



# Test Monitoring Center

Carnegie Mellon University  
6555 Penn Avenue, Pittsburgh, PA 15206, USA

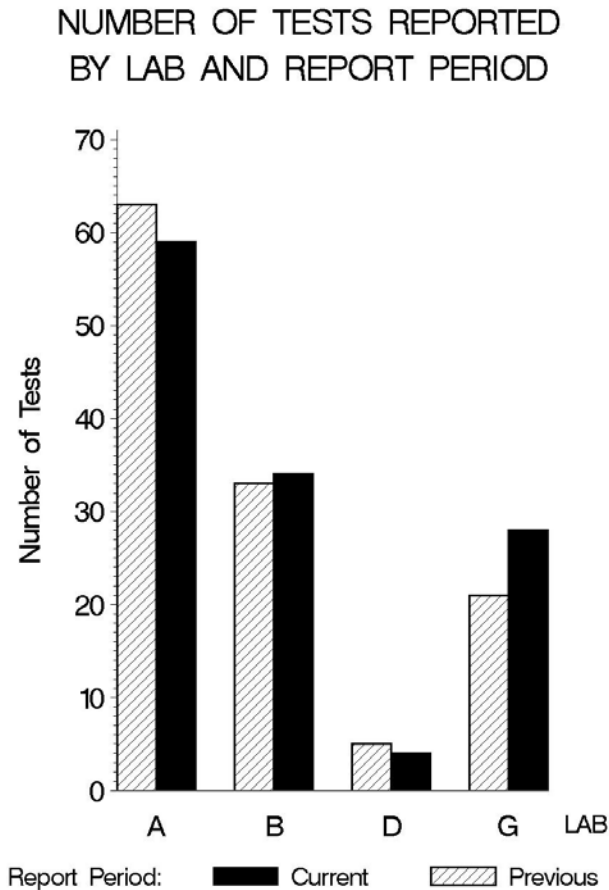
<http://astmtmc.cmu.edu>  
412-365-1000

MEMORANDUM: 12-036  
DATE: November 16, 2012  
TO: Leonard Orzech,  
Chairman, Ball Rust Test Surveillance Panel  
FROM: Michael T. Kasimirsky *Michael T. Kasimirsky*  
SUBJECT: BRT Testing from April 1, 2012 through September 30, 2012

A total of 125 BRT tests were reported to the Test Monitoring Center during the period from April 1, 2012 through September 30, 2012. Following is a summary of testing activity this period.

	Reporting Data
Number of Labs	4

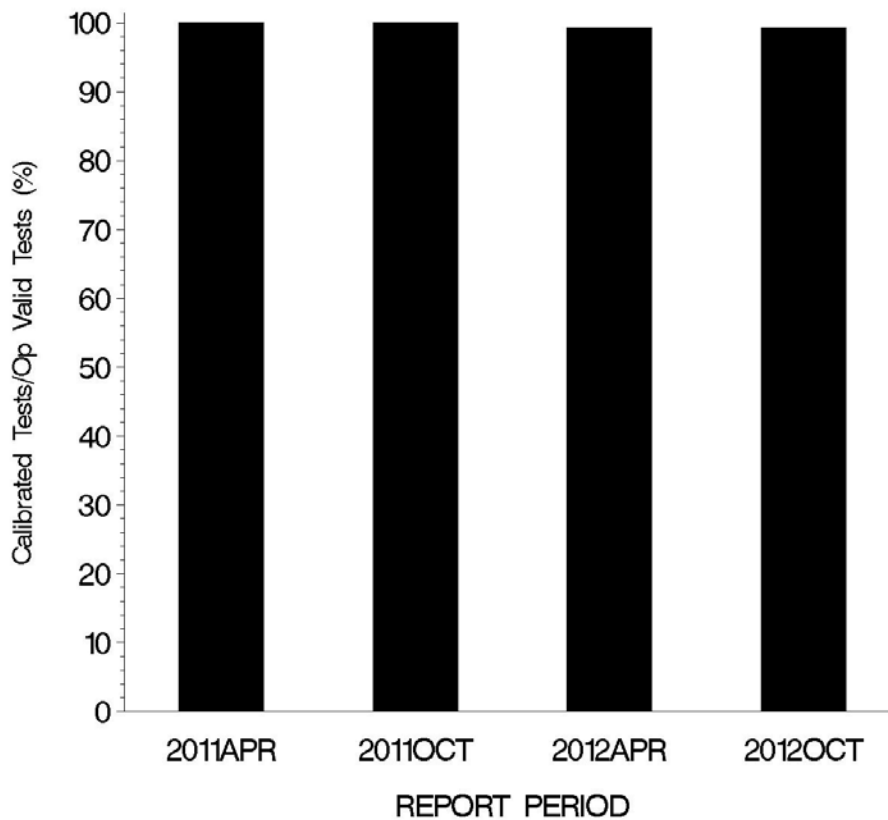
Tests reported this period were distributed as shown below:



**Test Distribution by Oil and Validity**

		1006	81	82	Totals	
					This Period	Last Period
Accepted for Calibration	AC	41	49	31	121	117
Hardware Qualification Run	NI	0	0	0	0	0
Unacceptable for Calibration	OC	0	0	1	1	1
Operationally Invalid (lab)	LC	0	0	0	0	2
Operationally Invalid (lab/TMC)	RC	0	0	0	0	1
Aborted Calibration	XC	2	1	0	3	1
<b>Total</b>		<b>43</b>	<b>50</b>	<b>32</b>	<b>125</b>	<b>122</b>

**OPERATIONALLY VALID TESTS  
MEETING ACCEPTANCE CRITERIA**



The above chart shows the percentage of accepted operationally valid tests. One test failed to meet the acceptance criteria this period.

Lost Tests per Start by Lab and Oil

Lab	1006			81			82			Total		
	Lost	Starts	%	Lost	Starts	%	Lost	Starts	%	Lost	Starts	%
A	0	20	0	0	23	0	0	16	0	0	59	0
B	1	11	9	1	16	6	0	7	0	2	34	6
D	0	1	0	0	2	0	0	1	0	0	4	0
G	1	11	9	0	9	0	0	8	0	1	28	4
Total	2	43	5	1	50	2	0	32	0	3	125	2

Lost tests are those that were aborted or operationally invalid. Three tests were lost this period.

Causes for Lost Tests

Lab	Cause	Oil			Validity			Loss Rate		
		1006	81	82	LC	RC	XC	Lost	Starts	%
G	Power Failure	•					•	1	125	1
B	Sample Discarded	•					•	1	125	1
	Shaker Table Malfunction		•				•	1	125	1
	Lost	2	1	0	0	0	3			
	Starts	43	50	32	125	125	125			
	%	5	2	0	0	0	2			

Average  $\Delta/s$  by Lab

Lab	n	AGVYI
A	59	0.468
B	32	0.663
D	4	1.104
G	27	-0.522
Industry	122	0.321

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

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

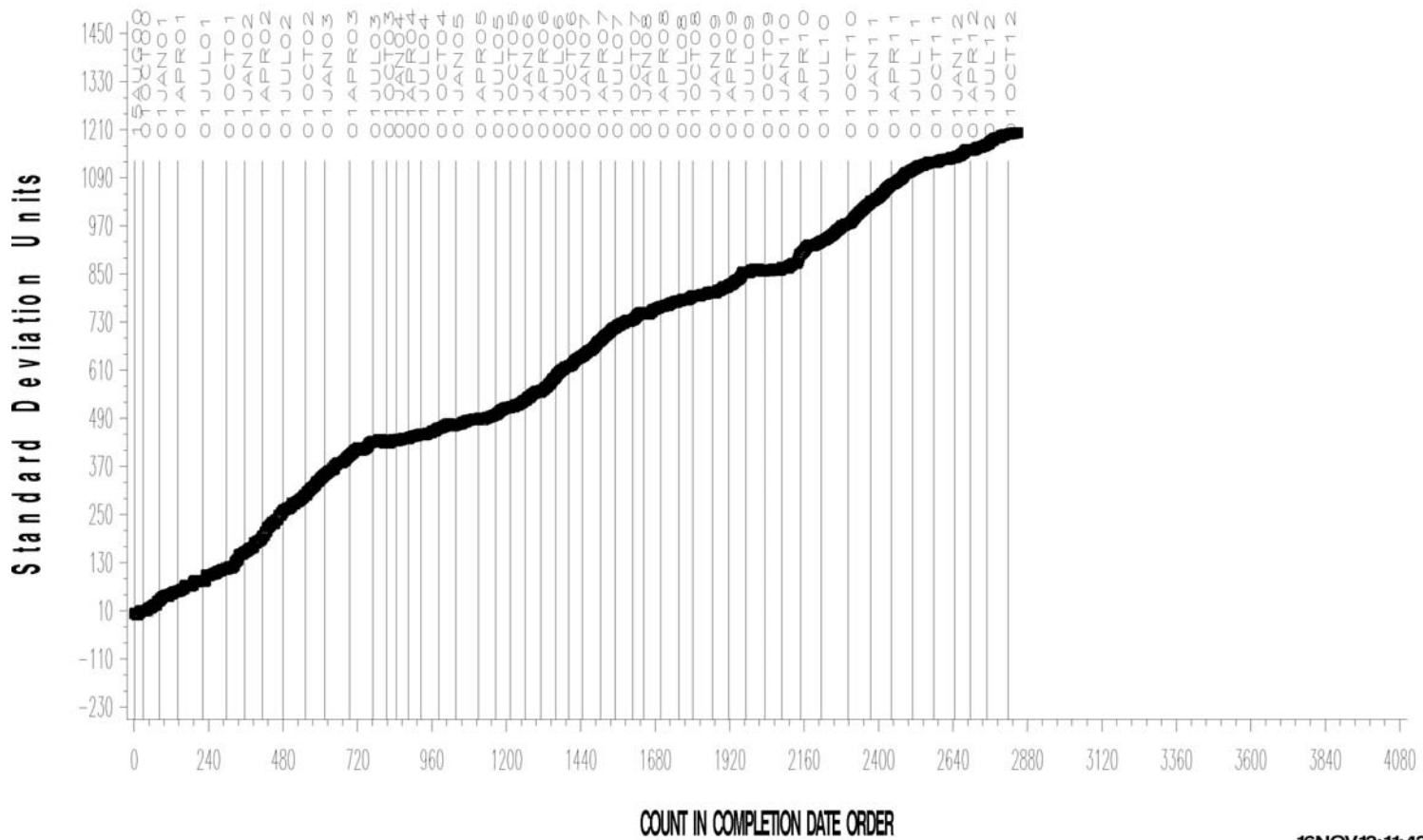
CUSUM PLOT

**BALL RUST TEST INDUSTRY OPERATIONALLY VALID DATA**



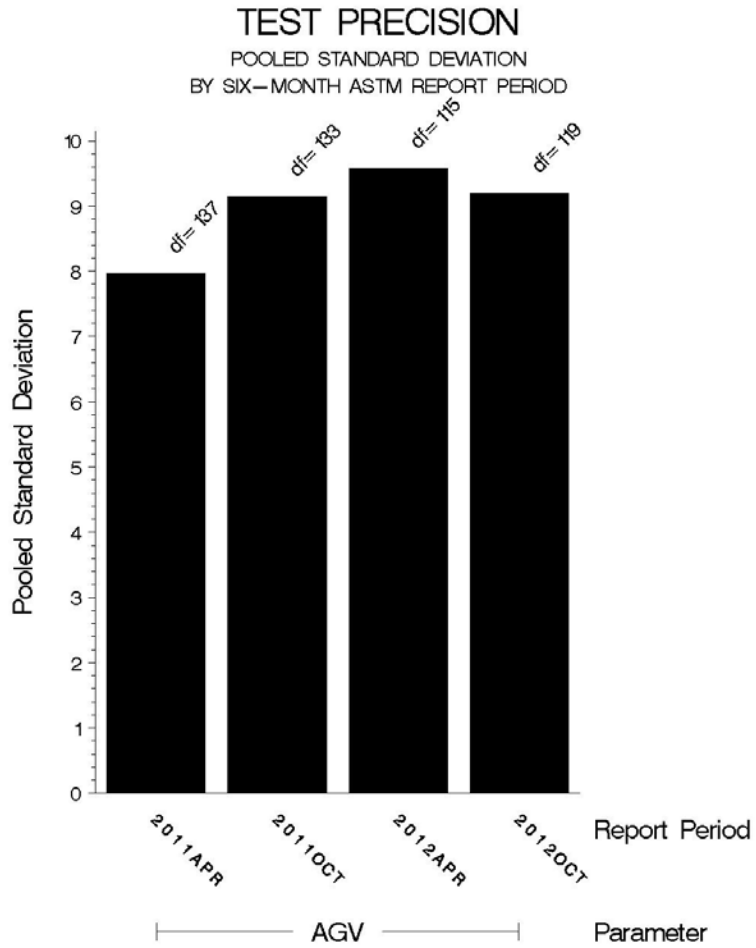
**REFERENCE AVERAGE GRAY VALUE**

CUSUM Severity Analysis



POOLED S:

Pooled s for this period is 9.18. 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	31	4462	35.7
81	49	1225	9.8
82	31	612	4.9
82-1	8	1225	9.8
Total	119	7524	60.2

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 slightly better than previous periods but comparable to historical performance.

MTK/mtk/astm1012.doc/mem12-036.mtk.doc

c: F. M. Farber

J. A. Clark

BRT Surveillance Panel

<ftp://ftp.astmtmc.cmu.edu/docs/bench/brt/semiannualreports/brt-10-2012.pdf>

Distribution: email