

# DETROIT DIESEL



## Installation Instructions

### 18SP617 – MBE4000 Extended Fill / Dipstick 40L Front Sump Kit – Butterfly Hood (P/N: 23535993)

#### KIT DESCRIPTION

This kit (P/N: 23535993) permits the installation of an extended oil fill / dipstick assembly on a 40L front sump MBE4000 EGR engine (Butterfly Hood).

#### KIT CONTENTS

See Table 1 for the extended fill / dipstick kit contents:

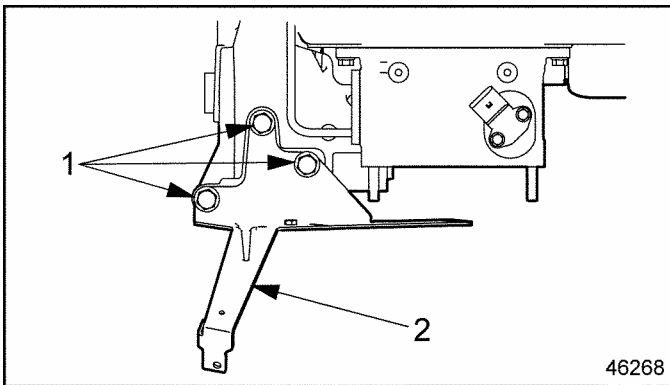
| Part No.           | Qty. | Description                               |
|--------------------|------|---|
| A 460 010 09 64    | 1    | Oil Fill Tube                             |
| A 344 018 03 68    | 1    | Oil Fill Cap                              |
| A 352 018 67 40    | 1    | Strap, Oil Cap                            |
| N 007 337 00 40 09 | 1    | Rivet                                     |
| A 000 995 12 77    | 2    | Clamp                                     |
| A 460 010 06 40    | 1    | Bracket, Oil Fill/Dipstick                |
| N 910 105 01 00 06 | 3    | Bolt, M10 x 20                            |
| A 460 010 08 40    | 1    | Bracket, Support / Stiffening             |
| A 460 010 09 66    | 1    | Guide Tube, FRT Sump 40L (Butterfly Hood) |
| A 460 010 32 72    | 1    | Dipstick, FRT Sump 40L (Butterfly Hood)   |
| A 470 997 00 71    | 1    | Fitting, Oil Pan                          |
| N 007 603 01 81 01 | 1    | Seal Ring                                 |
| M 910 105 00 60 04 | 5    | Bolt, M6 x 16                             |
| 23536043           | 3    | P-Clip                                    |
| 23535543           | 2    | Double Cable Strap                        |
| 18SP617            | 1    | Installation Instructions                 |

**Table 1 Components of MBE4000 Extended Fill / Dipstick Kit (P/N: 23535993)**

#### INSTALLATION PROCEDURE

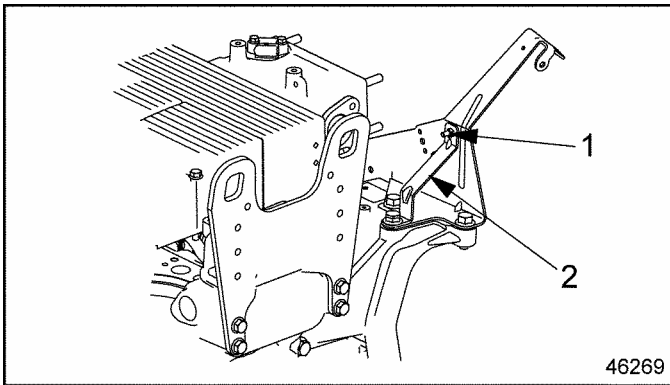
Perform the following steps for removal of current components and installation of new kit components:

1. Remove standard oil fill, dipstick, guide tube, fitting, and fill / dipstick bracket.
2. Install fill / dipstick bracket (P/N: 460 010 06 40) to top of alternator bracket using three M10 x 20 bolts (P/N: N 910 105 01 00 06). Do not tighten bolts. See Figure 1.
3. Install support / stiffening bracket (P/N: 460 010 08 40) to dipstick bracket using one M6 x 16 bolt (P/N: N 910 105 00 60 04). See Figure 2. Torque the three M10 x 20 bolts to 46 N·m (34 lb·ft). See Figure 1. Torque the one M6 x 16 bolt to 9 N·m (6.6 lb·ft). See Figure 2.



1. Fill / Dipstick Bracket Bolts, M10 x 20 (3)      2. Fill / Dipstick Bracket

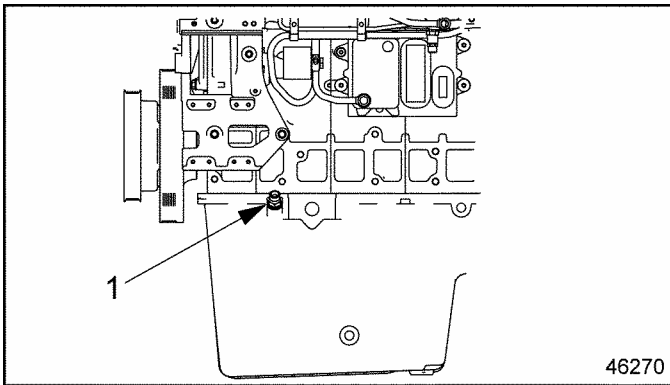
**Figure 1      Installing Fill / Dipstick Bracket to Alternator Bracket**



1. Support/Stiffening Bracket Bolt, M6 x 16      2. Support/Stiffening Bracket

**Figure 2      Installing Support / Stiffening Bracket**

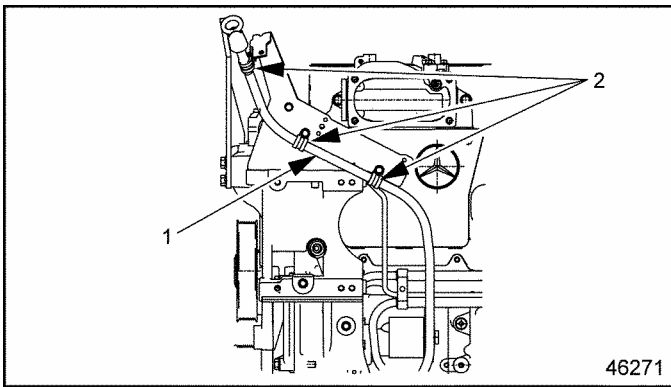
4. Install dipstick connector fitting (P/N: 470 997 00 71) to oil pan, using seal ring (P/N: N 007 603 01 81 01). Torque fitting to 50 N·m (37 lb-ft). See Figure 3.



1. Dipstick Connector Fitting

**Figure 3      Installing Dipstick Connector Fitting to Oil Pan**

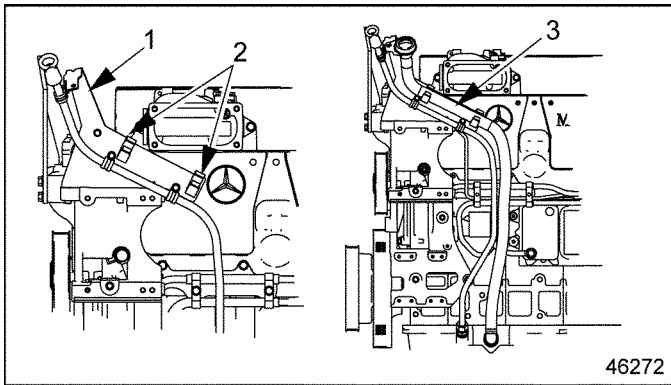
5. Install dipstick guide tube (P/N: 460 010 09 66) to oil pan fitting with M22 nut, which is attached to the dipstick guide tube. Also attach dipstick guide tube to block using three P-Clips (P/N: 23536043) and three M6 x 16 bolts (P/N: N 910 105 00 60 04). Tighten M22 nut to 70 N·m (52 lb-ft). Torque M6 x 16 bolts to 9 N·m (6.6 lb-ft). See Figure 4.



1. Dipstick Guide Tube                      2. P-Clips

**Figure 4      Installing Dipstick Guide Tube**

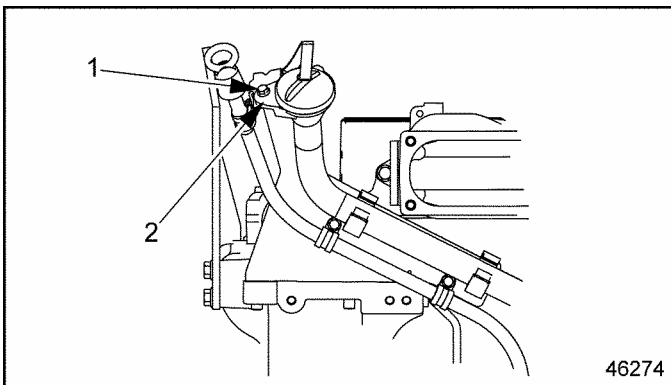
6. Insert dipstick (P/N: 460 010 32 72) in the dipstick guide tube.
7. Snap two oil fill tube clamps (P/N: 000 995 12 77) into holes located on oil fill / dipstick bracket. See Figure 5.
8. Attach oil fill tube (P/N: 460 010 09 64) to oil pan and clamp to bracket. Orient neck to front. See Figure 5.



1. Oil Fill / Dipstick Bracket    2. Oil Fill Tube Clamps    3. Oil Fill Tube

**Figure 5      Installing Oil Fill Tube**

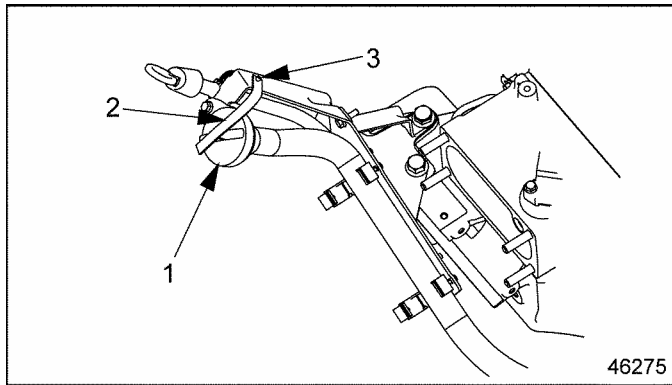
9. Connect oil fill neck flange to fill / dipstick bracket using one M6 x 16 bolt (P/N: N 910 105 00 60 04). Torque to 9 N·m (6.6 lb-ft). See Figure 6.



1. Oil Fill Neck Bolt, M6 x 16              2. Oil Fill Neck Flange

**Figure 6      Attaching Oil Fill Neck to Bracket**

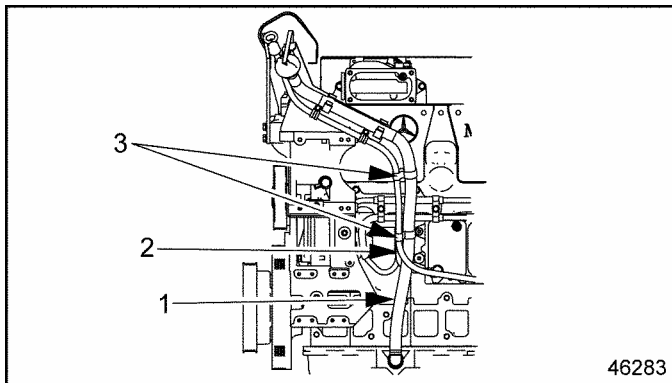
10. Install oil fill cap (P/N: 344 018 03 68) and oil cap strap (P/N: 352 018 67 40), using rivet (P/N: N 007 337 00 40 09) to fasten strap to bracket hole. See Figure 7.



1. Oil Fill Cap  
2. Oil Cap Strap  
3. Rivet

**Figure 7 Attaching Oil Fill Cap and Strap to Bracket**

11. Fasten the oil fill tube to dipstick tube with double cable tie strap (P/N: 23535543). Clip tie ends after tightening. See Figure 8.



1. Oil Fill Tube  
2. Dipstick Guide Tube  
3. Double Cable Tie Strap (2 qty.)

**Figure 8 Attaching Double Cable Tie Strap**



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