



# Test Monitoring Center

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

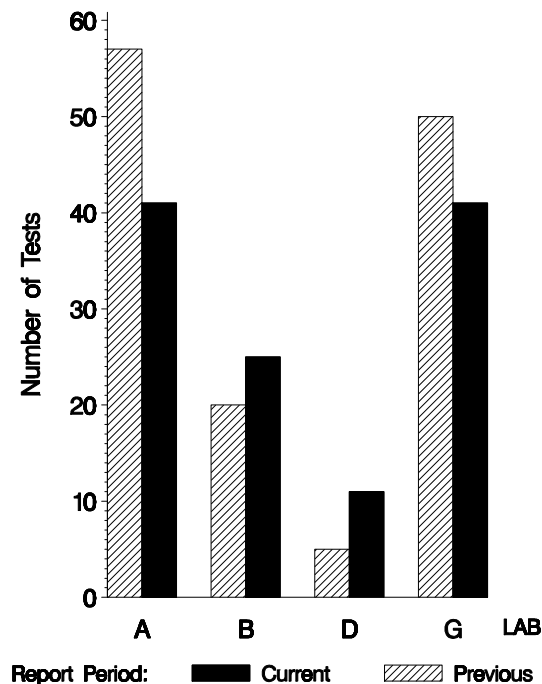
MEMORANDUM: 10-017  
DATE: May 4, 2010  
TO: Leonard Orzech,  
Chairman, Ball Rust Test Surveillance Panel  
FROM: Michael T. Kasimirsky *Michael T. Kasimirsky*  
SUBJECT: BRT Testing from October 1, 2009 through March 31, 2010

A total of 118 BRT tests were reported to the Test Monitoring Center during the period from October 1, 2009 through March 31, 2010. Following is a summary of testing activity this period.

	Reporting Data
Number of Labs	4

Tests reported this period were distributed as shown below:

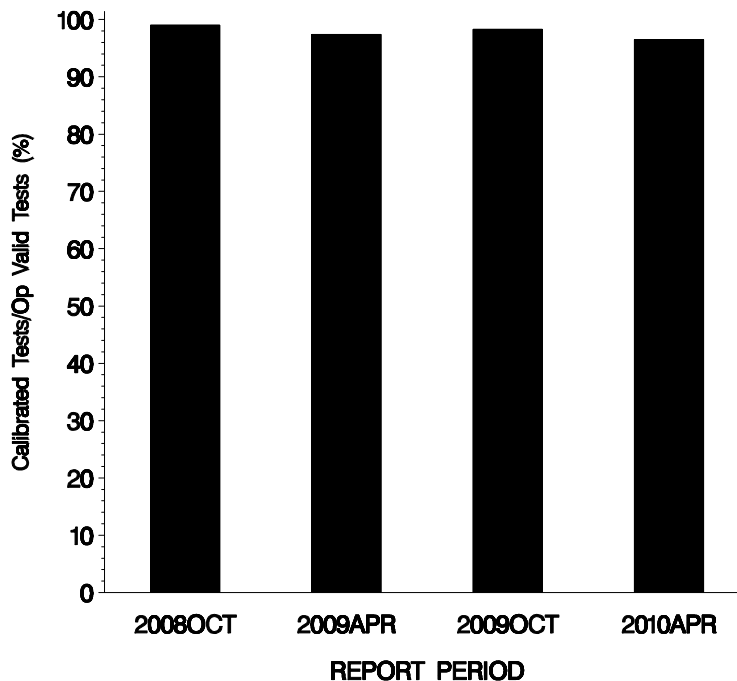
## NUMBER OF TESTS REPORTED BY LAB AND REPORT PERIOD



**Test Distribution by Oil and Validity**

		1006	81	82	Totals	
					This Period	Last Period
Accepted for Calibration	AC	30	48	32	110	115
Hardware Qualification Run	NI	0	0	0	0	4
Unacceptable for Calibration	OC	0	0	4	4	2
Operationally Invalid (lab)	LC	1	2	0	3	10
Operationally Invalid (lab/TMC)	RC	0	0	0	0	0
Aborted Calibration	XC	0	1	0	1	1
<b>Total</b>		<b>31</b>	<b>51</b>	<b>36</b>	<b>118</b>	<b>132</b>

**OPERATIONALLY VALID TESTS  
MEETING ACCEPTANCE CRITERIA**



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

Lost Tests per Start by Lab and Oil

Lab	1006			81			82			Total		
	Lost	Starts	%	Lost	Starts	%	Lost	Starts	%	Lost	Starts	%
A	0	10	0	0	20	0	0	11	0	0	41	0
B	1	6	17	1	9	11	0	10	0	2	25	8
D	0	3	0	0	4	0	0	4	0	0	11	0
G	0	12	0	2	18	11	0	11	0	2	41	5
Total	1	31	3	3	51	6	0	36	0	4	118	3

Lost tests are those that were aborted or operationally invalid.

Causes for Lost Tests

Lab	Cause	Oil			Validity			Loss Rate		
		1006	81	82	LC	RC	XC	Lost	Starts	%
B	Shaker Table Failure	●			●			1	25	4%
	Airflow Problem		●				●	1		4%
G	Acid Delivery Failure		●		●			1	41	2%
	Airflow Problem		●		●			1		2%
Lost		1	3	0	3	0	0			
Starts		31	51	36	118	118	118			
%		3%	6%	0%	3%	0%	0%			

Average  $\Delta/s$  by Lab

Lab	n	AGVYI
A	41	0.579
B	23	0.498
D	11	2.436
G	39	-0.605
Industry	114	0.337

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

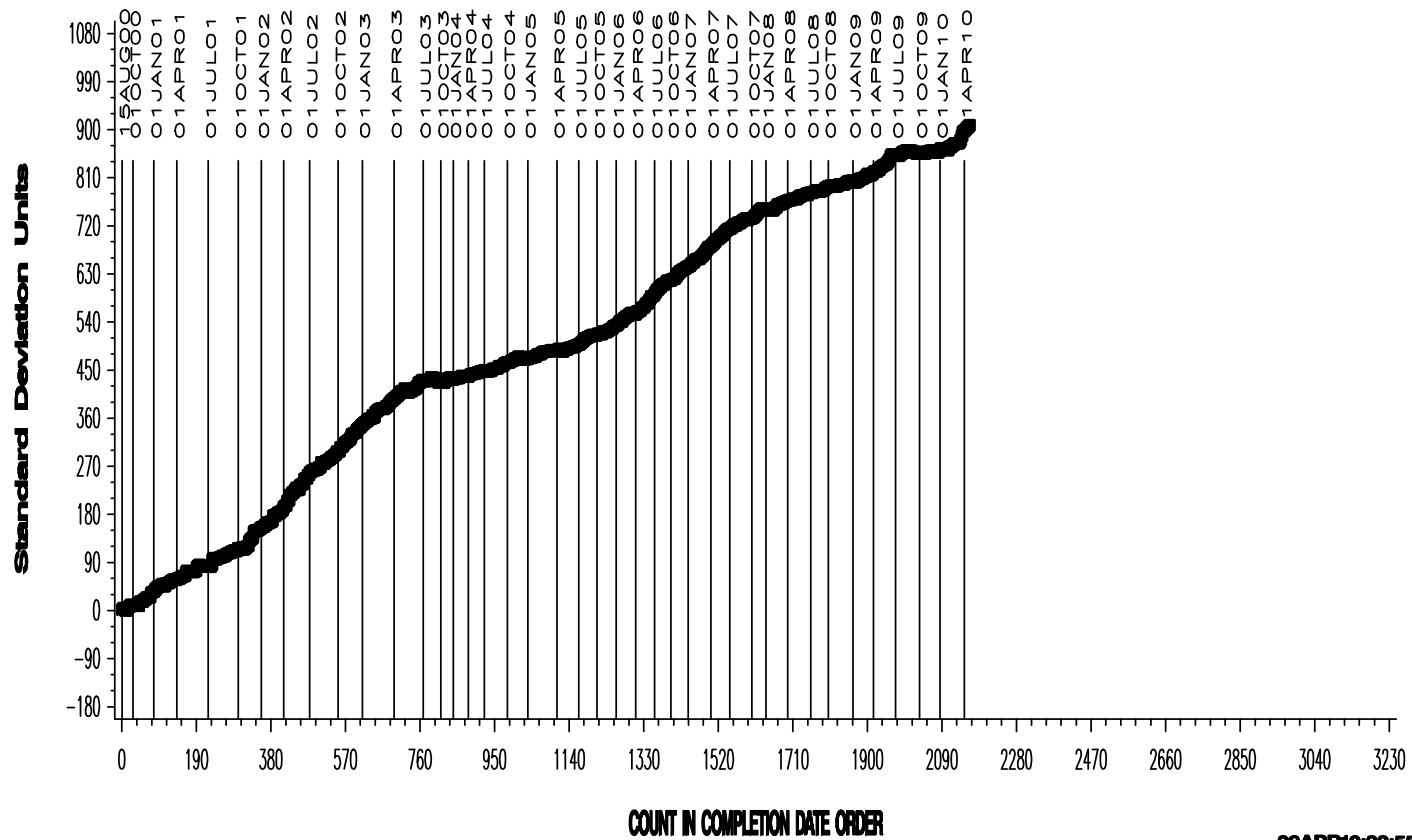
<ftp://ftp.astmtmc.cmu.edu/refdata/bench/brt/data/>

CUSUM PLOT

**BALL RUST TEST INDUSTRY OPERATIONALLY VALID DATA**

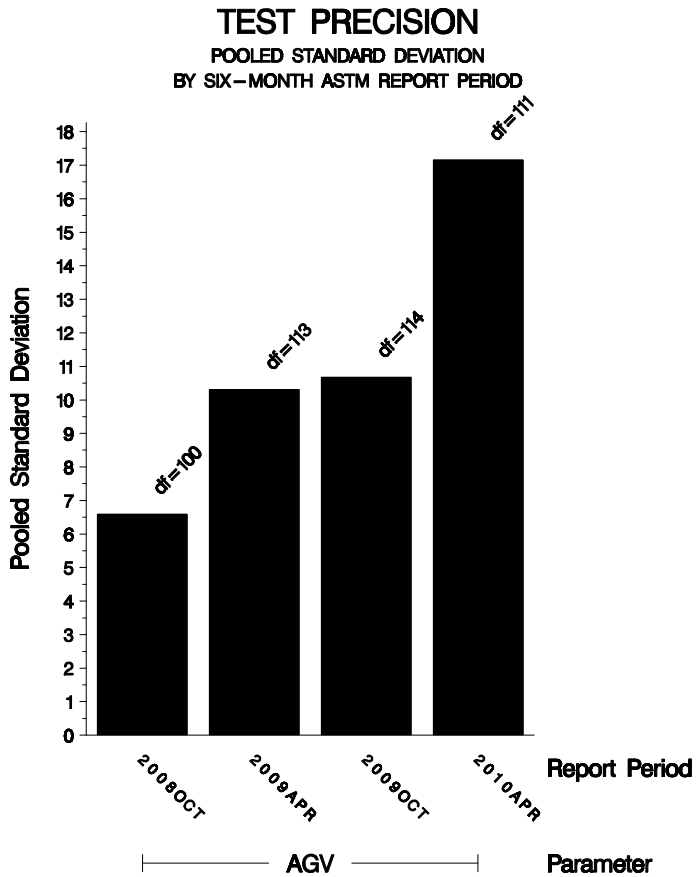
**REFERENCE AVERAGE GRAY VALUE**

CUSUM Severity Analysis



POOLED S:

Pooled s for this period is 17.15. 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	Gallons
1006	18	4975	39.8
81	21	1637	13.1
82	13	887	7.1
82-1	8	1225	9.8
Total	60	8724	69.8

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 worse than previous periods.

MTK/mtk/astm0410.doc/mem10-017.mtk.doc

c: F. M. Farber

J. A. Clark

BRT Surveillance Panel

<ftp://ftp.astmtmc.cmu.edu/docs/bench/brt/semiannualreports/brt-04-2010.pdf>

Distribution: email