



## Test Monitoring Center

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

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

MEMORANDUM: 15-015

DATE: May 7, 2015

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

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

SUBJECT: BRT Testing from October 1, 2014 through March 31, 2015

A total of 220 BRT tests were reported to the Test Monitoring Center during the report period from October 1, 2014 through March 31, 2015.

Please find attached a summary of testing activity this period.

MTK/mtk/astm0415.doc/mem15-015.mtk.doc

cc: F. M. Farber

J. A. Clark

BRT Surveillance Panel

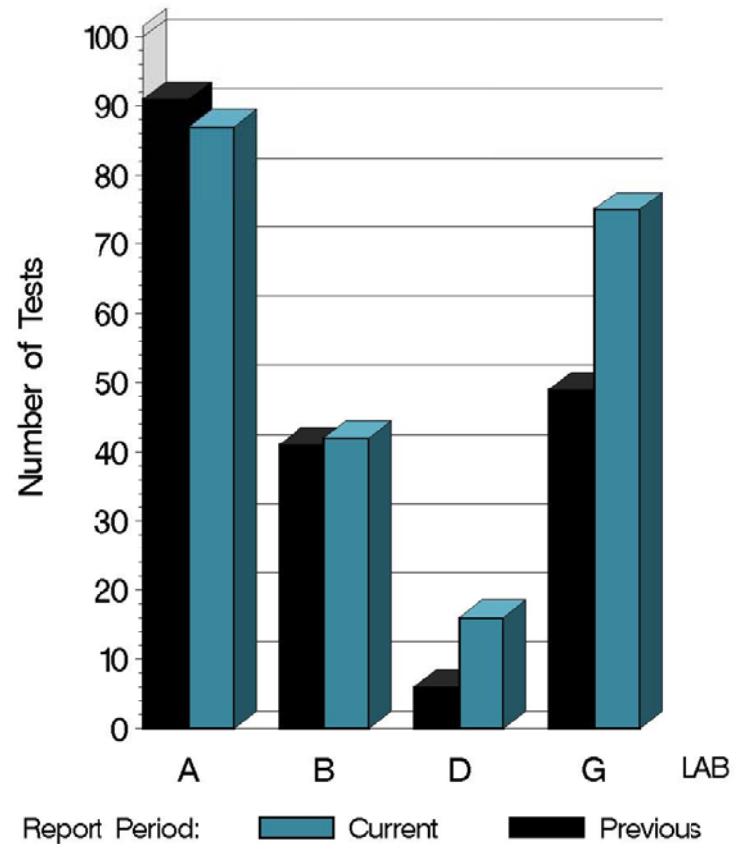
<ftp://ftp.astmtmc.cmu.edu/docs/bench/brt/semiannualreports/brt-04-2015.pdf>

Distribution: email

# BRT (D 6557)

Reporting Data	
Number of Labs	4

NUMBER OF TESTS REPORTED  
BY LAB AND REPORT PERIOD



14:06:44 07MAY2015

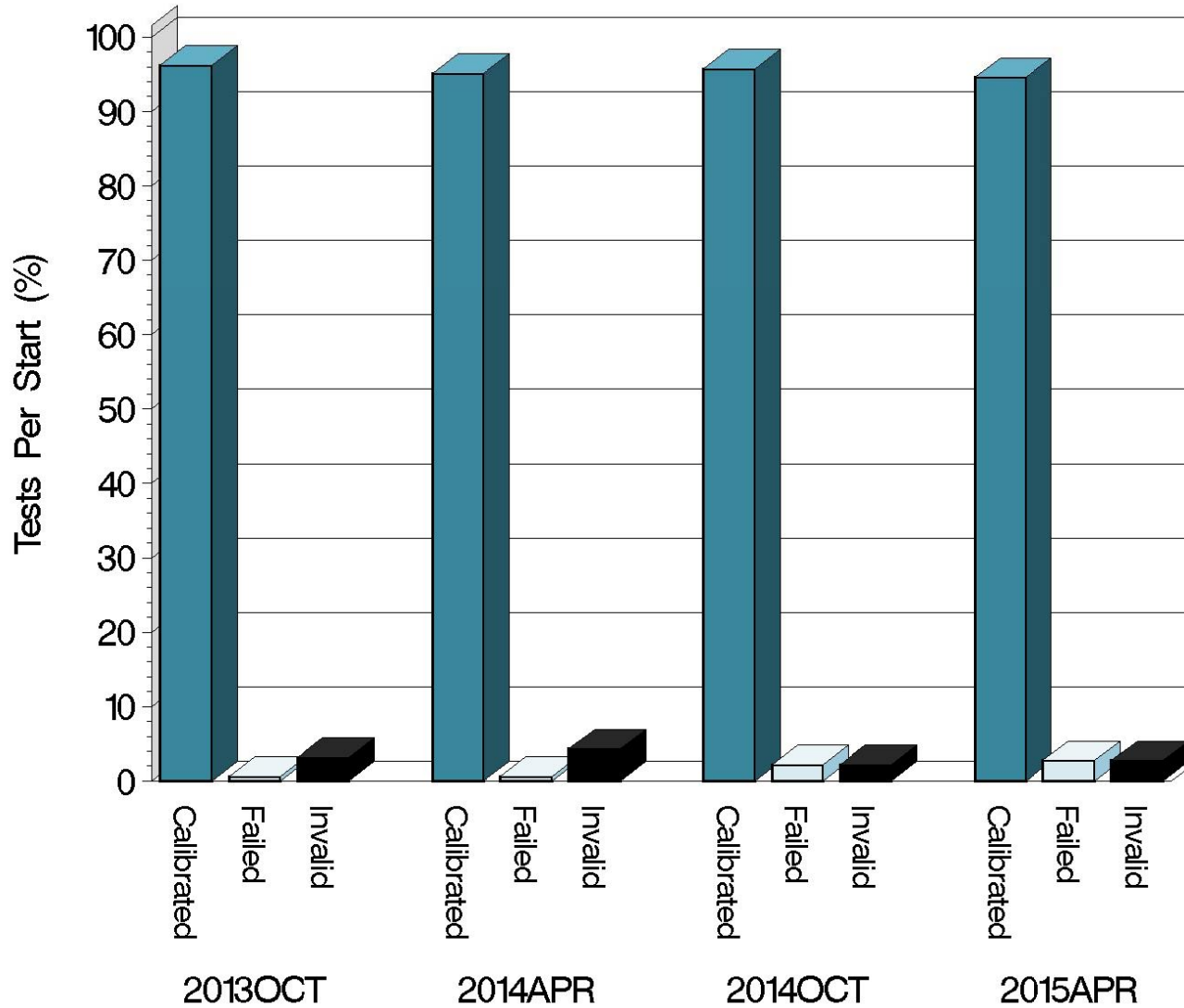
# BRT (D 6557)

## Test Distribution by Oil and Validity

		1006	81	82	Totals	
					This Period	Last Period
Accepted for calibration	AC	53	97	58	208	179
Rejected	OC	0	4	2	6	4
Invalidated by Lab	LC	0	0	0	0	3
Invalidated by TMC	RC	1	0	0	1	0
Aborted	XC	4	1	0	5	1
Hardware Approval run	NI	0	0	0	0	0
Unacceptable Approval run	MI	0	0	0	0	0
<b>Total</b>		<b>58</b>	<b>102</b>	<b>60</b>	<b>220</b>	<b>187</b>

# BRT (D 6557)

## CALIBRATION ATTEMPT SUMMARY



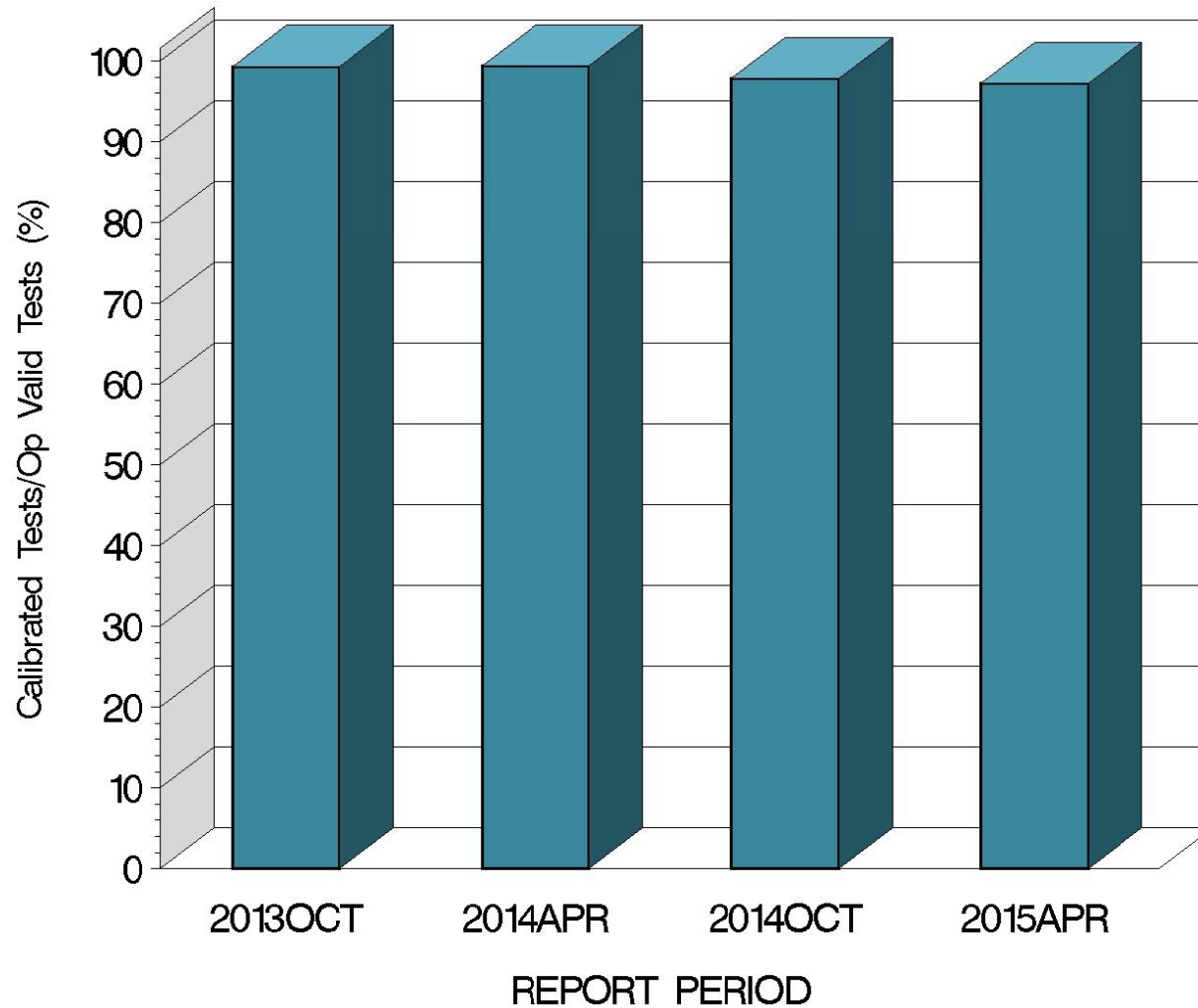
Resolution

Report Period

14:36:44 07MAY2015

# BRT (D 6557)

OPERATIONALLY VALID TESTS  
MEETING ACCEPTANCE CRITERIA



14:36:44 07MAY2015

# BRT (D 6557)

## CAUSES FOR LOST TESTS

Lab	Cause	Oil			Validity			Loss Rate		
		1006	81	82	LC	RC	XC	Lost	Starts	%
A	Shaker Table Failure	1	0	0	0	0	1	2	87	2%
	Operator Error	1	0	0	0	0	1			
D	Bath Failure	0	1	0	0	0	1	1	16	6%
G	Image Calibration Out-of-Spec	1	0	0	0	1	0	3	75	4%
	Power Failure	1	0	0	0	0	1			
	Acid Pump Problem	1	0	0	0	0	1			
	Lost	5	1	0	0	1	5			
	Starts	58	102	60	220	220	220			
	%	9%	1%	4%	2%	.5%	2%			

Lost tests are calibration attempts that were either aborted or operationally invalid

# BRT (D 6557)

Average $\Delta/s$ By Laboratory		
Lab	n	AGVYI
A	85	0.517
B	42	0.151
D	15	0.737
G	72	-0.220
Industry	214	0.212

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

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

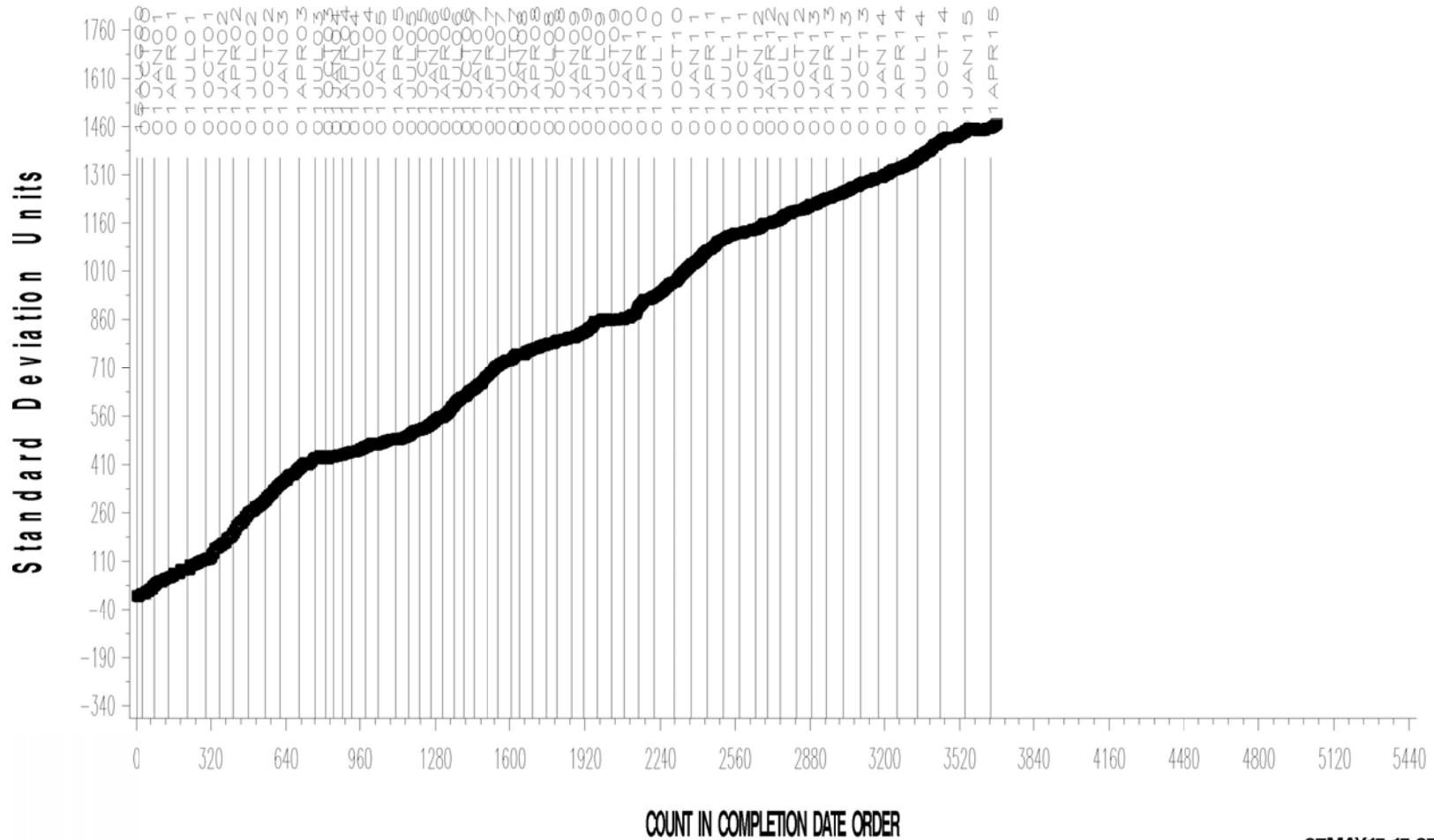
# BRT (D 6557)

BALL RUST TEST INDUSTRY OPERATIONALLY VALID DATA



REFERENCE AVERAGE GRAY VALUE

CUSUM Severity Analysis



07MAY15:15:07

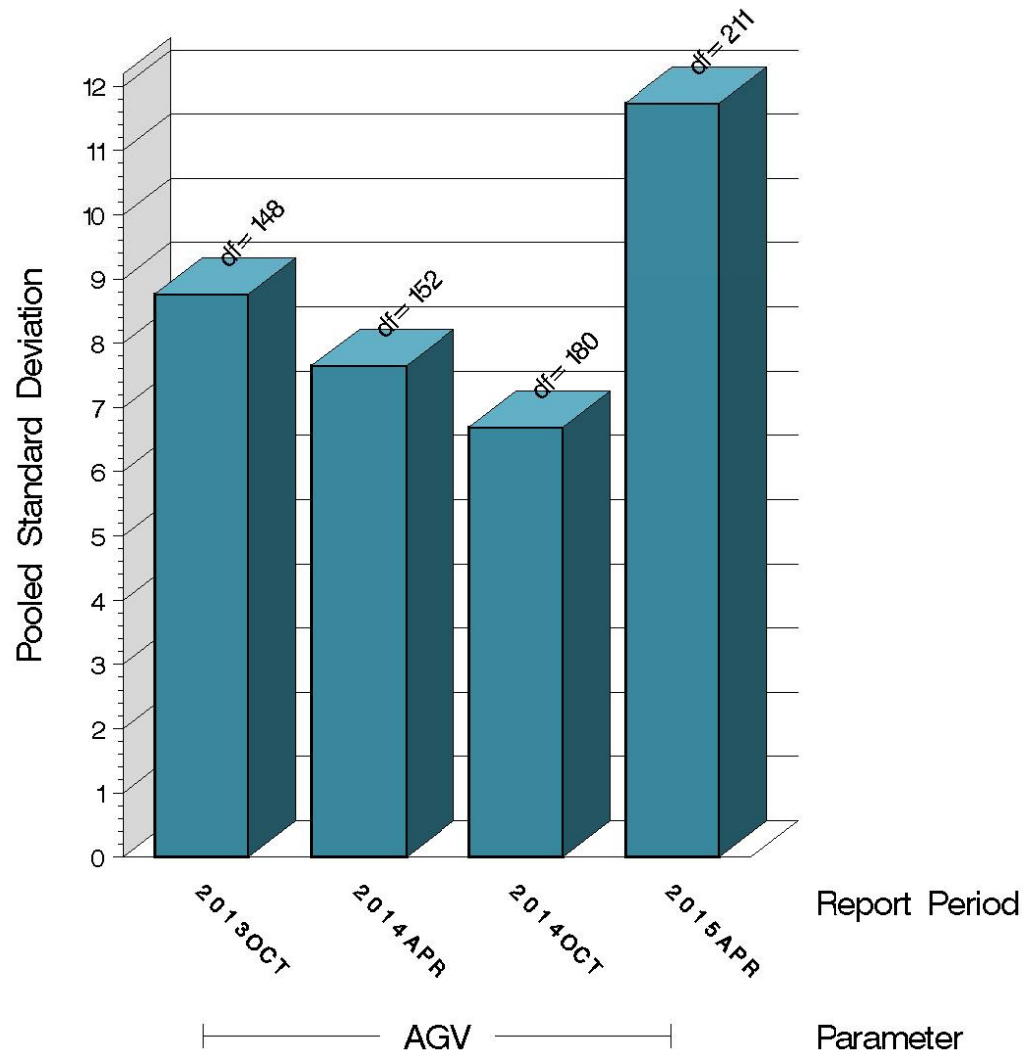




# BRT (D 6557)

## TEST PRECISION

POOLED STANDARD DEVIATION  
BY SIX-MONTH ASTM REPORT PERIOD



14:36:44 07MAY2015

# BRT (D 6557)

## SUMMARY OF SEVERITY & PRECISION

### Severity

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

Pooled  $s$  for this period is 11.73.

Precision, as measured by pooled standard deviation, is significantly worse than previous periods.

# BRT (D 6557)

## INFORMATION LETTERS

No Information Letters were issued this period.

# BRT (D 6557)

## STATUS OF REFERENCE OIL SUPPLY

Oil	Samples @ Labs	@ TMC	
		Samples (30 mL)	Gallons
1006	30	4100	32.8
81	45	775	6.2
82	24	375	3.0
82-1	8	1225	9.8
Total	107	6475	51.8