



## Test Monitoring Center

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

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

MEMORANDUM: 19-011

DATE: April 15, 2019

TO: Jessica Villarreal,  
Chairwoman, Ball Rust Test Surveillance Panel

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

SUBJECT: BRT Testing from October 1, 2018 through March 31, 2019

A total of 155 BRT tests were reported to the Test Monitoring Center during the report period from October 1, 2018 through March 31, 2019.

Please find attached a summary of testing activity this period.

MTK/mtk/ast0419.doc/mem19-011.mtk.doc

cc: F. M. Farber

J. A. Clark

BRT Surveillance Panel

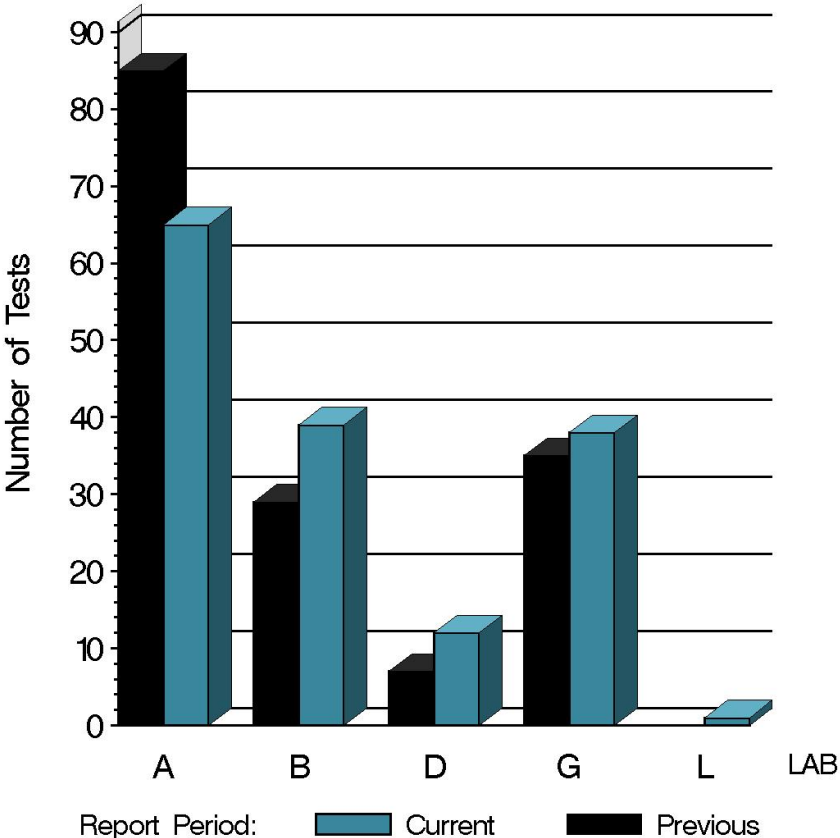
<http://www.astmtmc.cmu.edu/ftp/docs/bench/brt/semiannualreports/brt-04-2019.pdf>

Distribution: email

# BRT (D 6557)

	Reporting Data
Number of Labs	5

NUMBER OF TESTS REPORTED BY LAB AND REPORT PERIOD



10:25:11 15APR2019

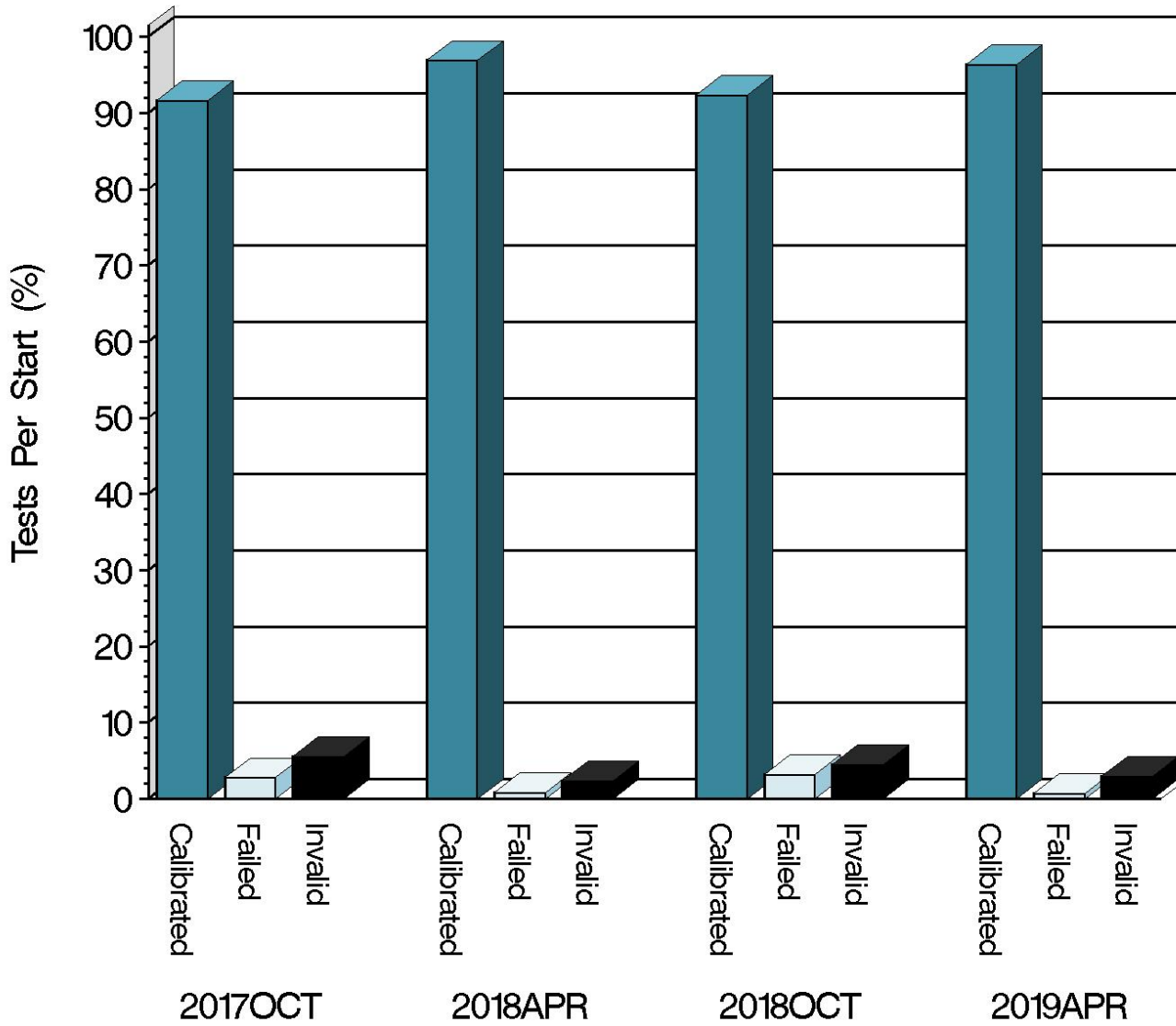
# BRT (D 6557)

## Test Distribution by Oil and Validity

							Totals	
		1006	81	82-1	86	87	This Period	Last Period
Accepted for calibration	AC	41	7	30	27	27	132	144
Rejected	OC	0	0	0	0	1	1	5
Invalidated by Lab	LC	1	1	0	1	0	3	2
Aborted	XC	0	0	1	0	0	1	3
Invalidated by TMC	RC	0	0	0	0	0	0	2
Acceptable Shakedown	NN	4	0	1	3	4	12	0
Invalid Shakedown	LN	0	0	0	0	1	1	0
Failed Shakedown	MN	2	0	0	2	1	5	0
<b>Total</b>		<b>48</b>	<b>8</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>155</b>	<b>156</b>

# BRT (D 6557)

## CALIBRATION ATTEMPT SUMMARY



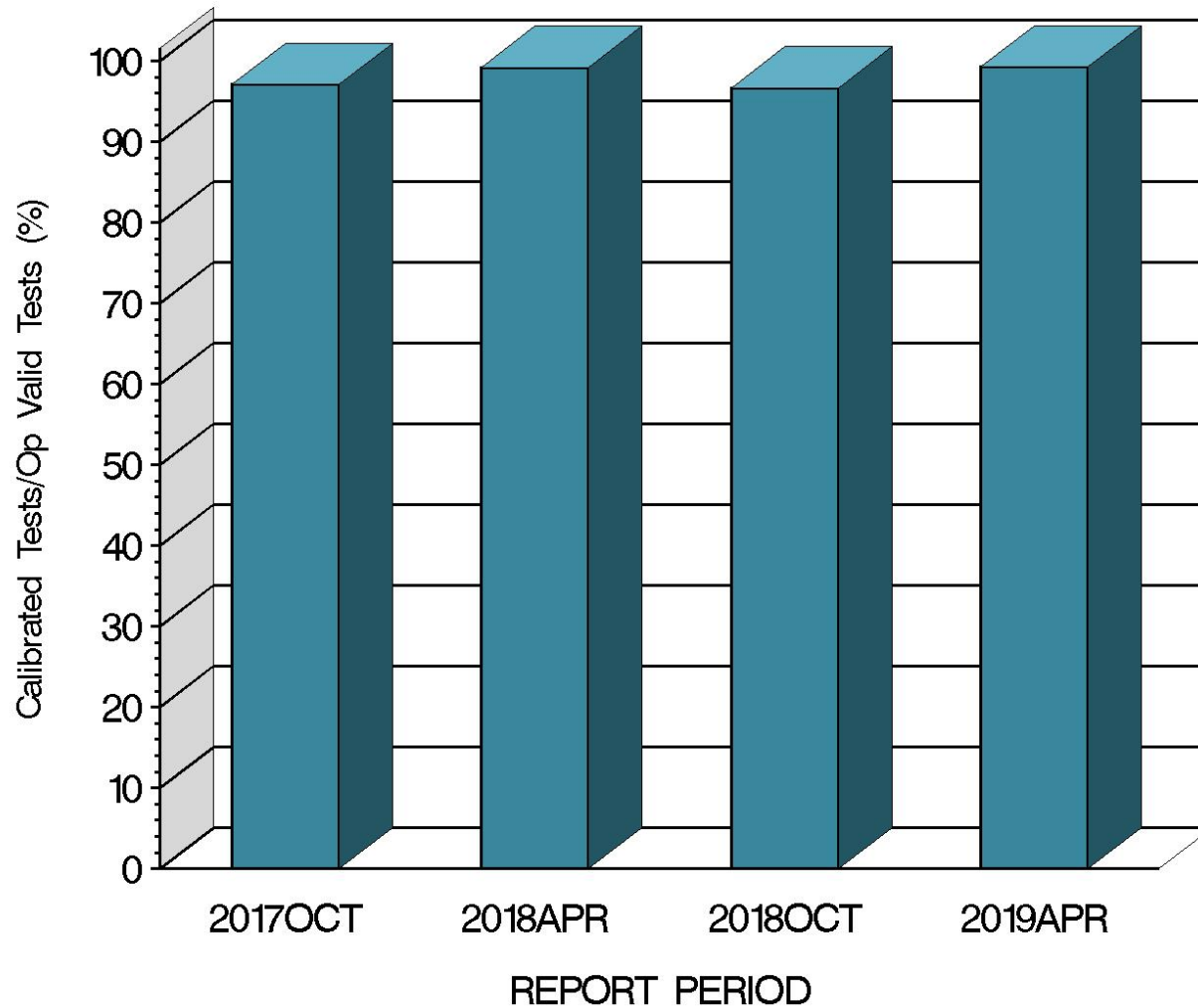
Resolution

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	82-1	86	87	LC	RC	XC	Lost	Starts	%
B	Airflow Problem	0	0	0	1	0	1	0	0	1	39	2.6
D	Image System Failure	1	0	0	0	0	1	0	0	1	12	8.3
G	Acid Pump Failure	0	0	1	0	0	0	0	1	1	38	2.6
L	Acid Leak	0	1	0	0	0	1	0	0	1	1	100
	Lost	1	1	1	1	0	3	0	1			
	Starts	48	8	32	33	34	137	137	137			
	%	2.1	12.5	3.1	3.0	0	2.2	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	65	0.262
B	20	-0.676
D	11	-0.013
G	37	-0.072
L	-	-
Industry	133	0.006

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

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

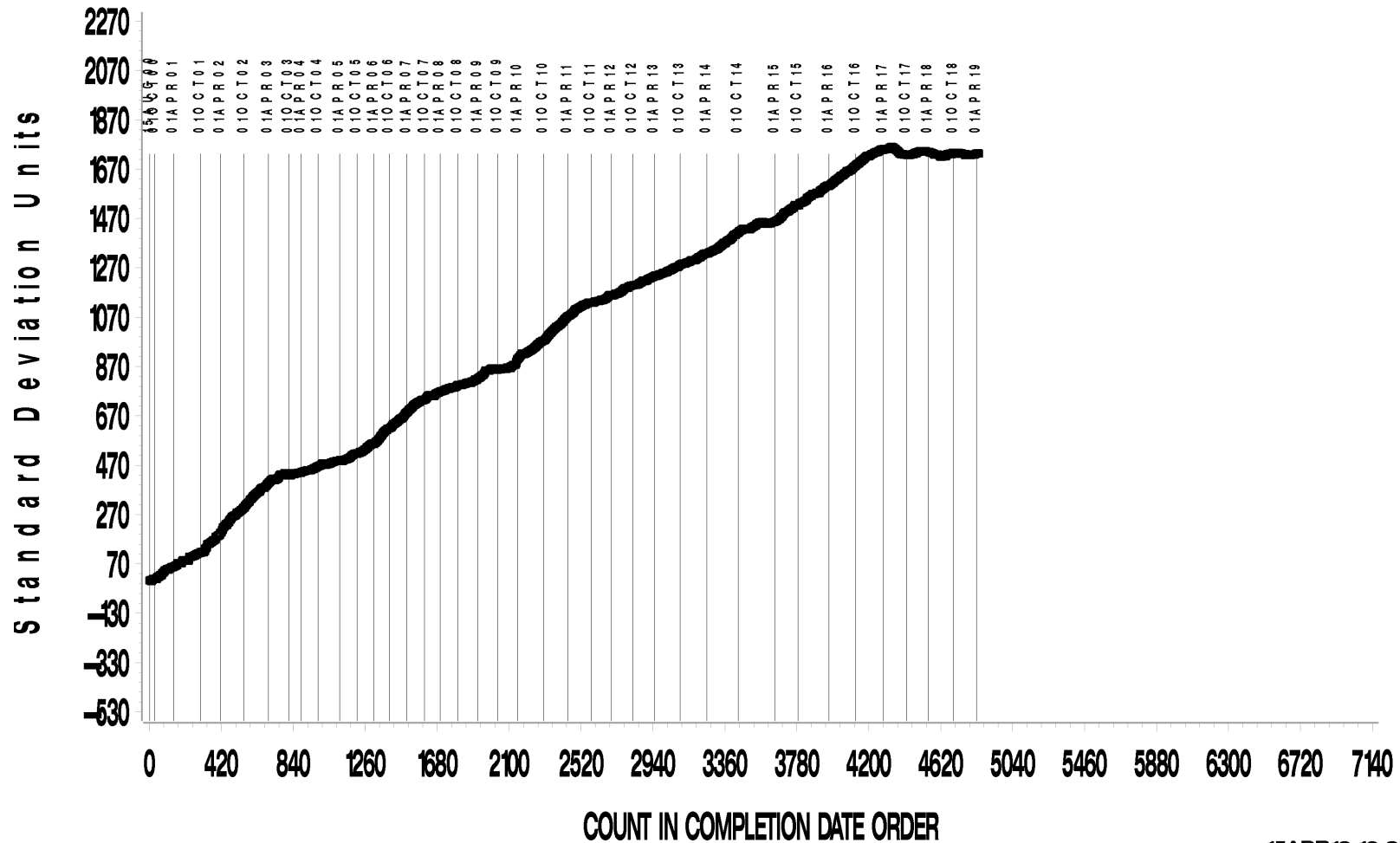
# BRT (D 6557)

BALL RUST TEST INDUSTRY OPERATIONALLY VALID DATA



REFERENCE AVERAGE GRAY VALUE

CUSUM Severity Analysis



15 APR 19: 10:20

Test Monitoring Center

<http://astmtmc.cmu.edu>

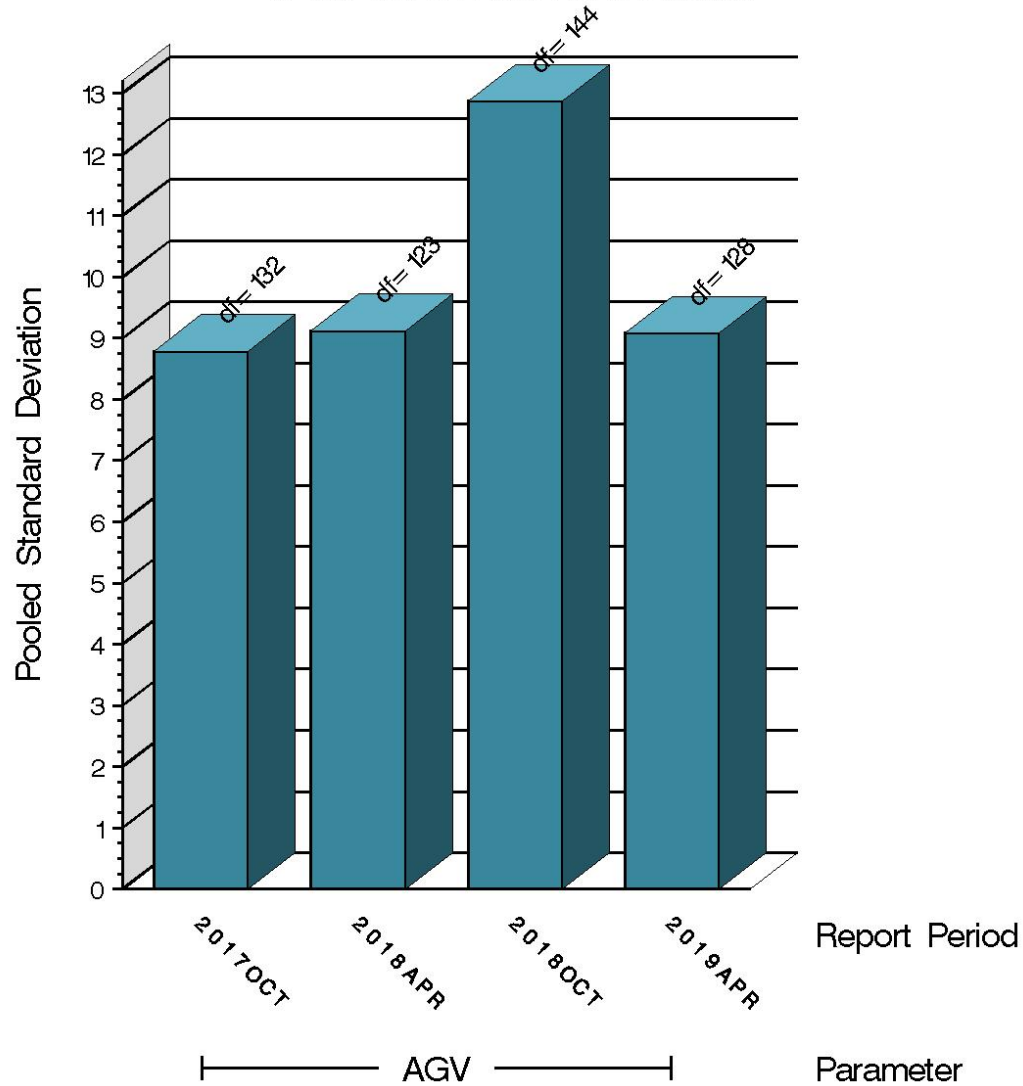


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# BRT (D 6557)

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, is on target.

### Precision

Pooled  $s$  for this period is 9.08.

Precision, as measured by pooled standard deviation, is better than the previous period.

# BRT (D 6557)

## INFORMATION LETTERS

No Information Letters issued this period.

# BRT (D 6557)

## STATUS OF REFERENCE OIL SUPPLY

Oil	Samples @ Labs	@ TMC	
		Samples (30 mL)	Gallons
1006	26	4156	33.2
81	3	0	0.0
82	2	0	0.0
82-1	35	704	5.6
86	22	6606	52.9
87	21	12093	96.7
Total	109	23559	188.5

Reference Oils 86 and 87 approved for calibration use.