



Test Monitoring Center

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Sequence VIF Information Letter 19-1
Sequence Number 1
January 10, 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: 1. Additional Fuel Flow Measurement Device
2. Additional Oil Circulation Pump and Updated Motor Specifications
3. Alternate Procedure for Establishing Oil Level Marks

1. During the October 29, 2018 Sequence VI Surveillance Panel Conference call, the panel agreed to allow the use of another model MicroMotion measurement device. The manufacturer is phasing out the current model (CMF010) specified in the procedure and model CMFS010 is a comparable replacement. Section 6.7.2 has been revised to add Model CFMS010 to the test method.
2. During the November 6, 2018 Sequence VI Surveillance Panel Conference call, the panel agreed to allow the use of another model pump for the oil recirculation pump. Model G4124B has been found suitable for this application. Also, the panel agreed to increase the motor r/min specification from 1140 – 1150 r/min to 1140 – 1170 r/min, as newer motors are being received with a higher speed rating. Finally, pump model G4214A is identified incorrectly. The correct model is G4124A. Section 6.6.5.2 has been revised to reflect these changes.
3. 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 23, has been added to allow use of this alternate method for determining oil level.

These revised text and or section(s) have been highlighted in red and are effective with the issuance of this letter.

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Attachment

c: http://www.astmtmc.cmu.edu/ftp/docs/gas/sequencevi/procedure_and_ils/VIF/il18-1_vif.pdf
Distribution: Email

Revises D8226-18

6.6.5.2 Use a positive displacement oil circulation pump. A Viking Series 4125, Model G4125, G4124A, or G4124B, no relief valve, base mounted are specified (see X1.15). The pump shall have a V-belt or direct drive electric drive motor of 1140 r/min to 1170 r/min with a minimum power of 0.56 kW. Voltage and phase are optional.

6.7.2 *Fuel Flow Measurement*—Measure the critical fuel flow rate throughout the test. Use a Micro Motion Model CMF010 or CMFS010 mass flow meter with either a RFT9739, 2500 MVD, 2700MVD, or 1700MVD transmitter; (see X1.24). The Micro Motion sensor may be mounted in a vertical or a horizontal position.

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 – see A11.3) 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.

²³Dewalt DW0822LR laser level is available from retail sources such as Lowes, Home Depot and Amazon.com

Renumber existing footnotes 23 and 24 as 24 and 25.

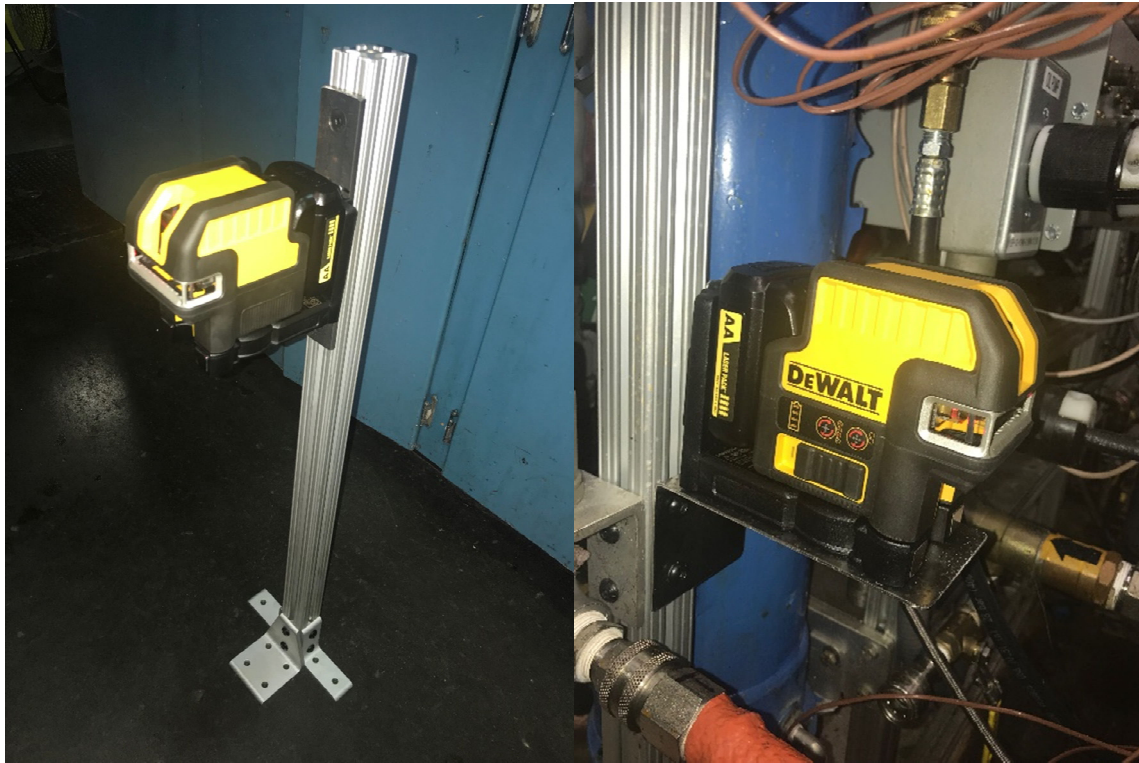


FIG A11.2 Stand for Laser Level

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

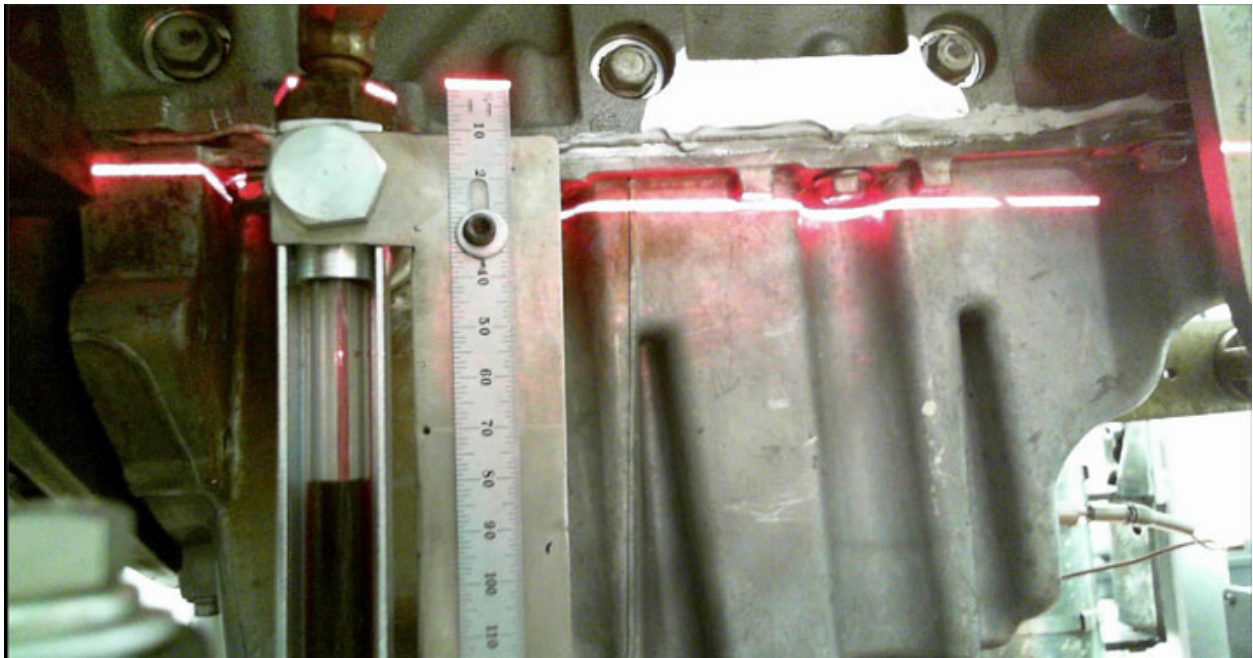


FIG A11.5 Aligning Zero of Scale with Laser

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.