

DETROIT DIESEL



Installation Instructions

18SP638 – MBE 4000 Lifter Bracket Support Installation

KIT DESCRIPTION

Two new service kits are now available to install support brackets on the lifter brackets on EPA04 MBE 4000 EGR engines.

Kit P/N: 23536181 contains the necessary parts for installation on a Freightliner or Sterling vehicle.

Kit P/N: 23536182 contains the necessary parts for installation on a Western Star vehicle.

NOTE:

Reference SIB 1-MBE 4000-06 for information on correctly lifting an MBE 4000.

KIT CONTENTS


The kits contain the following parts listed in Table 1.

P/N:	Description	Freightliner/Sterling Kit P/N: 23536181 (qty.)	Western Star Kit P/N: 23536182 (qty.)
4602230040	Support – Right Front Lifting Eye	1	—
4602230140	Support – Left Front Lifting Eye	1	1
4602200040	Support – Right Front Lifting Eye	—	1
910105010009	Bolt, M10 x 25	2	2
913023010002	Nut, M10	2	2
910105012041	Bolt, M12 x 130	2	2
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Table 1 MBE 4000 Lifter Bracket Support Kits

INSTALLATION PROCEDURE

Install the support brackets as follows (see Figures 1 - 6):

 WARNING:
PERSONAL INJURY
To avoid injury before starting and running the engine, ensure the vehicle is parked on a level surface, parking brake is set, and the wheels are blocked.

1. Apply the parking brake, chock the wheels, disconnect vehicle battery power, and perform any other applicable safety steps.
2. On Western Star vehicles only, remove the fan clutch to provide the necessary clearance to the front lifter bracket. Discard the two upper fan clutch mounting bolts. Refer to the applicable vehicle service manual. Do not remove the fan clutch on Freightliner or Sterling vehicles.
3. Using a drill with a 90 degree end and an M11 drill bit, enlarge the lower hole on each side of the front lifter bracket. See Figure 1.

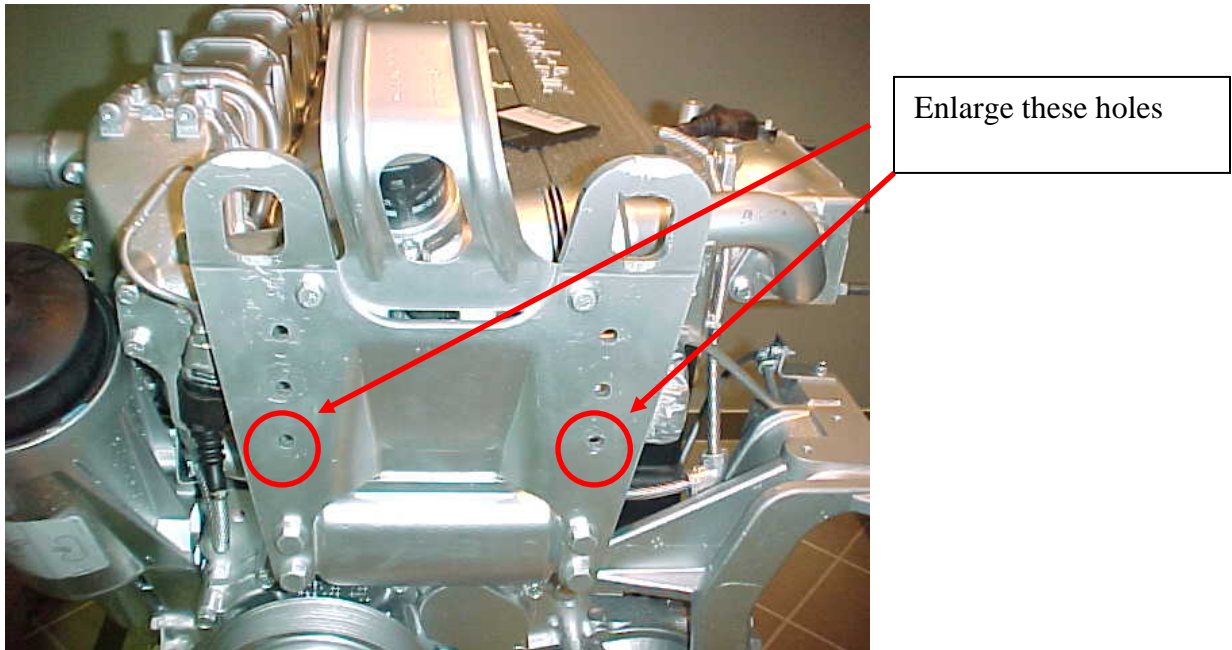
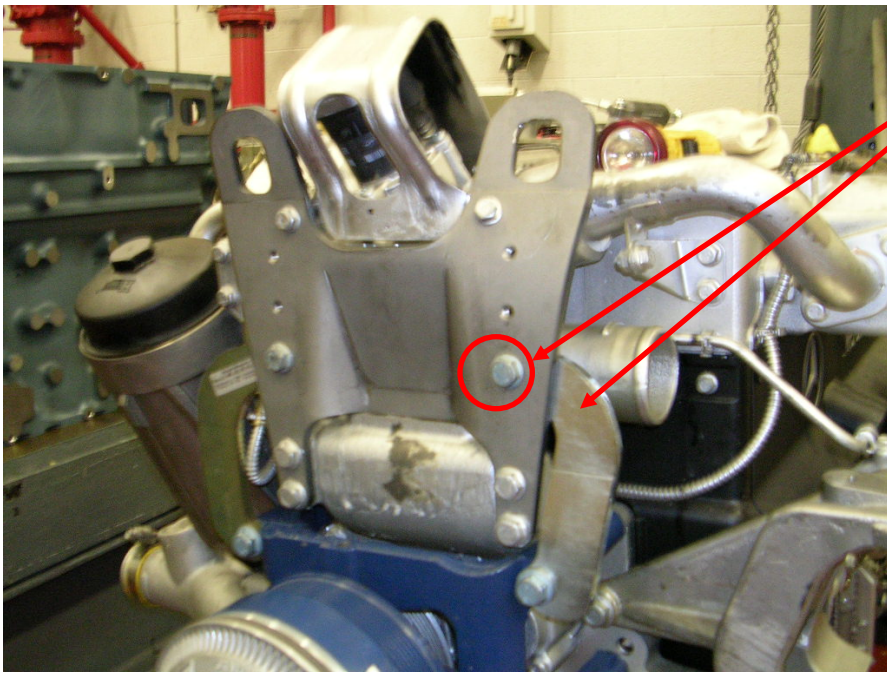


Figure 1 Lifter Bracket Hole Location For Enlarging

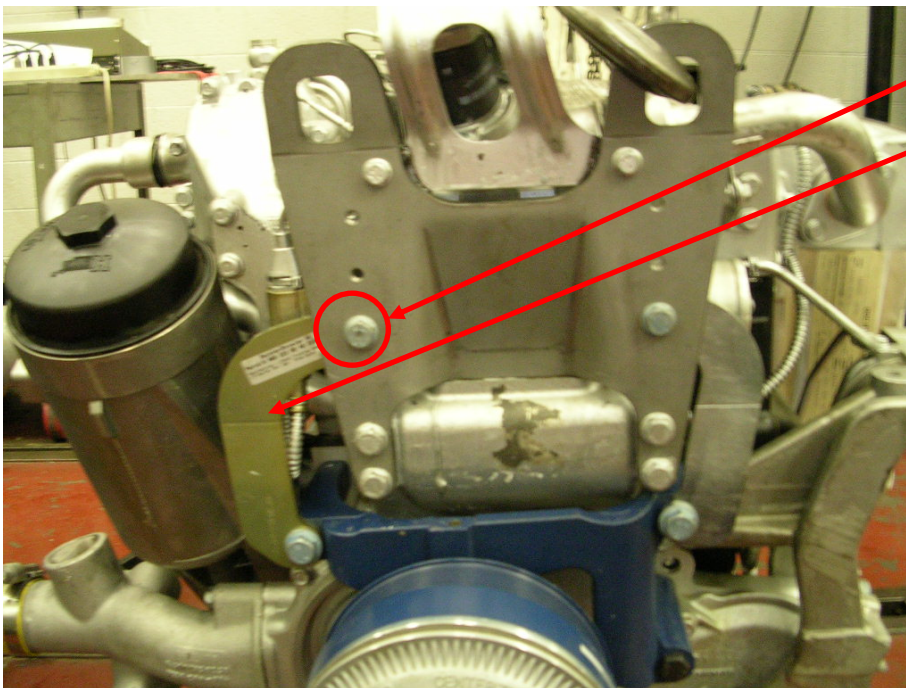
4. Install left side (intake side of engine) support bracket (P/N: 4602230140) on the back of the lifter bracket. Secure with one of the M10 x 25 bolts and M10 nuts through the enlarged hole in the lifter bracket, but do not tighten. The nut should be on the support bracket side. See Figure 2.



Install support bracket behind lifter bracket and secure with M10 bolt and nut.

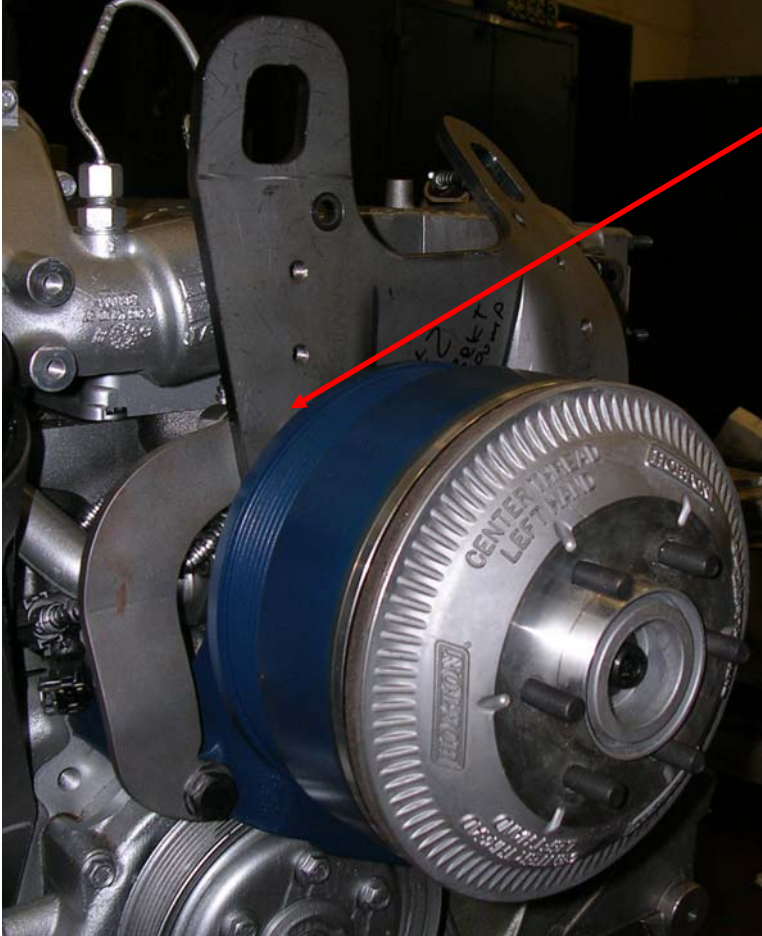
Figure 2 Left Side Support Bracket Installation

5. Install the applicable right side (exhaust side of engine) support bracket on the back of the lifter bracket. Secure with the other M10 x 25 bolt and M10 nut through the enlarged hole in the lifter bracket, but do not tighten. The nut should be on the support bracket side. See Figure 3 for the Freightliner/Sterling bracket, and Figure 4 for the Western Star bracket.



Install support bracket behind lifter bracket and secure with M10 bolt and nut.

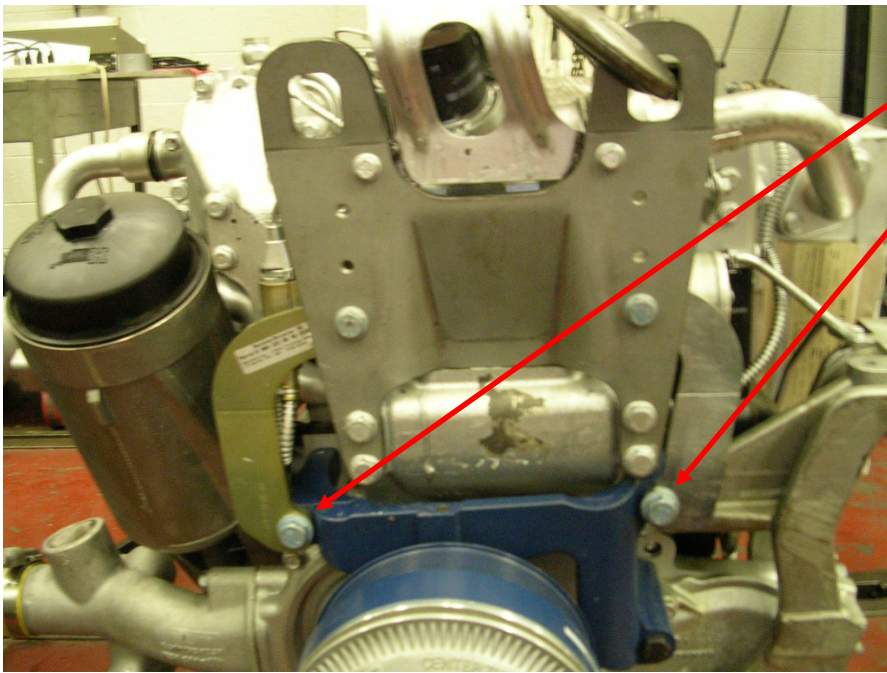
Figure 3 Right Side Support Bracket Installation for Freightliner/Sterling



Install support bracket behind lifter bracket and secure with M10 bolt and nut.

Figure 4 Right Side Support Bracket Installation for Western Star

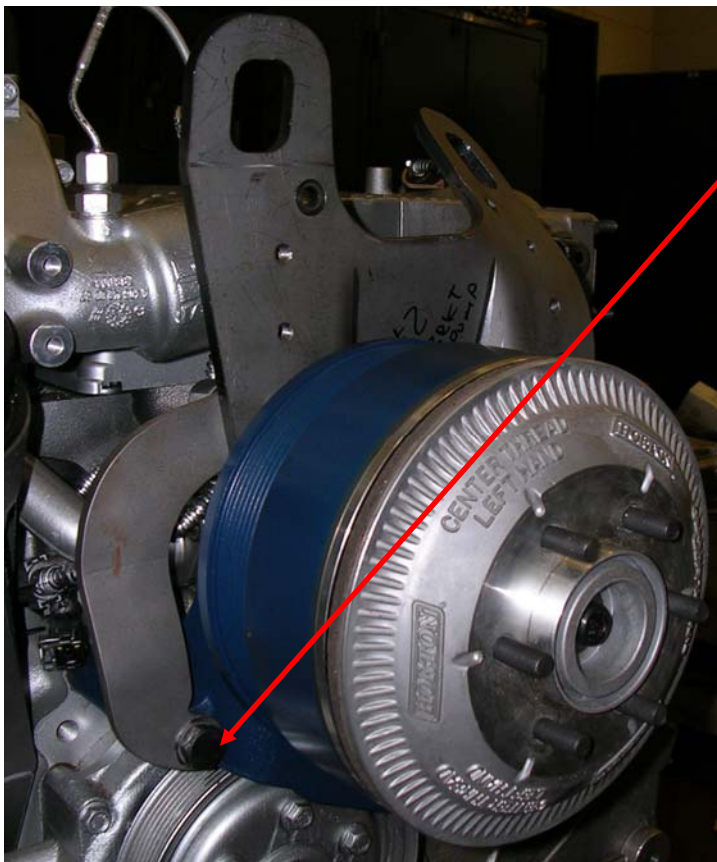
6. On Freightliner and Sterling vehicles, remove the two upper fan clutch mounting bolts and discard them. Install the two new M12 x 130 bolts through the new support brackets and fan clutch. Torque to 102-126 N·m (75-93 lb·ft). See figure 5.



Install new M12 x 130 bolts through support brackets and fan clutch.

Figure 5 Installation of Support Brackets to Fan Clutch for Freightliner/Sterling

7. On Western Star vehicles, reinstall the fan clutch and use the two new M12 x 130 bolts through the new support brackets and fan clutch. Torque to 102-126 N·m (75-93 lb·ft). See figure 6.



Install new M12 x 130 bolts through support brackets and fan clutch.

Figure 6 Installation of Support Brackets to Fan Clutch for Western Star

8. Torque the two new M10 bolts and nuts at the upper end of the new support brackets to 58-73 N·m (43-54 lb·ft).



WARNING:
PERSONAL INJURY

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

- **Always start and operate an engine in a well ventilated area.**
- **If operating an engine in an enclosed area, vent the exhaust to the outside.**
- **Do not modify or tamper with the exhaust system or emission control system.**

9. After all work has been completed, start and run the engine and check for proper operation.

DETROIT DIESEL



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