

#### **Test Monitoring Center**

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

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

MEMORANDUM: 14-037

DATE: November 19, 2014

TO: Yong-Li McFarland,

Chairwoman, Engine Oil Filterability Test Surveillance Panel

FROM: Michael T. Kasimirsky Milal J. Kasimisky

SUBJECT: EOWT Testing from April 1, 2014 through September 30, 2014

A total of 1,039 EOWT tests were reported to the Test Monitoring Center during the report period from April 1, 2014 through September 30, 2014.

Please find attached a summary of testing activity this period.

MTK/mtk/astm1014.doc/mem14-037.mtk.doc

cc: F. M. Farber J. A. Clark

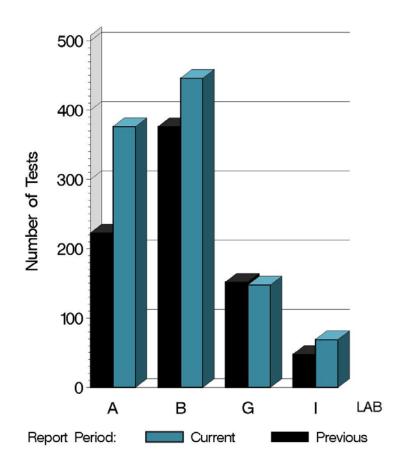
**EOWT Surveillance Panel** 

ftp://ftp.astmtmc.cmu.edu/docs/bench/eowt/semiannualreports/eowt-10-2014.pdf

Distribution: email

	Reporting Data
Number of Labs	4

#### NUMBER OF TESTS REPORTED BY LAB AND REPORT PERIOD





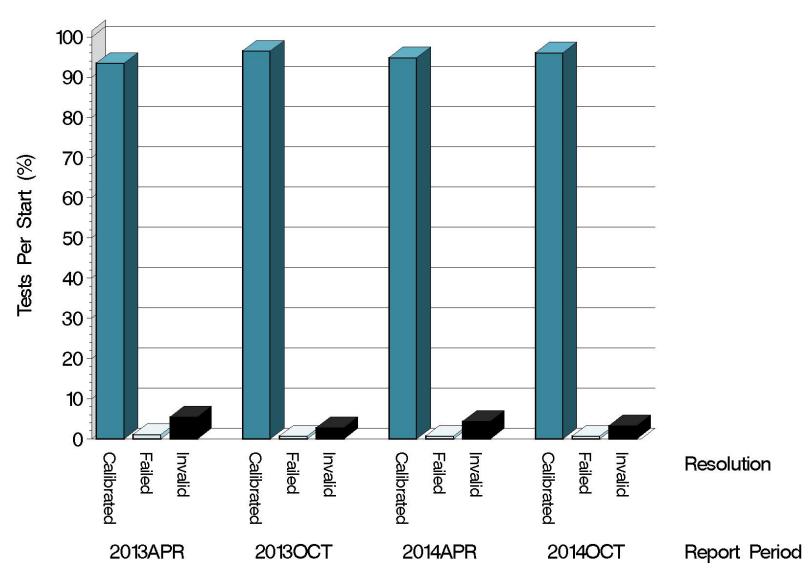


## **Test Distribution by Oil and Validity**

		By Oil			By Treat Level				Totals		
		77-1	77-2	78-1	78-2	0.6	1.0	2.0	3.0	This Period	Last Period
Accepted for Calibration	AC	4	596	0	398	251	249	250	248	998	758
Acceptable Donated Tests	NI	0	0	0	0	0	0	0	0	0	0
Unacceptable Donated Tests	MI	0	0	0	0	0	0	0	0	0	0
Rejected Tests	ОС	0	6	0	1	1	4	1	1	7	6
Operationally Invalid (lab)	LC	0	5	0	3	2	2	2	2	8	2
Operationally Invalid (lab/TMC)	RC	0	0	0	0	0	0	0	0	0	0
Aborted Calibration	XC	0	24	0	2	6	6	7	7	26	33
Total		4	631	0	404	260	261	260	258	1039	799



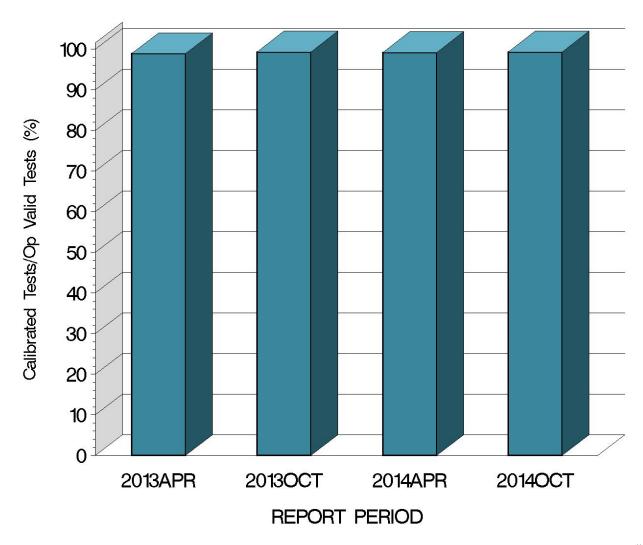
#### CALIBRATION ATTEMPT SUMMARY







# OPERATIONALLY VALID TESTS MEETING ACCEPTANCE CRITERIA







#### **CAUSES FOR LOST TESTS**

			Oil			Validity			Loss Rate			
Lab	Cause		77-1	77-2	78-1	78-2	LC	RC	XC	Lost	Starts	%
Α	Blender fa	ailure	0	2	0	2	0	0	4	4	376	1%
В	Sample P	ample Prep Error		20	0	3	7	0	16	23	116	5%
Ь	Sample L	ost	0	1	0	0	1	0	0	1 446 0.		0.2%
G	Power Fa	ilure	0	4	0	0	0	0	4	4	148	3%
I	Burette B	roken	0	2	0	0	0	0	2	2	69	3%
		Lost	0	29	0	5	8	0	26			
		Starts	4	631	0	404	1039	1039	1039			
		%	0%	5%	0%	1%	1%	0%	3%			

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





Average Δ/s By Laboratory						
Treat Level	Lab	n	CFAYI			
0.6	Α	94	-0.408			
	В	106	0.408			
	G	36	0.825			
		16	1.288			
	Industry	252	0.219			
1.0	Α	92	-0.176			
	В	106	0.137			
	G	36	0.685			
	[	19	1.273			
	Industry	253	0.187			
2.0	Α	93	-0.286			
	В	106	0.279			
	G	36	0.740			
	I	16	1.065			
	Industry	251	0.186			
3.0	Α	93	0.049			
	В	104	0.409			
	G	36	0.631			
	I	16	1.243			
	Industry	249	0.360			



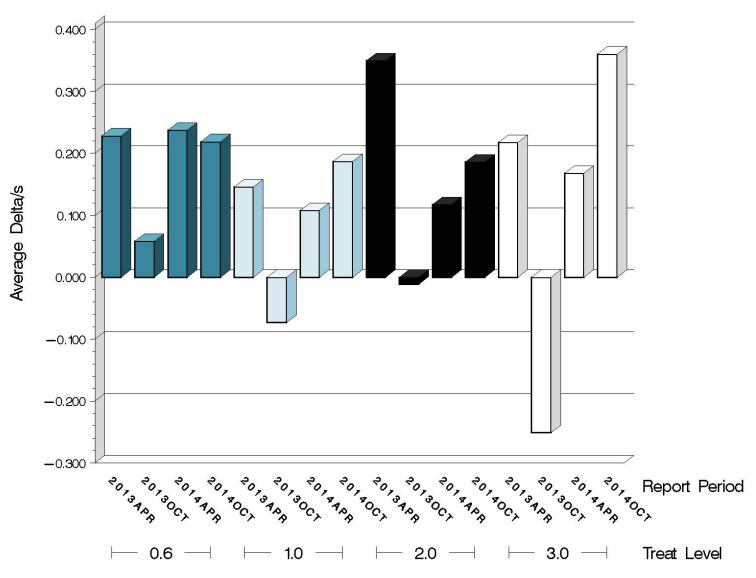
Individual test results can be found on the TMC Web Page at the following link:

ftp://ftp.astmtmc.cmu.edu/refdata/bench/eowt/data/





#### AVERAGE DELTA/S





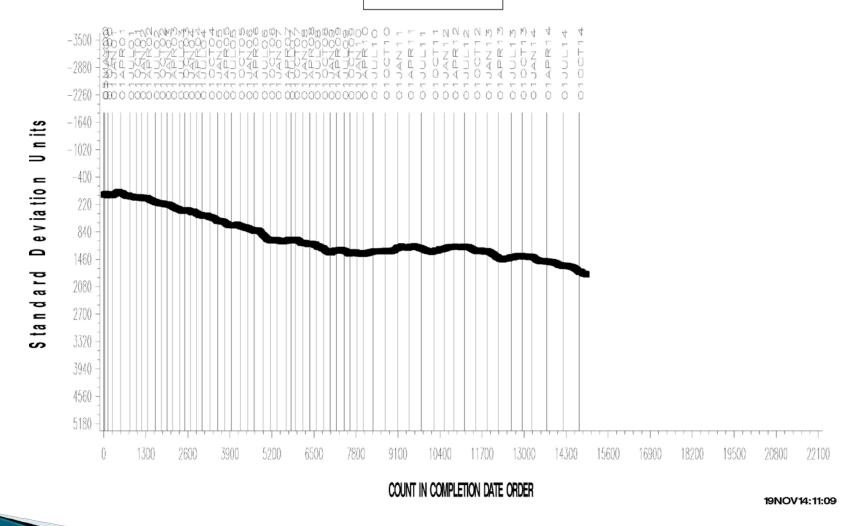


#### **EOWT INDUSTRY OPERATIONALLY VALID DATA**



#### 20 - 25 ML CHANGE IN FLOWRATE AVG.

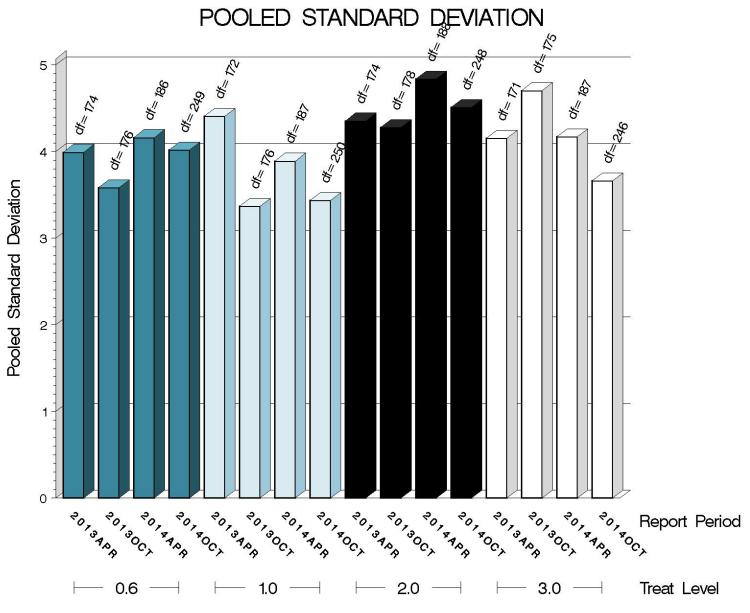
CUSUM Severity Analysis







http://astmtmc.cmu.edu







# EOWT (D 6794) SUMMARY OF SEVERITY & PRECISION

### **Severity**

Over the course of this report period, CIFA severity, as measured by CUSUM plotting, is trending slightly severe.

#### **Precision**

Pooled s values for this period are 4.02 (0.6%), 3.43 (1.0%), 4.51 (2.0%), and 3.66 (3.0%).

Precision, as measured by pooled standard deviation, is still comparable to historical performance.





### **INFORMATION LETTERS**

No EOWT Information Letters were issued this period.



#### STATUS OF REFERENCE OIL SUPPLY

		@ TMC				
Oil	Samples @ Labs	Samples (290 mL)	Gallons			
77-1	0	0	0.0			
77-2	112	1,909	147.0			
78-1	0	0	0.0			
78-2	156	261	20.1			
79	0	13,584	1,046.0			
Total	268	15,754	1,213.1			

The TMC inventories of oils 77-1 & 78-1 are depleted.

The TMC inventory of oil 78-2 is nearly depleted.

The TMC has procured a reblend of oil 78-2, called reference oil 79.

Plans to introduce reference oil 79 into EOFT testing are ongoing.



