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TO: Service Locations

FROM: Technical Support Development

SUBJECT: **EPA07 MBE 900 Engine Oil Dipstick Information**

ISSUE

The engine oil dipstick on the EPA07 MBE 900 engine has different markings to note the “minimum” and “maximum” engine oil level points. Overfilling the crankcase with oil can cause high oil consumption and possible severe engine or Aftertreatment System (ATS) damage due to the closed crankcase breather system on the EPA07 MBE 900 engine. Underfilling the crankcase may also lead to severe engine damage due to low oil pressure.

REQUIRED ACTION

To avoid possible engine or ATS damage, do NOT overfill or underfill the crankcase with engine oil. Make sure you understand the markings on the engine oil dipstick to correctly fill the engine with oil.

Instead of the usual crosshatch pattern on the dipstick, the EPA07 MBE 900 dipstick has two bends to note the “minimum” and “maximum” points. See Figure 1 for a picture of the bends in the dipstick and their corresponding engine oil level. Note the exact area noted on the bends. For example, the “maximum” oil level will be at the BOTTOM of that bend. For the “minimum” oil level, it is noted at the TOP of the bend.

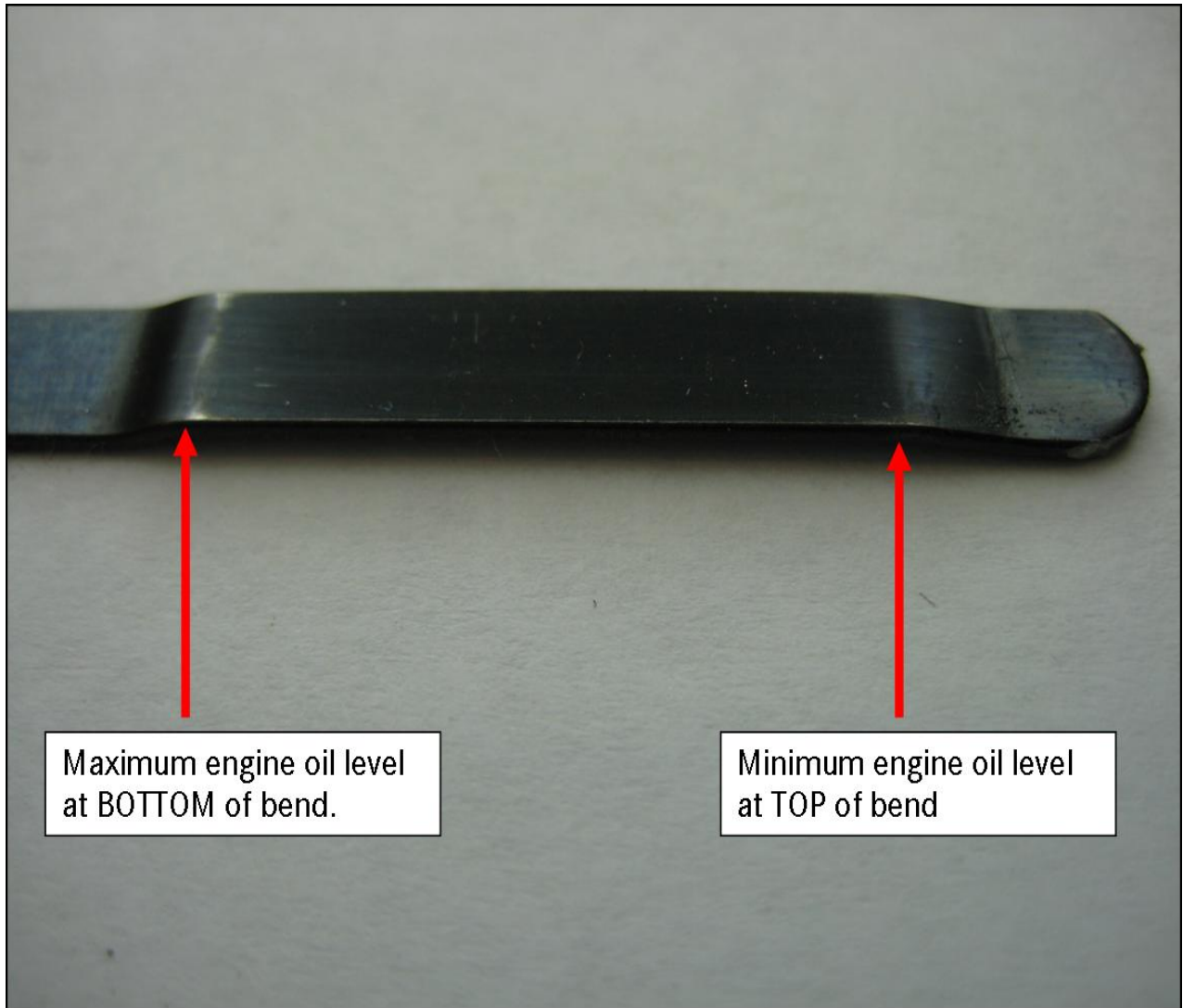
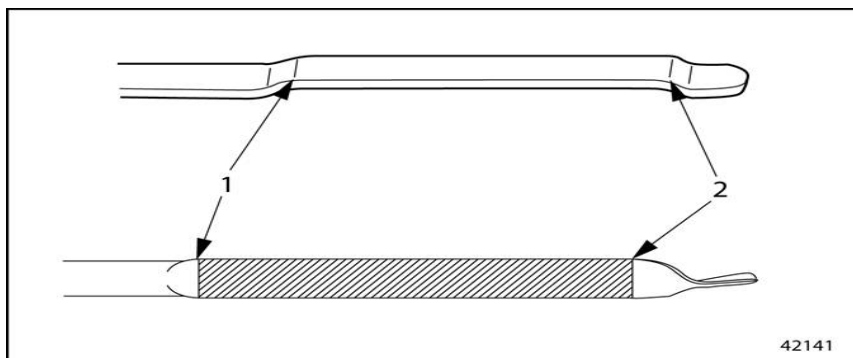


Figure 1 – EPA07 MBE 900 Engine Oil Dipstick

See Figure 2 for a comparison between the bends on the EPA07 MBE 900 dipstick and a crosshatch pattern on a conventional dipstick. Note the exact area noted on the bends. For example, the “maximum” oil level will be at the BOTTOM of that bend. For the “minimum” oil level, it is noted at the TOP of the bend.



1. Maximum engine oil level

2. Minimum engine oil level

Figure 2 – Comparison of bends to a crosshatch pattern

To check the oil level, perform the following procedure:

1. Park the vehicle on level ground.
2. Make sure the engine has been turned off for at least 20 minutes before checking the oil level. It is preferable to have the engine cold, such as sitting overnight, to get the most accurate oil level. This will allow the oil to completely drain back into the oil pan.
3. Remove the dipstick from the guide tube and use a shop rag to wipe off the end of the dipstick. Note the dipstick has a positive locking device such as a lever or twist-lock design that must be disengaged before pulling the dipstick out of the guide tube.
4. Wait 30 seconds to allow any crankcase pressure to dissipate through the guide tube and let the oil level settle in the oil pan.
5. Reinstall the dipstick and make sure it is fully inserted into the guide tube.
6. Remove the dipstick and read the oil level.
7. If the oil level is below the "minimum" bend, add oil to bring it up the "maximum" level. Do NOT fill beyond the maximum fill level on the dipstick, since overfilling may result in high oil consumption and possible severe engine or ATS damage.

ADDITIONAL INFORMATION/NOTES

- Approximate "maximum" oil pan capacity is 29.6 quarts (28 liters).
- Approximate "minimum" oil pan capacity is 24.3 quarts (23 liters).
- Approximate total engine oil capacity with filters is 30.6 quarts (29 liters).

CONTACT INFORMATION

Please contact the Detroit Diesel Customer Support Center at 313-592-5800 or email csc@detroitdiesel.com if you have any questions.