

DETROIT DIESEL



Installation Instructions

18SP639 – Installation of MBE 4000 EPA98 Low Pressure Fuel Lines – Sterling/Western Star/Freightliner M2 Configuration – Kit P/N: 23536860

KIT DESCRIPTION

This kit (P/N: 23536860) permits the installation of the new low pressure fuel lines for the MBE 4000 EPA98 installed in Sterling, Western Star and Freightliner M2 2001–2003 truck models.

KIT CONTENTS


See Table 1 for the fuel line kit contents:

Part No.	Qty.	Description
4600904576	1	Fuel Line – pump to filter
4600904676	1	Fuel Line – filter to block
4600901141	1	Bracket – fuel line, upper
4600901241	1	Bracket – fuel line, lower
5419950048	6	Clamp
910105008014	3	Bolt (M8X35)
910105006004	1	Bolt (M6X16)
916016015202	1	P-clip
18SP639	1	Installation Instructions

Table 1 Components of MBE 4000 EPA98 Low Pressure Fuel Line – Sterling/Western Star/Freightliner M2 Configuration - Kit (P/N: 23536860)

INSTALLATION PROCEDURE

Perform the following steps to install the low pressure fuel lines:

 WARNING:
PERSONAL INJURY
To avoid injury from penetrating fluids, do not put your hands in front of fluid under pressure. Fluids under pressure can penetrate skin and clothing.

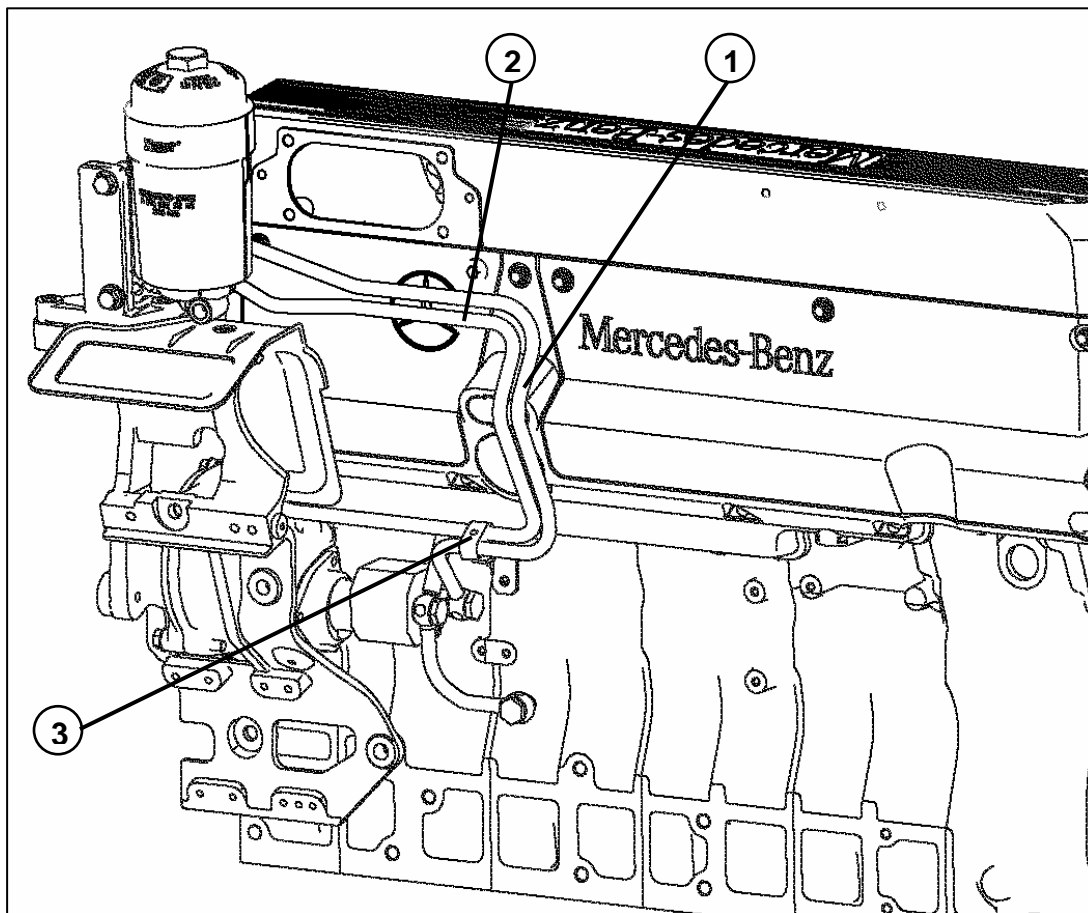
WARNING:
FIRE

To avoid injury from fire, keep all potential ignition sources away from diesel fuel, including open flames, sparks, and electrical resistance heating elements. Do not smoke when refueling.

NOTE:

For additional safety precautions, refer to the *MBE 4000 Service Manual (6SE412)* General Information section.

1. Remove the alternator belt and alternator. Refer to the appropriate section in Vehicle Manual for removal instructions. Go to www.accessfreightliner.com.
2. Remove the current fuel line configuration: plastic clips, fuel line from pump to filter (1), fuel line from filter to block (2) and bracket (3). See Figure 1.



1. Fuel line – pump to filter housing
2. Fuel line – filter housing to block

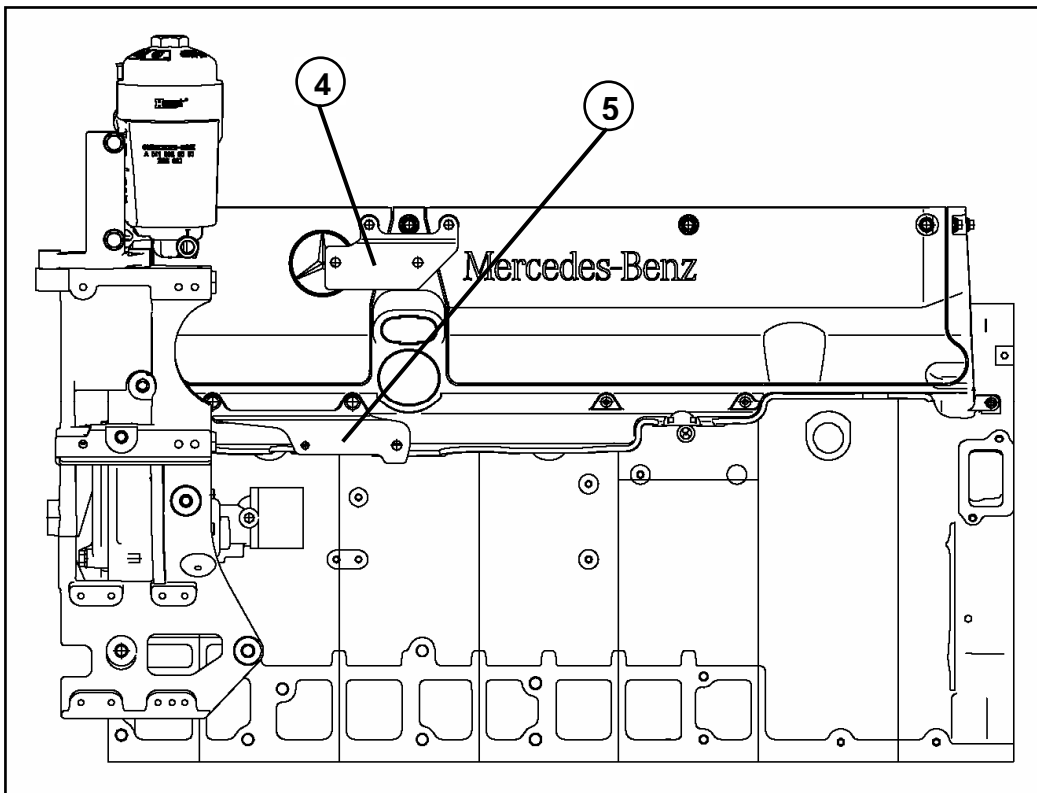
3. Bracket

Figure 1 Low Pressure Fuel Lines – Current Configuration (some components are not shown for better visualization)

NOTES:

- For engines equipped with priming valve, save this valve to install in the new fuel line.
- For engines not equipped with priming valve, the 06C-2 campaign was not performed. Before fuel lines installation, 06C-2 must be performed.

3. Install both upper (4) and lower (5) brackets. Use the beauty cover bolts to install these brackets. See Figure 2. Tighten upper bracket bolts (M6) to 12 N·m (9 lb·ft) and lower bracket bolts (M8) to 16 N·m (12 lb·ft).

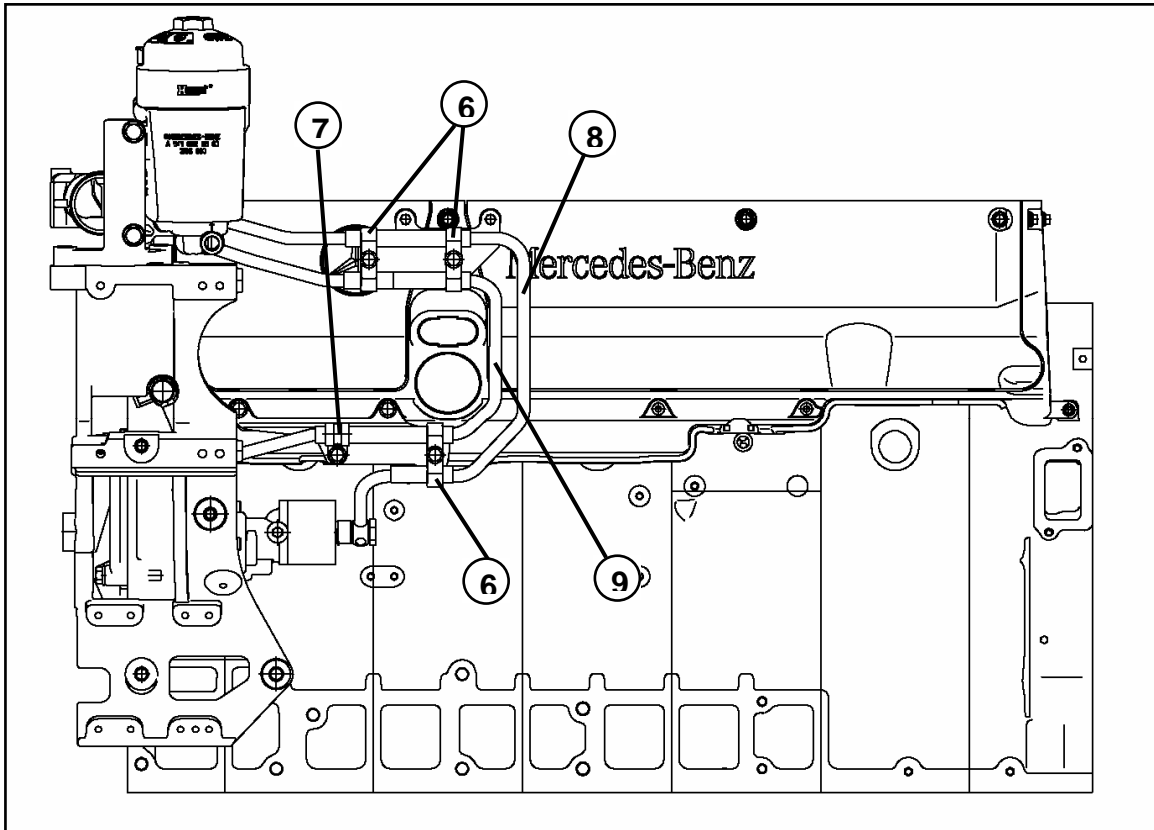


4. Bracket - upper

5. Bracket - lower

Figure 2 Upper and Lower Brackets Installation

4. Install fuel line from pump to filter (8) at the pump outlet. Do not torque the banjo bolt. See Figure 3.
5. Place P-clip (7) over the fuel line running from filter to block, using bolt M6 X 16.
6. Install fuel line from filter to block (9) at the filter outlet and engine block. Do not torque the banjo bolts.
7. Install the prime valve at the fuel line – pump to filter connection at the filter housing. For additional information on the priming valve installation, refer to 18SP610. Tighten to 40-50 N·m (30-37 lb·ft).



6. Clamps and bolts M8X35
7. P-clip

8. Fuel line – pump to filter
9. Fuel line – filter to block

Figure 3 Fuel Lines Configuration

8. Install all clamps using bolts M8X35 (6). Leave these clamps loose.
9. Torque the fuel line from the pump to filter (8) connection at the fuel pump outlet. Tighten banjo bolt to 50 N·m (37 lb-ft).
10. Torque the fuel line from the filter to block (9) at the engine block inlet and at the filter housing outlet. Tighten banjo bolt to 50 N·m (37 lb-ft).

NOTES:

- After installed, make sure the fuel line from the filter to block is not in contact/rubbing on the alternator bracket. See Figure 4 as reference for visual inspection.
- In case of contact, loosen the connection on the engine block and move the fuel line away from the bracket.

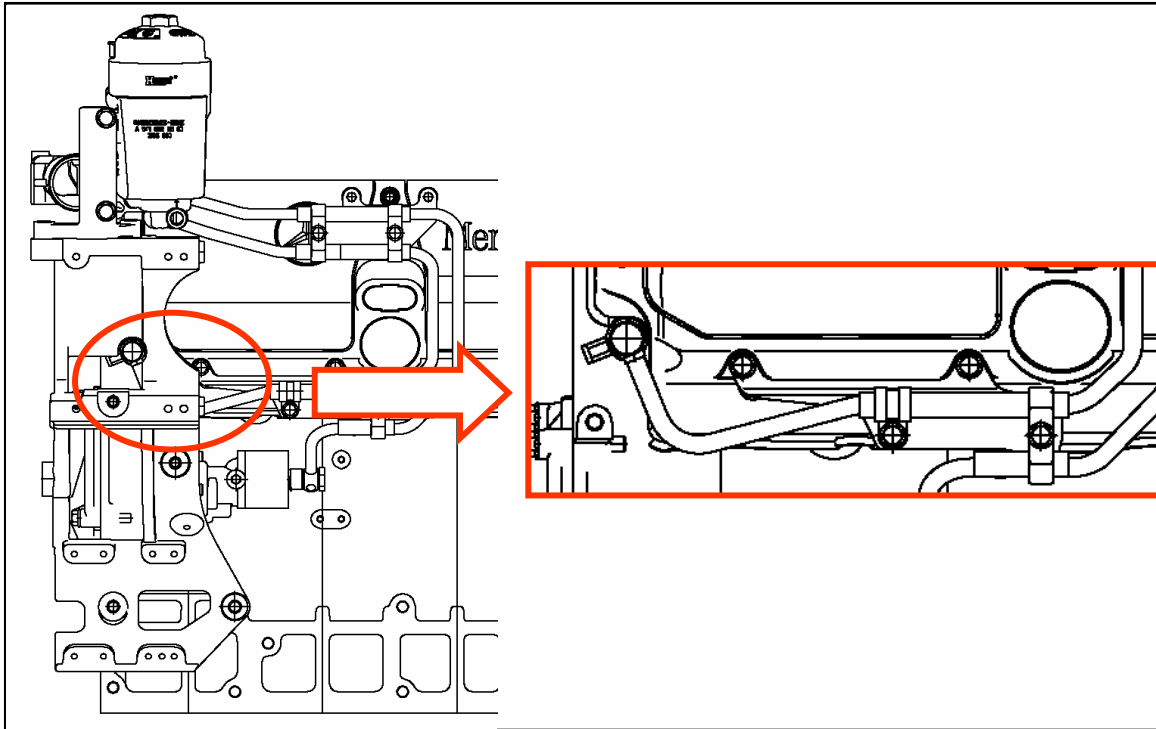


Figure 4 Fuel Line (Filter to Block) Installation Details — Behind Alternator Bracket

11. Torque all three clamp bolts (6). Tighten bolts (M8X35) to 25 N·m (18 lb·ft). See Figure 3.
12. Torque P-clip bolt (7). Tighten bolt (M6X16) to 12 N·m (9 lb·ft).
13. Install alternator and belt. Refer to the appropriate section in Vehicle Manual for installation instructions. Go to www.accessfreightliner.com.
14. Prime fuel system and start up the engine.
15. Check for fuel leaks.

DETROIT DIESEL



13400 Outer Drive, West, Detroit, Michigan 48239-4001
 Telephone: 313-592-5000
www.detroitdiesel.com

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