FUEL INJECTOR INSTALLATION GUIDE

Katech Gen V LT Stage I DI High-Flow Fuel Injectors

Gen 5 V8 LT 7.5mm Stem | PART NUMBER | KAT-7982

Katech Gen V LT Stage II DI High-Flow Fuel Injectors

Gen 5 V8 LT 7.5mm Stem | PART NUMBER | KAT-7983

WARNING! Please follow all warnings and instructions found in your vehicle service 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. Katech Tuning Guides are available upon request. If you are already in touch with a tuner, please have them reach out to support@katechengines.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 Katech Engineering Authorized Dealer Network.

CLEANLINESS IS PARAMOUNT!

Every serialized injector is production tested for leaks and dynamic flow for quality control. These pumps left the factory with no leaks and met all production specifications for control and flow! Contamination is the #1 cause of fuel system leaks and problems. Pump contamination can come from poor fuel quality, dirt or debris introduced during installation, or dirt and debris from handling before installation. It is imperative that the engine, workspace, tools, and handling practices are as clean as possible during the installation process. Use fuels and ethanol from trusted sources!

REQUIRED TOOLS

- Socket Wrench
- 8 mm Socket
- 10 mm Socket
- 13 mm Socket
- 17 mm Wrench
- 17 mm Crow's Foot Adapter
- Trim Removal Tool
- Injector Combustion Seal Sizing Tool: Bosch 0986-616-099-955 Or Equivalent
- 3/8th Fuel Line Quick Disconnect Tool
- Various Length Socket Wrench Extensions
- Flat-Blade Screwdriver
- Torque Wrench Capable of 10-100 Nm/5-75 Ft-Lb
- ECU Programming Interface or Other Calibration Delivery Method
- Safety Glasses
- Fire Extinguisher (Class B Minimum Recommended)

CONSUMABLES

- Clean Lint Free Absorbent Towels
- Disposable Rubber Gloves

ADDITIONAL RECOMMENDED OEM PARTS (NOT INCLUDED)

DESCRIPTION	QUANTITY	GM PART #
GM Genuine Parts Intermediate Fuel Feed Pipe (Pump to Junction)	1	12677004
GM Genuine Parts Fuel Rail Crossover Tube - High-pressure Line T-Junction	1	12677002
GM Genuine Parts LS Square Port Intake Manifold Gasket Kit - Set of 8	1	19256623

PRODUCT PARTS LIST

DESCRIPTION	QUANTITY	PART #
LT GEN V V8 7.5mm Stem Injectors (BANK 1)	4	H730-1790 (stg1) or H740-1784 (stg3)
LT GEN V V8 7.5mm Stem Injectors (BANK 2)	4	
LT GEN V V8 7.5mm Stem Injector Installation Kit (dirt seals, clips, seal spares)	8	A030-1440

****Be advised that each Katech Gen V V8 LT Stage I & Stage II Fuel Injector Set is batched by bank. This is laser marked on the injector and on the injector box label. Be sure to install them accordingly to maintain accurate fueling across all cylinders****

STEP 1 In the trunk of the vehicle pull up the passenger side back corner of the carpet to reveal the battery.

FIGURE 1

STEP 2 Use a 10 mm socket to remove the negative battery terminal. Cover the terminal with a rag or electrical tape to prevent power from accidentally being restored to the vehicle.

FIGURE 2

STEP 3 Remove the driver side engine appearance cover by pulling up on it, to release it from the mounting studs.

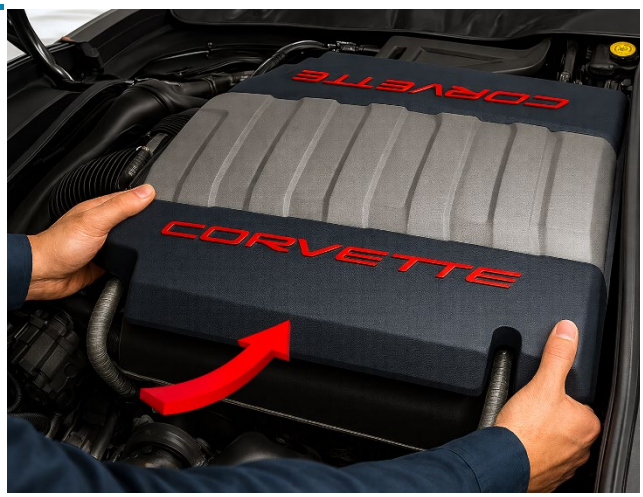


FIGURE 3

STEP 4 Remove the passenger side engine appearance cover by pulling up on it, to release it from its mounting studs.

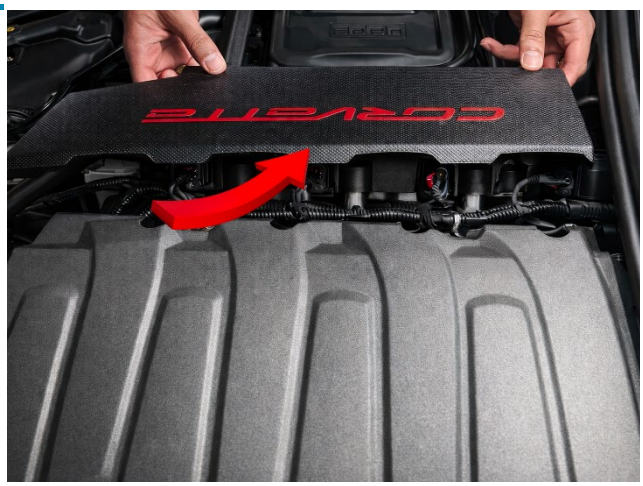


FIGURE 4

STEP 5 Using a 10 mm socket remove the 4 bolts holding the intake manifold cover in place.

TORQUE SPEC 10 Nm (7.3 ft-lb)

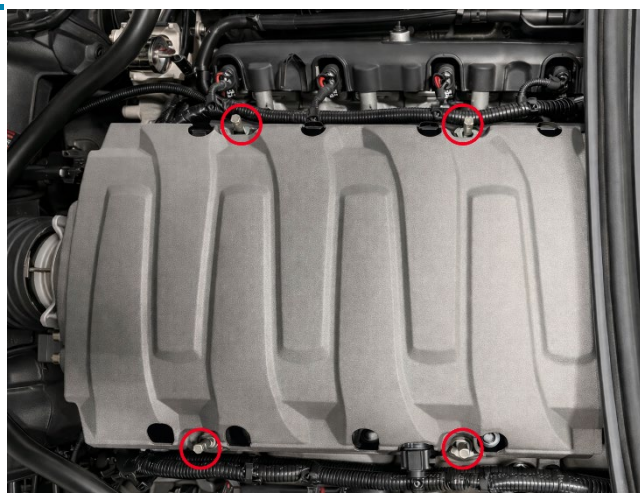


FIGURE 5

STEP 6 Disconnect the manifold absolute pressure sensor.

FIGURE 6

STEP 7 Use a trim removal tool to disconnect the coil pack harnesses from the engine cover on both sides of the intake manifold.

FIGURE 7

STEP 8 Remove the intake manifold cover.

FIGURE 8

STEP 9 Using a 10 mm socket, loosen the 10 bolts mounting the intake manifold to the cylinder head. These bolts will stay fixed into the manifold and cannot be removed.

When reinstalling the intake manifold, tighten the bolts in sequence from 1 to 10 as shown in *Figure 9*.

TORQUE SPECS
First pass, 5 Nm (44 in-lb.)
Final pass, 10 Nm (89 in-lb.)

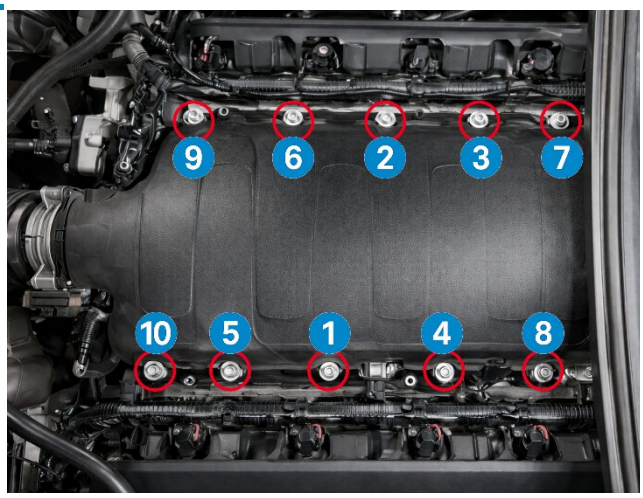


FIGURE 9

STEP 10 Use an 8 mm socket to loosen the hose clamp on the intake coupler connected to the throttle body.

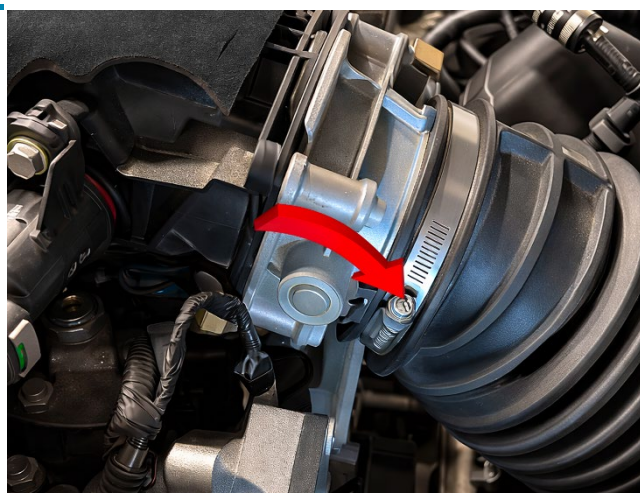


FIGURE 10

STEP 11 Pull the intake coupler off the throttle body.

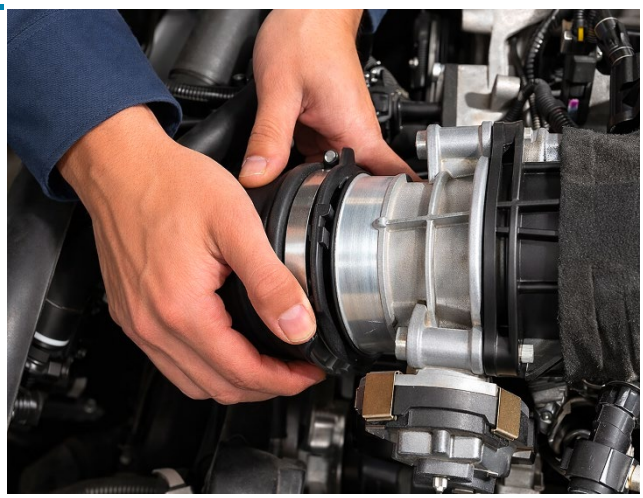


FIGURE 11

STEP 12 Disconnect the engine harness electrical connector from the EVAP canister purge solenoid valve.

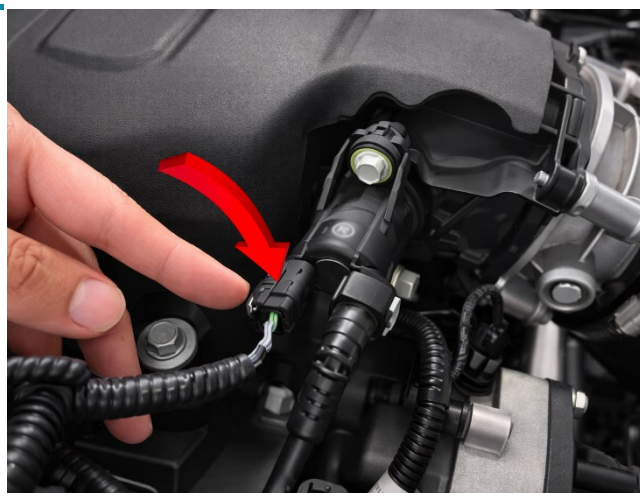


FIGURE 12

STEP 13 Disconnect the EVAP canister purge tube quick connect fitting from the EVAP canister purge solenoid valve.

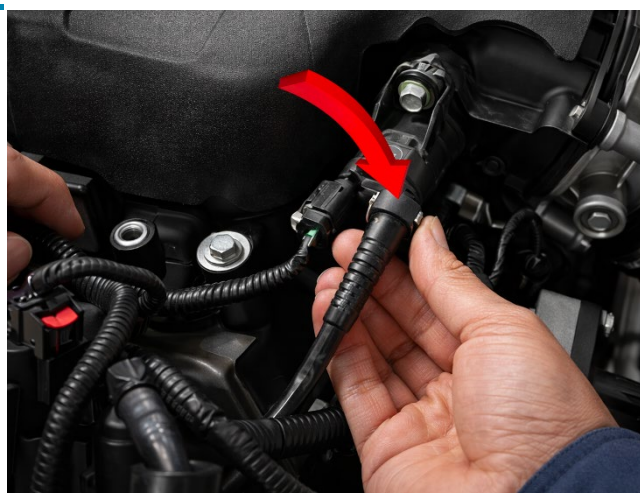


FIGURE 13

STEP 14 Remove the positive crankcase ventilation hose from the intake manifold.

FIGURE 14

STEP 15 Disconnect the engine harness electrical connector from the throttle actuator.

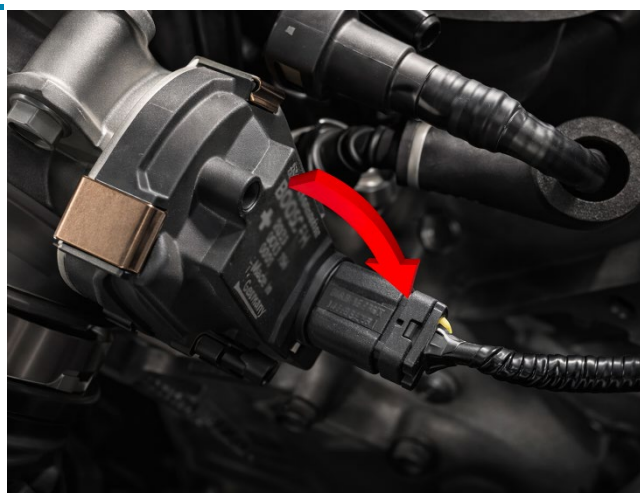


FIGURE 15

STEP 16 Lift up on the intake manifold, then slightly move it forward.

FIGURE 16

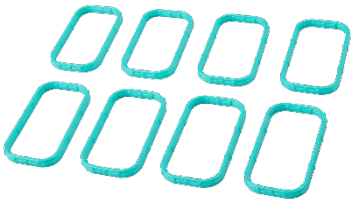
STEP 17 Push in the red tab to release the vacuum hose from the back of the manifold.

FIGURE 17

STEP 18 Remove the intake manifold from the engine bay.

NOTE General Motors classifies the GM Intake Manifold Gaskets as one time use and recommends replacement.

GM LS Square Port Intake Manifold Gasket Kit - Set of 8
GM Part# 19256623



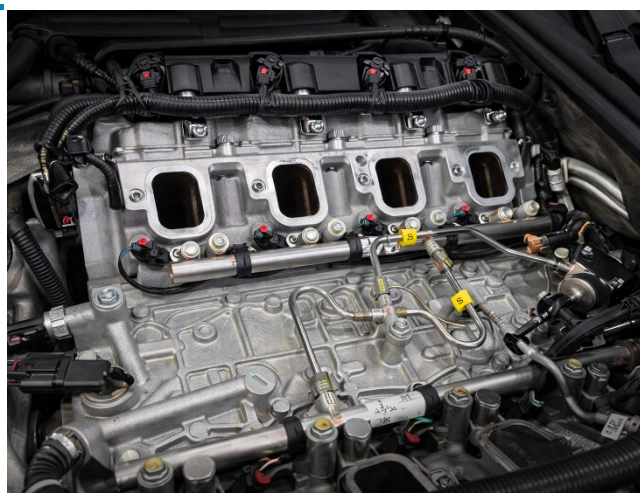


FIGURE 18

STEP 19 Disconnect the solenoid connector on the high-pressure fuel pump.

FIGURE 19

STEP 20 Disconnect the retaining lock over the low-pressure fuel line feeding into the fuel pump using a flat-blade screwdriver. The lock fingers should easily slide up and over the fuel line.

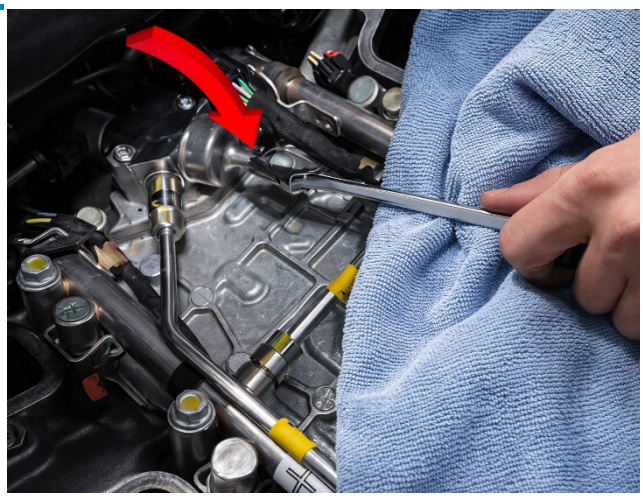


FIGURE 20

STEP 21 Use a 3/8th fuel line quick disconnect tool to disconnect the low-pressure fuel line. Place rags or absorbent shop towels beneath the line to capture any spilled fuel before removal.

SAFETY GLASSES RECOMMENDED DURING THIS STEP

FIGURE 21

STEP 22 Using a 17 mm wrench, disconnect the compression nuts that connect to the high-pressure pump and at the T-junction, then remove the high-pressure line. Place rags or absorbent shop towels beneath the compression nuts to capture any spilled fuel before removal.

NOTE General Motors classifies this GM Intermediate Fuel Feed Pipe as one time use and recommends replacement.
GM Intermediate Fuel Feed Pipe GM Part #12677004

SAFETY GLASSES RECOMMENDED DURING THIS STEP

TORQUE SPEC 30 Nm (22.1 ft-lb)

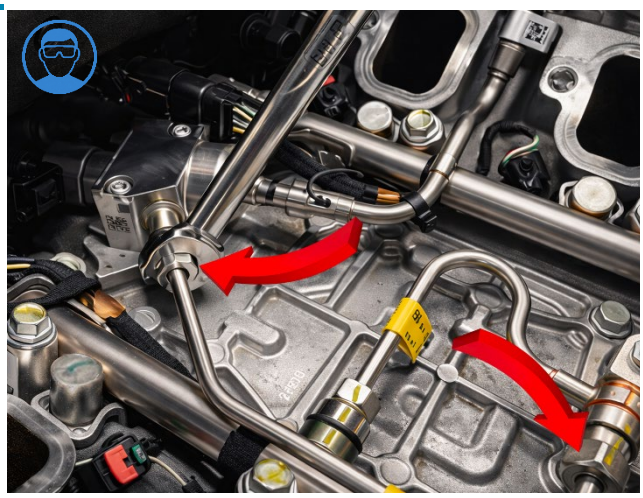


FIGURE 22

STEP 23 Use a 17 mm wrench to disconnect the compression nuts on both ends of the fuel line connecting the fuel rails. Place rags or absorbent shop towels beneath the compression nuts to capture any spilled fuel before removal.

SAFETY GLASSES RECOMMENDED DURING THIS STEP

TORQUE SPEC 30 Nm (22.1 ft-lb)

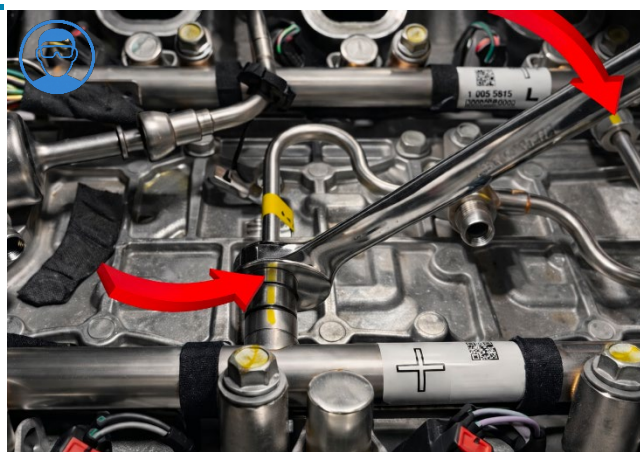


FIGURE 23

STEP 24 Use a 10 mm socket to remove the bolt securing the fuel line from Step 23. Remove the fuel line from the engine bay.

NOTE General Motors classifies the GM Fuel Rail Crossover Tube as one time use and recommends replacement.
GM Fuel Rail Crossover Tube GM Part # 12677002

TORQUE SPEC 10 Nm (7.3 ft-lb)

FIGURE 24

STEP 25 Disconnect the driver's side fuel injector harness connector.

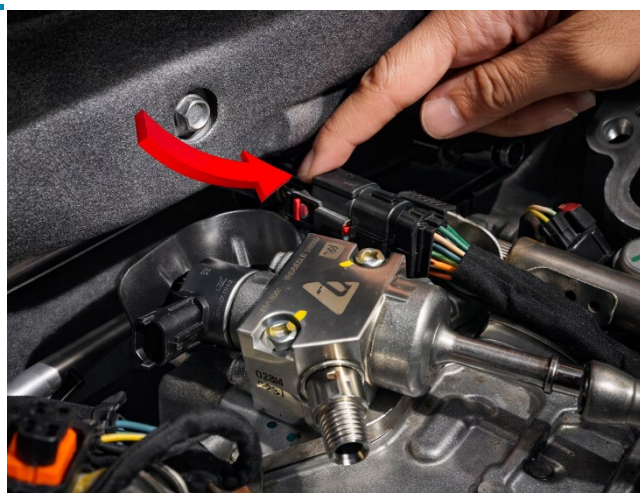


FIGURE 25

STEP 26 Disconnect the passenger's side fuel injector harness connector.

FIGURE 26

STEP 27 Using a 13 mm socket remove the 8 bolts securing the fuel rails to the cylinder heads.

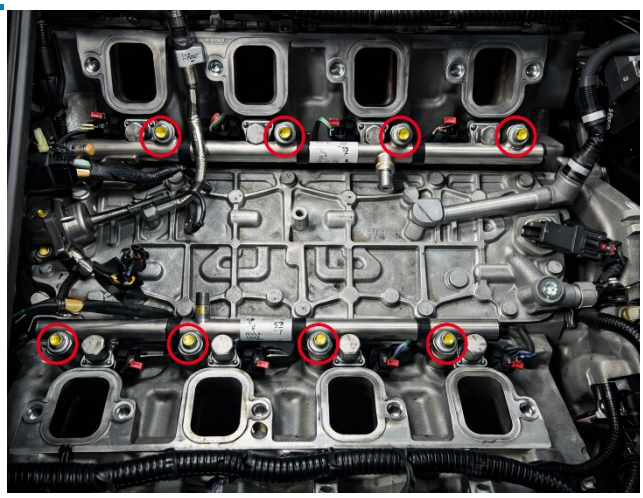


FIGURE 27

STEP 28 Pull the fuel rails out of the engine by hand.

FIGURE 28

STEP 29 Place the fuel rails on absorbent towels in a clean space.

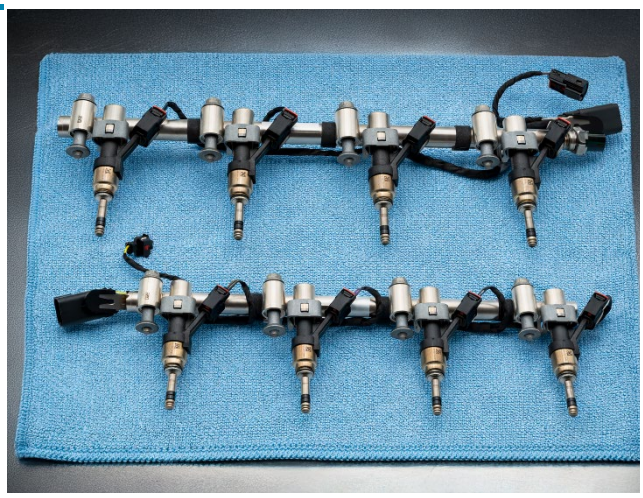


FIGURE 29

STEP 30 Disconnect the electrical connectors from the fuel injectors.

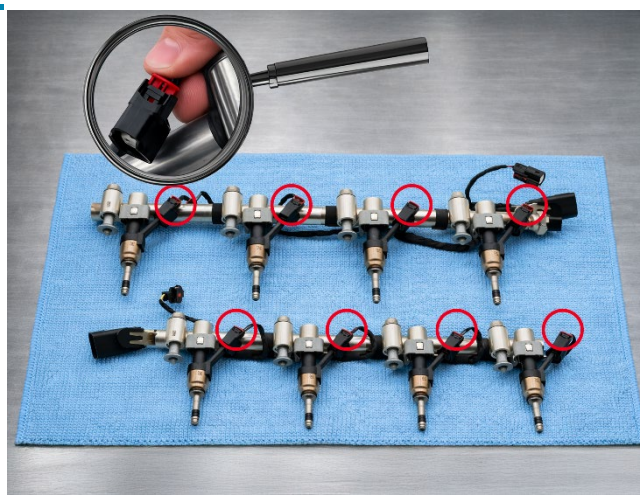


FIGURE 30

STEP 31 Pull on the prongs of the retainment clip on the injectors. Use a flathead screwdriver to pry the retainment clip off the injectors.

FIGURE 31

STEP 32 Pull the injector out of its seated position in the fuel rail.

FIGURE 32

STEP 33 Remove the spacers from the OEM injectors by hand. (Spacers are to be used in next step,)

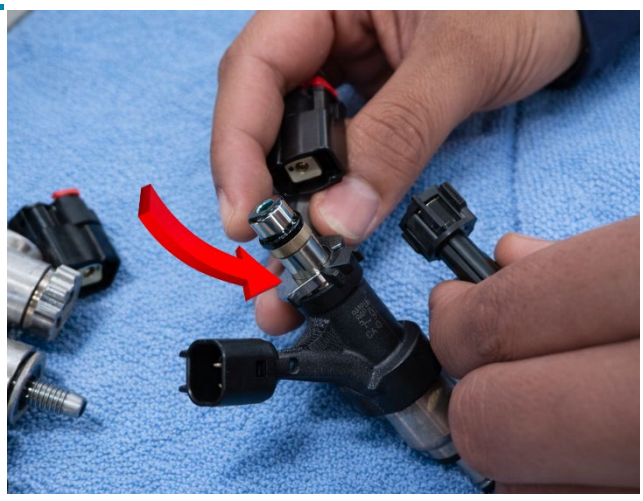


FIGURE 33

STEP 34 Install the spacers removed in **STEP 33** onto the new fuel injectors.

FIGURE 34

STEP 35 **WARNING! The injectors are flow batched in sets of four, labeled Bank 1 and Bank 2 as shown in FIGURE 35. It is crucial that each bank batch stays together on the same fuel rail. If not, the fuel trims will be inaccurate across both banks. Batching the injectors together is done to ensure highly precise fuel trims.**

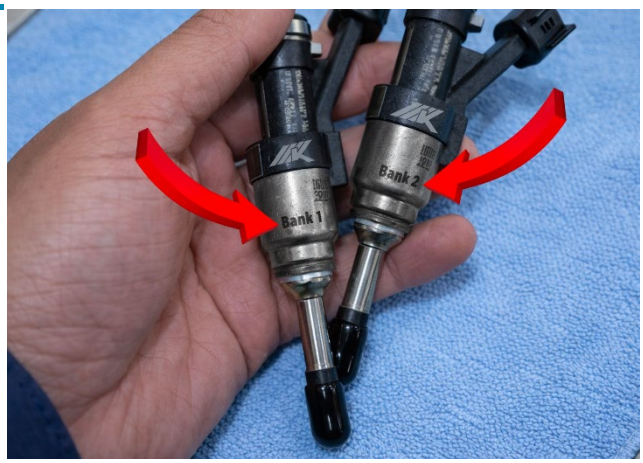


FIGURE 35

STEP 36 Install the new injectors into the seated positions on the fuel rails.

FIGURE 36

STEP 37 Press the retainer clips onto the new injectors in the same location as the OEM injectors. When installing the new injectors, use firm pressure to make sure the retaining clips are properly in place.

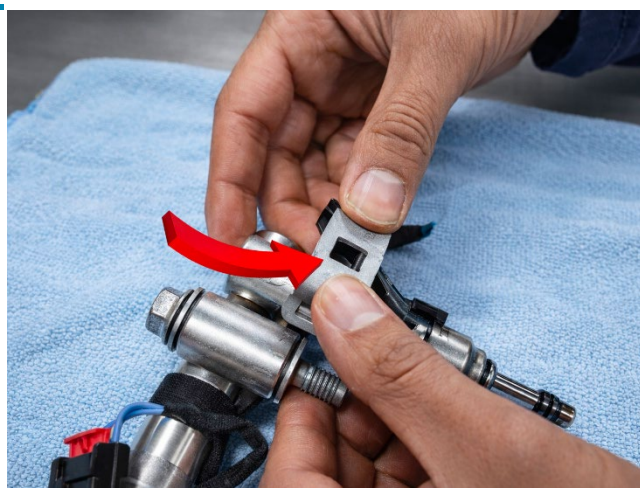


FIGURE 37

STEP 38 Install the white umbrella seals (dirt seals). These are the white cone shaped seals included in the box with your new injectors. Press them on the front of the injectors over the stems. Press them until they are contacting the core of the injector.

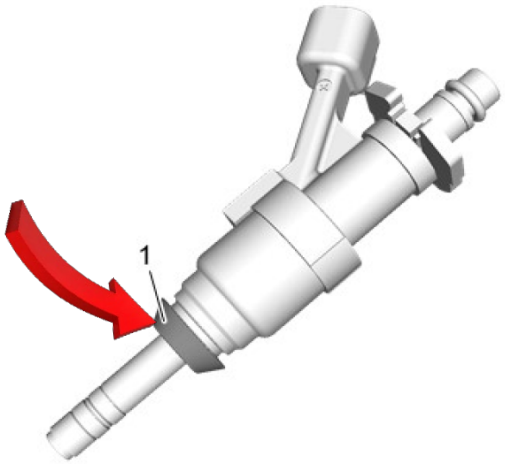


FIGURE 38

STEP 39 Install the electrical connector to the solenoid connectors on the new injectors.

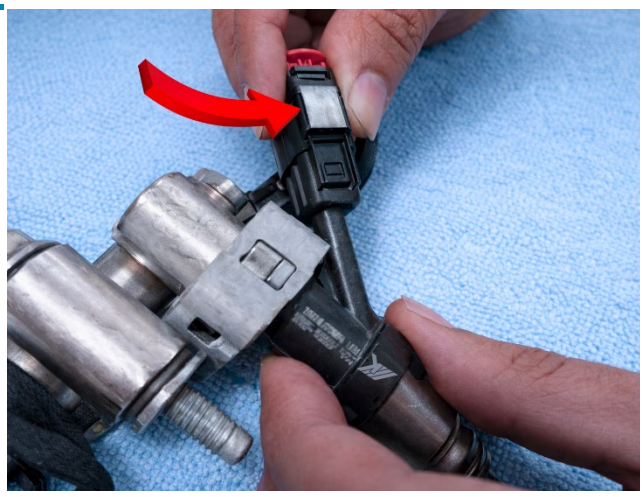


FIGURE 39

STEP 40 **Sizing of the combustion seal** - you **MUST** size the injector combustion seals immediately before installing the injectors in the cylinder head. This step must be performed on all new injectors as well as after changing the seals on used injectors. Seals should be changed whenever injectors are removed from the engine. **Use the Injector Seal Installer and Sizer tool set: Bosch 0986-616-099-955** or equivalent. Place the injector compression tool over the end of each injector. Press the tool on until the tool stops on the stem. *****FAILURE TO PROPERLY COMPRESS CAN RESULT IN SEAL DAMAGE THAT MAY LEAD TO A HIGH RPM MISFIRE*****

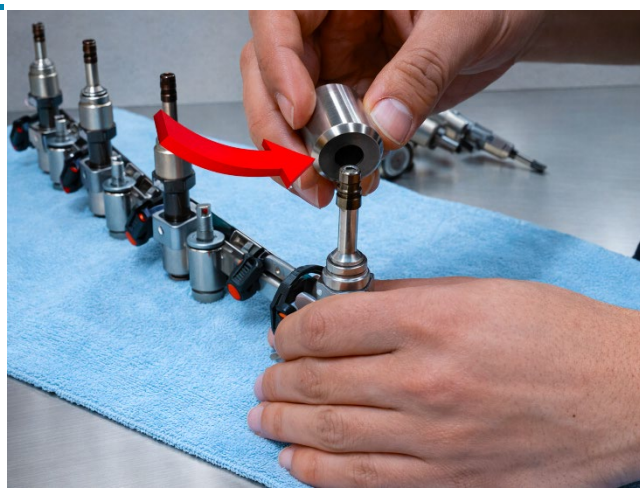


FIGURE 40

STEP 41 Keep the compression tool on the stem of each injector for 30 seconds before moving on to the next one. The fuel injectors must be installed into the cylinder head immediately after performing this step. Do not perform this step until you are ready to continue with the installation of the fuel rail into the engine.

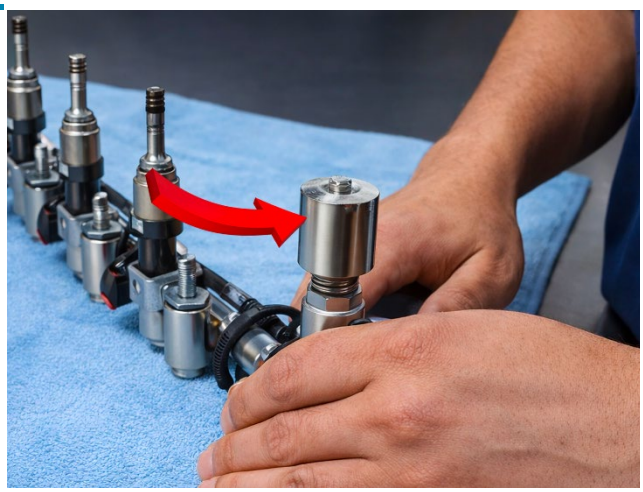


FIGURE 41

STEP 42 Reinstall the fuel rails with injectors into their seated positions on the cylinder heads. Be careful to ensure the tips of the injectors go into the corresponding hole in the cylinder head. Press the high-pressure rail assembly down until pressure can be felt. Then using a 13 mm socket, tighten the fuel rails to the cylinder head.

TORQUE SPEC 25 Nm (18 ft-lb)

FIGURE 42

Once the **Katech Gen V LT DI High-Flow Fuel Injectors** are installed, reinstallation of all remaining components can begin. Follow the steps of disassembly listed above in reverse to re-install components starting with **STEP 26**. Follow all torque specs that are included in each step where applicable (when applicable the torque specifications for re-assembly are in parentheses in Nm at the end of the particular disassembly step). 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 contact your calibration specialist to make the necessary changes prior to starting the vehicle. Once calibration is complete, please proceed to the next step.

FIRST START-UP

STEP 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 service manual.

STEP 2 Key cycle the vehicle into the "Accessory On" position (**DO NOT go to the Start position**). The low-pressure fuel pump will activate, and the fuel system will pressurize. Check the high-pressure fuel circuit (pump-lines-injectors) and the low-pressure system for leaks. If no leaks are found, proceed to Step 3.

STEP 3 Cycle the key to the Start position and let the vehicle 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, continue with the following steps. 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 no leaks are found, proceed to step 4.

STEP 4 Key cycle one more time to Start. Engine should start-up and idle. If so, continue with the following steps. If not, repeat Steps 2-4 again.

STEP 5 Let the car idle for a few minutes. Check for leaks in the low and high-pressure systems again.

STEP 6 Installation is complete! Please see the **IMPORTANT** notes on the next page.

NOTE | A fault code may appear at the first key cycle due to the extended cranking 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.

IMPORTANT NOTE Please check for fuel leaks after driving the vehicle 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.

TECHNICAL & SOFTWARE SUPPORT

Katech

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Katech ENGINEERING

Thank you for choosing our ***Katech Fuel Injectors***. We sincerely appreciate your trust in our products and our team. Every component we offer reflects the dedication, craftsmanship, and engineering culture that has shaped Katech since 1977.

Katech's heritage is rooted in decades of competition, championship-winning programs, and hard-fought success at some of the world's most demanding endurance events, including Le Mans, Daytona, and Sebring. The demands of top-level racing continue to shape the standards and technical guidance we deliver every day.

We are honored to be part of your project and look forward to supporting you throughout your build. Thank you again for choosing Katech. We're proud to support your pursuit of performance.

- *Katech Engineering*

Revision	Notes	Date
1.0	Updated for banks, notes on seals, part numbers,.	2/12/2026
1.1	Updated for image updates.	3/9/2026