



DETROITTM
DEMAND PERFORMANCESM

18SP660Rev2 – EPA04 and EPA07 MBE 4000 Steel Low Pressure Fuel Line Kits (P/N: A4600702932 and A4600703032)

KIT DESCRIPTION

New service kits (P/N: A4600702932 and A4600703032) contain a steel low pressure fuel line and associated parts to replace the former plastic fuel line. In addition to installing the parts, EPA04 engines relative to recall [11C2](#) equipped with a Hengst fuel filter housing with engine serial numbers from 0460878301 to 0460884090 and EPA07 engines relative to recall [09C2](#) with a Hengst fuel filter housing with engine serial numbers from 0460847011 to 0460888753 must have the fuel filter housing wall thickness inspected.

KIT CONTENTS

The two new service kits contain the parts listed in Table 1:

Part No.	Description	EPA04 Kit P/N: A4600702932 (qty.)	EPA07 Kit P/N: A4600703032 (qty.)
A4600702832	Steel Low Pressure Fuel Line	1	1
N915036012101	Banjo Bolt – M16 x 28	2	1
N915047012100	Banjo Bolt – M16 x 46	-	1
N000000001070	Seal Ring	4	5
18SP660Rev2	Installation Instructions	1	1

Table 1 EPA04 and EPA07 MBE 4000 Steel Low Pressure Fuel Line Kits

NOTE:

If engine is currently equipped with the steel low pressure fuel line part number A4600702832, **no further action is required.**



PERSONAL INJURY

To avoid injury, never remove any engine component while the engine is running.



PERSONAL INJURY

To avoid injury from accidental engine startup while servicing the engine, disconnect/disable the starting system.



PERSONAL INJURY

To avoid injury from hot surfaces, wear protective gloves, or allow engine to cool before removing any component.

REPLACEMENT PROCEDURE

Install the new steel low pressure fuel line as follows.

NOTE:

Certain parts must be retained during the removal process for reuse during the installation process. These parts will be noted in **bolded** font in the removal steps below.

REMOVAL

1. Apply the parking brake, chock the wheel, disconnect vehicle battery power, and perform any other applicable safety steps.
2. Open the fuel tank fill cap to release pressure in the fuel system. Replace and tighten the cap.
3. Loosen the alternator belt.
4. Remove four M10 x 100 bolts that secure the alternator to its mounting bracket. **Save bolts for reuse.**

5. Gently remove the alternator and set on frame rail. Be careful not to damage the alternator or the cables attached to it. See Figure 1.

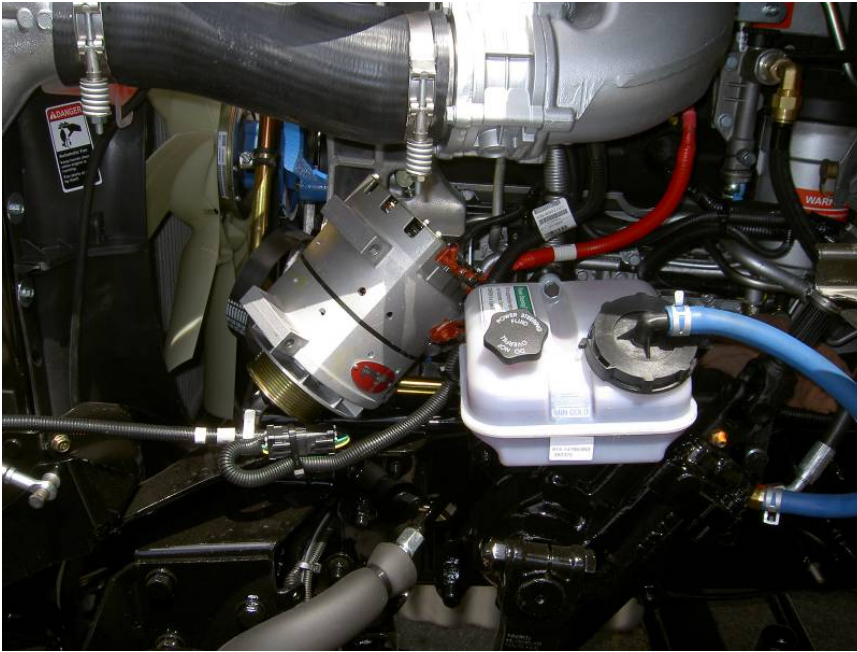


Figure 1 Alternator Removal

6. Remove two M8 x 40 bolts from the low pressure fuel line clamps. **Save bolts and clamps for reuse.** See Figure 2.

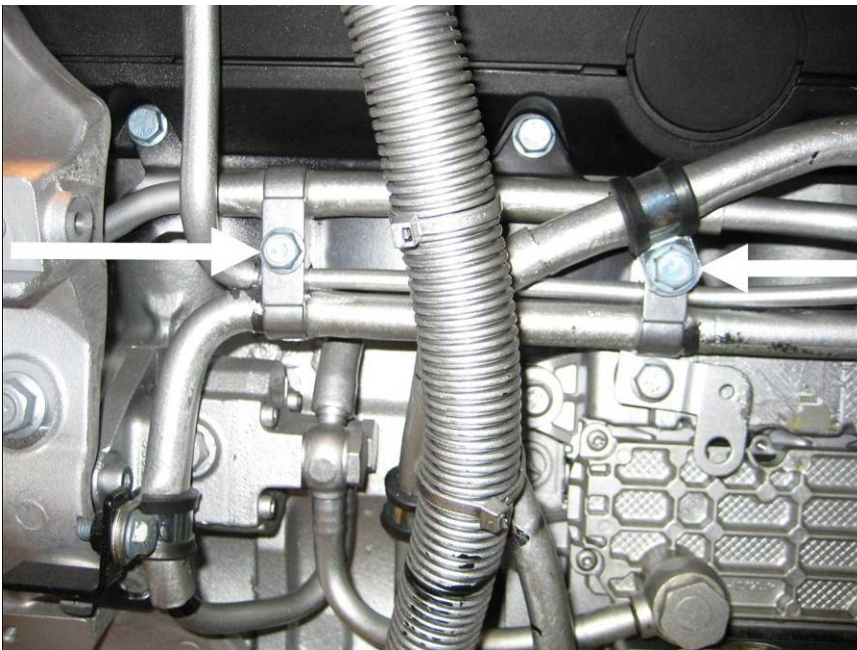


Figure 2 Fuel Line Clamp Removal

7. Remove M16 x 28 banjo bolt on plastic low pressure fuel line at front of block through access hole in alternator mounting bracket. Do **NOT** remove the spacer the bolt threads in to. Discard banjo bolt and two seal rings. See Figure 3. Torque spacer to 50 N·m (37 lb·ft) to insure it did not loosen during banjo bolt removal.

NOTE:

In a suitable container, catch any fuel that runs out of the low pressure fuel line or cylinder block.

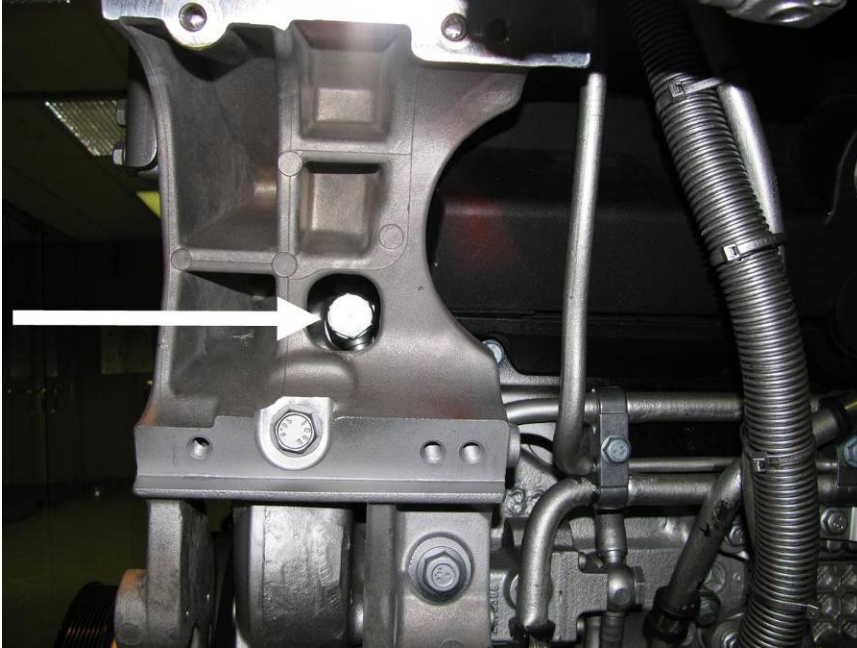


Figure 3 **Cylinder Block Banjo Bolt Removal**

8. Remove banjo bolt at other end of low pressure fuel line at fuel filter housing. Discard the banjo bolt and seal rings. See Figure 4 (EPA07 configuration).

NOTE:

In a suitable container, catch any fuel that runs out of the low pressure fuel line or fuel filter housing.

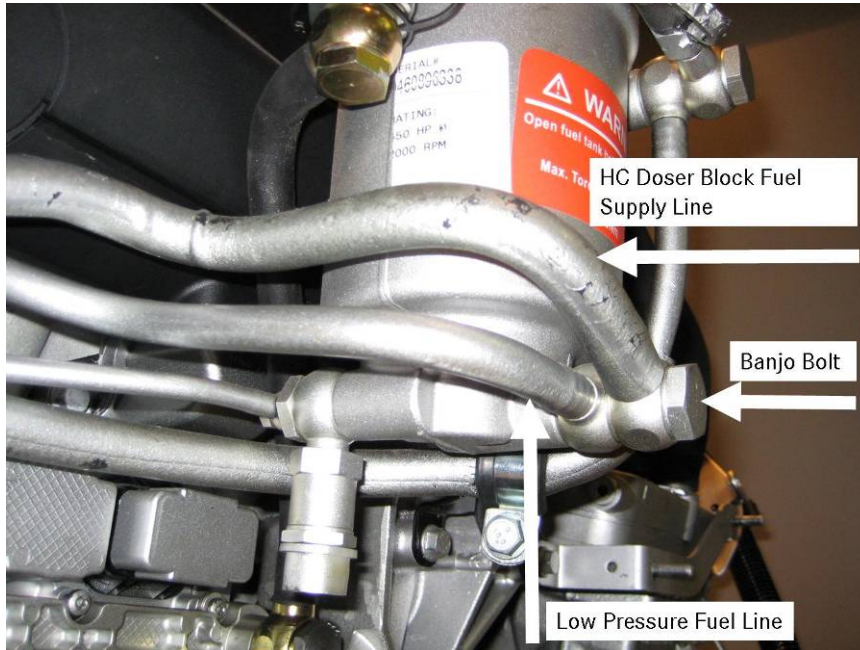


Figure 4 Fuel Filter Housing Banjo Bolt Removal (EPA07 Configuration)

9. Remove plastic low pressure fuel line from engine. Discard fuel line. Be careful not to damage the hydrocarbon doser block fuel supply line (EPA07 configuration).

10. Engines equipped with a Hengst fuel filter housing with an EPA04 engine relative to recall [11C2](#), serial numbers between 0460878301 and 0460884090 or EPA07 engines relative to recall [09C2](#), serial numbers between 0460847011 and 0460888753 must have the fuel filter housing wall thickness inspected. Insert tool J-50161 into the hole in the fuel filter housing where the low pressure fuel line was removed, until it bottoms out.

NOTE:

On the Hengst housing, the low pressure fuel line bore is marked with a letter "A" for reference. See Figure 5.

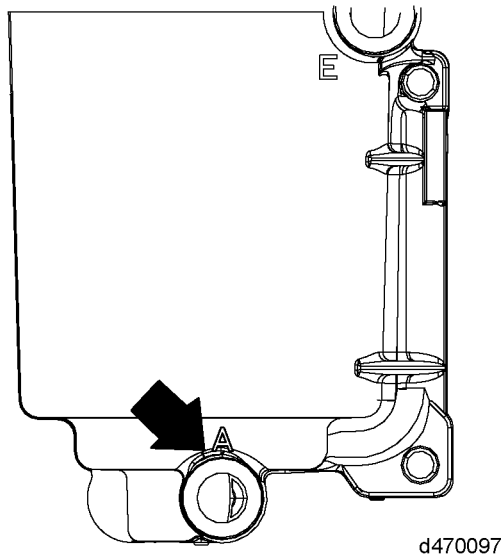
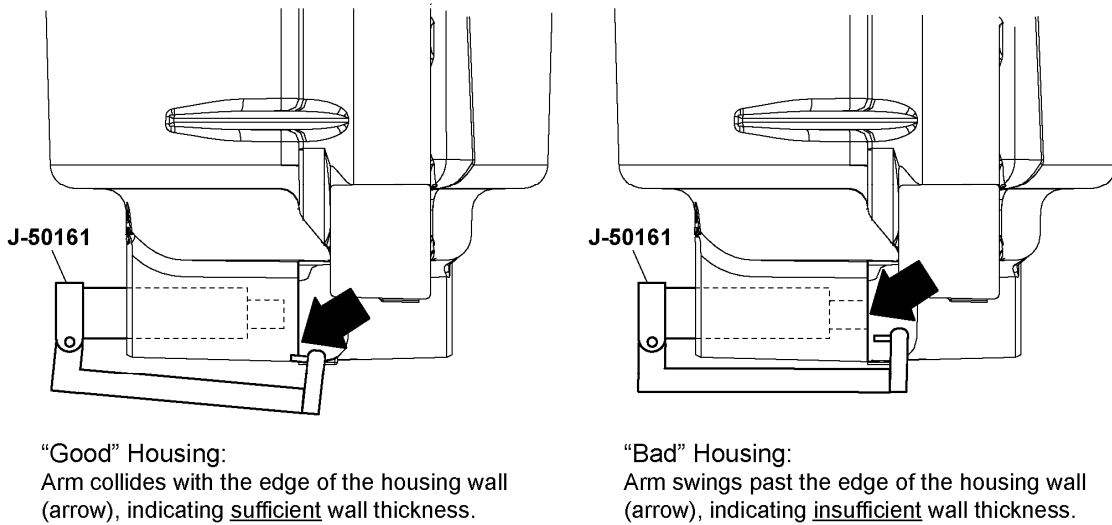


Figure 5 Low Pressure Fuel Line Hole

11. Swing the tool arm up from the bottom to avoid interference with fuel lines. See Figure 6.
- If the arm **DOES NOT** go past the end of the fuel filter housing, the housing has sufficient wall thickness.
 - If the arm **DOES** go past the end of the fuel filter housing and ends up parallel with the stationary body of the gauge, the housing does not have sufficient wall thickness and **MUST** be replaced.

NOTE:

Refer to [10 TS-5](#) for warranty information and DDC-SVC-MAN-0026 for repair information.



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Figure 6 Fuel Filter Housing Thickness Measurement

INSTALLATION

1. Place new steel low pressure fuel line (P/N: A4600702832) into position.
2. Install and hand tighten new M16 x 28 banjo bolt (P/N: N915036012101) with two new seal rings (P/N: N000000001070) on new steel low pressure fuel line into spacer at front of cylinder block through alternator mounting bracket access hole.
3. Install and hand tighten new M16 banjo bolt at fuel filter housing:
 - a. For EPA04 configuration, use M16 x 28 banjo bolt (P/N: N915036012101) with two new seal rings (P/N: N000000001070).
 - b. For EPA07 configuration, use M16 x 46 banjo bolt (P/N: N915047012100) with three new seal rings (P/N: N000000001070), along with the hydrocarbon doser block fuel supply line. The new steel low pressure fuel line will be closest to the fuel filter housing. Do **NOT** bend either the steel low pressure fuel line or the hydrocarbon doser block fuel supply line. See Figure 7 for the correct installation of the lines.

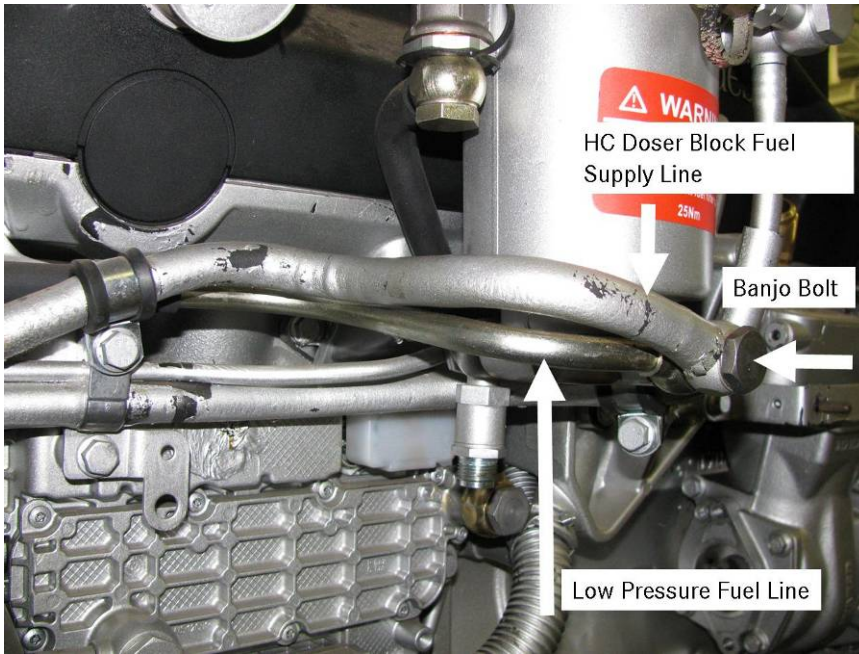


Figure 7 Steel Fuel Line Installation (EPA07 Configuration)

4. Torque the banjo bolts to 40 N·m (30 lb·ft), starting with the banjo bolt at the front of the cylinder block.
5. Install fuel line clamps in their original positions. Clamps must go over foam covered areas of the fuel lines. See Figure 8.

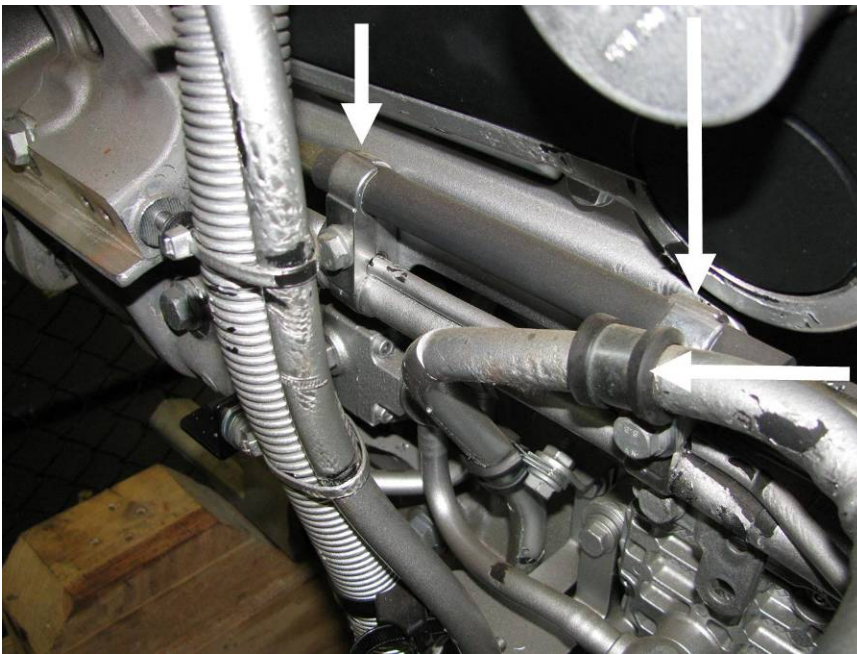


Figure 8 Steel Fuel Line Clamp Installation (EPA07 Configuration)

6. Torque clamp bolts to 25 N·m (18 lb·ft).
7. Install alternator to its mounting bracket with four M10 x 100 bolts. Torque bolts to 46 N·m (34 lb·ft).
8. Install and tighten alternator belt to correct specifications.
9. Reconnect vehicle battery power.
10. Prime fuel system.



ENGINE EXHAUST

To avoid injury from inhaling engine exhaust, always operate the engine in a well-ventilated area. Engine exhaust is toxic.

11. Start engine.
12. For EPA07 engines, use the purge function in DDDL/DDRS 7.0 to purge all the air from the hydrocarbon doser system.
13. Run engine and verify repair.



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