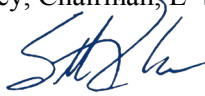




## Test Monitoring Center

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

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

MEMORANDUM: 14-026  
DATE: October 27, 2014  
TO: Jarrod Chalkley, Chairman, L-42 Surveillance Panel  
FROM: Scott Parke   
SUBJECT: L-42 Reference Oil Testing from April 1, 2014 through September 30, 2014

Please find attached a summary of reference oil testing activity this period.

SDP/sdp/mem14-026.sdp.doc

cc: Frank Farber

Jeff Clark

L-42 Surveillance Panel

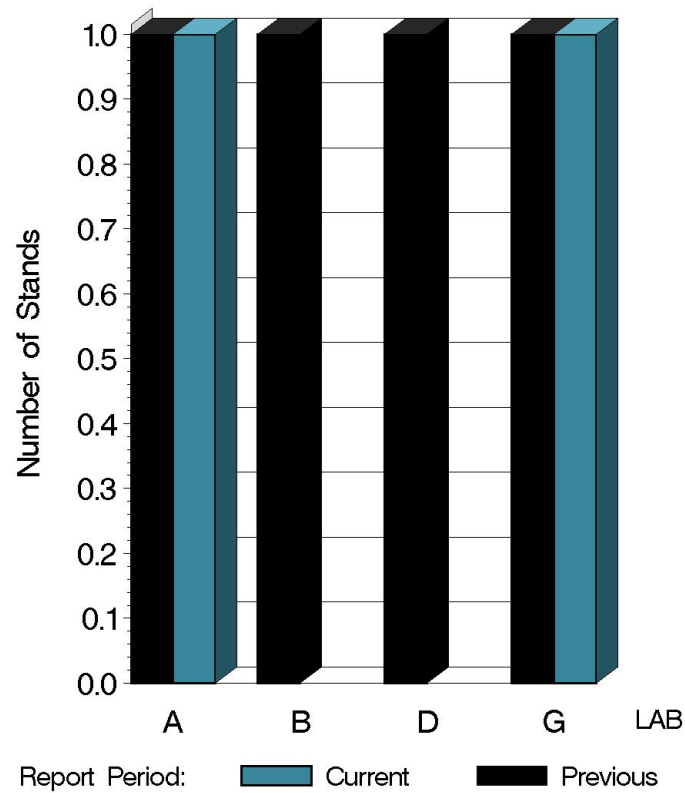
<ftp://ftp.astmtmc.cmu.edu/docs/gear/l42/semiannualreports/l42-10-2014.pdf>

Distribution: email

# L-42 (D7452)

	Reporting Data	Calibrated on 9-30-14
Number of Labs	2	2
Number of Stands	2	2

BY-LAB STAND  
DISTRIBUTION



14:51:00 24OCT2014

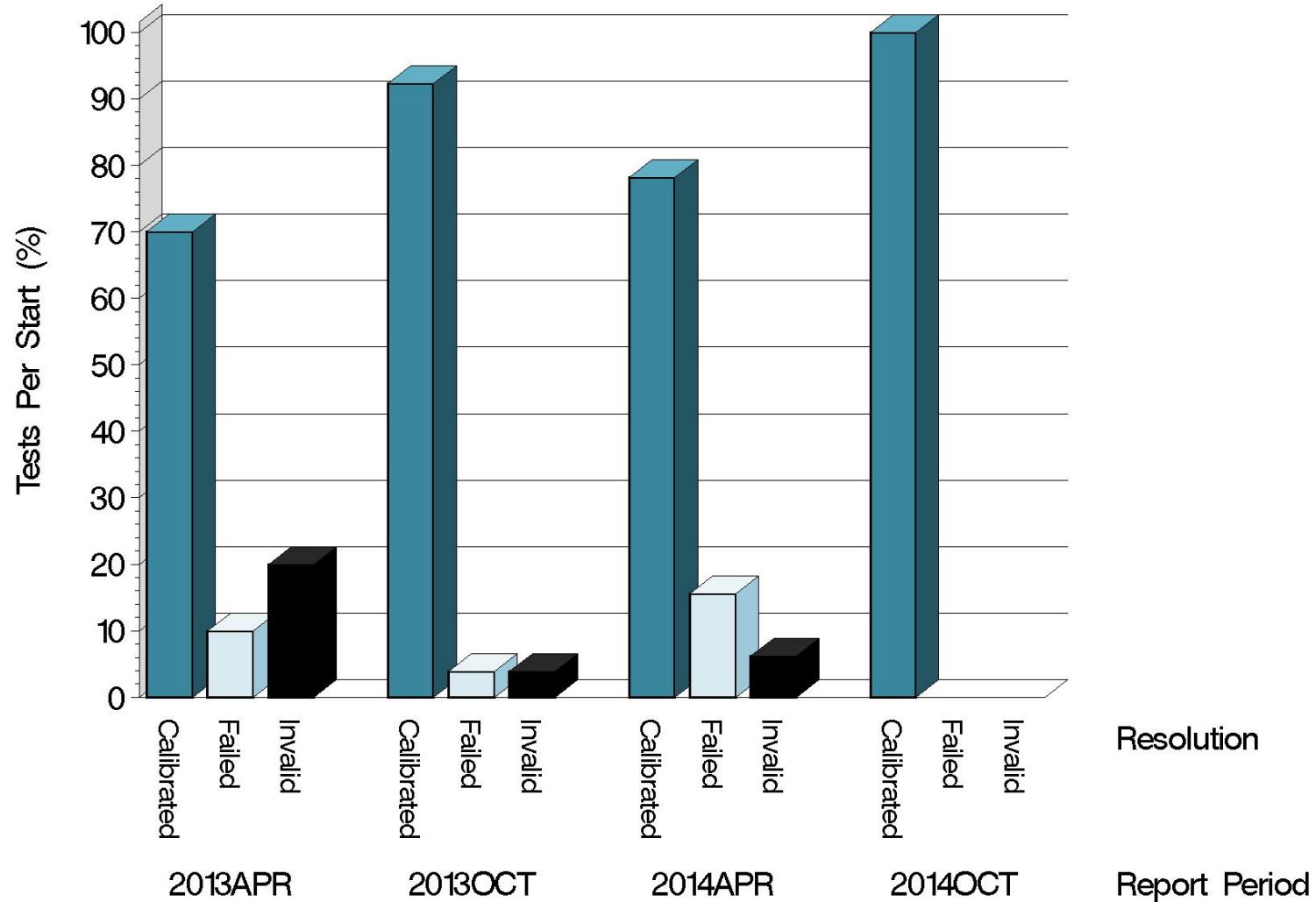
# L-42 (D7452)

## Test Distribution by Oil and Validity

						Totals	
		112-2	113	116-1	117	Last Period	This Period
Accepted for calibration	AC	0	0	3	9	25	12
Rejected (Mild)	OC	0	0	0	0	4	0
Rejected (Severe)	OC	0	0	0	0	1	0
Rejected (Precision)	OC	0	0	0	0	0	0
Accepted discrimination	AS	1	1	0	0	3	2
Unacceptable discrimination	MS	1	0	0	0	4	1
Invalidated discrimination	LS	0	0	0	0	1	0
Invalidated calibration	LC	0	0	0	0	2	0
Unacceptable calibration	MC	0	0	0	0	0	0
Aborted	XC	0	0	0	0	0	0
Acceptable information run	NI	0	0	0	0	11	0
Unacceptable information run	MI	0	0	0	0	1	0
<b>Total</b>		<b>2</b>	<b>1</b>	<b>3</b>	<b>9</b>	<b>52</b>	<b>15</b>

# L-42 (D7452)

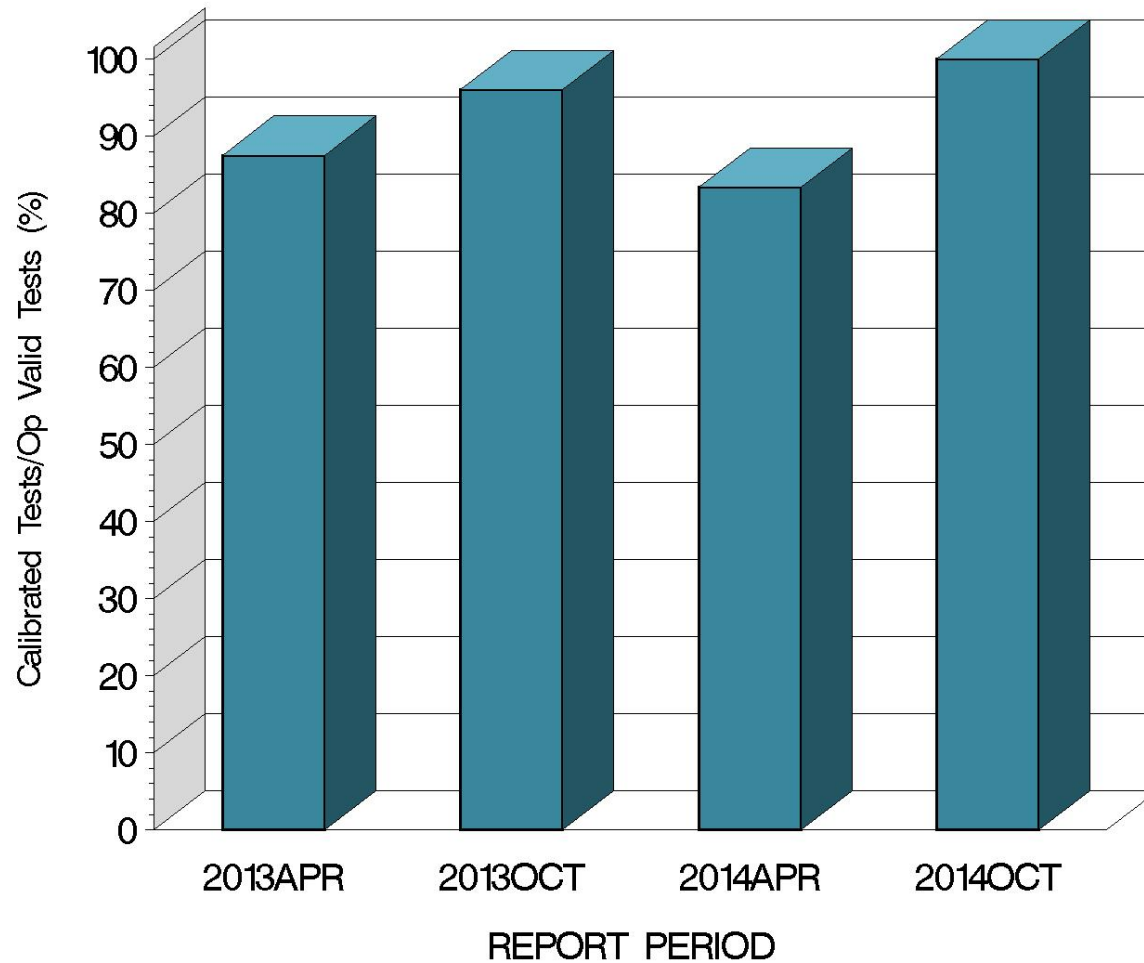
## CALIBRATION ATTEMPT SUMMARY



14:51:00 24OCT2014

# L-42 (D7452)

OPERATIONALLY VALID TESTS  
MEETING ACCEPTANCE CRITERIA



14:51:00 24OCT2014

# L-42 (D7452)

## CAUSES FOR LOST TESTS

Lab	Cause	Oil				Validity				Loss Rate		
		112-2	113	116-1	117	MS	LS	LC	MI	Lost	Starts	%
	No tests were lost this period.									0	15	0%
	Lost	0	0	0	0	0	0	0	0			
	Starts	2	1	3	9	15	15	15	15			
	%	0%	0%	0%	0%	0%	0%	0%	0%			

# L-42 (D7452)

			Coast Side Pinion Scoring		
Oil	Gear Batch	N	Mean	Std. Dev.	Average $\Delta/s$
116-1	B6L544/P4L806	3	28	3.61	0.53
117	C1L680/P8T025A	9	24	4.53	0.18

		Pooled Standard Deviation			
Lab	Coast Side Pinion Scoring $\Delta/s$	df	Coast Side Pinion Scoring	Coast Side Ring Scoring	Shock Series I Coast Side Ring Scoring
A	0.18	8	4.53	3.24	0.00
G	0.53	2	3.61	6.08	0.58

# L-42 (D7452)

## SUMMARY OF SEVERITY & PRECISION

### Severity

ECSP severity remained within control chart limits throughout this period.

### Precision

ECSP precision remained within control chart limits throughout this period.

Industry control charts follow.

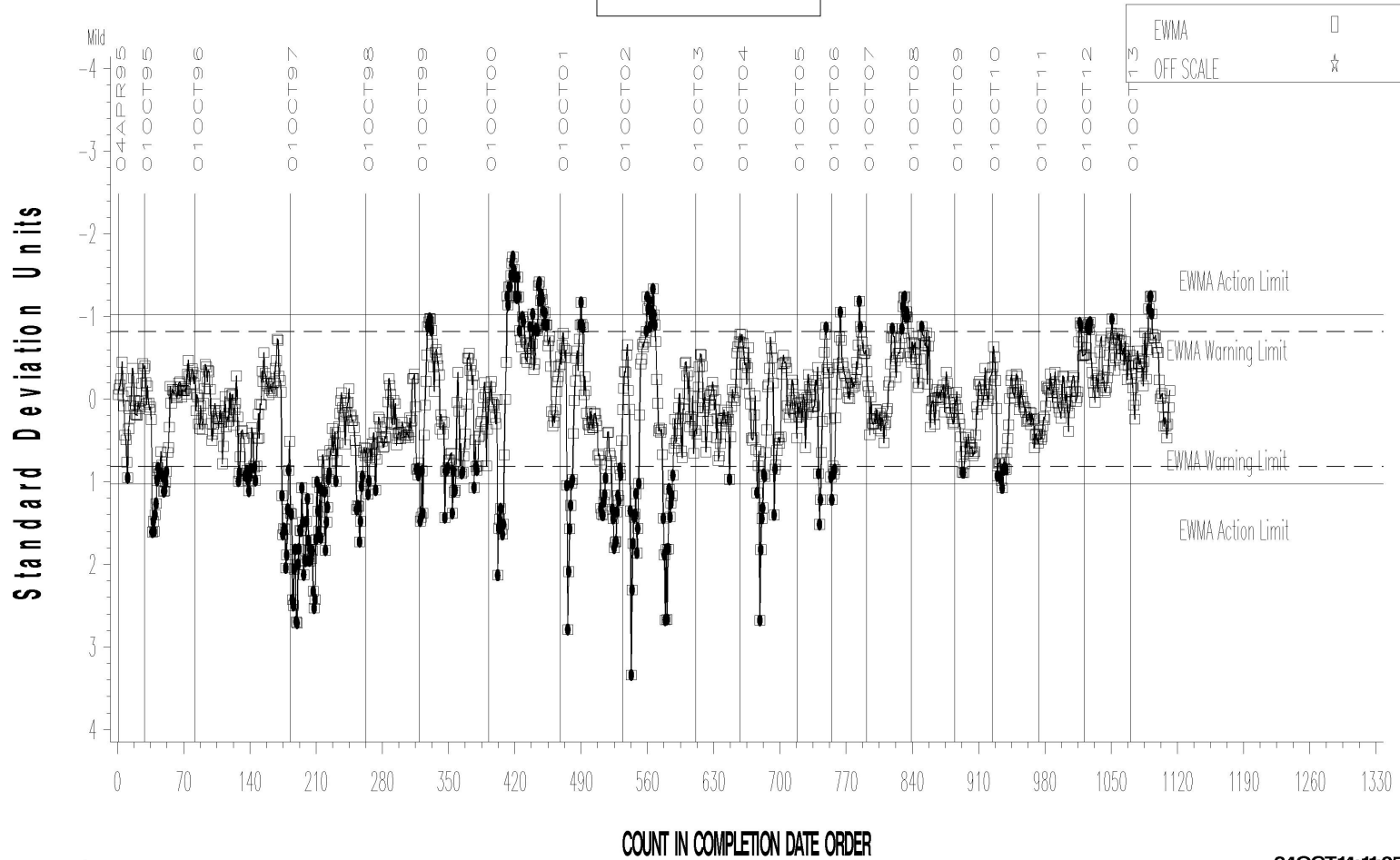


# L-42 (D7452)

L-42 INDUSTRY OPERATIONALLY VALID DATA

FINAL EOT PINION SCORING COAST SIDE

LTMS Severity Analysis



Severe

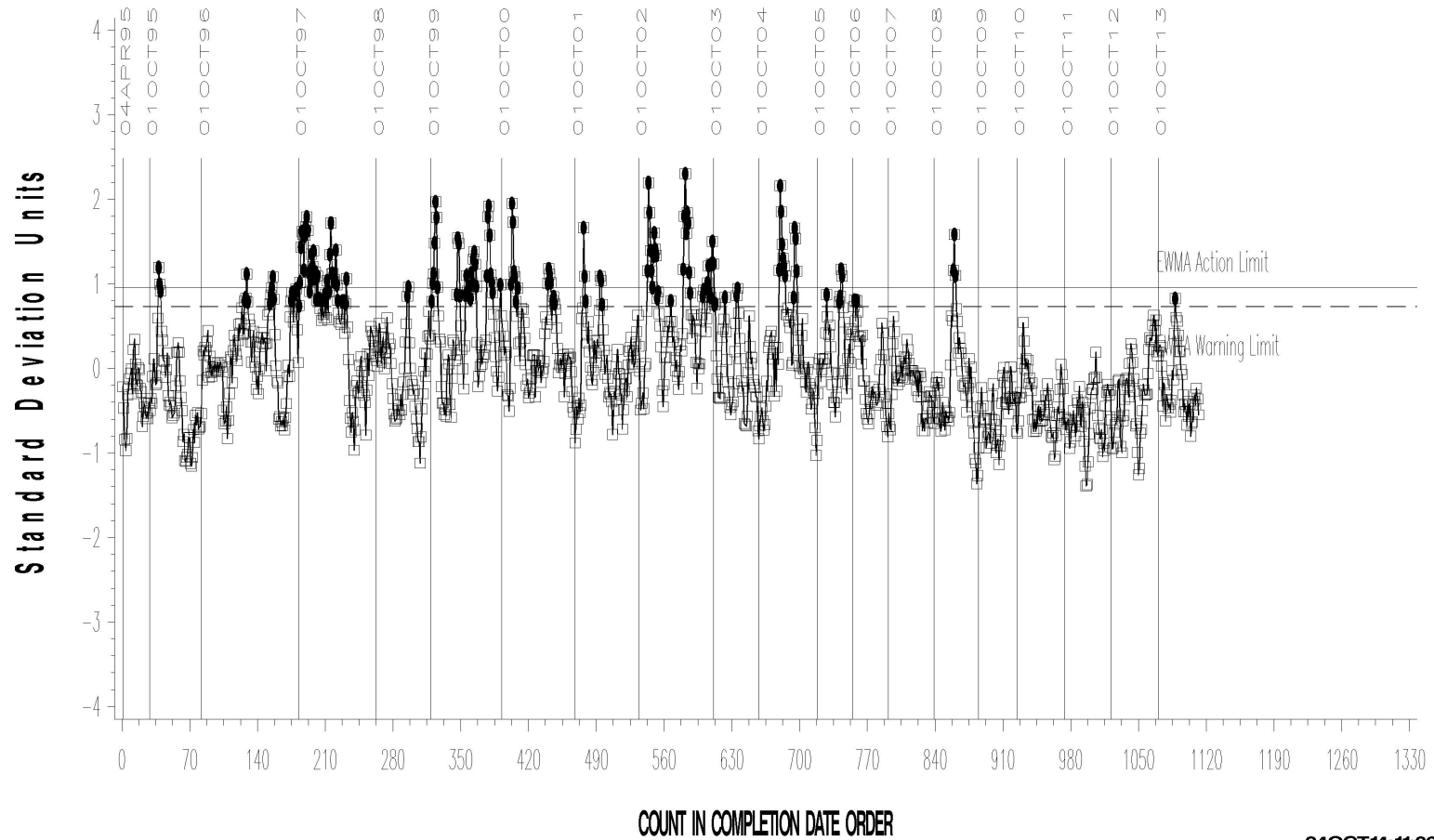
24OCT14:11:05

# L-42 (D7452)

L-42 INDUSTRY OPERATIONALLY VALID DATA

FINAL EOT PINION SCORING COAST SIDE

LTMS Precision Analysis

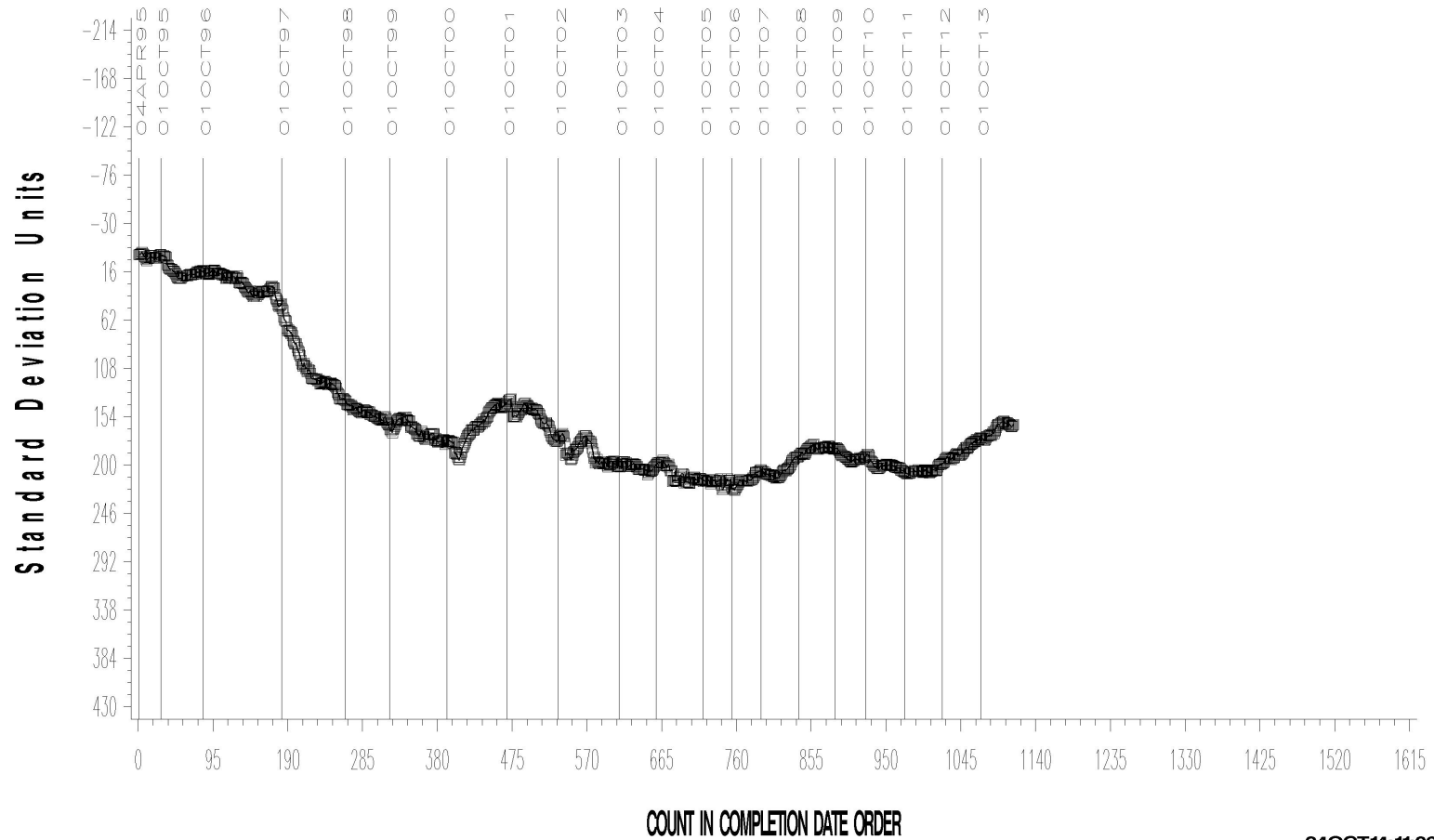


# L-42 (D7452)

L-42 INDUSTRY OPERATIONALLY VALID DATA

FINAL EOT PINION SCORING COAST SIDE

CUSUM Severity Analysis



24OCT14:11:06

# L-42 (D7452)

## TIMELINE ADDITIONS

Effective Date	Information Letter	Event
20140530	14-1	Implementation of correction factor for use with reference oil 117.

# L-42 (D7452)

## LAB VISITS

One L-42 lab visit was conducted during this period. No procedural nonconformances were found.

## INFORMATION LETTERS

Information Letter 14-1 was issued May 14, 2014 to implement a correction factor for use with reference oil 117.

# L-42 (D7452)

## STATUS OF REFERENCE OIL SUPPLY

Oil	Cans @ Labs	@ TMC	
		Cans	Gallons
112-2	1	15	7.5
113	12	136	68.0
116-1	13	0	0.0
117	27	976	488.0
<b>Total</b>	<b>53</b>	<b>1127</b>	<b>563.5</b>

At surveillance panel direction, the TMC has procured oil 117 as a replacement oil for 116-1. This is a J2360 oil which produces somewhat milder scoring. The oil has been implemented for use as the new “pass” oil with a correction factor +6% for the pinion scoring result and +4% for the ring scoring result.