

Approved by ASTM D02.B: July 1, 2005

Sequence VG Information Letter 05-2 Sequence No. 23

July 19, 2005

TO: Sequence VG Mailing List

SUBJECT: Approval of Fuel Batch TA192ILS15 and Corrections for AES, RAC AEV and APV

At the May 19, 2005 Sequence VG Surveillance Panel Meeting, the panel agreed to accept Haltermann VG fuel batch TA192ILS15. However, because the severity of this batch is significantly different for AES, RAC, AEV and APV, corrections must be applied to these parameters. Sections 13.2.2.1 and 13.3.2.2 of Test Method D 6593 have been revised and Sections 13.2.1.1 and 13.2.2.2 have been added to include corrections for these parameters. Old Section 13.2.2.2 has been renumbered as 13.2.2.3. These corrections are to be applied to both reference and non-reference oil tests and will be reviewed when five tests are obtained on each of the current reference oils. The corrections are to be applied only to results obtained on fuel batch TA192ILS15. This fuel batch can be used on or after July 1, 2005.

El many

Peter Misangyi Product Engineering Ford Motor Company

John Z. Jalar

John L. Zalar Administrator ASTM Test Monitoring Center

Attachment

c: ftp://ftp.astmtmc.cmu.edu/docs/gas/sequencev/procedure and ils/vgil05-2-23.pdf

Distribution: Email

#### (Revises Test Method D6593-04a, as amended by Information Letters 04-2, 04-3, 04-4 and 05-1)

13.2.1.1 If the test was run using Haltermann fuel, Batch TA192ILS15, average the two RAC sludge ratings to obtain the original RAC result. Adjust the original result by adding 0.627 and dividing by 1.041. The industry correction factor is the difference between the adjusted original result and the original result. Add the original result, the industry correction factor and lab severity adjustment to obtain the final RAC sludge result.

#### 13.2.2 Average Sludge (Unweighted Average of 9 Parts):

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

(1) Determine the sludge depth at each of the sites shown on rating worksheets. A site is defined as a 20-mm (0.79-in.) diameter circular area.

(2) Determine an interpolated sludge value for a designated site which exhibits more than one level of sludge depth within this area. This value is generated by multiplying each rated value's volume factor by the percentage of area covered, totaling these volume factor percentages, and comparing the total to the values given in Table 7 to determine the rating for the site. As an example, if a site was determined to be 50 % A and 50 % E, the calculation would be: 50 % of the average sludge depth factor for A (or 1.0), plus 50 % of the average sludge depth factor for A (or 1.0), plus 50 % of the average sludge depth factor for E (or 16.0); that is:  $([0.5 \times 1.0 = 0.5] + [0.5 \times 16.0 = 8] = 8.5)$ , and the calculated site sludge depth would be a D. In the event that there are areas where it is apparent that deposits had been formed, but are no longer adhering to the part, the rating site is the closest point to the designated point which will eliminate the voided area from the 20-mm (0.79 in.) rating area.

(3) Add the total rating checks made for each line on the appropriate worksheets. These shall equal 10 or 20, depending on the part that is rated.

(4) Multiply the total rating checks made on each line by ten or five, respectively (refer to (3)), to obtain the percent covered by the rated sludge depth. The grand total shall equal 100 %.

(5) Convert the percent covered by the rated sludge depth at each location to a volume factor using the procedure shown in CRC Manual No. 20.

(6) Add the volume factors on each line to determine the total volume factor. Use CRC Manual No. 12 to convert the total volume factor to the original sludge merit rating.

13.2.2.2 If the test was run using Haltermann fuel, Batch TA192ILS15, adjust the original engine sludge merit rating by adding 2.175 to the original result and dividing by 1.192. The industry correction factor is the difference between the adjusted original result and the original result. Add the original result, the industry correction factor and lab severity adjustment to obtain the final result.

Renumber old 13.2.2.2 as 13.2.2.3

13.3.2.2 Determine original varnish ratings of all parts by comparison of the deposit on the rating location using the CRC Rust/Varnish/Lacquer Rating Scale for non-rubbing parts from CRC Manual 20. If the test was run using Haltermann fuel, Batch TA192ILS15, use fixed industry correction factors of 0.19 for average engine varnish and 0.54 for average piston varnish. For both average engine varnish and average piston varnish, add the original result, the industry correction factor and lab severity adjustment to obtain the final result.

## Supplemental Information, not to be incorporated into Test Method D6593



Sequence VG Plot of Fuel Program Results Versus Targets

AES Target, Merits



Sequence VG Plot of Fuel Program Results Versus Targets

## Supplemental Information, not to be incorporated into Test Method D6593



# Sequence VG

#### Supplemental Information, not to be incorporated into Test Method D6593



## Sequence VG

Plot of Fuel Program Results Versus Targets