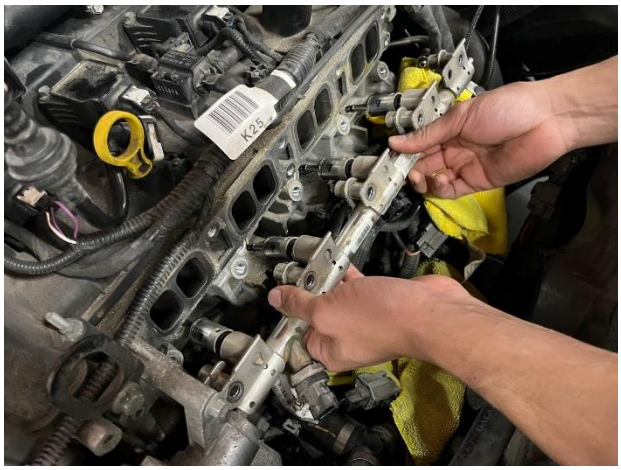

Figure 92

31. Once the fuel rail is reinstalled, reinstallation of all remaining components can begin. Follow the steps of disassembly listed above in reverse to re-install components starting with step 19. 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 with 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. Cycle the key to the ignition position 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 extended cracking 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
Rev 1	Production Release	2/16/23
Rev 2	Added Calibration Details	2/16/23