A Program of ASTM International

Test Monitoring Center

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412-365-1000

MEMORANDUM: 09-046

DATE: November 4, 2009

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

FROM: Donald Lind

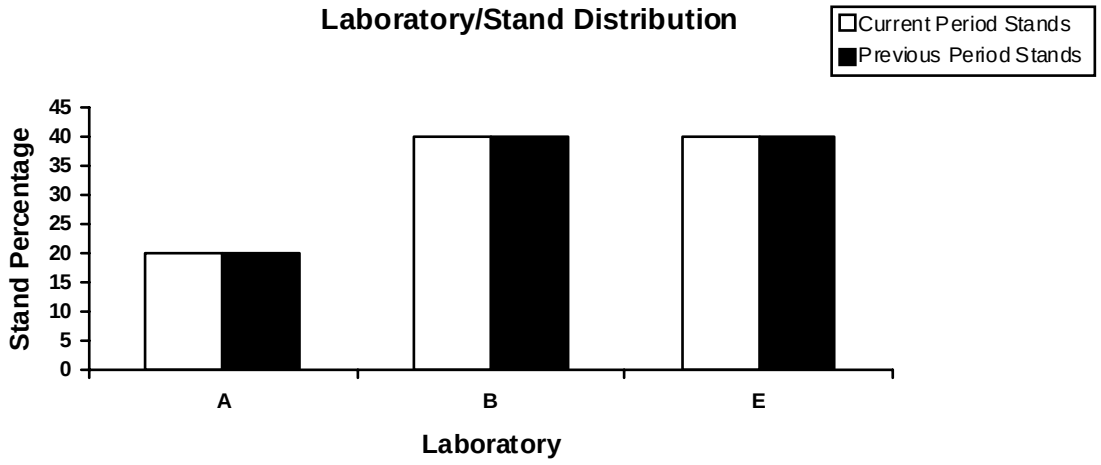
SUBJECT: L-33-1 Reference Test Status from April 1, 2009 through September 30, 2009

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, 2009 through September 30, 2009.

Lab and Stand Summary

	Reporting Data	Calibrated as of 9/30/09
Number of Laboratories	3	3
Number of Storage Boxes	5	5

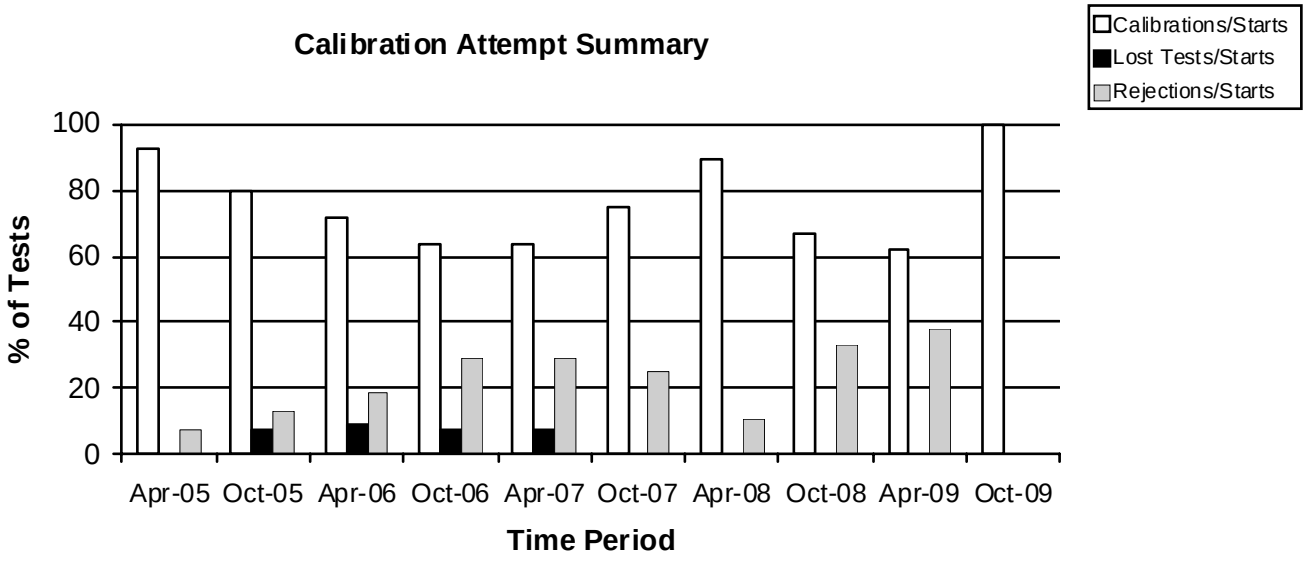
The following chart shows the laboratory/stand distribution:



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

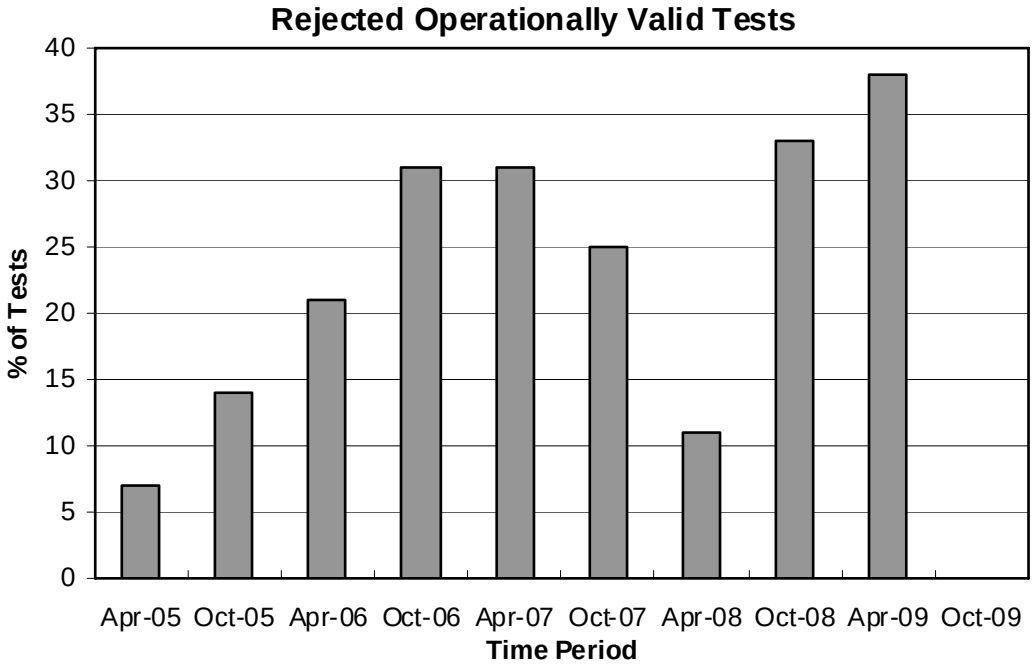
	TMC Validity Codes	No. of Tests
Operationally and Statistically Acceptable	AC	7
Failed Acceptance Criteria	OC	0
Operationally Invalid (Lab Judgement)	LC	0
Operationally Invalid (Lab / TMC Judgement)	RC	0
Aborted	XC	0
Total		7

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



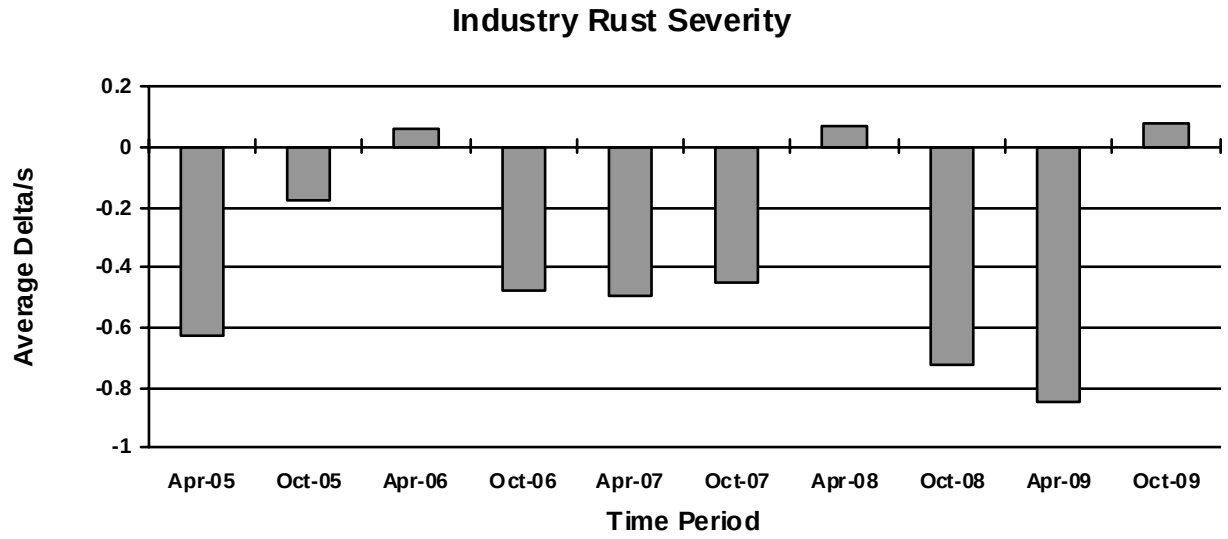
The calibration per start rate has increased with respect to the previous period. The rejected per start rate has decreased with respect to the previous period and the lost test per start rate has remained the same with respect to the previous period.

There were no statistically rejected operationally valid tests reported this report period. The statistically rejected operationally valid test rate has decreased with respect to the previous report period.

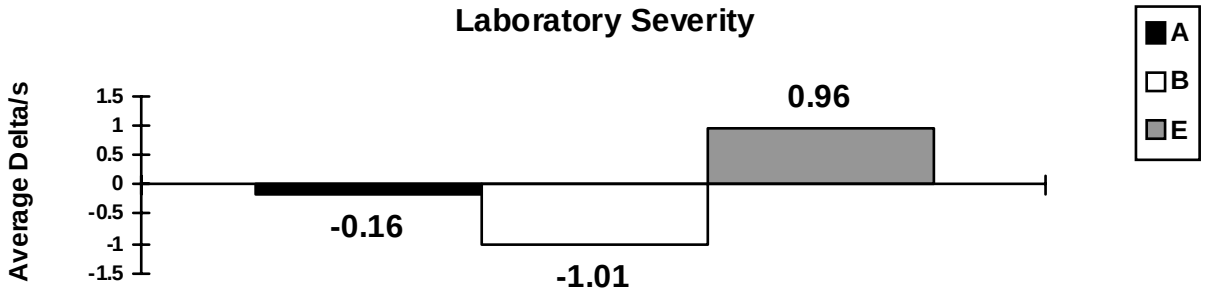


Severity and Precision

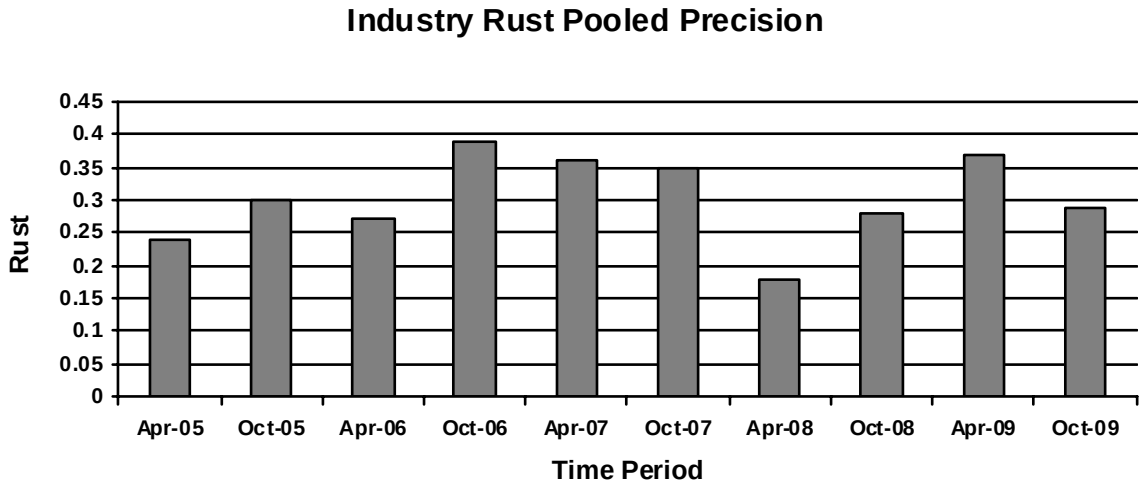
A total of 7 operationally valid test results were reported this period. The mean delta/s for this period is 0.08 mild, which equates to 0.02 merits. All of the 7 operationally valid tests reported this period were conducted on V01.1 hardware. Severity for the 7 operationally valid test results is slightly mild of target as indicated in the chart below and Figure 1.



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 0.29 merits (pooled s). Precision this report period has improved compared to previous period as shown below:



Industry Control Charts

Figure 1 is the Industry EWMA severity and precision charts of tests completed through September 30, 2009. Figure 2 is the Industry EWMA severity and precision charts of the last 30 tests completed through September 30, 2009. There were no industry EWMA severity alarms and two industry EWMA precision warning alarms triggered this report period. The alarms were not caused by any one lab, stand or oil.

TMC Lab Visits

There were two lab visits conducted this report period. There was one discrepancy to report. Incorrect severity adjustments were being applied to candidate tests.

Information Letters

There were no information letters issued this report period.

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 E	TMC
123-2	2	2	3	206
151-3	4	0	0	*
155	3	2	4	**

* 0 Gallons (Multiple test area usage)
** 226 Gallons (Multiple test area usage)

Attachments

c: L-33-1 Surveillance Panel
F. M. Farber
ftp://ftp.astmtmc.cmu.edu/docs/gear/l331/semiannualreports/l331-10-2009.pdf

Distribution: Email

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

Table 1 is the L-33-1 Industry Timeline.

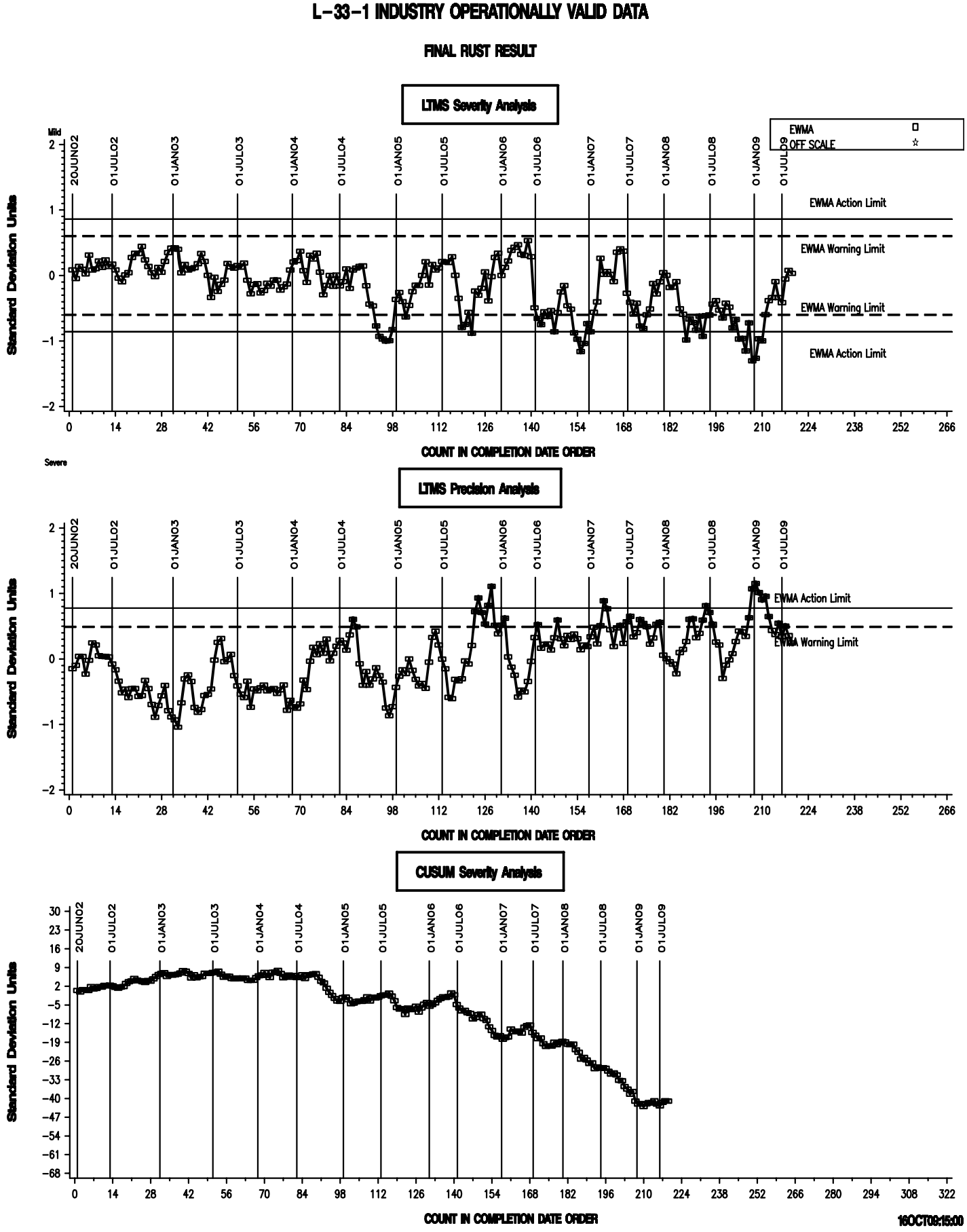
Figure 1 is the Industry Control Chart for L-33-1 Rust.

Figure 2 is the Industry Control Chart of the last 30 test results 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	Tests run on non-calibrated stands are deemed non-interpretable tests	03-1
20030507	Revision to light rust definition	03-1
20030507	Editorial changes	03-1
20030916	Addition of bearing replacement guidelines	03-2
20030916	Addition of Dana Bulletin No. 5304-2 for Drive Pinion Shaft Installation	03-2
20040101	Change in cleaning solvent specification	03-2
20050221	Revised Solvent Specification	05-1
20050221	Revised Cover Plate Guide Pin Requirement	05-1
20050221	Updated Test Precision	05-1
20050221	Donated Reference Oil Test Programs/Calibration Period Length Adjustment	05-1
20050221	Revised Footnote 2	05-1
20060207	Axle Cover Rating Template Serialization	06-1
20060721	Housing Cover Gasket Supplier Name and Address Change	06-2
20061009	Aluminum Differential Case, Area 2, Hub Inside Diameter Rating Template	06-3
20061009	Editorial changes	06-3
20070214	Revised Area 1 Rating Surface Description	07-1
20070214	Editorial Changes to Figures A1.8, A1.14, and A1.15	07-1
20070411	Revised Wording for Downtime Occurrences	07-2
20070411	Editorial Changes to Sections A2.2.1 and A2.2.2	07-2
20070525	Rating Procedure Using Aluminum Differential Case, Area 2, Hub Inside Diameter Rating Template	07-3
20071114	Revised Start-up Procedure	07-4
20080114	Revised Section 11.1.6.1	08-1
20090323	Revision to Percent Deviation Calculation	09-1

FIGURE 1


L-33-1 INDUSTRY OPERATIONALLY VALID DATA
FINAL RUST RESULT
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Warning Limit
EWMA Warning Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
EWMA Warning Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
16OCT09:15:00

L-33-1 INDUSTRY OPERATIONALLY VALID DATA

FINAL RUST RESULT