



Test Monitoring Center

6555 Penn Avenue
Pittsburgh, PA 15206-4489
(412) 365-1000

L-60-1 Information Letter 02-1
Sequence Number 20
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ASTM consensus has not been obtained on this information letter. An appropriate ASTM ballot will be issued in order to achieve such consensus.

TO: L-60-1 Mailing List

SUBJECT: 1. CRC Rating Manual 20
2. Report Forms and Data Dictionary

1. At the April 10, 2002 L-60-1 Surveillance Panel meeting, the panel approved a motion to adopt CRC Manual 20 as a replacement for Manuals 12 and 14. Attached are revised Sections 11.3.3, 11.3.4, and 11.4.2 of Test Method D5704. The effective date is May 1, 2002.

2. The L-60-1 report forms and data dictionary have been removed from Test Method D5704. The TMC will continue to maintain and revise the L-60-1 report forms and data dictionary as done in the past. The current report forms and data dictionary may be downloaded from the ASTM Test Monitoring Center web page at <http://astmtmc.cmu.edu/> or can be obtained in hardcopy format from the TMC. Attached are revised Sections 10.7, 11.5, 15.1, A5, A6.1, A6.2, A6.3, A6.4 and A6.5. Annex A9 and Section 15.5 have been deleted. Section 15.6 has been revised and renumbered to Section 15.5. Sections 15.7 and 15.8 have been renumbered to Sections 15.6 and 15.7, respectively.

Jerrold L. Gropp
Chairman
L-60-1 Surveillance Panel

John L. Zalar
Administrator
ASTM Test Monitoring Center

Attachment

c: ftp://ftp.astmtmc.cmu.edu/docs/gears/l601/procedure_and_ils/il02-1.pdf

Distribution: Email

(Revises Test Method D 5704-00a)

10.7 Run the test at the conditions specified and without interruption for 50.0 ± 0.1 h. Terminate the test if it is interrupted for more than 5 min total during the test period. Record any downtime on Form 4 (Annex A5).

11.3.3 Subdivide the total ratable area into percentage areas of different sludge depths and ratings using CRC Manual No. 20 (utilizing the sludge scale and sludge gage, which are included in the manual) as a guide. Calculate and record the sludge volume factor for each subdivided area. The total volume factor for a gear face is determined by adding the individual area volume factors for that gear face.

11.3.4 Convert the total volume factor for each gear face to a merit rating using CRC Manual No. 20.²⁴ Report this rating to two decimal places.

11.4.2 Using the current CRC Manual No. 20 as a guide, subdivide the ratable area on each gear face into percentage areas of different carbon depths and varnish intensities.²⁴ Use the CRC Rust/Varnish/Lacquer Rating Scale for Non-Rubbing Parts in CRC Manual No. 20 to determine varnish rating factors for each subdivision containing varnish deposits.

11.5 Using Form 5 of Annex A5 for calculating and reporting carbon/varnish and sludge rating measurements.

15.1 For reference oil tests, the standardized report form set and data dictionary for reporting the test results and for summarizing the operational data are required. The final test report will include a complete report form package. See Annex A5 for information on obtaining report forms and data dictionary.

The current Section 15.5 is deleted and a new Section 15.5 (which is the current Section 15.6 with revised wording) has been added below.

15.5 *Deviations from Test Operational Limits*—Report all deviations from specified test operational limits on Form 4 of Annex 5 under Other Comments.

Section 15.7 renumbered to Section 15.6

Section 15.8 renumbered to Section 15.7

A6.1 *Viscosity Increase*—Adjust end of test (EOT) viscosity increase results for industry severity. Transform EOT viscosity increase by taking the natural log of the viscosity increase result. Record the transformed viscosity increase result on the Non-reference Oil Ratings Summary (Form 2, Annex A5). Add -0.1178 to the transformed results and record this value on the Non-reference Oil Ratings Summary page in the Corrected Transformed Results space. Convert the corrected viscosity increase result to original units. Record this value in the Final Original Unit Result Space.

A6.2 *Pentane Insolubles*—Adjust EOT pentane insolubles results for industry severity. Transform EOT pentane insolubles by taking the natural log of the pentane insolubles result. Record the transformed pentane insolubles result on the Non-reference Oil Ratings Summary (Form 2, Annex A5). Add -0.4445 to the transformed results and record this value on the Non-reference Oil Ratings Summary page in the Corrected Transformed Results space. Convert the corrected pentane insolubles result to original units. Record this value in the Final Original Unit Result Space.

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A6.3 *Toluene Insolubles*—Adjust EOT toluene insolubles results for industry severity. Transform EOT toluene insolubles by taking the natural log of the toluene insolubles result. Record the transformed toluene insolubles result on the Non-reference Oil Ratings Summary (Form 2, Annex A5). Add 0.0000 to the transformed results and record this value on the Non-reference Oil Ratings Summary page in the Corrected Transformed Results space. Convert the corrected toluene insolubles result to original units. Record this value in the Final Original Unit Result Space.

A6.4 *Average Carbon/Varnish*—Adjust EOT average carbon/varnish results for industry severity. Transform EOT average carbon/varnish by taking the natural log of the quantity of the average carbon/varnish result divided by ten minus the average carbon/varnish result. Record the transformed average carbon/varnish result on the Non-reference Oil Ratings Summary (Form 2, Annex A5). Add 0.0000 to the transformed results and record this value on the Non-reference Oil Ratings Summary page in the Corrected Transformed Results space. Convert the corrected average carbon/varnish result to original units. Record this value in the Final Original Unit Result Space.

A6.5 *Average Sludge*—Adjust EOT average sludge results for industry severity. Transform EOT average sludge by taking minus the natural log of ten minus the average sludge result. Record the transformed average sludge result on the Non-reference Oil Ratings Summary (Form 2, Annex A5). Add 0.0000 to the transformed results and record this value on the Non-reference Oil Ratings Summary page in the Corrected Transformed Results space. Convert the corrected average sludge result to original units. Record this value in the Final Original Unit Result Space.

Delete Annex A9

(Revises Test Method D 5704-00a)

A5. L-60-1 TEST REPORT FORMS and DATA DICTIONARY

The required report forms and data dictionary are available on the ASTM Test Monitoring Center web page at <http://astmtmc.cmu.edu/> or can be obtained in hardcopy format from the TMC.

Form 0	Test Report Cover
Form 1	Reference Test Result Summary Page
Form 2	Non-Reference Test Result Summary Page
Form 3	Operational Summary
Form 4	Page Lost Time and Comments Sheet
Form 5	Gear Rating
Form 6	Operational Validity Summary