



Test Monitoring Center

Carnegie Mellon University
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<http://astmtmc.cmu.edu>
412-365-1000

MEMORANDUM: 09-066

DATE: December 3, 2009

TO: Leonard Orzech,
Chairman, Ball Rust Test Surveillance Panel

FROM: Michael T. Kasimirsky *Michael T. Kasimirsky*

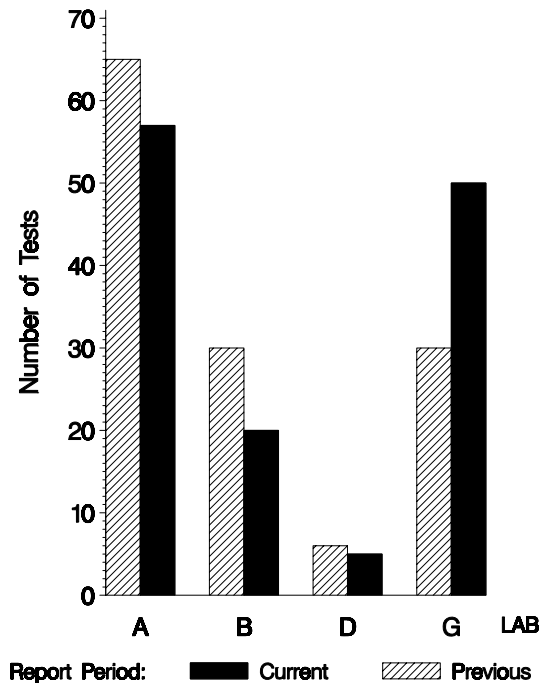
SUBJECT: BRT Testing from April 1, 2009 through September 30, 2009

A total of 132 BRT tests were reported to the Test Monitoring Center during the period from April 1, 2009 through September 30, 2009. Following is a summary of testing activity this period.

	Reporting Data
Number of Labs	4

Tests reported this period were distributed as shown below:

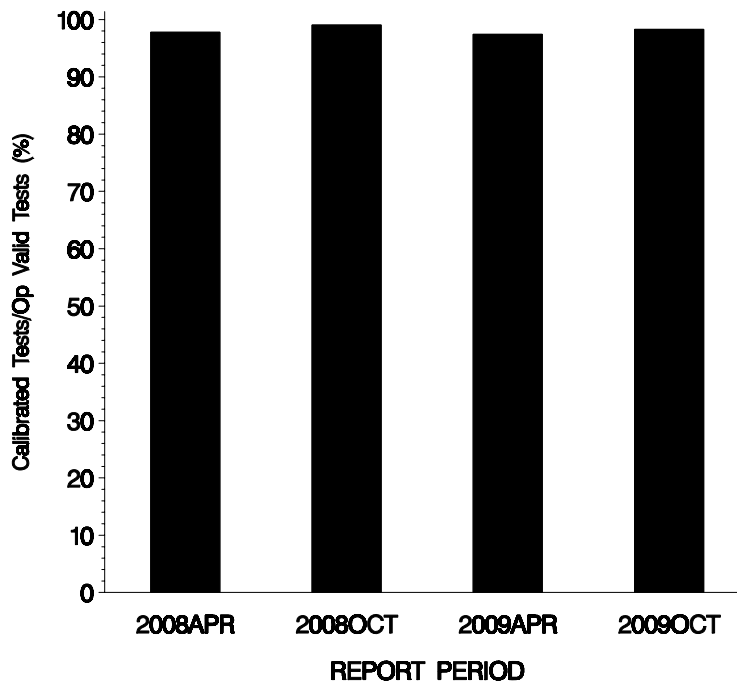
NUMBER OF TESTS REPORTED BY LAB AND REPORT PERIOD



Test Distribution by Oil and Validity

						Totals	
		1006	81	82	82-1	Last Period	This Period
Accepted for Calibration	AC	30	61	24	0	102	115
Hardware Qualification Run	NI	0	0	0	4	0	4
Rejected Mild	OC	0	0	1	0	1	1
Rejected Severe	OC	0	0	1	0	0	1
Operationally Invalid (lab)	LC	3	5	2	0	1	10
Operationally Invalid (lab/TMC)	RC	0	0	0	0	0	0
Aborted Calibration	XC	0	1	0	0	1	1
Total		33	67	28	4	105	132

**OPERATIONALLY VALID TESTS
MEETING ACCEPTANCE CRITERIA**



The above chart shows the percentage of accepted operationally valid tests. Two tests, at different labs, failed to meet the acceptance criteria this period; one mild and one severe, both ran oil 82.

Lost Tests per Start by Lab and Oil

Lab	1006			81			82			82-1			Total		
	Lost	Starts	%	Lost	Starts	%	Lost	Starts	%	Lost	Starts	%	Lost	Starts	%
A	0	14	0	1	30	3	0	13	0	0	0	0	1	57	2
B	0	5	0	0	11	0	1	4	25	0	0	0	1	20	5
D	0	2	0	0	2	0	0	1	0	0	0	0	0	5	0
G	3	12	25	5	24	21	1	10	10	0	0	0	9	46	20
Total	3	33	9	5	67	7	1	28	4	0	0	0	11	128	9

Lost tests are those that were aborted or operationally invalid.

Causes for Lost Tests

		Oil			Validity			Loss Rate		
Lab	Cause	1006	81	82	LC	RC	XC	Lost	Starts	%
A	Air Compressor Failure		●		●			1	57	2%
B	Acid Delivery Failure			●	●			1	20	5%
G	Wrong Test Length	●			●			1	46	2%
	Stalled Acid Pump	●			●			1		2%
	Airflow Problem	●	●		●			5		11%
	Variance Too High		●	●	●		●	2		4%
	Lost	3	6	2	10	0	1			
	Starts	33	67	28	128	128	128			
	%	9%	9%	7%	8%	0%	0.8%			

Average Δ/s by Lab

Lab	n	AGVYI
A	56	0.356
B	19	0.979
D	5	1.491
G	37	-0.177
Industry	117	0.337

Individual test results can be found on the TMC Web Page at the following link:

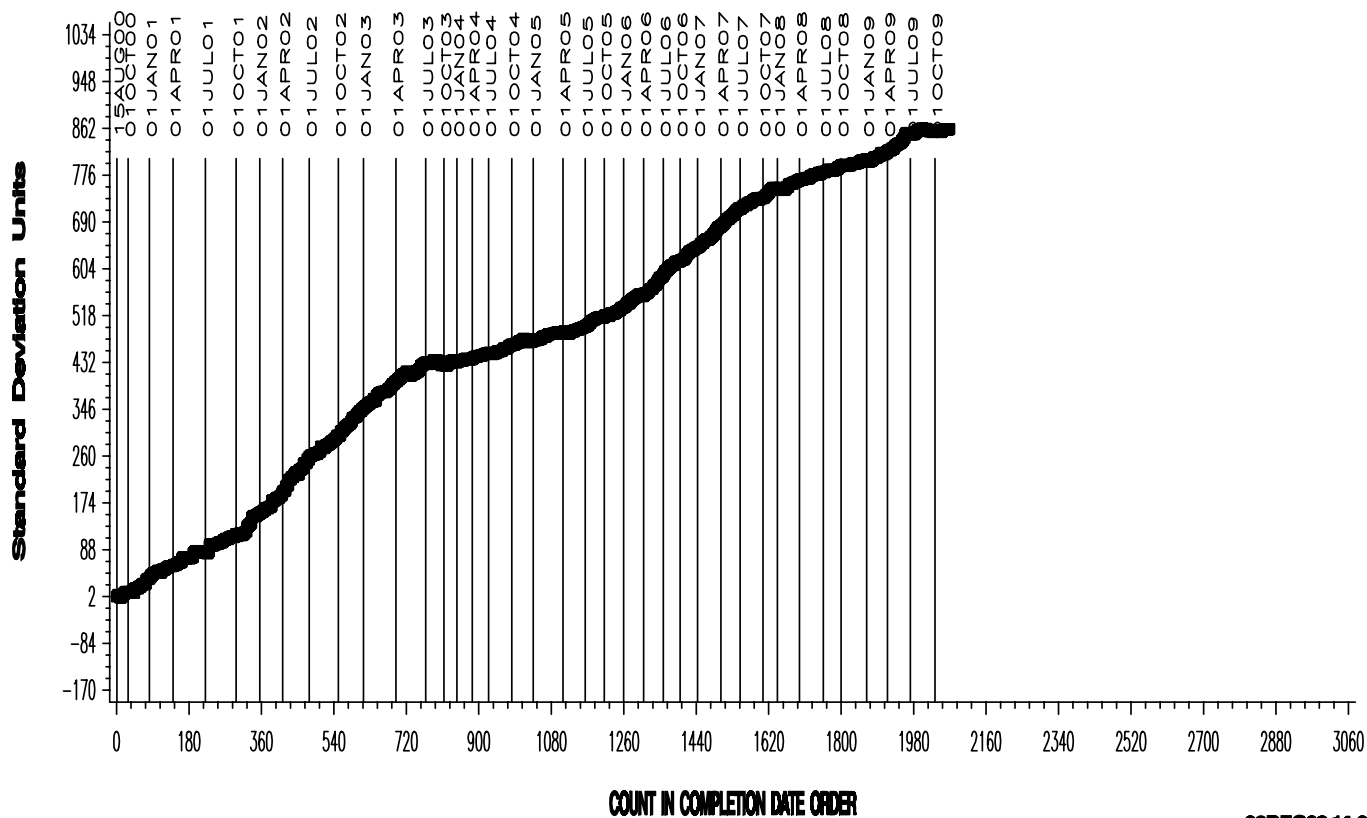
<ftp://ftp.astmtmc.cmu.edu/refdata/bench/brt/data/>

CUSUM PLOT

BALL RUST TEST INDUSTRY OPERATIONALLY VALID DATA

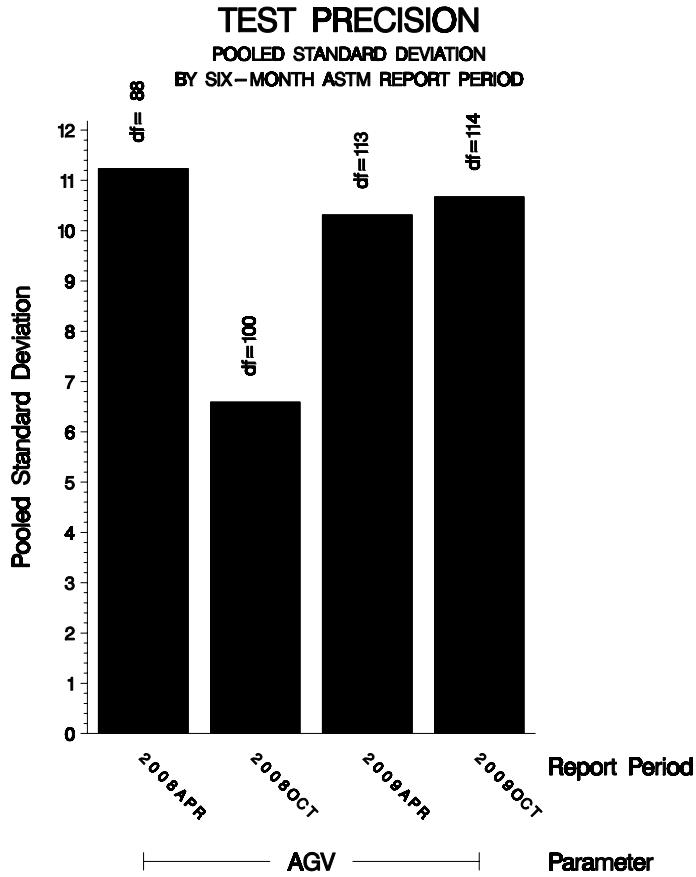
REFERENCE AVERAGE GRAY VALUE

CUSUM Severity Analysis



POOLED S:

Pooled s for this period is 10.67. Shown below is a bar chart comparing the pooled s values for AGV over the last four report periods.



STATUS OF REFERENCE OIL SUPPLY:

At the end of this report period, the testing oil supply stood as outlined in the following table:

Oil	Samples @ Labs	@ TMC	
		Samples (30 mL)	Gallons
1006	23	5000	40.0
81	40	1675	13.4
82	26	900	7.2
82-1	8	1225	9.8
Total	97	8800	70.4

INFORMATION LETTERS:

No information letters were issued this period.

SUMMARY

- Over the course of this report period, AGV severity as measured by cusum plotting continued the mild trend that has existed since the inception of the test.
- Precision as measured by pooled standard deviation is comparable to previous periods.

MTK/mtk/astm1009.doc/mem09-066.mtk.doc

c: F. M. Farber

J. A. Clark

BRT Surveillance Panel

<ftp://ftp.astmtmc.cmu.edu/docs/bench/brt/semiannualreports/brt-10-2009.pdf>

Distribution: email