



## Test Monitoring Center

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

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

MEMORANDUM: 15-036  
DATE: November 9, 2015  
TO: Leonard Orzech,  
Chairman, Ball Rust Test Surveillance Panel  
FROM: Michael T. Kasimirsky *Michael T. Kasimirsky*  
SUBJECT: BRT Testing from April 1, 2015 through September 30, 2015

A total of 135 BRT tests were reported to the Test Monitoring Center during the report period from April 1, 2015 through September 30, 2015.

Please find attached a summary of testing activity this period.

MTK/mtk/astm1015.doc/mem15-036.mtk.doc

cc: F. M. Farber

J. A. Clark

BRT Surveillance Panel

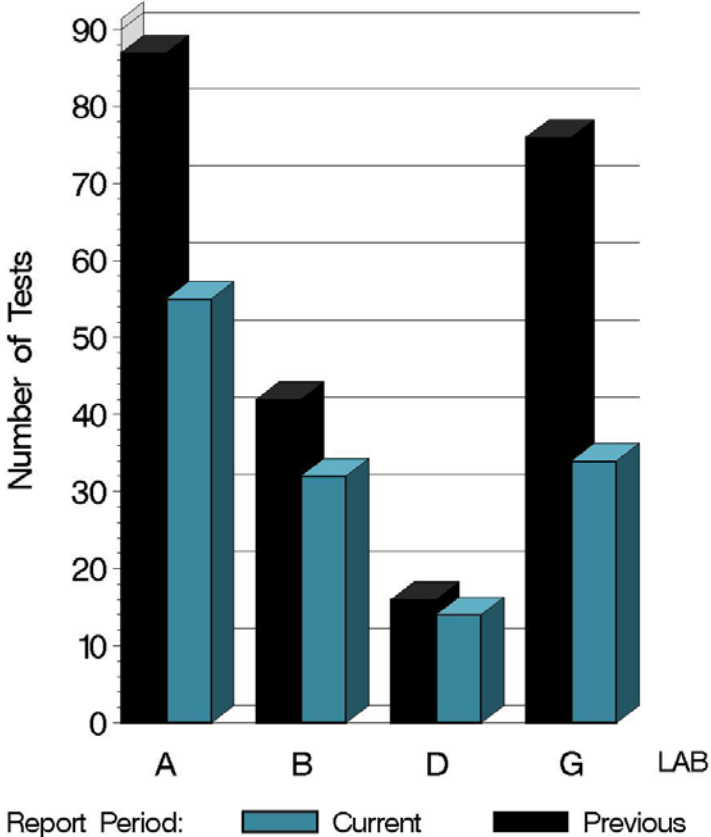
<ftp://ftp.astmtmc.cmu.edu/docs/bench/brt/semiannualreports/brt-10-2015.pdf>

Distribution: email

# BRT (D 6557)

Reporting Data	
Number of Labs	4

NUMBER OF TESTS REPORTED BY LAB AND REPORT PERIOD



14:34:15 08NOV2015

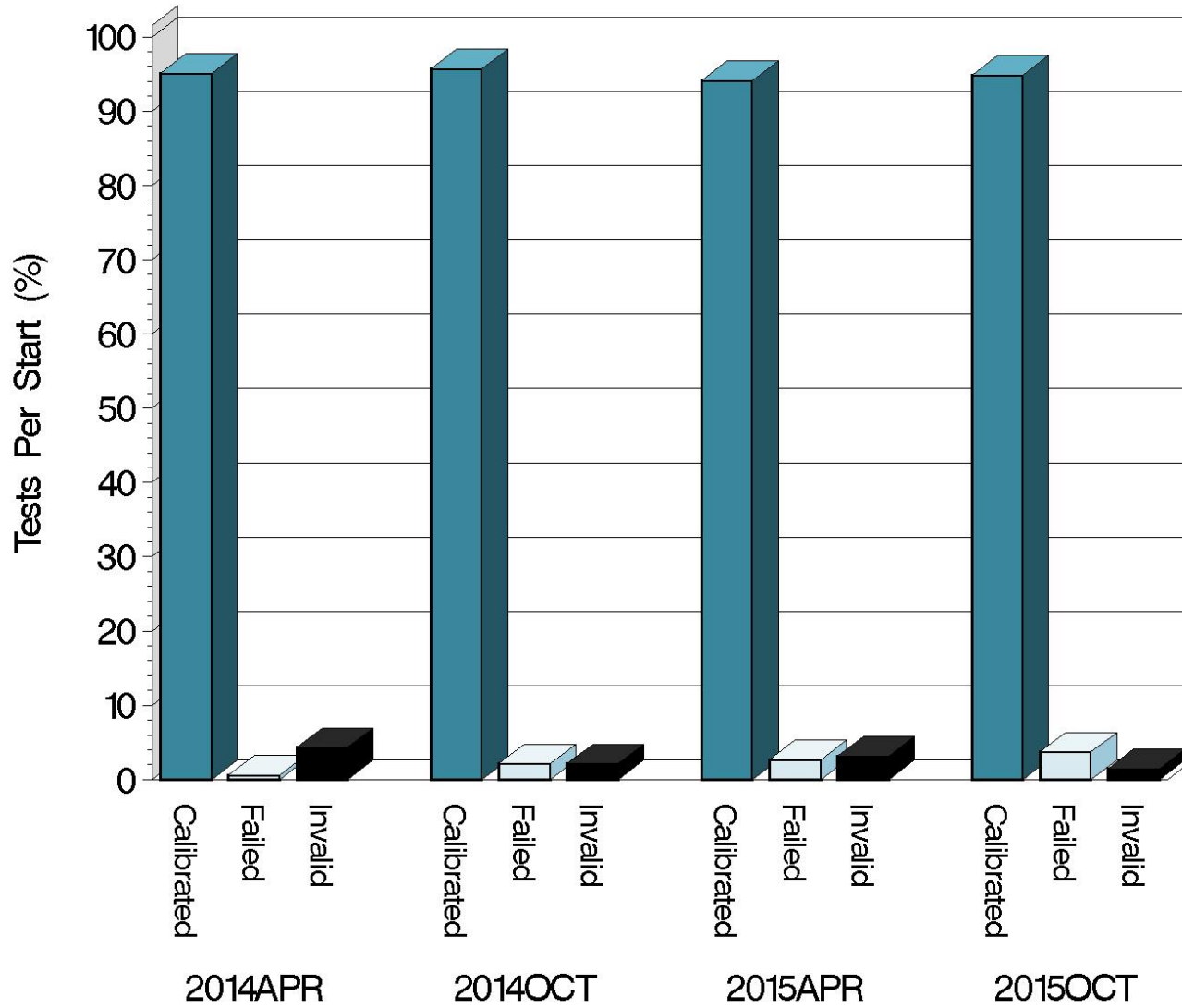
# BRT (D 6557)

## Test Distribution by Oil and Validity

					Totals				
					1006	81	82	This Period	Last Period
Accepted for calibration	AC	33	70	25	128	208			
Rejected	OC	1	0	4	5	6			
Invalidated by Lab	LC	0	1	0	1	0			
Invalidated by TMC	RC	0	0	0	0	1			
Aborted	XC	1	0	0	1	5			
Hardware Approval run	NI	0	0	0	0	0			
Unacceptable Approval run	MI	0	0	0	0	0			
<b>Total</b>		<b>35</b>	<b>71</b>	<b>29</b>	<b>135</b>	<b>220</b>			

# BRT (D 6557)

## CALIBRATION ATTEMPT SUMMARY



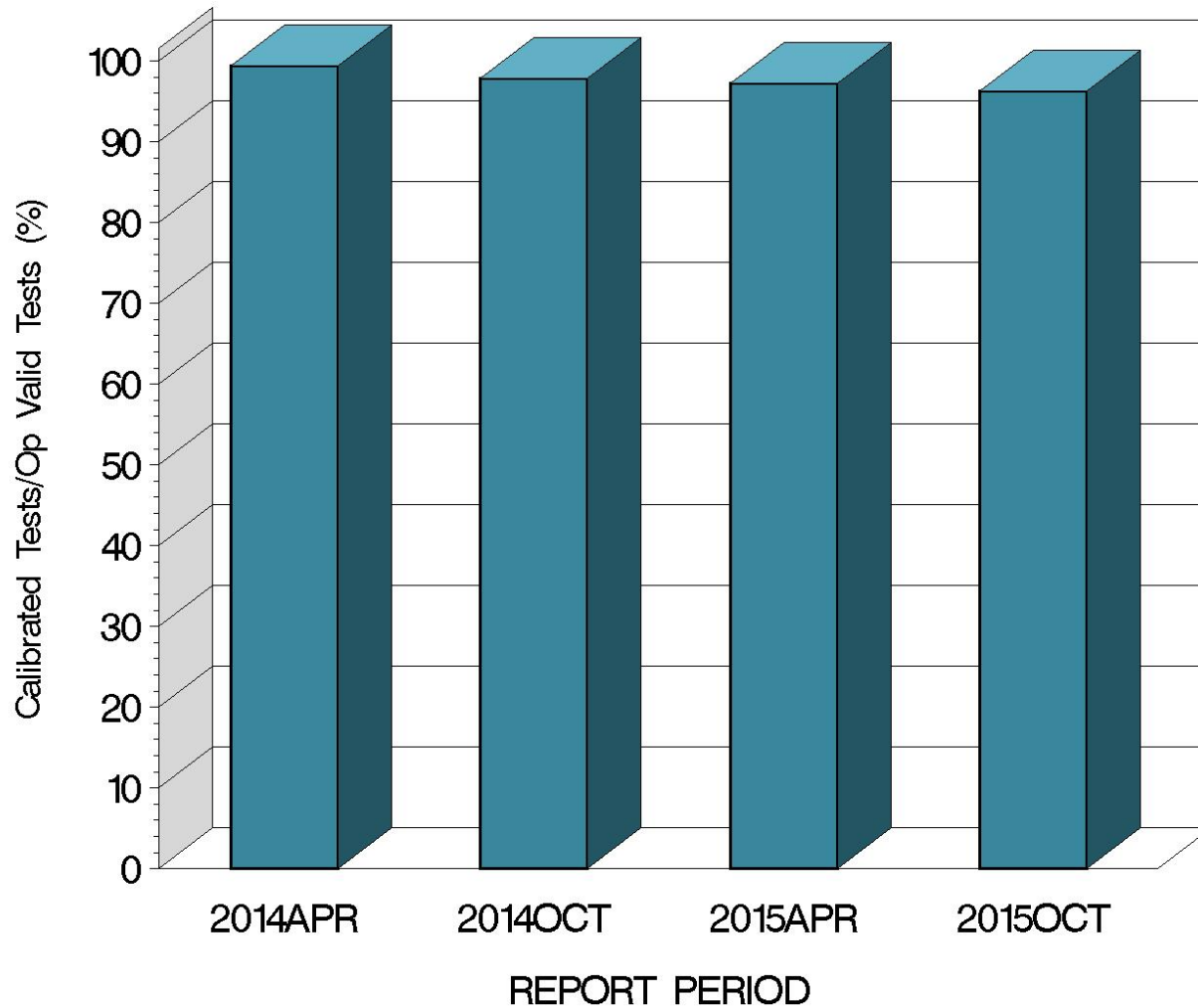
Resolution

Report Period

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# BRT (D 6557)

OPERATIONALLY VALID TESTS  
MEETING ACCEPTANCE CRITERIA



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# BRT (D 6557)

## CAUSES FOR LOST TESTS

Lab	Cause	Oil			Validity			Loss Rate		
		1006	81	82	LC	RC	XC	Lost	Starts	%
D	Bath Failure	1	0	0	0	0	1	1	14	7%
G	Program Error	0	1	0	1	0	0	1	34	3%
	Lost	1	1	0	1	0	1			
	Starts	35	71	29	135	135	135			
	%	3%	1%	0%	0.7%	0%	0.7%			

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

# BRT (D 6557)

Average $\Delta$ /s By Laboratory		
Lab	n	AGVYI
A	55	0.601
B	32	-0.085
D	13	0.230
G	33	1.003
Industry	133	0.499

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

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

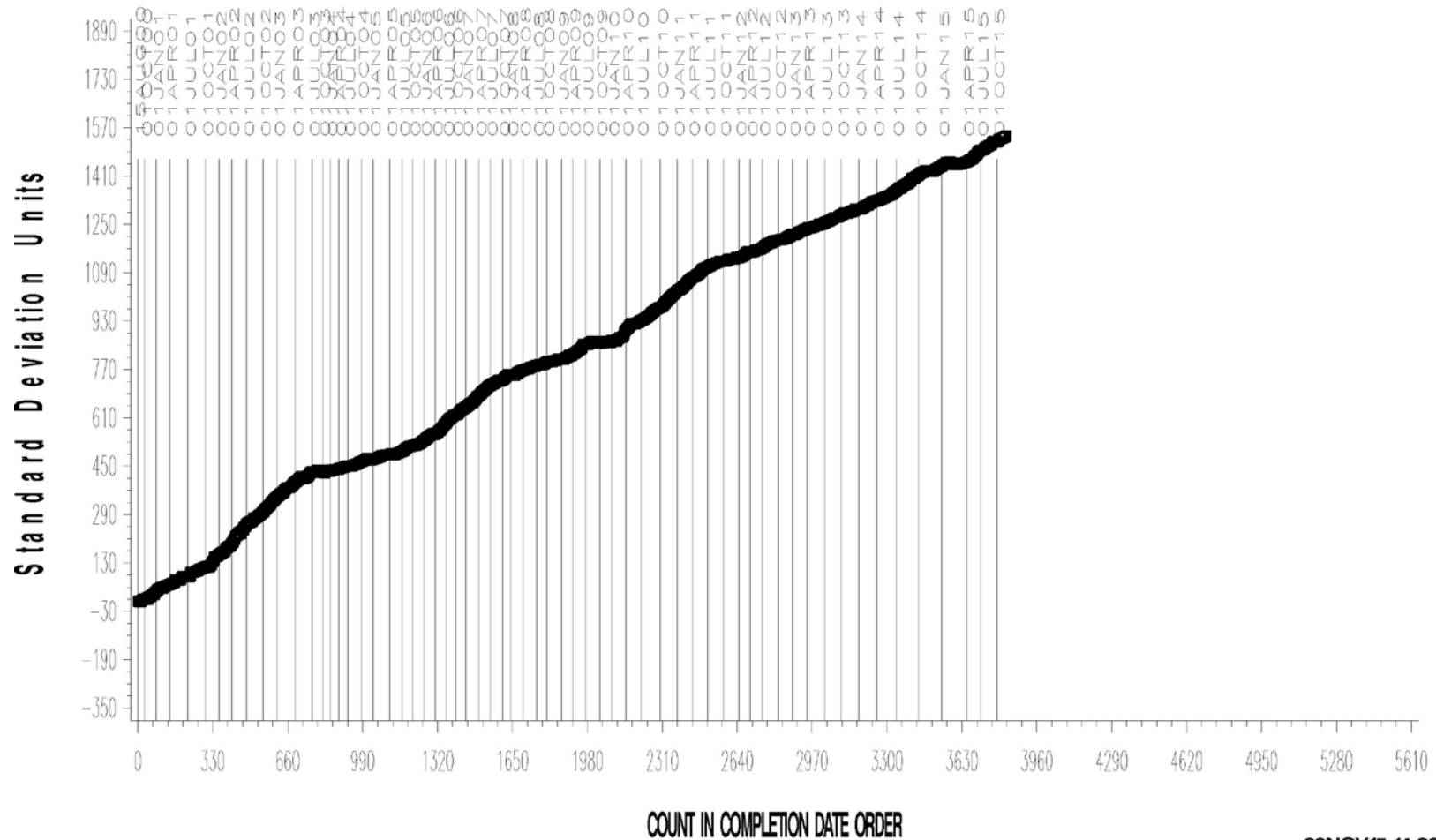
# BRT (D 6557)

BALL RUST TEST INDUSTRY OPERATIONALLY VALID DATA



REFERENCE AVERAGE GRAY VALUE

CUSUM Severity Analysis



09NOV15:14:26

**Test Monitoring Center**  
<http://astmtmc.cmu.edu>

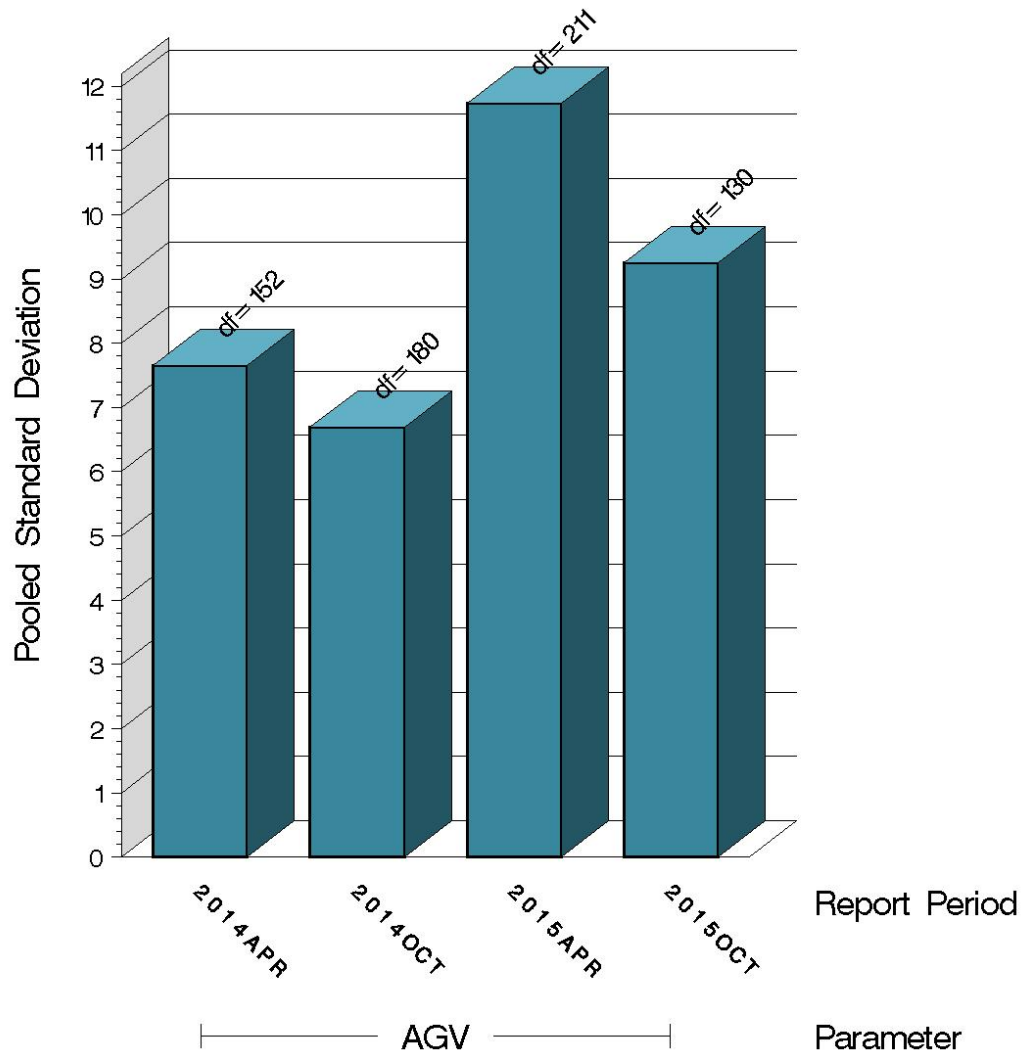




# BRT (D 6557)

## TEST PRECISION

POOLED STANDARD DEVIATION  
BY SIX-MONTH ASTM REPORT PERIOD



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# 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 9.25.

Precision, as measured by pooled standard deviation, is better than the previous period, but still in line with overall historical performance.

# 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	32	4050	32.4
81	52	687	5.5
82	32	337	2.7
82-1	8	1225	9.8
Total	124	6299	50.4