



Test Monitoring Center

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

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

MEMORANDUM: 17-033

DATE: October 26, 2017

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

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

SUBJECT: BRT Testing from April 1, 2017 through September 30, 2017

A total of 146 BRT tests were reported to the Test Monitoring Center during the report period from April 1, 2017 through September 30, 2017.

Please find attached a summary of testing activity this period.

MTK/mtk/astm1017.doc/mem17-033.mtk.doc

cc: F. M. Farber

J. A. Clark

BRT Surveillance Panel

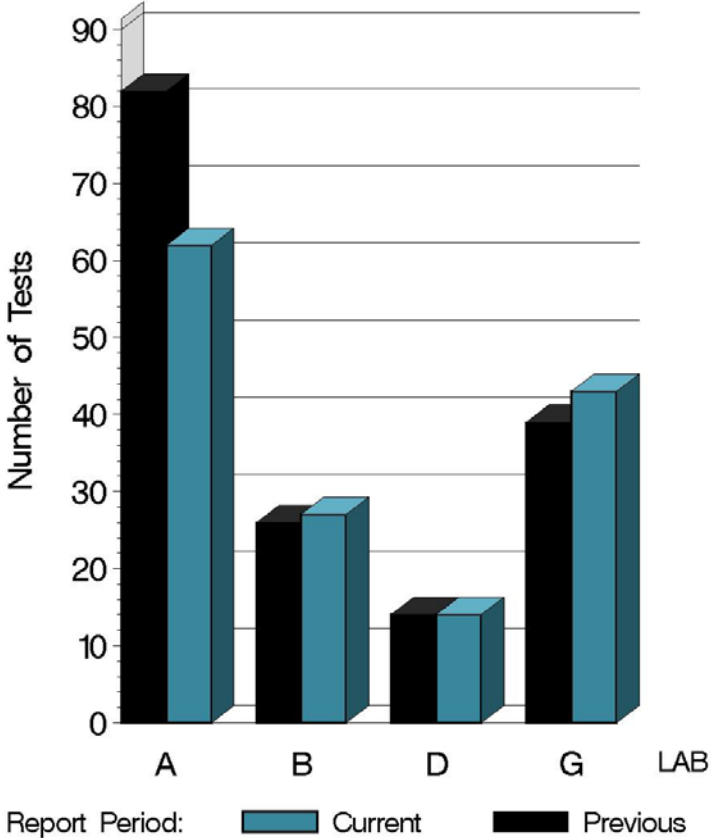
<ftp://ftp.astmtmc.cmu.edu/docs/bench/brt/semiannualreports/brt-10-2017.pdf>

Distribution: email

BRT (D 6557)

Reporting Data	
Number of Labs	4

NUMBER OF TESTS REPORTED BY LAB AND REPORT PERIOD



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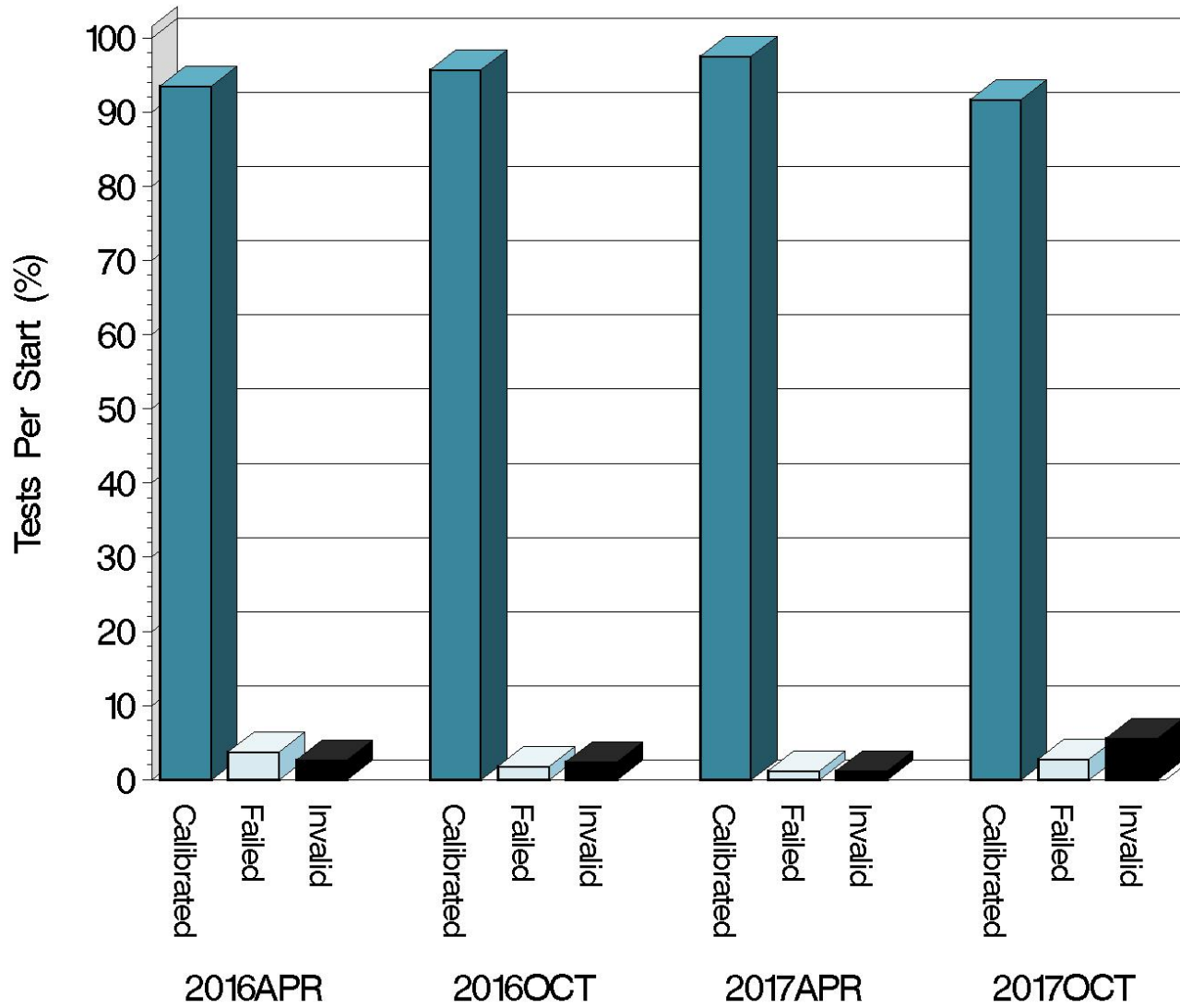
BRT (D 6557)

Test Distribution by Oil and Validity

						Totals	
		1006	81	82	82-1	This Period	Last Period
Accepted for calibration	AC	46	30	8	48	132	157
Rejected	OC	4	0	0	0	4	2
Invalidated by Lab	LC	1	0	0	2	3	1
Invalidated by TMC	RC	0	0	0	0	0	0
Aborted	XC	4	0	0	1	5	1
Stand Shakedown	AS	2	0	0	0	2	0
Total		57	30	8	51	146	161

BRT (D 6557)

CALIBRATION ATTEMPT SUMMARY



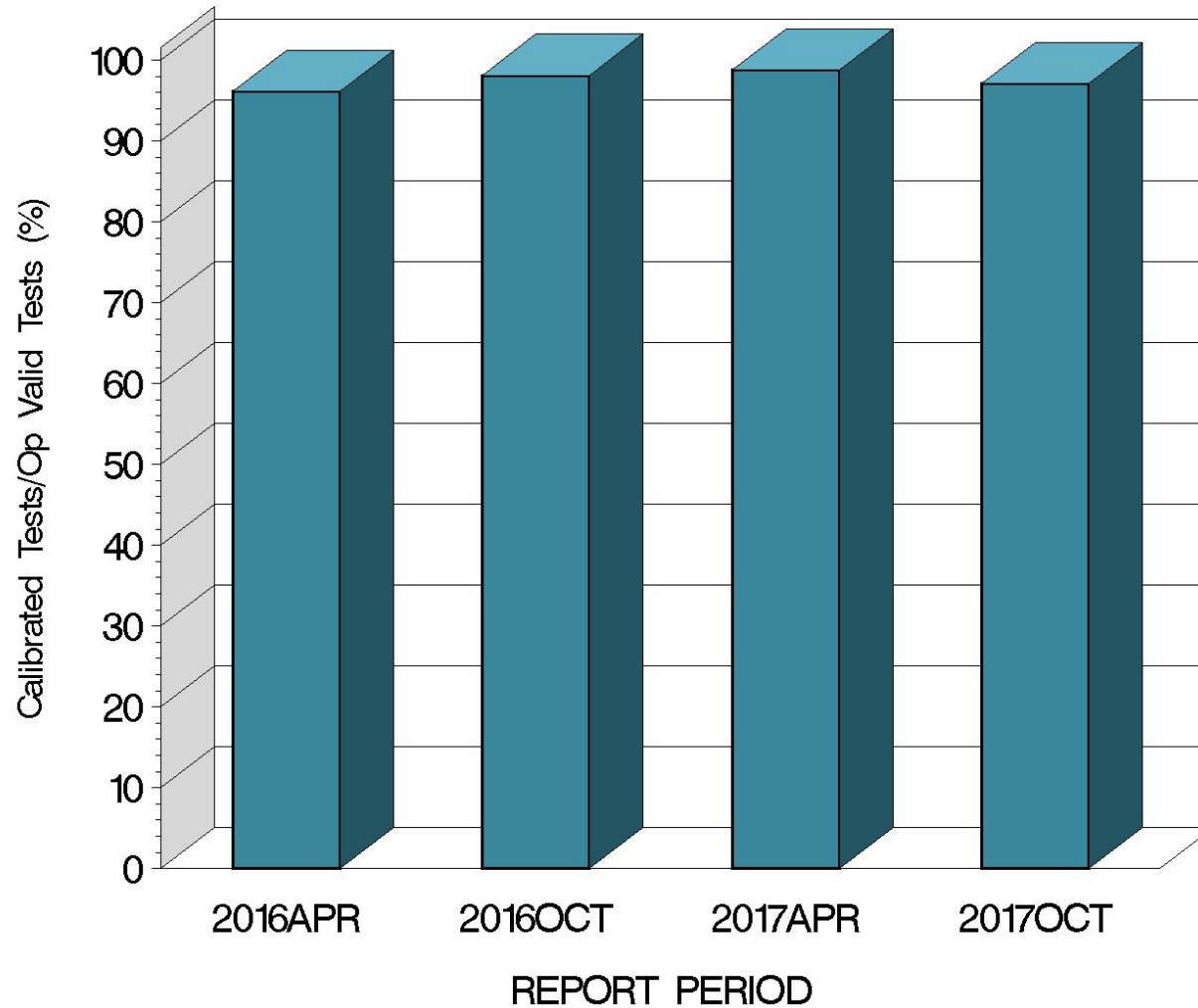
Resolution

Report Period

12/23/16 26OCT2017

BRT (D 6557)

OPERATIONALLY VALID TESTS
MEETING ACCEPTANCE CRITERIA



12:23:16 26OCT2017

BRT (D 6557)

CAUSES FOR LOST TESTS

Lab	Cause	Oil				Validity			Loss Rate		
		1006	81	82	82-1	LC	RC	XC	Lost	Starts	%
A	Acid Pump Problem	1	0	0	0	0	0	1	1	62	1.6
B	Airflow Problem	0	0	0	2	1	0	1	2	25	8.0
	Acid Pump Problem	1	0	0	0	1	0	0	1	25	4.0
	Shaker Table Failure	1	0	0	0	1	0	0	1	25	4.0
G	Heater Failure	2	0	0	0	0	0	2	2	43	4.7
	No Test Ball	1	0	0	0	0	0	1	1	43	2.3
Lost		6	0	0	2	4	0	4			
Starts		55	30	8	50	143	143	143			
%		10.9	0	0	4.0	2.3	0	2.3			

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

BRT (D 6557)

Average Δ/s By Laboratory		
Lab	n	AGVYI
A	61	0.176
B	21	-0.680
D	14	-1.136
G	40	-0.057
Industry	136	-0.160

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

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

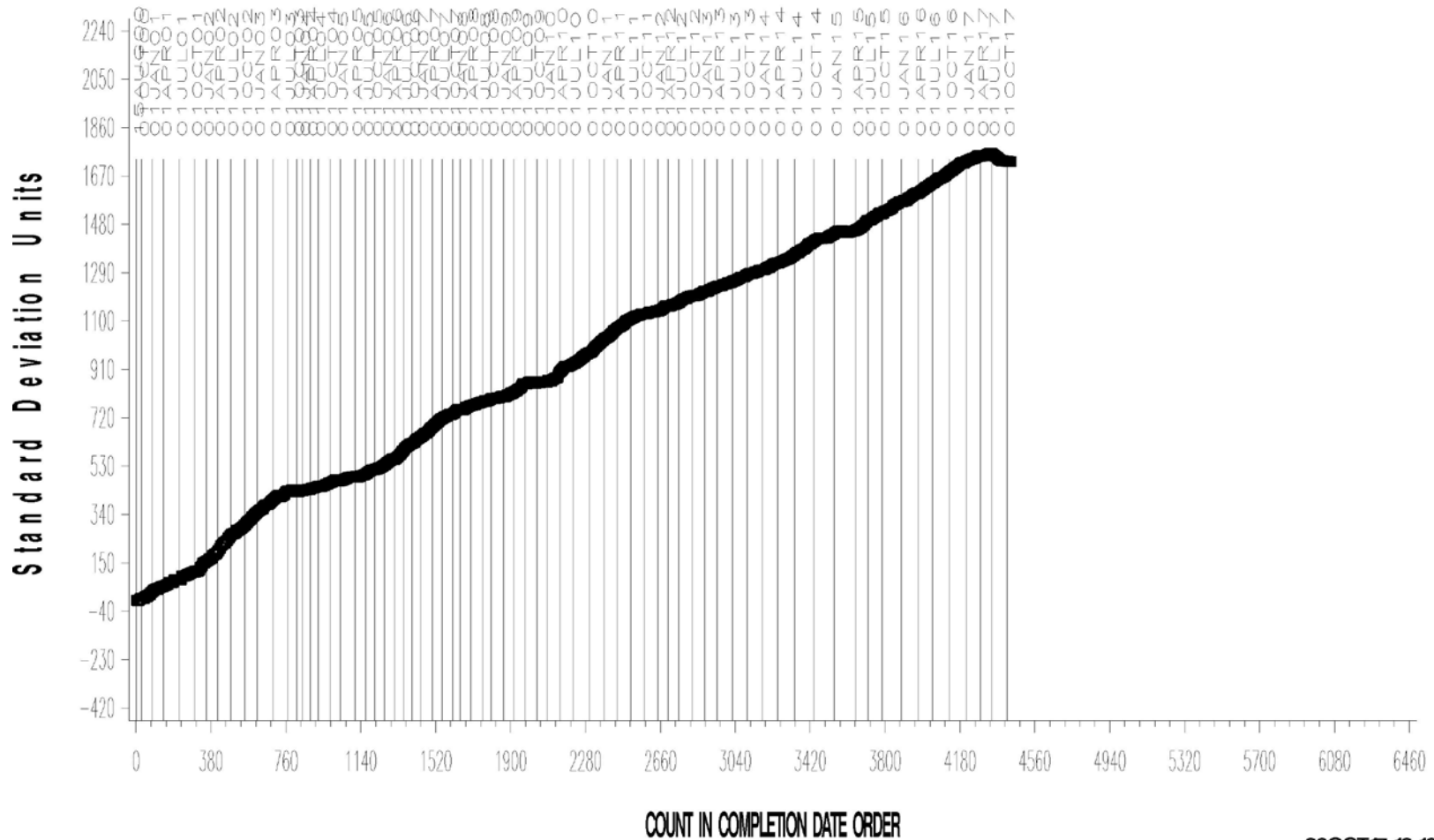
BRT (D 6557)

BALL RUST TEST INDUSTRY OPERATIONALLY VALID DATA



REFERENCE AVERAGE GRAY VALUE

CUSUM Severity Analysis



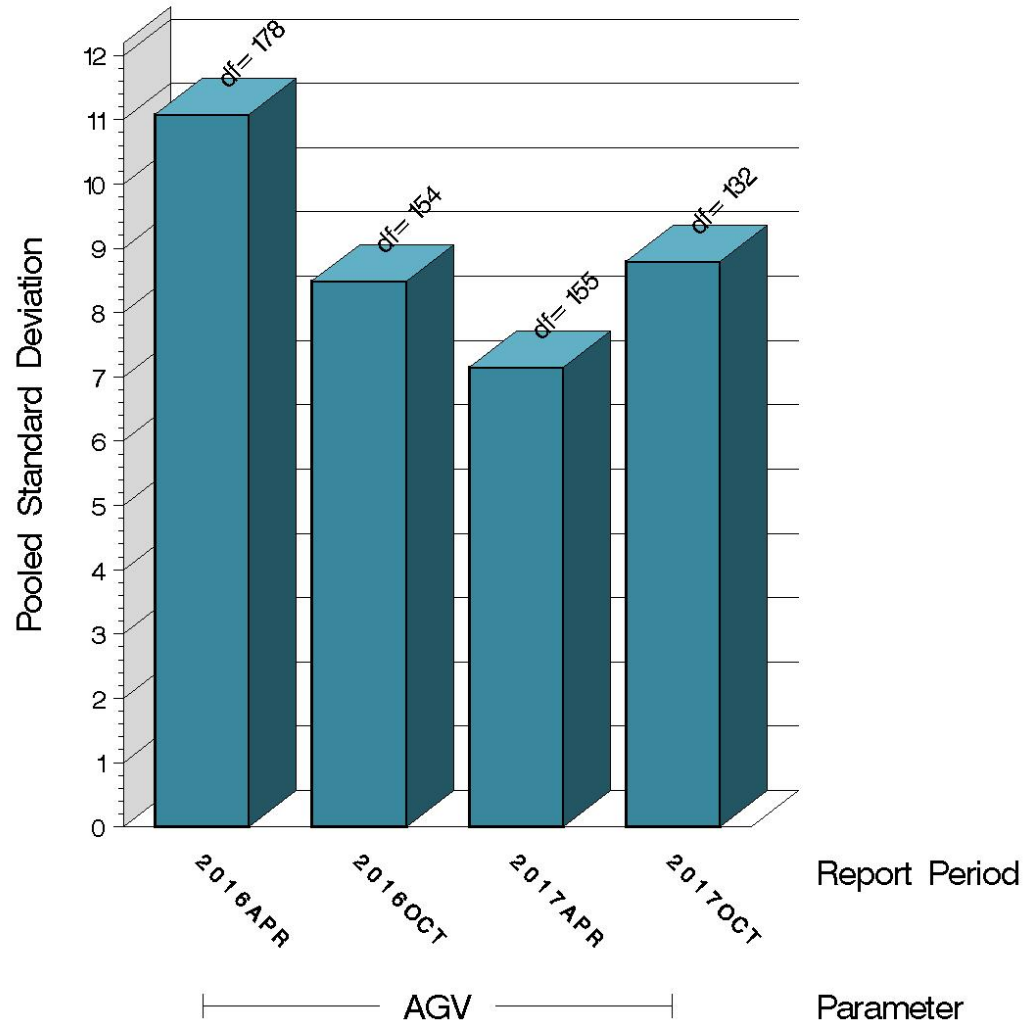
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BRT (D 6557)

TEST PRECISION

POOLED STANDARD DEVIATION
BY SIX-MONTH ASTM REPORT PERIOD



12/23/16 26OCT2017

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 8.79.

Precision, as measured by pooled standard deviation, is worse 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	77	3737	29.9
81	42	0	0.0
82	2	0	0.0
82-1	54	1000	8.0
86	40	6712	53.7
87	40	12212	97.7
Total	255	23661	189.3

Reference Oils 86 and 87 are potential replacements for reference oil 81, which cannot be reblended, but neither has been approved at this time.