




Test Monitoring Center

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

MEMORANDUM: 13-026
DATE: May 6, 2013
TO: Thomas Gottwald, Chairman, L-42 Surveillance Panel
FROM: Scott Parke 
SUBJECT: REVISED: L-42 Testing from October 1, 2012 through March 31, 2013

Please find attached a summary of testing activity this period. Development testing for the C1L680/P8T025A hardware batch continued through this period. That testing has now concluded and the batch has been approved for testing.

This memo supersedes memo 13-016. Not all labs had reported all data for the period at the time that memo was published.

SDP/sdp/mem13-026.sdp.doc

cc: Frank Farber
Jeff Clark

L-42 Surveillance Panel

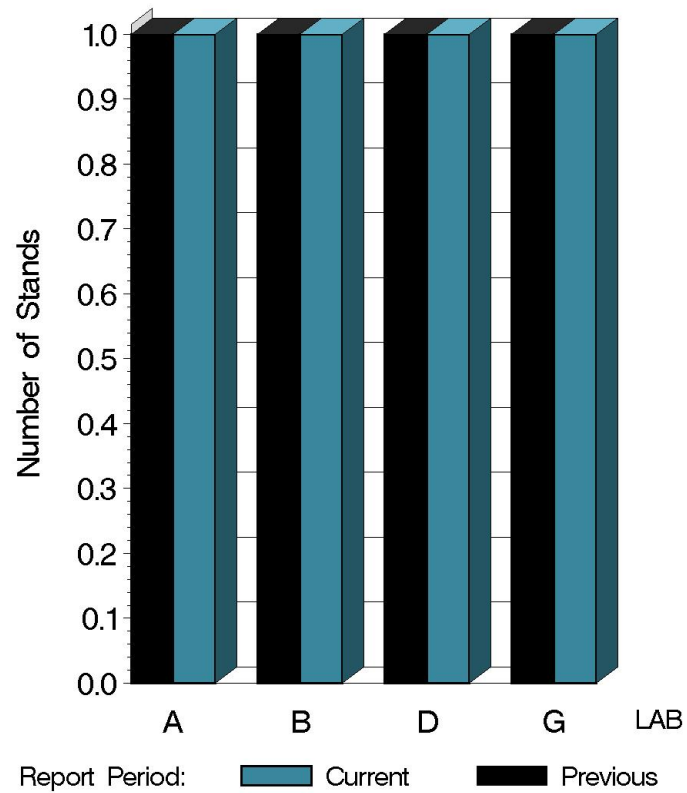
<ftp://ftp.astmtmc.cmu.edu/docs/gear/142/semiannualreports/142-04-2013.pdf>

Distribution: email

L-42 (D7452)

	Reporting Data	Calibrated on 3-31-13
Number of Labs	4	4
Number of Stands	4	4

BY-LAB STAND
DISTRIBUTION



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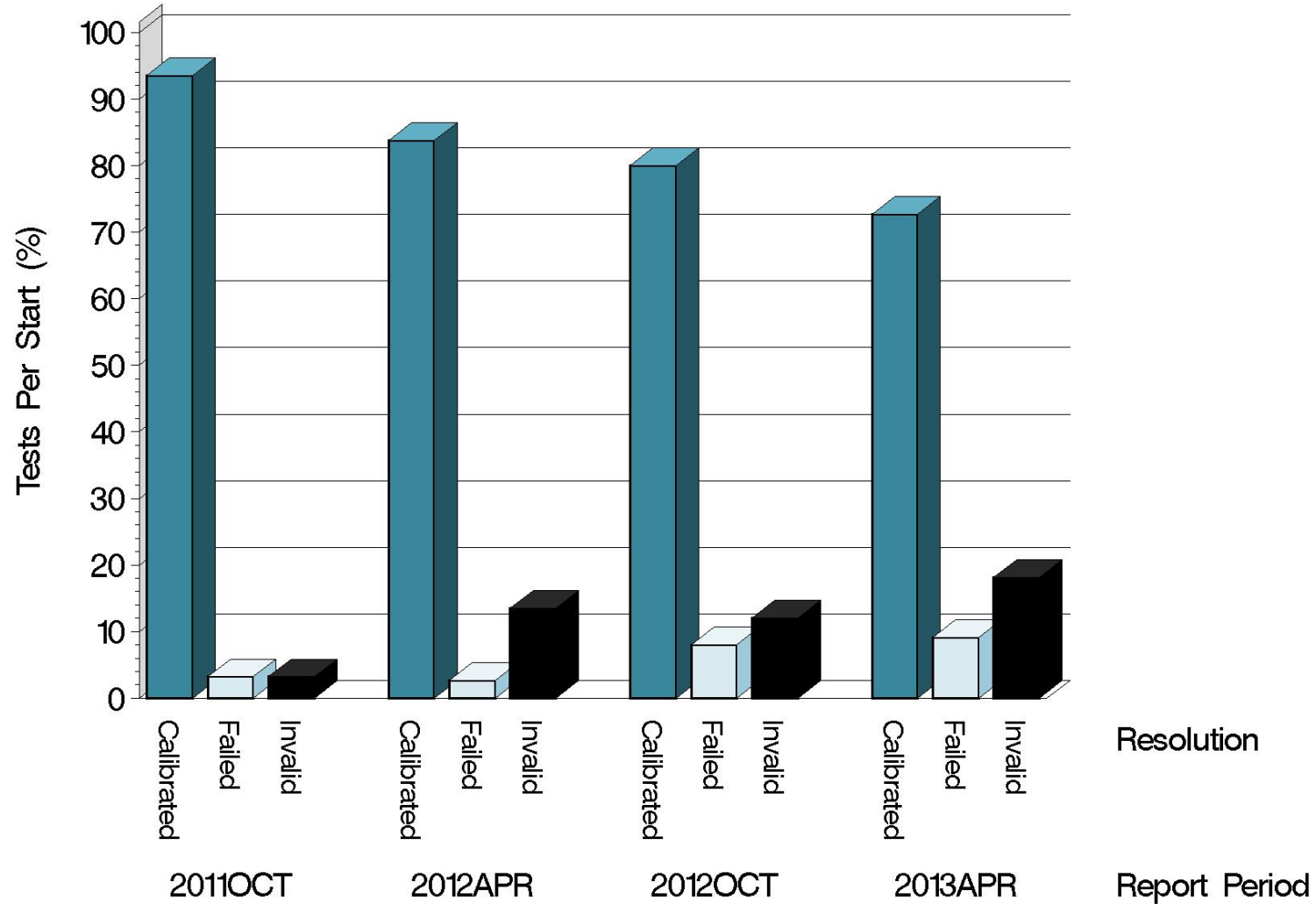
L-42 (D7452)

Test Distribution by Oil and Validity

					Totals	
					Last Period	This Period
		112-2	113	116-1		
Accepted for calibration	AC	0	0	21	19	21
Rejected (Mild)	OC	0	0	2	2	2
Rejected (Severe)	OC	0	0	1	0	1
Rejected (Precision)	OC	0	0	0	0	0
Accepted discrimination	AS	0	3	0	1	3
Unacceptable discrimination	MS	0	5	0	0	5
Invalidated calibration	LC	0	0	3	3	3
Unacceptable calibration	MC	0	0	2	0	2
Aborted	XC	0	0	1	0	1
Hardware information run	NI	0	4	15	15	19
Unacceptable hardware info run	MI	0	1	9	0	10
Shakedown run	NN	0	0	0	2	0
Total		0	13	54	42	67

L-42 (D7452)

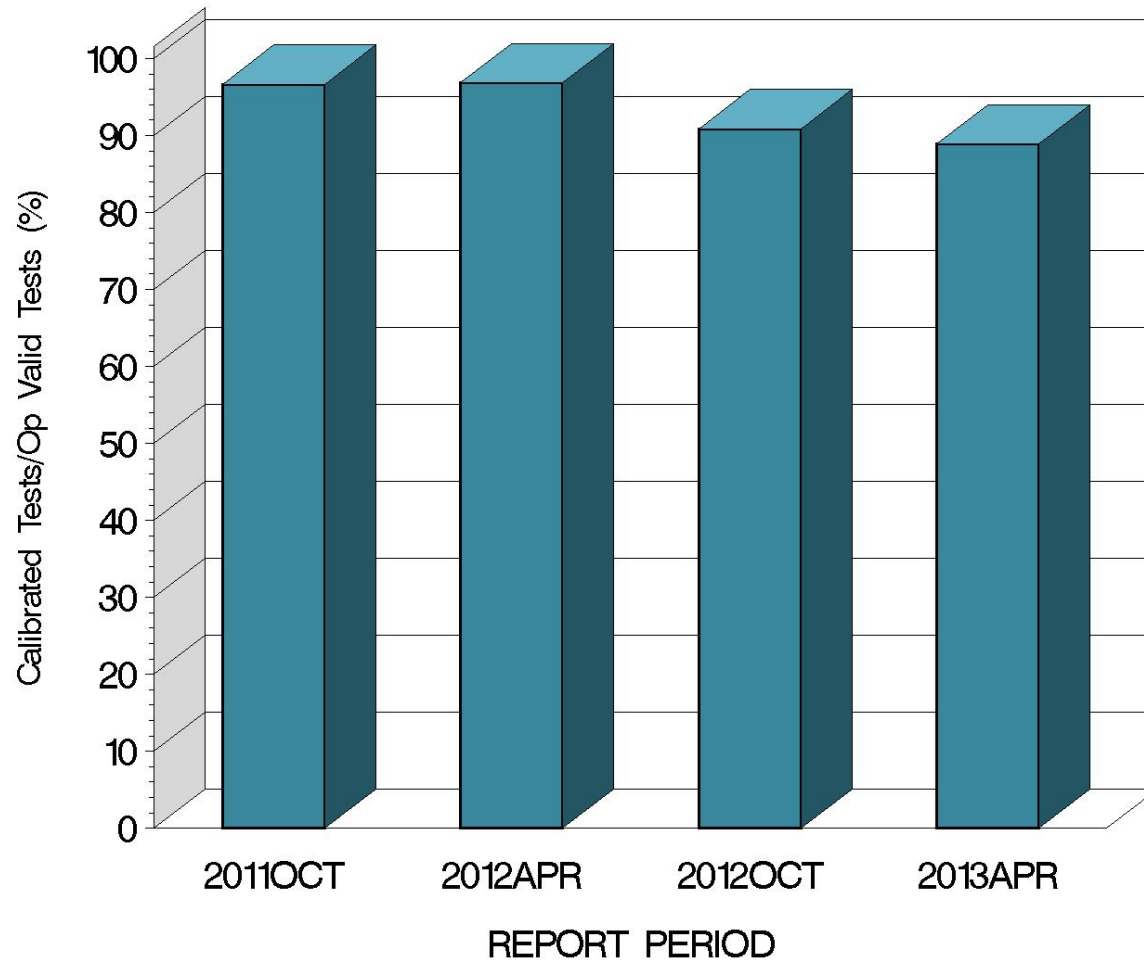
CALIBRATION ATTEMPT SUMMARY



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L-42 (D7452)

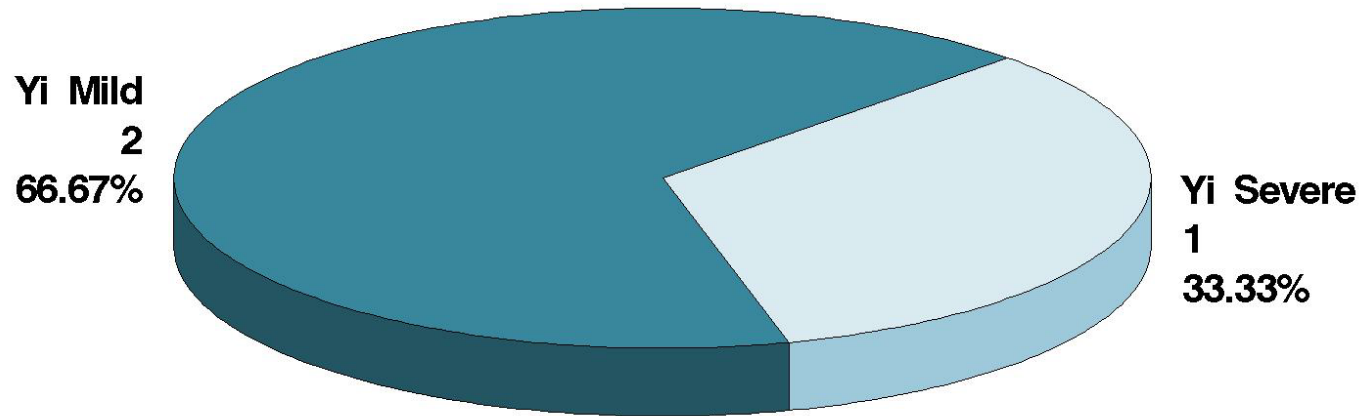
OPERATIONALLY VALID TESTS
MEETING ACCEPTANCE CRITERIA



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L-42 (D7452)

CAUSES FOR FAILED TESTS



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L-42 (D7452)

CAUSES FOR LOST TESTS

Lab	Cause	Oil		Validity				Loss Rate		
		113	116-1	MC	MI	LC	XC	Lost	Starts	%
B	Drive side scoring		•			•		10	22	45%
	High wheel speed	•			•					
	High wheel speed		•		•					
	High wheel speed		•		•					
	High wheel speed		•		•					
	High wheel speed		•		•					
	High wheel speed		•		•					
	High wheel speed		•		•					
	High wheel speed		•		•					
	Poor engine performance		•				•			

continued...

L-42 (D7452)

		Oil		Validity				Loss Rate		
Lab	Cause	113	116-1	MC	MI	LC	XC	Lost	Starts	%
D	Wheel speed out		•		•			2	11	18%
	Wheel speed out		•		•					
G	Excess shutdowns		•			•		4	25	16%
	Wheel speed %out		•			•				
	Drive side scoring		•	•						
	Drive side scoring		•	•						
Lost		1	13	2	10	3	1			
Starts		13	54	67	67	67	67			
%		8%	24%	3%	15%	4%	1%			

L-42 (D7452)

			Coast Side Pinion Scoring		
Oil	Gear Batch	N	Mean	Std. Dev.	Average Δ/s
116-1	B6L544/P4L806	16	22.0	4.91	-0.56
116-1	C1L680/P8T025A	8	23.4	5.21	0.07

		Pooled Standard Deviation			
Lab	Coast Side Pinion Scoring Δ/s	df	Coast Side Pinion Scoring	Coast Side Ring Scoring	Shock Series I Coast Side Ring Scoring
A	-0.36	2	5.57	3.00	0.00
B	0.33	4	5.02	4.10	0.00
G	-0.56	15	4.91	4.80	1.41

L-42 (D7452)

SUMMARY OF SEVERITY & PRECISION

Severity

ECSP exceeded the EWMA warning limit for a series of 4 lab G tests at the beginning of the period (15, 19, 22, and 18% scoring values). Performance for the remainder of the period remained within control chart limits.

Precision

ECSP precision remained within control chart limits throughout this period.

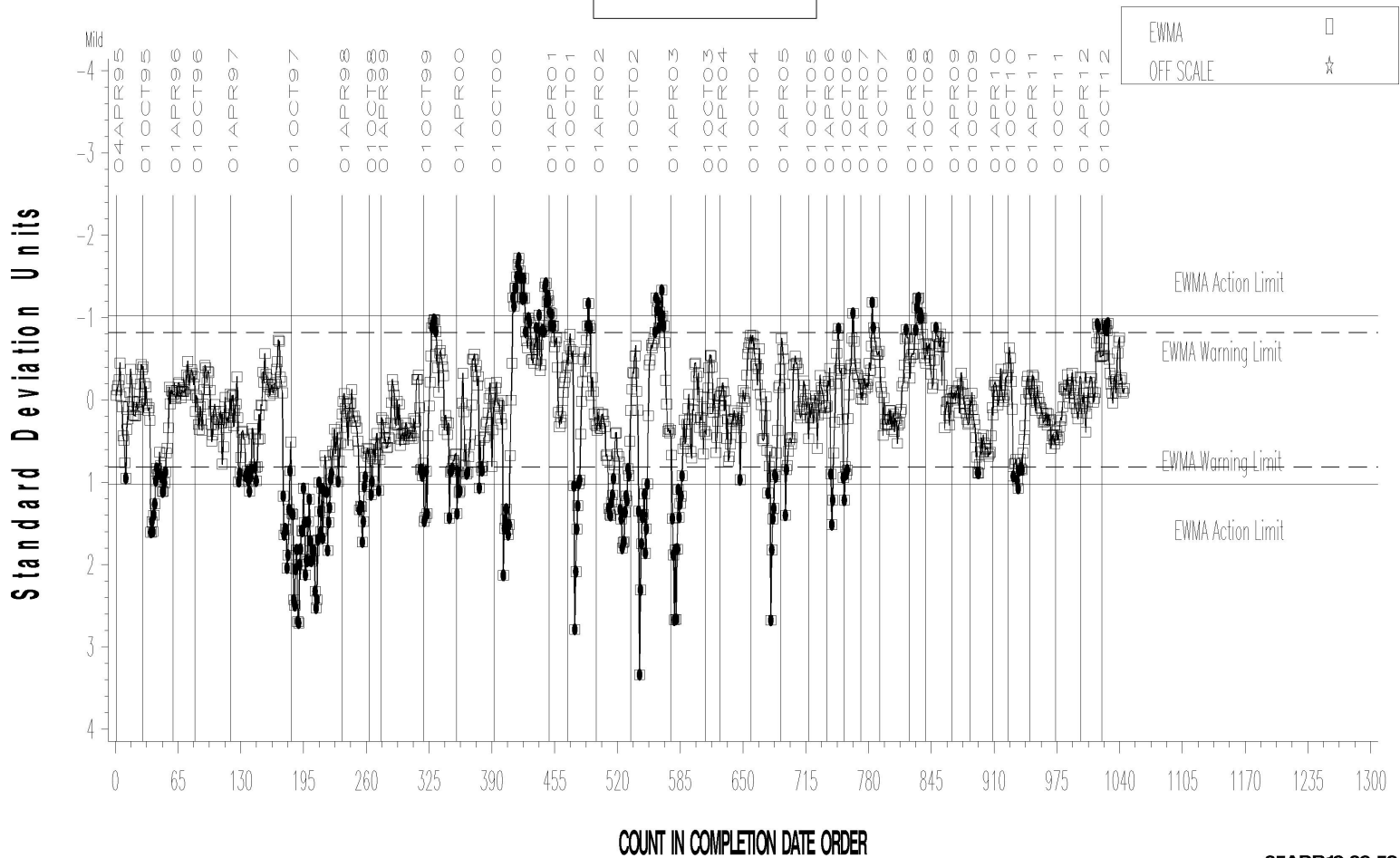
Industry control charts follow.

L-42 (D7452)

L-42 INDUSTRY OPERATIONALLY VALID DATA

FINAL EOT PINION SCORING COAST SIDE

LTMS Severity Analysis



Severe

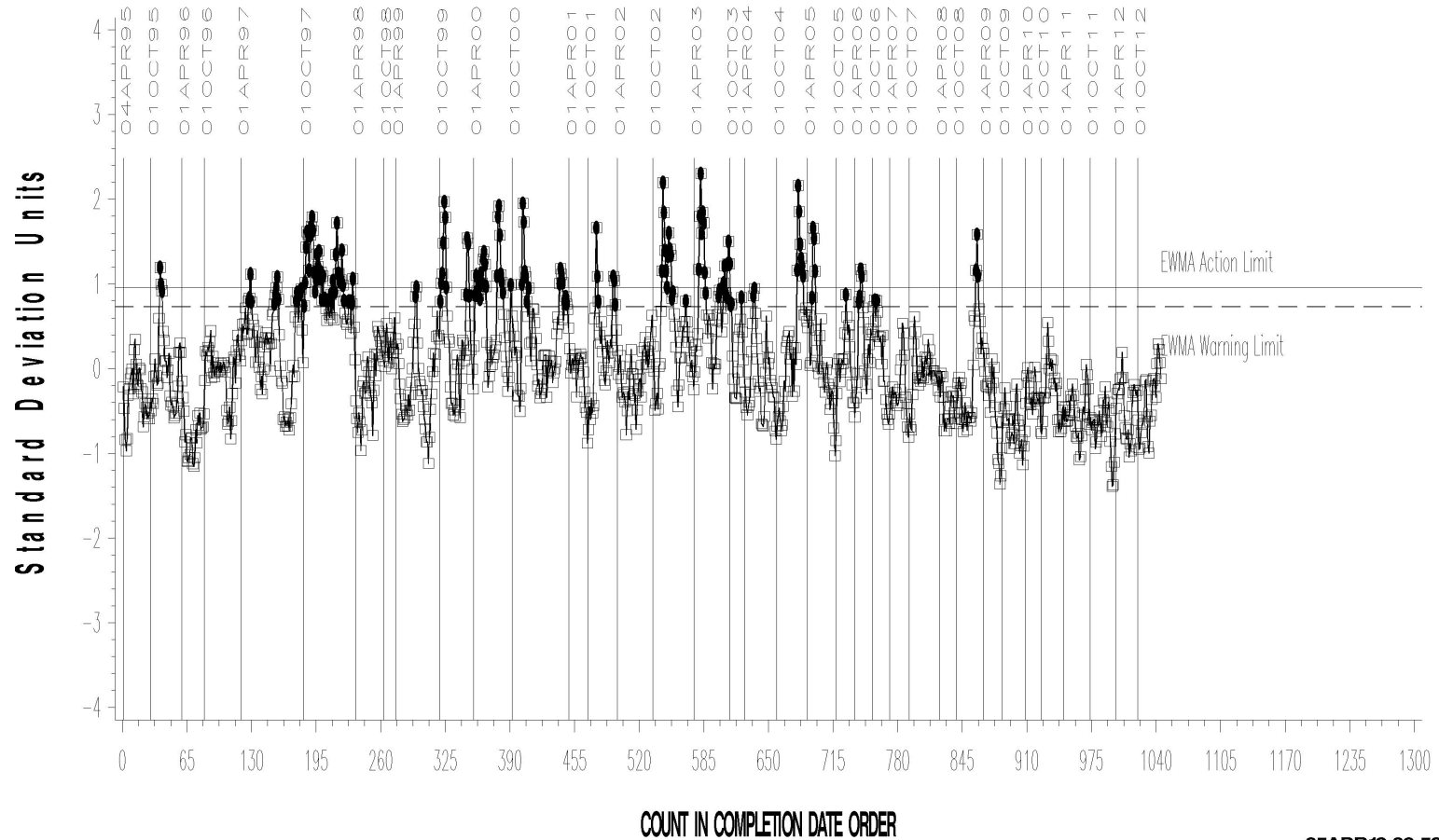
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L-42 (D7452)

L-42 INDUSTRY OPERATIONALLY VALID DATA

FINAL EOT PINION SCORING COAST SIDE

LTMS Precision Analysis



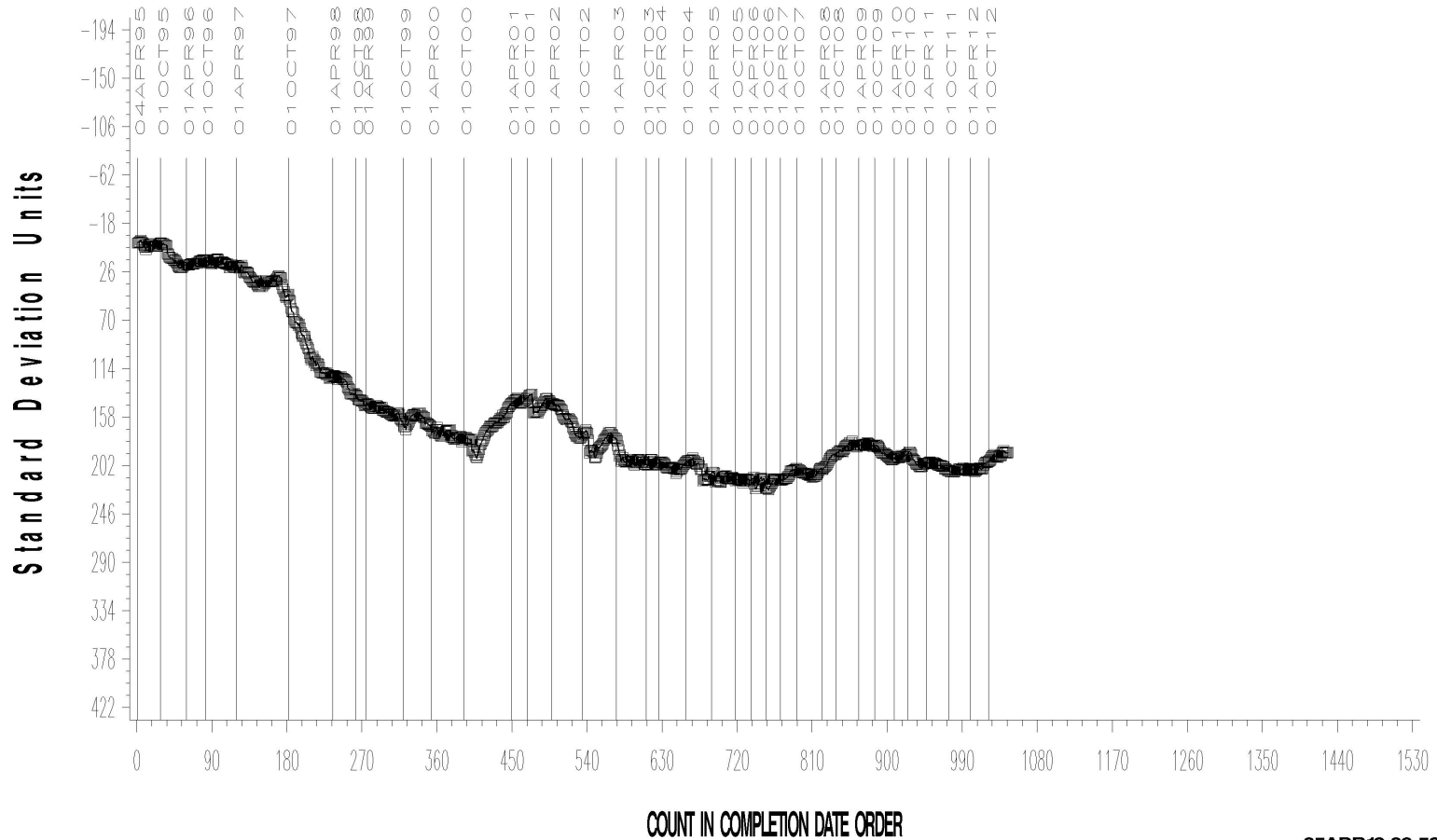
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L-42 (D7452)

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
20121221		First C1L680/P8T025A calibration run.

L-42 (D7452)

LAB VISITS

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

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	5	15	7.5
113	16	143	71.5
116	0	0	0.0
116-1	42	32	16.0
Total	63	190	95.0

The L42 Surveillance Panel has identified a J2360 oil as a potential replacement for 116-1 but has not yet taken steps to acquire or introduce it.