Test Monitoring Center
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(412) 365-1000

MEMORANDUM: 03-082

DATE: October 3, 2003

TO: Dale Smith, Chairman, L-33-1 Surveillance Panel

FROM: Donald Lind

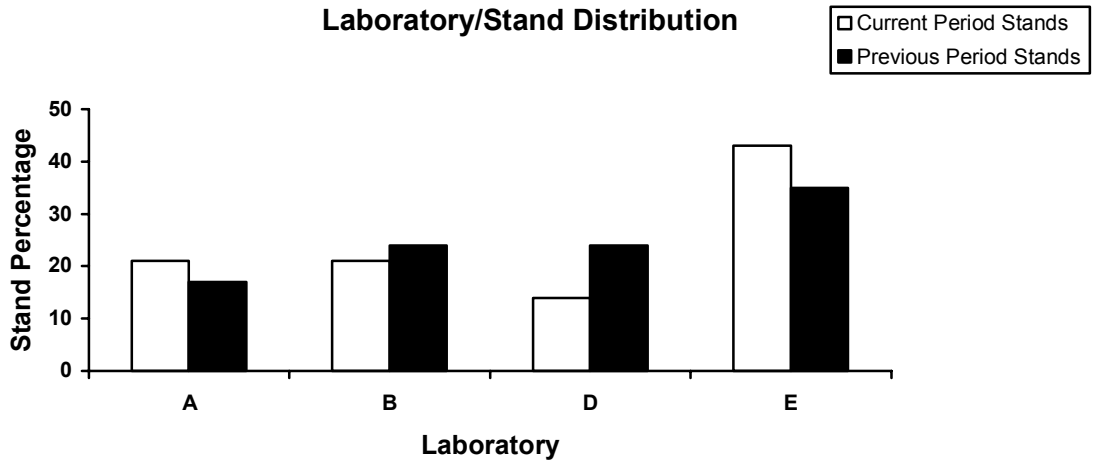
SUBJECT: L-33-1 Reference Test Status from April 1, 2003 through September 30, 2003

The following is a summary of the L-33-1 reference oil tests that were reported to the Test Monitoring Center during the period April 1, 2003 through September 30, 2003.

Lab and Stand Summary

	Reporting Data	Calibrated as of 9/30/03
Number of Laboratories	4	4
Number of Storage Boxes	14	10

The following chart shows the laboratory/stand distribution:

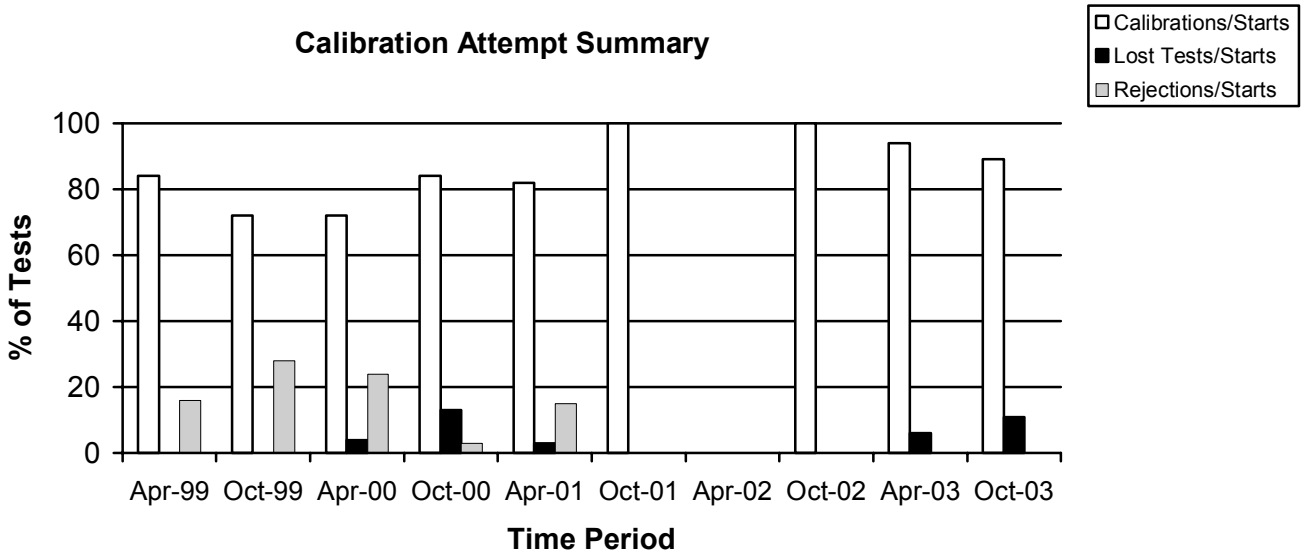


The following summarizes the status of the reference oil tests reported to the TMC:

	TMC Validity Codes	No. of Tests
Operationally and Statistically Acceptable	AC	17
Failed Acceptance Criteria	OC	0
Operationally Invalid (Lab Judgement)	LC	2
Operationally Invalid (Lab / TMC Judgement)	RC	0
Aborted	XC	0
Total		19

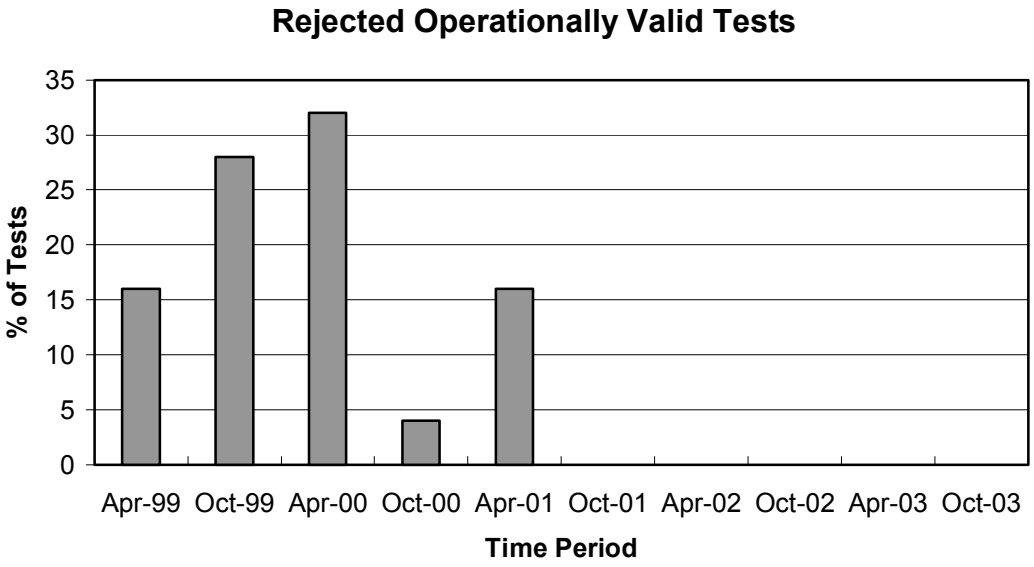
There were no additional tests conducted this report period.

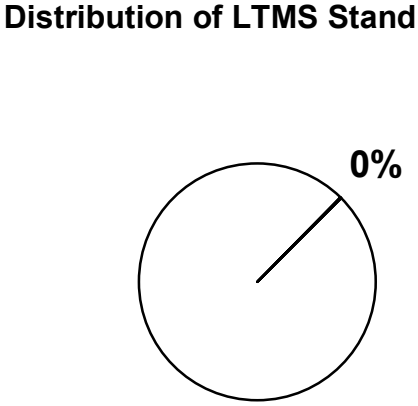
Calibrations per start, lost tests per start and rejection per start rates are summarized below:



The calibration per start rate has decreased slightly when compared to the previous period. The lost test per start rate has increased slightly with respect to the previous period and the rejected per start rate has remained the same with respect to the previous period.

There were no statistically rejected tests this report period.

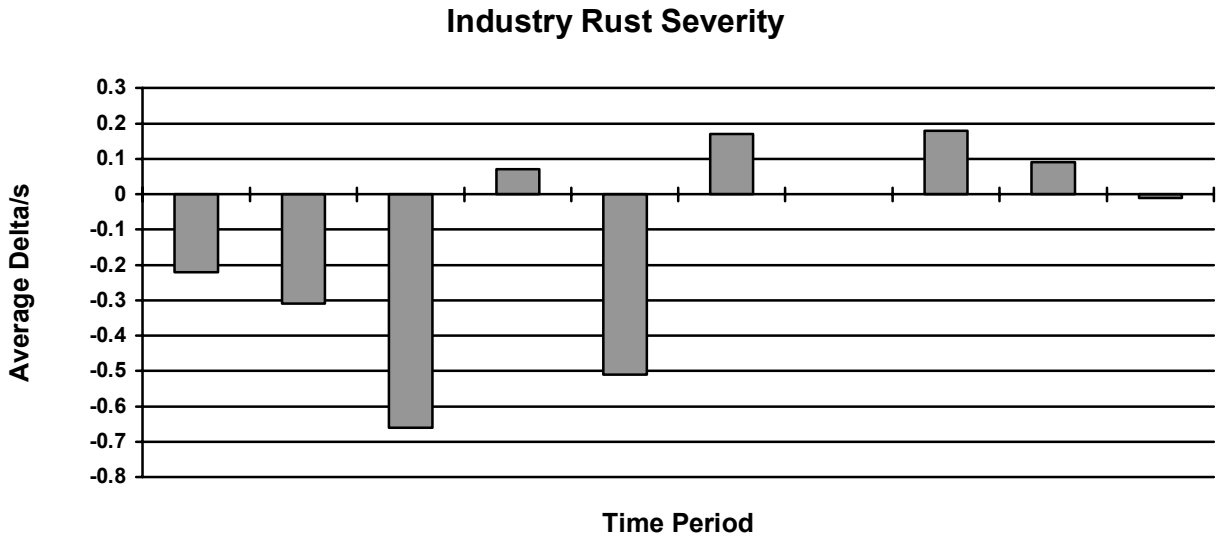




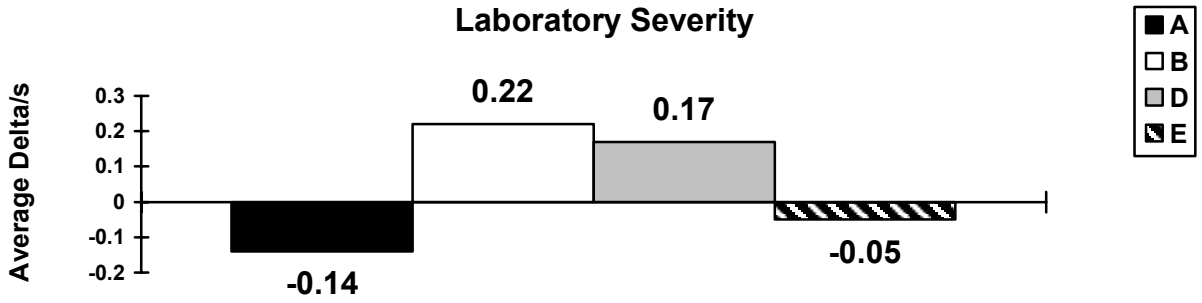
There were no tests that failed the acceptance criteria this report period.

Severity and Precision

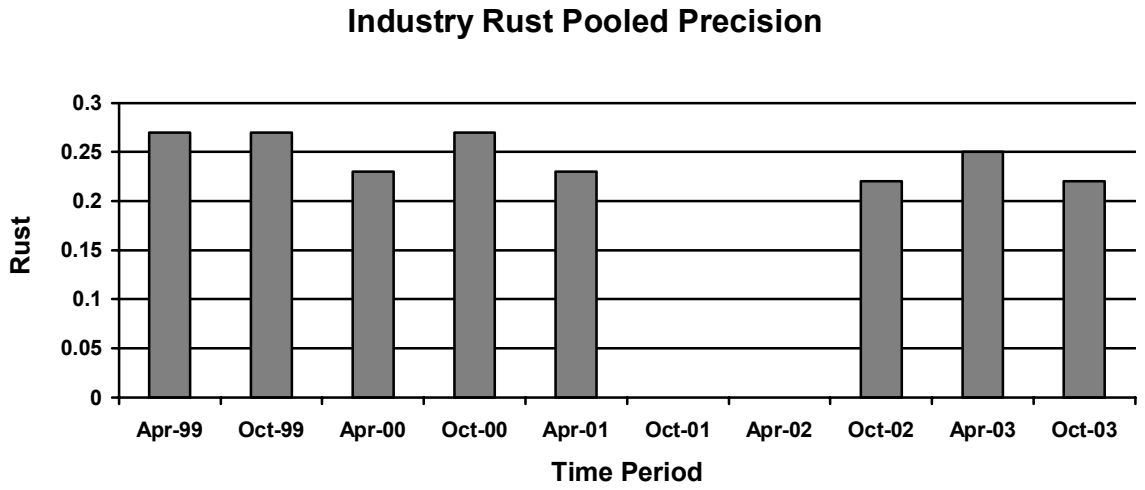
A total of 17 operationally valid test results were reported this period. The mean delta/s for this period is -0.01 severe, which equates to 0.00 merits. Of the 17 operationally valid tests reported this period, 9 were conducted on V99.1 hardware (-0.02 severe) and 8 on V01.1 (0.01 mild). Severity for the 17 operationally valid test results is on target as indicated in the chart below and Figure 1. The comparison with previous periods is shown below:



Shown below is a summary of the average rust Δ/s for all laboratories reporting data this report period.



The industry precision estimate for this report period is 0.22 merits (pooled s). Comparisons with previous periods are shown below:



Industry Control Charts

Figure 1 is the Industry EWMA severity and precision chart of tests completed through September 30, 2003. There were no EWMA severity or precisions alarms triggered this report period.

TMC Lab Visits

There were two lab visits conducted this report period. During the lab visits three discrepancies were noted. All three discrepancies were at the same lab. The discrepancies were; the start time for the warm-up section of the test was not being recorded as per Section 11.1.3 of the test procedure, the pressure for cleaning solvent was at 60 psi not 30 psi as per Section 9.2.1.4, the differential housing bearing caps were not torqued to 35 to 50 lbf-ft as per Section 9.2.2.2.

Information Letters

There were two information letters issued this report period. Information Letter 03-1, Sequence Number 2 was issued on May 7, 2003 and Information Letter 03-2, Sequence Number 3 was issued on September 16, 2003. Items changed with these information letters are documented in the L-33-1 timeline (Table 1).

Reference Oils

The following is a listing of reference oils with the expected number of tests remaining at the Test Monitoring Center and at the testing laboratories. L-33-1 reference oils are shipped in quantities of 1 gallon per test.

Reference Oil	Lab A	Lab B	Lab D	Lab E	TMC
123	3	5	5	7	14
123-2	2	4	5	5	253
151-3	6	6	5	7	*

* 239 Gallons (Multiple test area usage)

Attachments

c: L-33-1 Surveillance Panel
ftp://www.astmtmc.cmu.edu/docs/gears/l331/semiannualreports/l331-10-2003.pdf
J. L. Zalar
F. M. Farber

Distribution: Email

Listing of Tables and Figure Included as Part of This Report to the L-33-1 Surveillance Panel

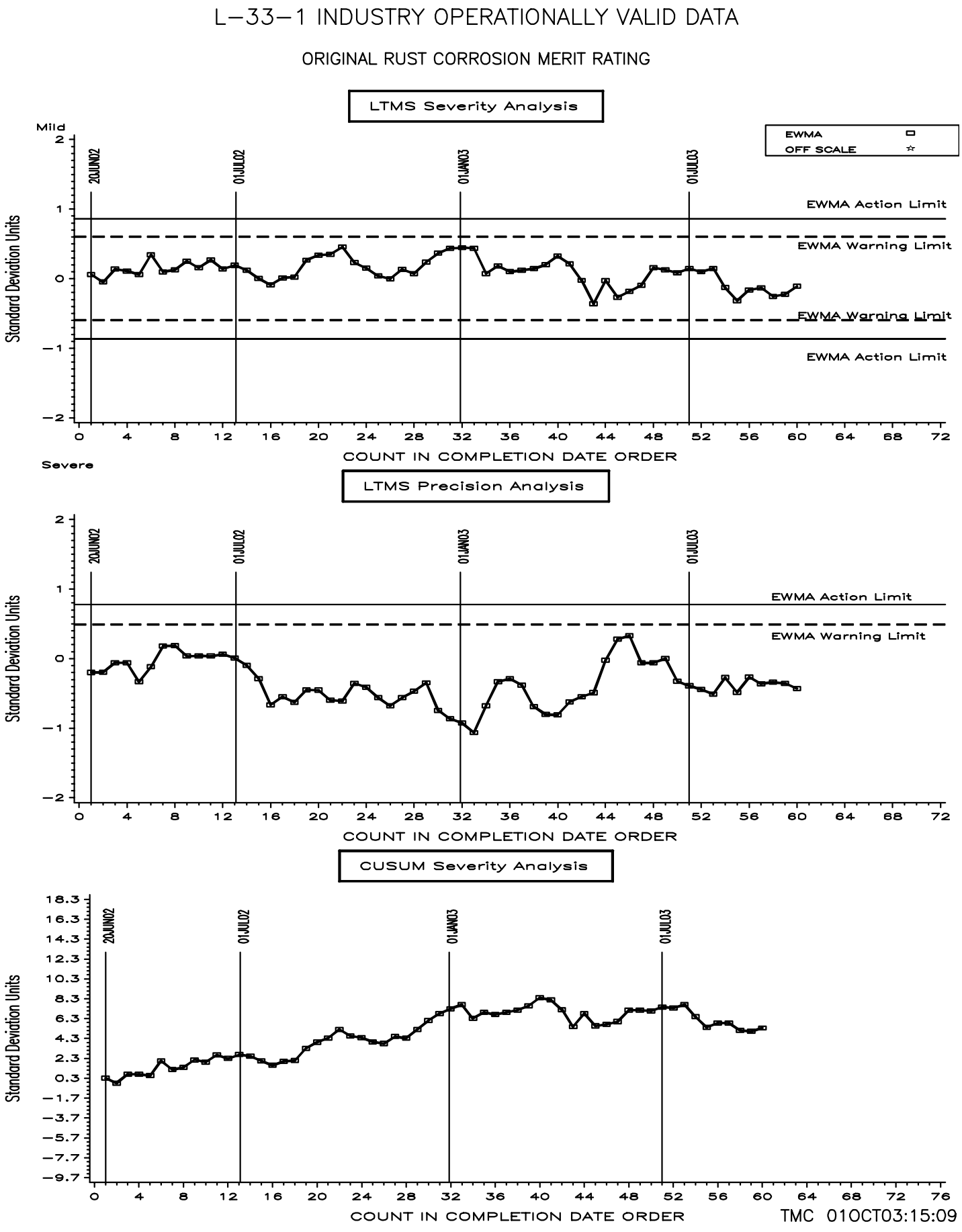
Table 1 is the L-33-1 Industry Timeline

Figure 1 is the Industry Control Chart for L-33-1 Rust

Table 1
L-33-1 Industry Timeline

Effective Date	Topic	Information Letter Number
20030106	New L-33-1 test procedure	02-1
20030507	Revised test unit assembly procedure	03-1
20030507	Revised specification for the abrasive blasting cabinet regulator	03-1
20030507	Revised electric fan motor RPM specification	03-1
20030507	Non-interpretable tests	03-1
20030507	Revision to light rust definition	03-1
20030507	Editorial changes	03-1
20030916	Bearing replacement	03-2
20030916	Addition of Dana bulletin No. 5304-2	03-2
20040101	Change in solvent specification	03-2

FIGURE 1


L–33–1 INDUSTRY OPERATIONALLY VALID DATA
ORIGINAL RUST CORROSION MERIT RATING
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
20JUN02
01JUL02
01JAN03
01JUL03
EWMA Action Limit
EWMA Warning Limit
EWMA Warning Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
CUSUM Severity Analysis
TMC 01OCT03:15:09