Test Monitoring Center
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L-33 Information Letter No. 02-4
Sequence No. 18
June 26, 2002

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

TO: L-33 Mailing List

SUBJECT: 1. Severity Adjustments
2. Weighting Factors

1. At the June 11, 2002 L-33 Surveillance Panel meeting, the panel approved a motion to adopt the use of severity adjustments. Attached are replacement pages for the L-33 test procedure (STP512A) with a new Section 12.7 and a new Annex A5. This change is effective June 17, 2002.

2. At the June 11, 2002 L-33 Surveillance Panel meeting, the panel approved a motion to adopt new rust/corrosion weighting factors. Attached are replacement pages for the L-33 test procedure (STP512A) with a revised Section 12.4 and a new Annex A6. This change is effective June 17, 2002.

Dale Smith
Chairman
L-33 Surveillance Panel

John L. Zalar
Administrator
ASTM Test Monitoring Center

Attachment

c: ftp://ftp.astmtmc.cmu.edu/docs/gears/l33/procedure_and_ils/il02-4.pdf

Distribution: Email

12.3 The following areas will be rated as described above:

Area Number	Description
1	Differential case pinion contact thrust surfaces
2	Differential case side gear thrust surface and Hub I.D.
3	Differential gears (side gears) thrust surface and Hub O.D.
4	Axle housing cover plate without the plug
5	Ring gear (Drive gear) tooth surfaces
6	Drive pinion tooth surfaces
7	Drive pinion roller surfaces
8	Drive pinion cup (total raceway length)
9	Differential case roller surfaces
10	Differential case cup (total raceway length)

12.4 By filling in values on the rating sheet then applying the appropriate weighting values shown in Annex A6, a final deposit merit value will be obtained. Note the presence, location and amount of additional deposits, i.e., stain and sludge or other, in the" Remarks" section on the rating sheet. Also note rust in non-rated areas in the "Remarks" section.

12.5 For a valid rating, the test shall be rated by an individual who has participated in an ASTM sponsored, high volume gear rater calibration workshop within the previous 12 months.

12.6 Test Validity: The test is determined to be operationally valid if the percent deviation of the critical operating parameters and number of downtimes are within the limits specified and defined in Annex A 2.

12.7 Severity Adjustment – Calculate severity adjustments (SA) for results of non-reference gear oil tests. Use the control chart technique, referenced in Annex A5, for determining the laboratory bias for rust or corrosion deposits. Enter the adjustments on Form 1 (Annex A3)

13. FINAL TEST REPORT

Report all items using the current report format which is available from the Test Monitoring Center. Annex A3 lists the required forms for reporting the test data.

14. PRECISION AND BIAS

14.1 *Precision:*

Test precision is established on the basis of reference oil test results (for operationally valid tests) monitored by the ASTM Test Monitoring Center.

A5. L-33 TEST CONTROL CHART TECHNIQUE FOR DEVELOPING AND APPLYING SEVERITY ADJUSTMENTS (SA)

Refer to *Lubricant Test Monitoring System*, available from the ASTM TMC, for information on the control chart technique and application of severity adjustments.

A6. L-33 RUST/CORROSION WEIGHTING FACTORS

Differential Case Location	Area	Weighting Factors
At Pinion Contact	1	.087
Differential Gear Contact	2	.193
Differential Gears (Side)	3	.094
Axle Housing Cover	4	.169
Drive Gear (Ring)	5	.079
Drive Pinion	6	.079
Drive Pinion Roller	7	.051
Drive Pinion Cups	8	.083
Differential Case Roller	9	.071
Differential Case Cups	10	.094