




## Test Monitoring Center

@ Carnegie Mellon University  
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<http://astmtmc.cmu.edu>  
412-365-1000

MEMORANDUM: 13-053  
DATE: October 14, 2013  
TO: Thomas Gottwald, Chairman, L-42 Surveillance Panel  
FROM: Scott Parke   
SUBJECT: L-42 Reference Oil Testing from April 1, 2013 through September 30, 2013

Please find attached a summary of testing activity this period.

SDP/sdp/mem13-053.sdp.doc

cc: Frank Farber

Jeff Clark

L-42 Surveillance Panel

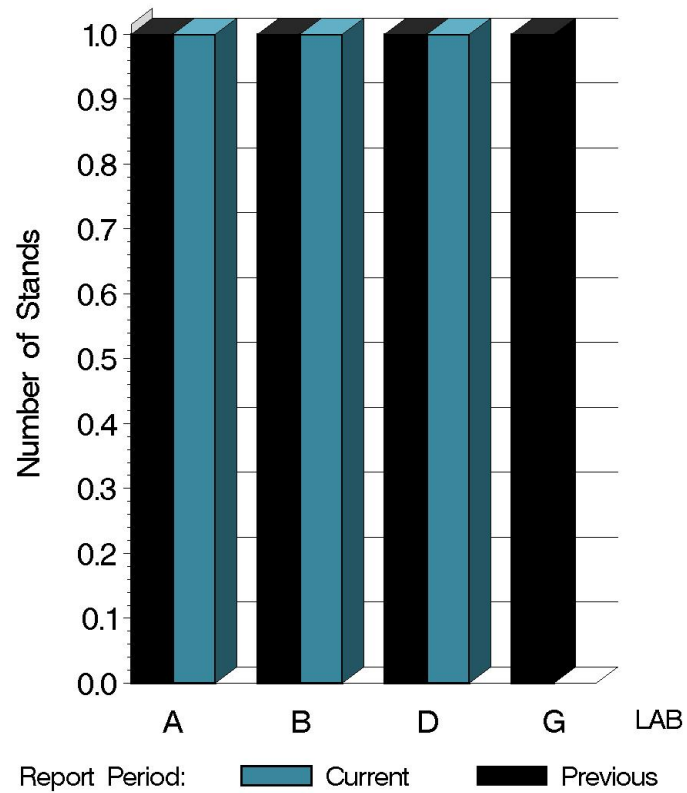
<ftp://ftp.astmtmc.cmu.edu/docs/gear/l42/semiannualreports/l42-10-2013.pdf>

Distribution: email

# L-42 (D7452)

	Reporting Data	Calibrated on 9-30-13
Number of Labs	3	2
Number of Stands	3	2

BY-LAB STAND  
DISTRIBUTION



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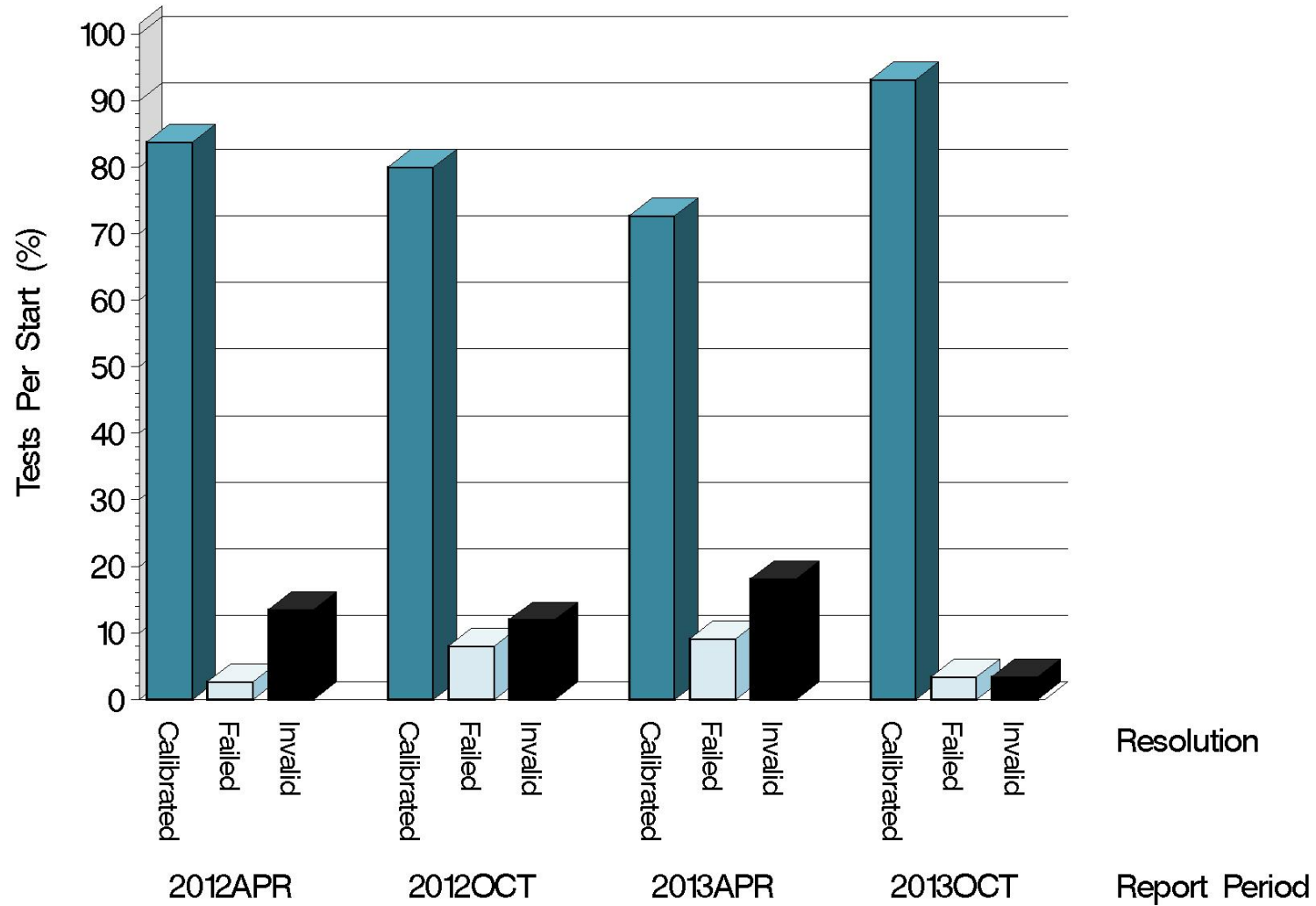
# L-42 (D7452)

## Test Distribution by Oil and Validity

					Totals	
					Last Period	This Period
		112-2	113	116-1		
Accepted for calibration	AC	0	0	24	21	24
Rejected (Mild)	OC	0	0	1	2	1
Rejected (Severe)	OC	0	0	0	1	0
Rejected (Precision)	OC	0	0	0	0	0
Accepted discrimination	AS	1	2	0	3	3
Unacceptable discrimination	MS	0	0	0	5	0
Invalidated calibration	LC	0	0	1	3	1
Unacceptable calibration	MC	0	0	0	2	0
Aborted	XC	0	0	0	1	0
Hardware information run	NI	0	0	0	19	0
Unacceptable hardware info run	MI	0	0	0	10	0
Shakedown run	NN	0	0	0	0	0
<b>Total</b>		<b>1</b>	<b>2</b>	<b>26</b>	<b>67</b>	<b>29</b>

# L-42 (D7452)

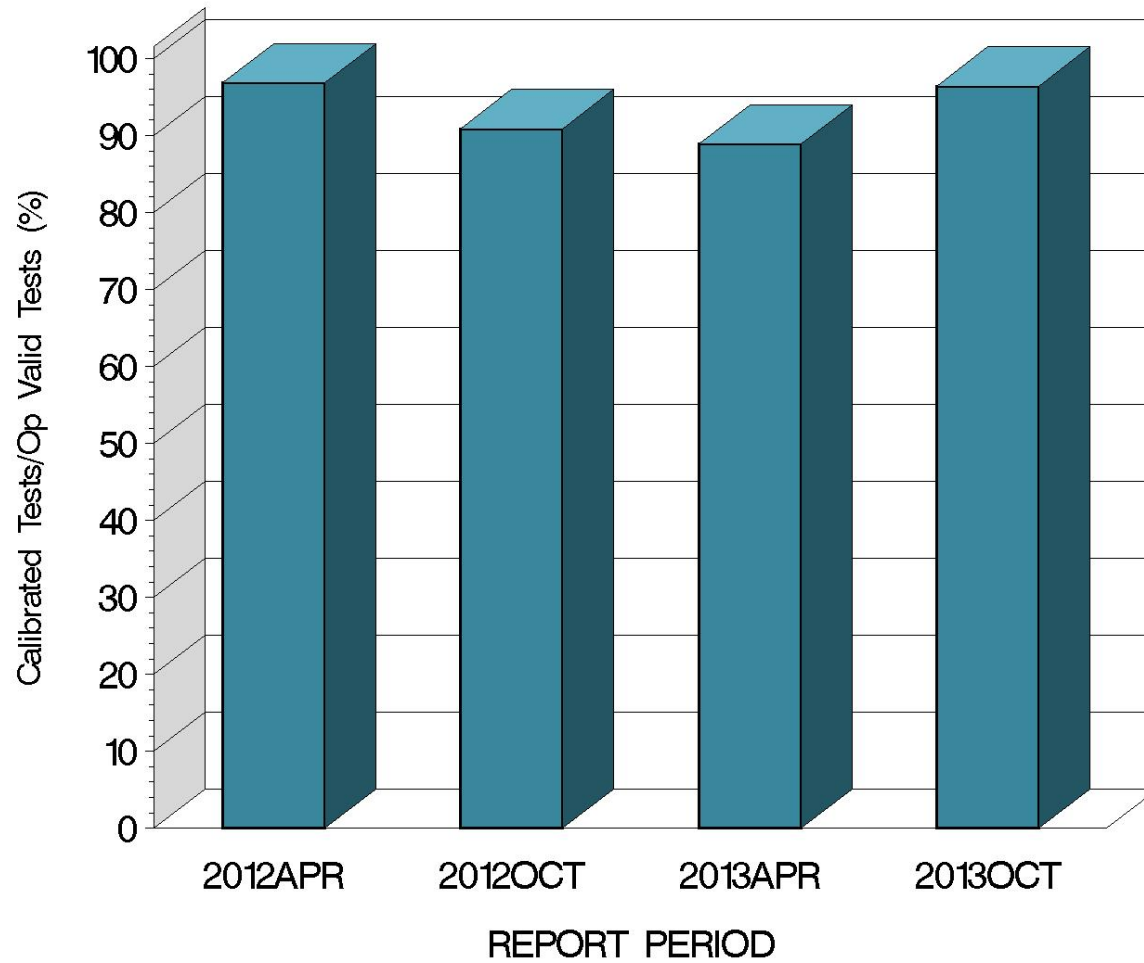
## CALIBRATION ATTEMPT SUMMARY



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# L-42 (D7452)

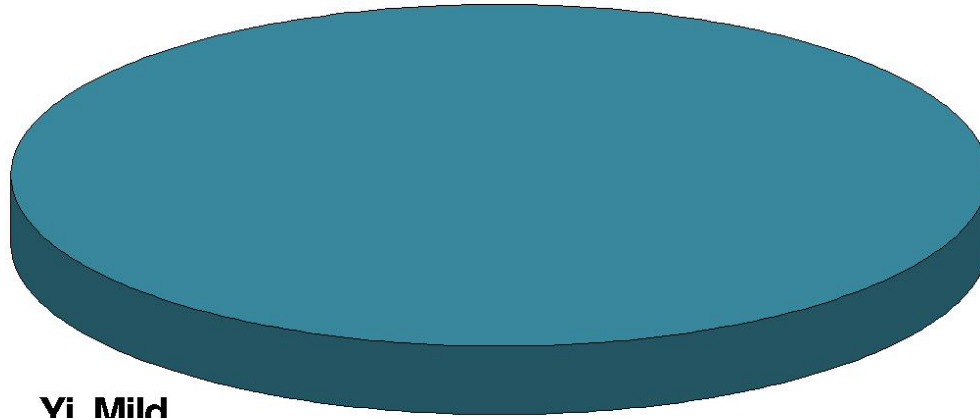
OPERATIONALLY VALID TESTS  
MEETING ACCEPTANCE CRITERIA



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# L-42 (D7452)

## CAUSES FOR FAILED TESTS



Yi Mild  
1  
100%

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# L-42 (D7452)

## CAUSES FOR LOST TESTS

Lab	Cause	Oil			Validity			Loss Rate		
		112-2	113	116-1	RC	LC	XC	Lost	Starts	%
A	Drive side scoring			●		●		1	10	10%
	Lost	0	0	1	0	1	0			
	Starts	1	2	26	29	29	29			
	%	0%	0%	4%	0%	3%	0%			

# L-42 (D7452)

			Coast Side Pinion Scoring		
Oil	Gear Batch	N	Mean	Std. Dev.	Average $\Delta/s$
116-1	C1L680/P8T025A	25	19.4	4.60	-0.65

		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	-0.73	7	4.84	3.25	0.00
B	-0.22	10	4.31	3.24	0.00
D	-1.34	5	1.37	0.84	0.00



# 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.

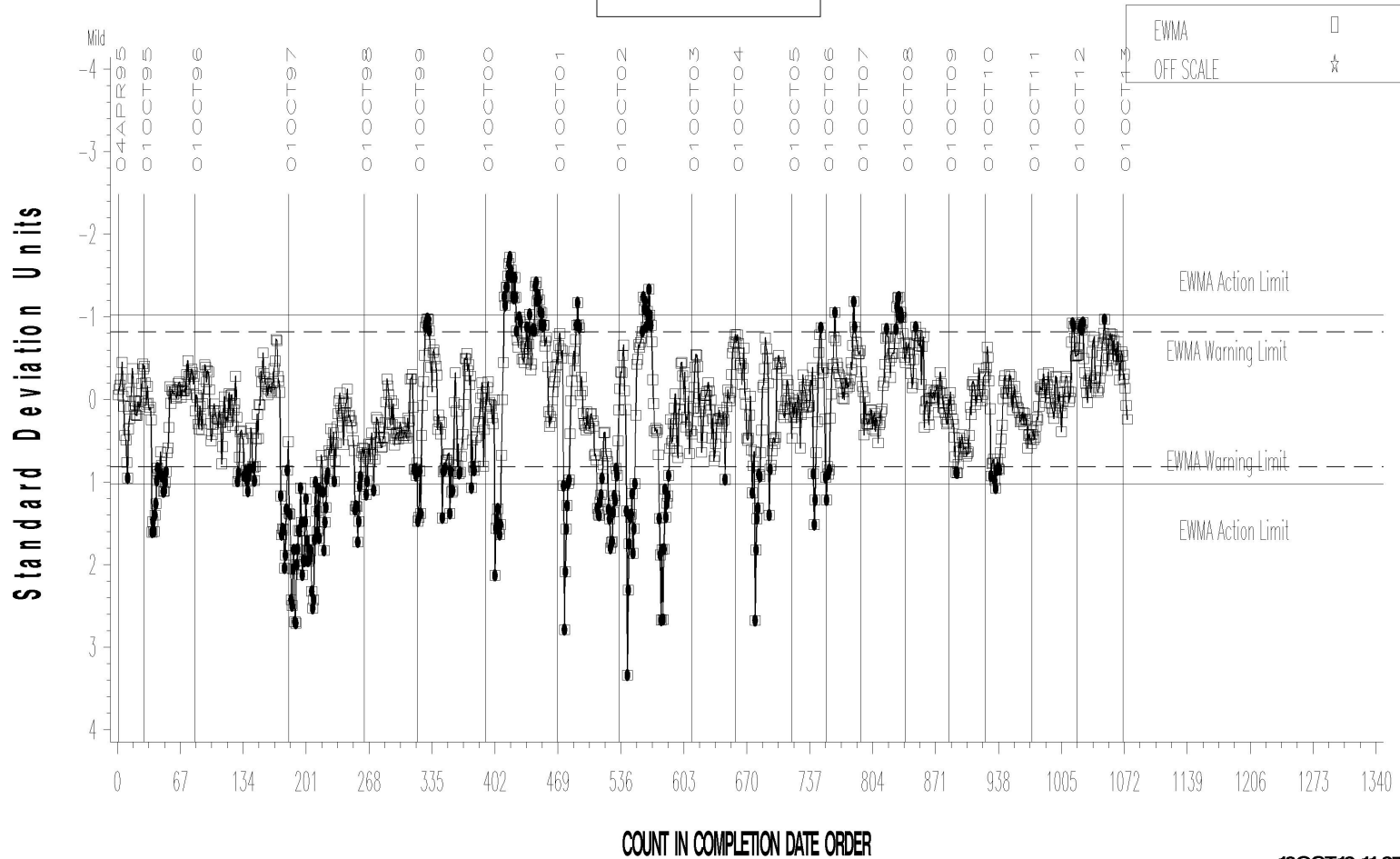
Industry control charts follow.

# L-42 (D7452)

L-42 INDUSTRY OPERATIONALLY VALID DATA

FINAL EOT PINION SCORING COAST SIDE

LTMS Severity Analysis



Severe

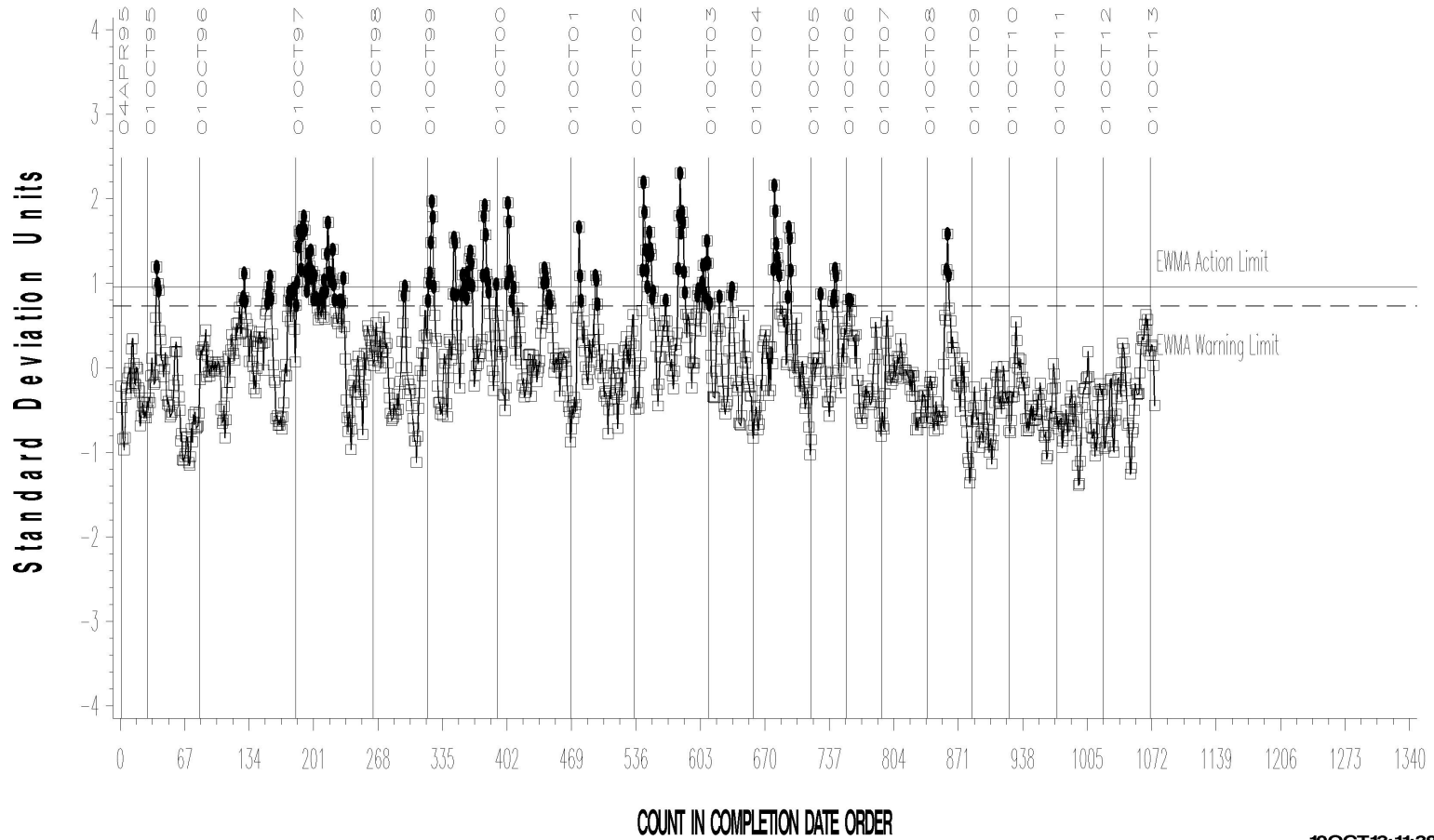
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# L-42 (D7452)

L-42 INDUSTRY OPERATIONALLY VALID DATA

FINAL EOT PINION SCORING COAST SIDE

LTMS Precision Analysis



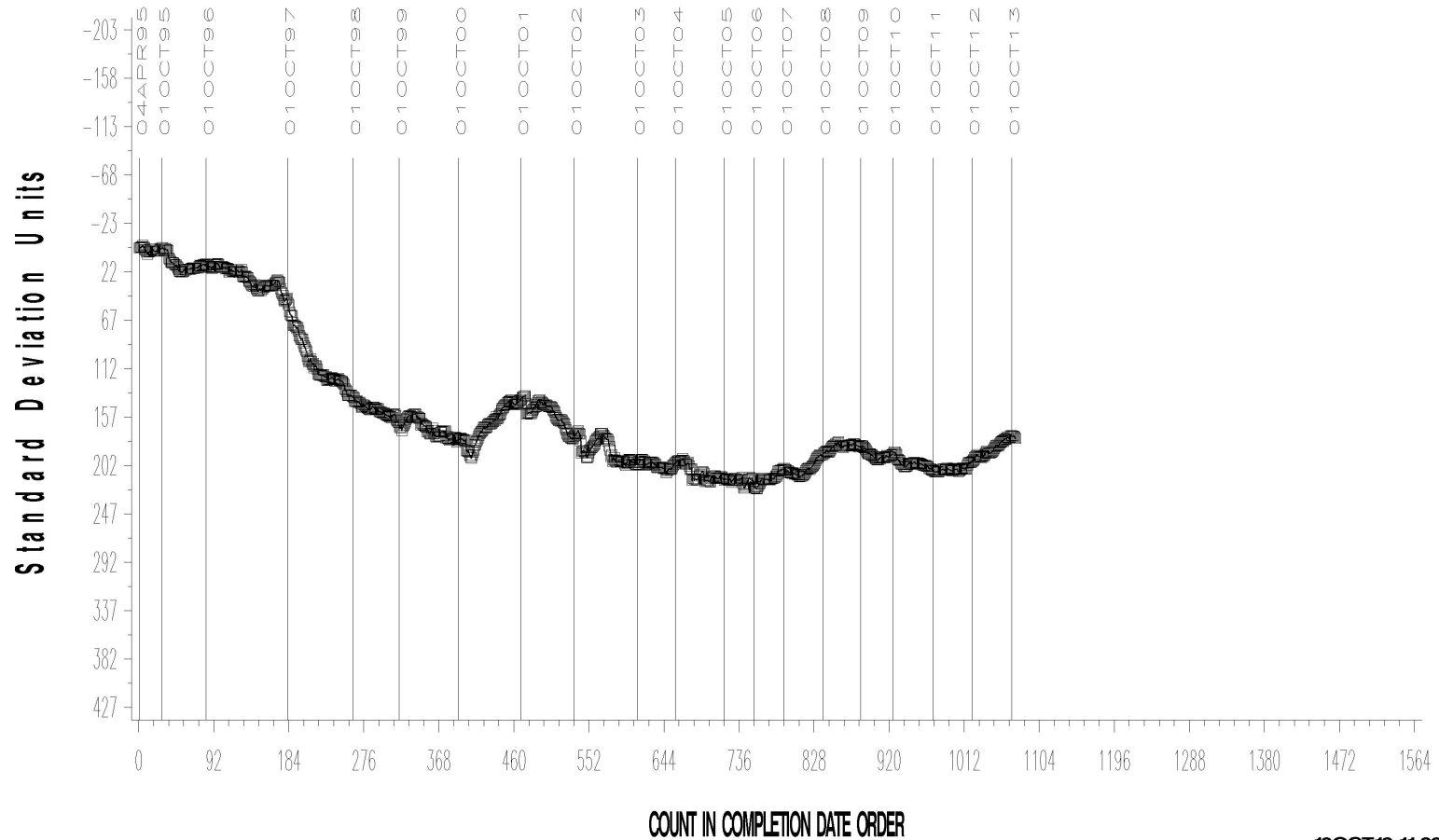
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# L-42 (D7452)

L-42 INDUSTRY OPERATIONALLY VALID DATA

FINAL EOT PINION SCORING COAST SIDE

CUSUM Severity Analysis



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# L-42 (D7452)

## TIMELINE ADDITIONS

Effective Date	Information Letter	Event
		No timeline additions this period.

# L-42 (D7452)

## LAB VISITS

No L-42 lab visits were conducted during this period.

## INFORMATION LETTERS

No L-42 information letters were issued during this period.

# L-42 (D7452)

## STATUS OF REFERENCE OIL SUPPLY

Oil	Cans @ Labs	@ TMC	
		Cans	Gallons
112-2	4	15	7.5
113	16	143	71.5
116-1	42	4	2.0
117	24	1050	525.1
Total	86	1212	606.1

At surveillance panel direction, the TMC has procured oil 117 as a replacement oil for 116-1. This is a J2360 oil which is expected to produce slightly milder scoring. Information runs are currently being conducted to verify the expected performance.