



**IMPORTANT SERVICE
INFORMATION FOR:**

- ✓ SERVICE MANAGER
- ✓ SERVICE ADVISOR
- ✓ TECHNICIAN
- ✓ PARTS DEPARTMENT
- ✓ WARRANTY PERSONNEL

BULLETIN NUMBER:
IB12-J-003E

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GROUP:
ENGINE

LONG BLOCK REPLACEMENT – FUEL INJECTOR PIPE INSTALLATION

AFFECTED VEHICLES

- 2018MY - Current Isuzu FTR
- 2005MY - Current Isuzu N-Series
- 2005-2010MY GMC and Chevrolet W-Series
Equipped with 4HK1 5.2L Diesel Engine

- 1999-2009MY Isuzu F/H Series
- 1999-2009MY GMC and Chevrolet C/T Series
Equipped with 6HK1 7.8L Diesel Engine

- 2011MY - Current NPR/NPR Stripped Chassis (Reach)
Equipped with 4JJ1 3.0L Diesel Engine

This bulletin supersedes IB12-J-003D. This bulletin is being revised to update models, procedure, and parts information. Please discard bulletin IB12-J-003D.

INFORMATION

Proper Installation of the Fuel Injector Pipes into a Long Block Assembly

The fuel injection pipes should be installed onto the new long block assembly after first installing the common rail.

When installing the fuel injection pipes, follow the procedure below to ensure proper mating of the fuel injector high-pressure inlet, and the fuel injection pipes. Refer to the appropriate year and model service manual for further information regarding the replacement procedure.

4JJ1 Engine

NOTE: Fuel injector pipes, fuel injection gaskets, and fuel injection O-rings must not be reused. New pipes, gaskets, and O-rings must be installed anytime the fuel injector pipes are removed. Failing to replace pipes and/or follow the procedure below may cause severe engine damage. Refer to the appropriate service manual for additional information.

- Program the new fuel injector flow rates into the ECM for the correct cylinders using IDSS.

- Remove the cylinder head cover, taking care to avoid damaging the gasket.
- Loosen the fuel injector clamp fixing bolts and remove injector.
- Install O-ring and gasket onto the injector.
- Apply oil to threads and seating surface of injector clamp bolt.
- Temporarily install the injector clamp and injector.
- Ensure there is clearance between the fuel injector and the fuel injector clamp by gently rotating the fuel injector side to side.
- Apply engine oil to the outer diameter of the threads of the fuel injectors and the common rail pipe fittings. Loosely thread the fuel injection pipe sleeve nuts to the correct fuel injector at the correct location on the common rail.
- **HAND TIGHTEN** the fuel injector and common rail sleeve nuts until contact is felt between the pipe and the fuel injector, and pipe and common rail fitting.

NOTE: Pay close attention to ensure the fuel injection pipe is positioned correctly into the fuel injector high pressure inlet.

- Torque the fuel injection components in the following order. Refer to the appropriate service manual for detailed torque specifications.
 - Fuel injector clamp bolts.
 - Fuel injector pipe sleeve nuts to the fuel injectors.
 - Fuel injector pipe to the common rail.

4HK1 Engine

NOTE: Fuel injector pipes, fuel injection gaskets, and fuel injection O-rings must not be reused. New pipes must be installed anytime the fuel injector pipes are removed. Failing to replace pipes and/or follow the procedure below may cause severe engine damage. Refer to the appropriate service manual for additional information.

- Program the new fuel injector flow rates into the ECM for the correct cylinders using IDSS.
- Remove the cylinder head cover, taking care to avoid damaging the gasket.
- Loosen and remove the fuel injector terminal nuts.
- Loosen and remove the fuel injector harness bracket bolts. Unclip the harness at the inside of the pass-through connector. Remove the bracket and wire harness.
- Remove the fuel injector leak off pipe. Discard the gaskets.
- Loosen injector clamp fixing bolts and clamps. On 2011 MY and newer remove the injector clamp bolts and clamps.
- *(2011 MY and newer)* Remove the fuel injectors.
- *(2011 MY and newer)* Replace fuel injector nozzle gasket and O-ring.
- *(2011 MY and newer)* Reinstall fuel injectors.

- Install the fuel injector clamp to the cylinder head.
- Start installation of the clamp bolts. On *2011 MY and newer* apply molybdenum disulfide spray to the threads and seating surfaces of the clamp bolts. On *2010 MY and older* apply oil onto the threads and the seating surface.
- Ensure there is clearance between the fuel injector and the fuel injector clamp by gently rotating the fuel injector side to side.
- Apply engine oil to the outer diameter of the threads of the fuel injectors and the common rail pipe fittings. Loosely thread the fuel injection pipe sleeve nuts to the correct fuel injector at the correct location on the common rail.
- Loosely install the fuel injection pipe clips.
- **HAND TIGHTEN** the fuel injector and common rail sleeve nuts until contact is felt between the pipe and the fuel injector, and pipe and common rail fitting.
- Install the fuel injector leak off pipe with new gaskets and tighten the banjo bolts.

NOTE: Pay close attention to ensure the fuel injection pipe is positioned correctly into the fuel injector high pressure inlet.

- Torque the fuel injection components in the following order. Refer to the appropriate service manual for detailed torque specifications.
 - Fuel injector clamp bolts.
 - Fuel injector pipe sleeve nuts to the fuel injectors.
 - Fuel injector pipe to the common rail.
 - Tighten the fuel injector leak off pipe banjo bolts.
 - Clip the fuel injector harness onto the pass-through connector and install the harness bracket.
 - Install the fuel injector terminal nuts.
 - Torque the fuel injection pipe clips.

NOTE: Install the cylinder head cover from the original engine to ensure the correct engine emission label and information will be retained with the vehicle.

6HK1 Engine

NOTE: Fuel injector pipes, fuel injection gaskets, and fuel injection O-rings must not be reused. New pipes must be installed anytime the fuel injector pipes are removed. Failing to replace pipes and/or follow the procedure below may cause severe engine damage. Refer to the appropriate service manual for additional information.

- Program the new fuel injector flow rates into the ECM for the correct cylinders using IDSS.
- Remove the cylinder head cover, taking care to avoid damaging the gasket.
- Loosen and remove the fuel injector terminal nuts.

- Loosen and remove the fuel injector harness bracket bolts. Unclip the harness at the inside of the pass-through connector. Remove the bracket and wire harness.
- Remove the fuel injector leak off pipe. Discard the gaskets.
- Loosen but do not remove the fuel injector clamp fixing bolts.
- Ensure there is clearance between the fuel injector and the fuel injector clamp by gently rotating the fuel injector side to side.
- Apply engine oil to the outer diameter of the threads of the fuel injectors and the common rail pipe fittings. Loosely thread the fuel injection pipe sleeve nuts to the correct fuel injector at the correct location on the common rail.
- Loosely install the fuel injection pipe clips.
- **HAND TIGHTEN** the fuel injector and common rail sleeve nuts until contact is felt between the pipe and the fuel injector, and pipe and common rail fitting.
- Install the fuel injector leak off pipe with new gaskets and tighten the banjo bolts.

NOTE: Pay close attention to ensure the fuel injection pipe is positioned correctly into the fuel injector high pressure inlet.

- Torque the fuel injection components in the following order. Refer to the appropriate service manual for detailed torque specifications.
 - Fuel injector clamp bolts.
 - Fuel injector pipe sleeve nuts to the fuel injectors.
 - Fuel injector pipe to the common rail.
 - Tighten the fuel injector leak off pipe banjo bolts.
 - Clip the fuel injector harness onto the pass-through connector and install the harness bracket.
 - Install the fuel injector terminal nuts.
 - Torque the fuel injection pipe clips.

NOTE: Install the cylinder head cover from the original engine to ensure the correct engine emission label and information will be retained with the vehicle.