



Test Monitoring Center

@ Carnegie Mellon University
6555 Penn Avenue, Pittsburgh, PA 15206, USA

<http://astmtmc.cmu.edu>
412-365-1000

Sequence VIE Information Letter 19-1
Sequence Number 9
January 7, 2019

ASTM consensus has not been obtained on this information letter. An appropriate ASTM ballot will be issued in order to achieve such consensus.

TO: Sequence VI Surveillance Panel

SUBJECT: Alternate Procedure for Establishing Oil Level Marks

As a result of an electronic ballot, the Sequence VI Surveillance Panel agreed to allow an alternate method for defining oil level marks. Section A11.1.21 has been modified and section A11.3, including footnote 22, has been added to allow use of this alternate method for determining oil level in ASTM Test Method 8114.

These revisions are effective with the issuance of this letter.

Michael P. Raney
Engine Oil Test Development and Support
GM Global Propulsion Systems

Frank M. Farber
Director
ASTM Test Monitoring Center

Attachment

c: http://www.astmtmc.cmu.edu/ftp/docs/gas/sequencevi/procedure_and_ils/VIE/i118-5_vie.pdf

Distribution: Email

Revises D8114-18a as amended by Information Letters 18-2, 18-3 and 18-4

A11.1.21 Once stabilized at the above conditions, mark the level on the sight glass (Fig. A5.20) **or record the level on the scale (using alternative laser level method)** and consider this as the Oil Sump Full Level.

A11.3 Alternative Laser Level Oil Pan Sight Glass Preparation and Calibration

A11.3.1 This setup and method is may be used as an alternative to the method defined in A11.2.

A11.3.2 Fabricate a metal attachment for the sight glass that allows a scale to be affixed. Machine slots into the scale to allow for adjustment and mounting on the metal attachment using bolts/screws.



FIG A11.1 Oil Pan Sight Glass Using Metal Attachment with Scale

A11.3.3 Construct a stand for a laser level that allows for height adjustment. An example is provided in Fig. A11.2. A Dewalt DW0822LR²² has been found to be suitable.

²²Dewalt DW0822LR laser level is available from retail sources such as Lowes, Home Depot and Amazon.com

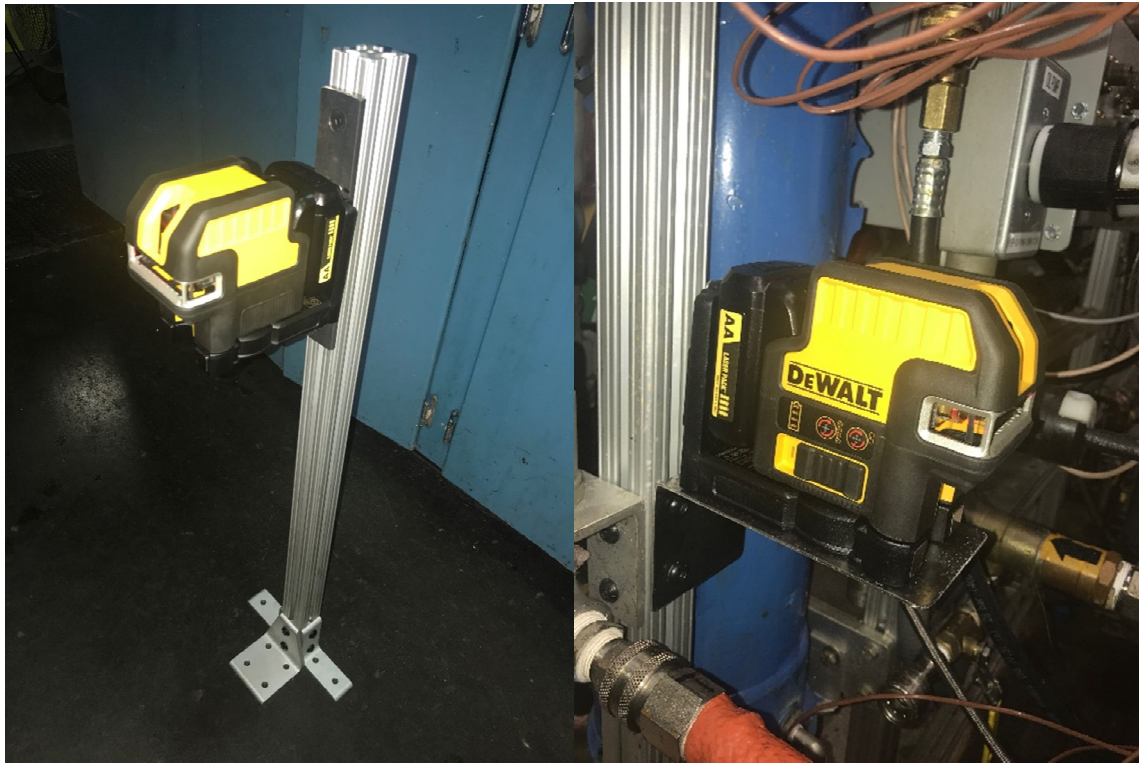


FIG A11.2 Stand for Laser Level

A11.3.4 A camera may be used to view the sight glass. If used, mount the camera near the engine pointed towards the sight glass and scale. See Fig. A11.3 for an example setup.



FIG A11.3 Camera Used to View Oil Pan Sight Glass and Scale

A11.3.5 While engine is not running, place laser level on stand and adjust height until horizontal laser is even with the bottom of the tab on the oil pan. This tab is approximately 100 mm from the top sight glass fitting and toward the front of the engine. See Fig. A11.4.



FIG A11.4 Aligning Laser Level with Oil Pan Tab

A11.3.6 Adjust the scale so that its zero mark aligns with the horizontal laser. See Fig. A11.5

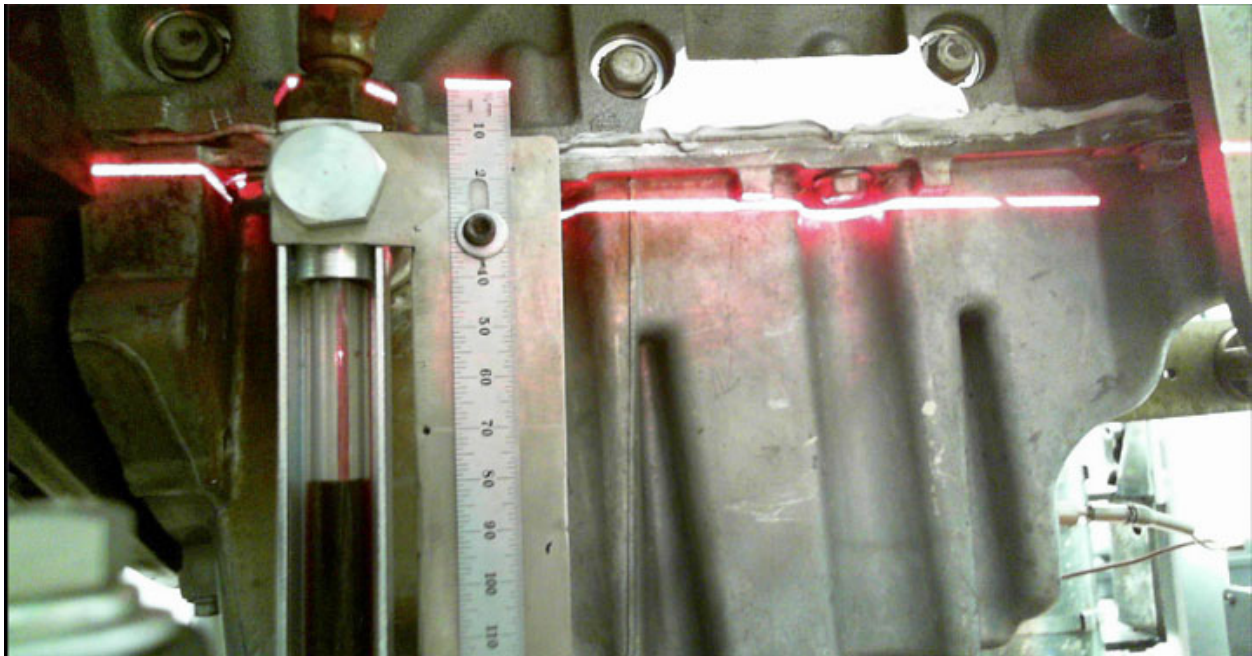


FIG A11.5 Aligning Zero of Scale with Laser

A11.3.7 Establish full mark according to A11.1. With the proper full mark established and the engine running at flush conditions, drain 200 mL of oil from the engine at the outlet (top) of the oil heater. Allow a few minutes for system to stabilize then mark sight glass (-200 mL).

A11.3.2 Repeat above in increments of 200 mL until a total of 1800 mL has been removed from engine. Record the reading on the scale that corresponds with each oil level. It is recommended that a spreadsheet table be created to record readings. When oil level readings are taken, this table can be used to interpolate between calibration readings and give a more accurate oil level.

A11.3.3 Return the 1800 mL of oil with engine running at flush conditions, allow the system to stabilize a few minutes. The oil level should now be at the original full mark on the sight glass. Repeat the calibration procedure if the level does not return to the original sight glass full mark.