A Program of ASTM International

Test Monitoring Center

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

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

Sequence VG Information Letter 13-1
Sequence No. 36
February 18, 2013

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 VG Mailing List

SUBJECT: 1) Modifications to Test Hardware
2) Correct References to Rating Manuals and Workshops
3) Thread Modifications to Blocks and Weld Repair to RAC

1) During the February 12, 2013 Sequence V Conference Call, the Panel approved a motion to document that modifications to test parts are not to be performed unless approved by the Surveillance Panel. Section 7.2 has been revised to add this statement and to remove the reference for cylinder heads and polished cams.
2) Also during the February 12, 2013 Sequence V Conference Call, the panel agreed to update the references to Rating Manuals and rating workshop. Under ASTM Documents, TMCMNL20 has been added, Sections 7.6.3.2, 7.6.4, 13.1.5, 13.1.6, 13.1.8, 13.2.1, 13.2.2.1 (5) and (6), 13.3.1 and 13.3.2.2 have been updated to reflect the proper manuals and or workshop designation. Footnote 7 has been added, footnote 12 has been deleted and remaining existing footnotes will be renumbered. Also, Section 13.1.4 has been corrected to read “no red, white or blue rater available at the lab”.
3) Finally, during the February 12, 2013 Sequence V Conference Call, the panel agreed to allow laboratories to address damaged threads in the block and coolant leaks from the Rocker Arm Cover. Sections 7.3 and 7.4.8 have been modified to allow these repairs.

The attached revised sections of Test Method D6593 are effective February 12, 2013.

Ron Romano
FCSD, Service Product Development, SEO
Ford Motor Company

Frank M. Farber
Director
ASTM Test Monitoring Center

Attachment

c: ftp://ftp.astmtmc.cmu.edu/docs/gas/sequencev/procedure_and_ils/vgil13-1-36.pdf

Distribution: Email

(Revises Test Method D6593-10, as amended by information letters 10-01 and 12-01)

2.3 *Other ASTM Documents*[7]
ASTM Deposit Rating Manual 20 (Formerly CRC Manual 20)

New Footnote 7:

7 For STOCK# TMCMNL20, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org.

Renumber subsequent footnotes accordingly

7.2 *Required New Engine Parts*—Use the parts listed in the engine kit (see A5.1). Use a new gasket kit for each test. Do not modify or alter test parts without the approval of the Sequence V Surveillance Panel.

7.3 *Reusable Engine Parts*—The parts listed in the test stand set up kit, supplemental stand set up kit, engine dress kit, and engine finish and fastener kit can be reused (all of these can be used in numerous engine assemblies as long as they remain serviceable). See Annex A5. Crankshaft, connecting rods, timing chain covers and cylinder heads may be used for multiple engine assemblies as long as they remain serviceable. Camshafts can be used for as many as four tests as long as they remain serviceable. As the block can be used for as many as four tests, damaged threads in the block can be corrected with commercially available thread inserts.

7.4.8 *Rocker Arm Cover (RAC)*—The RAC is fabricated from stainless steel and incorporates a water jacket and bolt bosses for the camshaft baffle (see Figs. A3.3-A3.5). The RAC, bolts, and washers supplier is listed in A9.2. As the RAC is used for multiple tests, leaks to the external cooling jacket may be repaired by welding or other suitable means. Do not modify the rated surfaces of the RAC.

7.6.3.2 Submerge the RAC in agitated organic solvent (see 7.7.2) until clean (approximately 1 h). Rinse the parts thoroughly with hot water (> 60 °C). Rinse the RAC with degreasing solvent (7.7.1) and allow to air-dry. Inspect the appearance of the inside of the RAC. If the before test rating is less than ten on the ASTM varnish rating scale (ASTM Rating Manual 20), polish the RAC with Scotch Brite General Purpose Hand Pad #74479,[9,13] to achieve a dull finish. Rinse with degreasing solvent (7.7.1) and allow to air-dry before use.

Current Footnote 12 Deleted - Renumber existing footnotes.

7.6.4 *Camshaft Baffle*—Submerge the camshaft baffles in agitated organic solvent (see 7.7.2) until clean (approximately1 h). Rinse the parts thoroughly with hot water (> 60 °C).Rinse the camshaft baffles with degreasing solvent (7.7.1) and allow to air-dry. Inspect the appearance of the top surface of the camshaft baffle. If the before test rating is less than ten on the ASTM varnish rating scale (ASTM Rating Manual 20), polish the camshaft baffle with Scotch Brite General Purpose Hand Pad #74479,[9,13] to achieve a dull finish. Rinse with degreasing solvent (7.7.1) and allow to air-dry before use.

13.1.4 If multiple ratings are deemed necessary of a given part or parts, consensus rating may be used according to the following: The raters shall be from the same laboratory or from an outside rater if required (no Red, White or Blue rater available at the lab). Report only one rating value, and this value shall be agreed to by the original rater involved. Document any consensus rating in the comment section of the test report.

13.1.5 All raters of Sequence VG engine parts shall attend an ASTM Light Duty Deposit Rating Workshop every 12 months ± 30 days and produce data that meets the ASTM definitions of Blue, Red, or

White for varnish. If a rater is unable to meet this requirement, the rater can continue to rate Sequence VG parts during a grace period of 45 days after the completion of the workshop and can follow the procedure described in 13.1.6 to generate data that meet the ASTM definitions of Blue, Red, or White.

13.1.6 A rater who is unable to meet the requirement in 13.1.5 can schedule a visit to the TMC to generate data on ASTM Light Duty Deposit Rating Workshop parts and receive an assessment of rating performance compared to data collected at recent workshops. Visits to the TMC will be scheduled based on availability of parts.

13.1.8 A second attempt to generate rating data at the TMC is permitted only after the rater receives training from an experienced industry rater. The experienced industry rater shall verify to the TMC, in writing, that the rater training has taken place. No more than two attempts are permitted between ASTM Light Duty Deposit Rating Workshops.

13.2.2.1 To determine the sludge rating merit for each part, use the self-weighting procedure as follows:

(*5*) Convert the percent covered by the rated sludge depth at each location to a volume factor using the procedure shown in ASTM Rating Manual 20.

(*6*) Add the volume factors on each line to determine the total volume factor. Use ASTM Rating Manual 20 to convert the total volume factor to the sludge merit rating.

13.3.2.2 Determine original varnish ratings of all parts by comparison of the deposit on the rating location using the ASTM Rust/Varnish/Lacquer Rating Scale for non-rubbing parts from ASTM Rating Manual 20. If the test was run using Haltermann fuel, Batch TF2221LS20, use fixed industry correction factors of 0.39 for APV and 0.12 for AEV. For both APV and AEV, add the original results, the industry correction factors, and lab severity adjustments to obtain the final results.