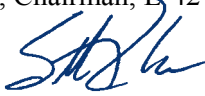




Test Monitoring Center

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

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

MEMORANDUM: 16-042
DATE: November 10, 2016
TO: Eric Donovan, Chairman, L-42 Surveillance Panel
FROM: Scott Parke 
SUBJECT: L-42 Reference Oil Testing from April 1, 2016 through September 30, 2016

Attached is a summary of reference oil testing activity this period.

SDP/sdp/mem16-042.sdp.doc

cc: Frank Farber

Jeff Clark

L-42 Surveillance Panel

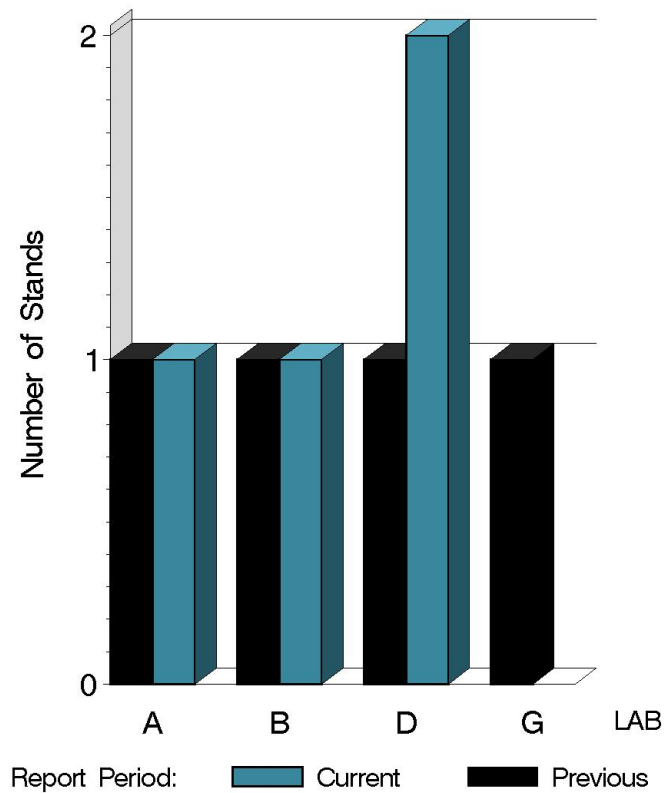
<ftp://ftp.astmtmc.cmu.edu/docs/gear/l42/semiannualreports/l42-10-2016.pdf>

Distribution: email

L-42 (D7452)

	Reporting Data	Calibrated on 9-30-16
Number of Labs	3	3
Number of Stands	3	3

BY-LAB STAND
DISTRIBUTION



16:20:19 09NOV2016

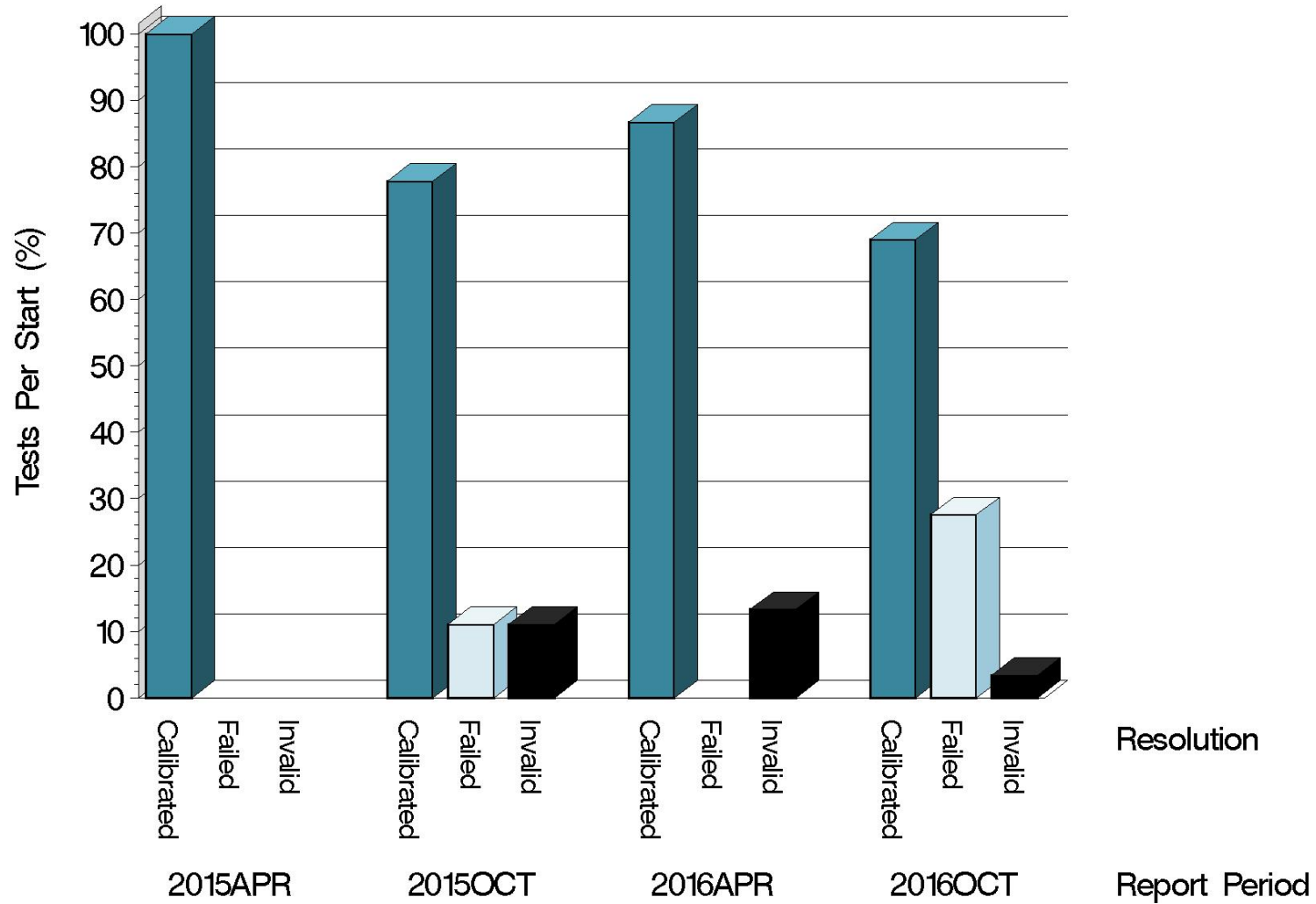
L-42 (D7452)

Test Distribution by Oil and Validity

					Totals				
					113	116-1	117	Last Period	This Period
Accepted for calibration	AC	0	0	20	13	20			
Rejected (Mild)	OC	0	0	2	0	2			
Rejected (Severe)	OC	0	0	6	0	6			
Rejected (Precision)	OC	0	0	0	0	0			
Accepted discrimination	AS	4	0	0	3	4			
Unacceptable discrimination	MS	0	0	0	1	0			
Invalidated discrimination	LS	1	0	0	0	1			
Invalidated calibration	LC	0	0	0	2	0			
Unacceptable calibration	MC	0	0	0	0	0			
Aborted	XC	0	0	1	0	1			
Acceptable information run	NI	1	0	1	0	2			
Unacceptable information run	MI	0	0	0	0	0			
Total		6	0	30	19	36			

L-42 (D7452)

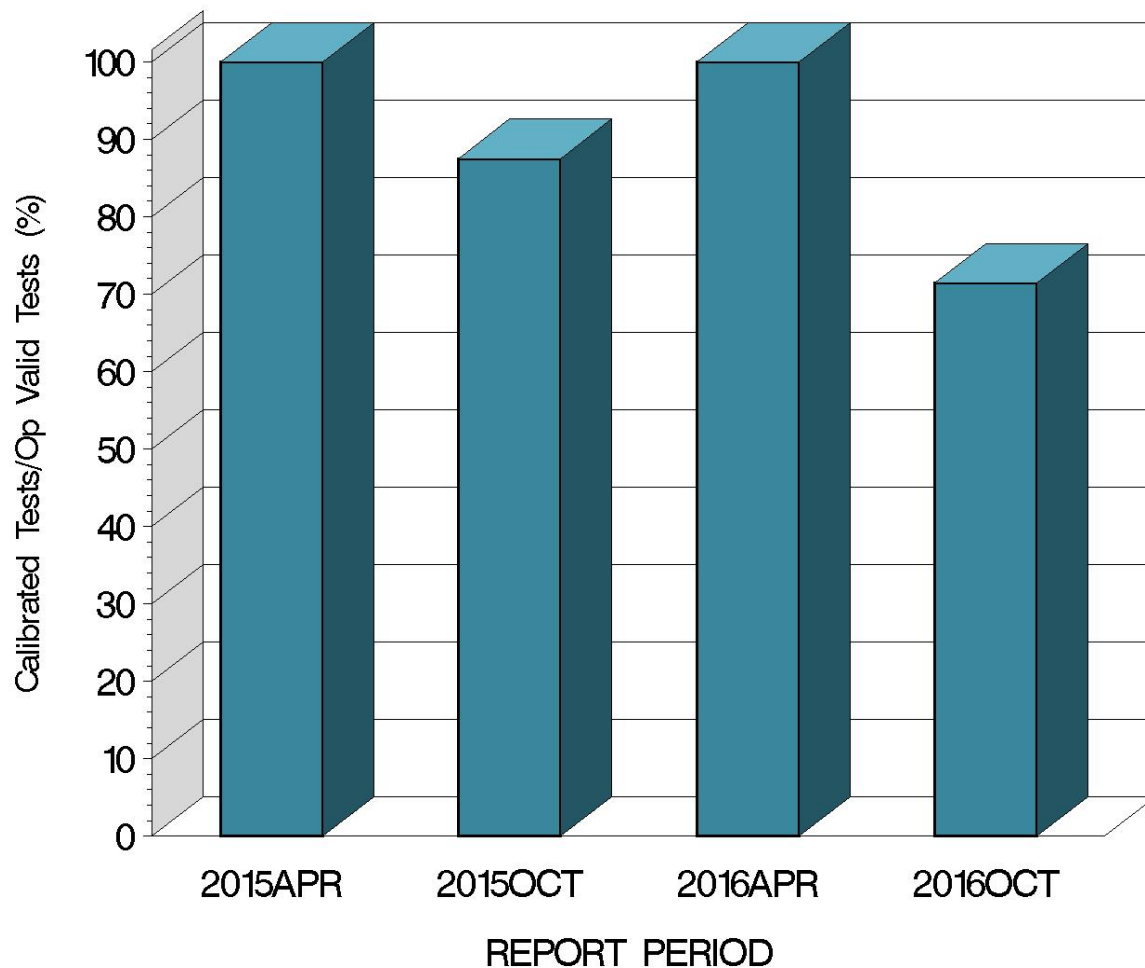
CALIBRATION ATTEMPT SUMMARY



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L-42 (D7452)

OPERATIONALLY VALID TESTS
MEETING ACCEPTANCE CRITERIA

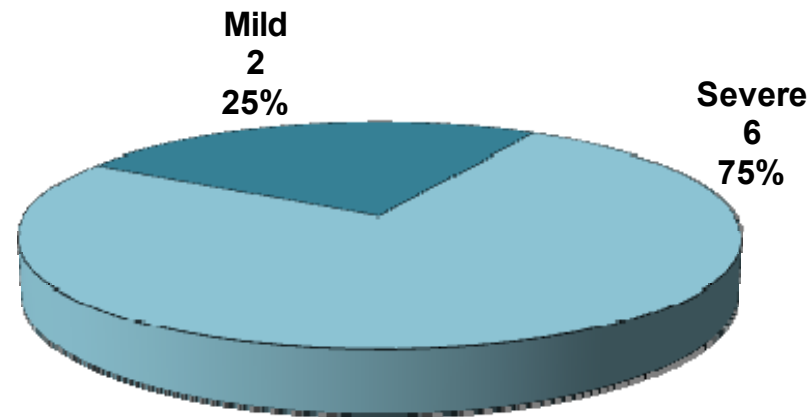


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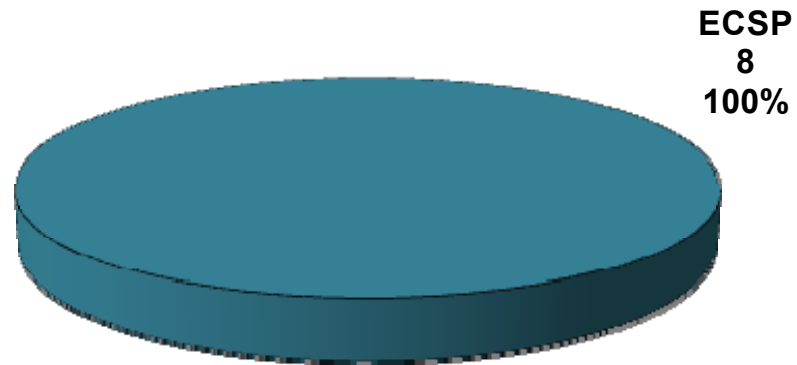
L-42 (D7452)

CAUSES FOR FAILED TESTS

By Alarm Type



By Parameter



L-42 (D7452)

CAUSES FOR LOST TESTS

Lab	Cause	Oil			Validity				Loss Rate		
		113	116-1	117	MS	LS	LC	XC	Lost	Starts	%
A	Broken exhaust flange			●				●	1	13	8%
D	Shutdown during shock series 1	●				●			1	8	13%
	Lost	1	0	1	0	1	0	1			
	Starts	6	0	30	36	36	36	36			
	%	17%	0%	3%	0%	3%	0%	3%			

L-42 (D7452)

			Coast Side Pinion Scoring		
Oil	Gear Batch	N	Mean	Std. Dev.	Average Δ/s
117	C1L925/P8AD078X	28	24.7	6.98	0.31

		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	-1.05	8	3.15	1.51	0
B	1.08	14	5.61	4.18	0
D	0.50	3	2.36	1.26	0

L-42 (D7452)

SUMMARY OF SEVERITY & PRECISION

Severity
ECSP severity remained within control chart limits throughout the period.
Precision
Precision also remained within limits throughout the period.

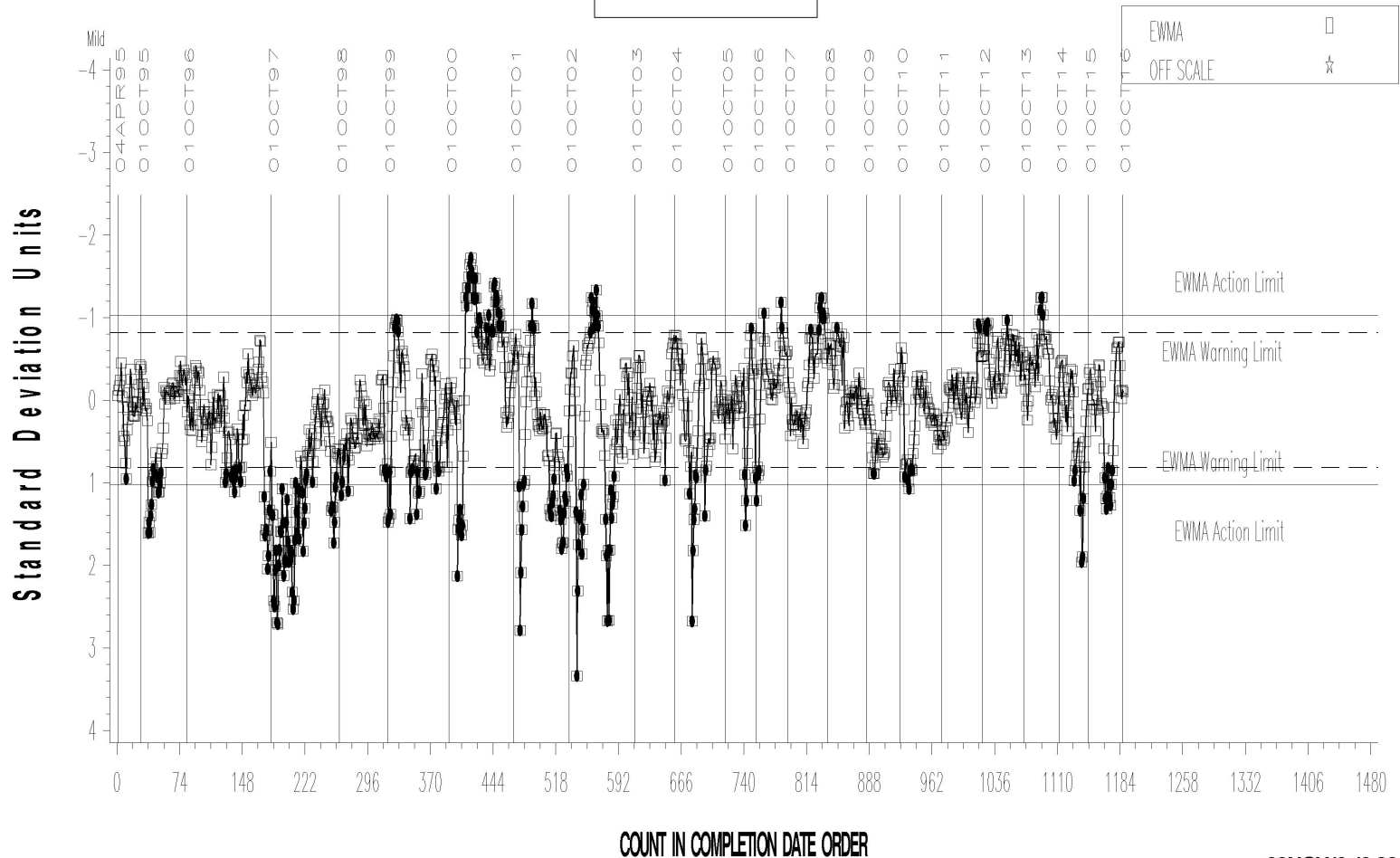
Industry control charts follow.

L-42 (D7452)

L-42 INDUSTRY OPERATIONALLY VALID DATA

FINAL EOT PINION SCORING COAST SIDE

LTMS Severity Analysis



Severe

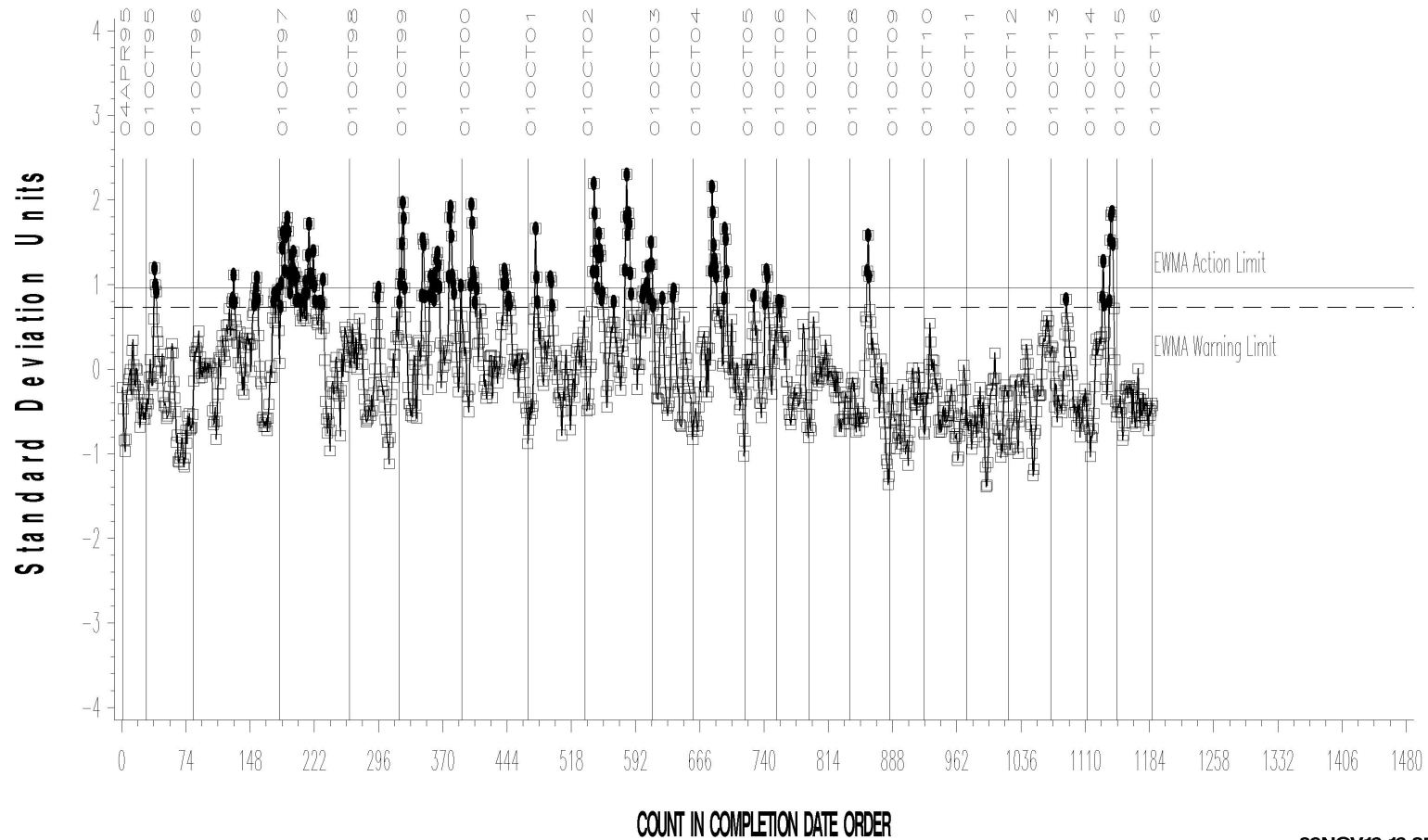
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L-42 (D7452)

L-42 INDUSTRY OPERATIONALLY VALID DATA

FINAL EOT PINION SCORING COAST SIDE

LTMS Precision Analysis



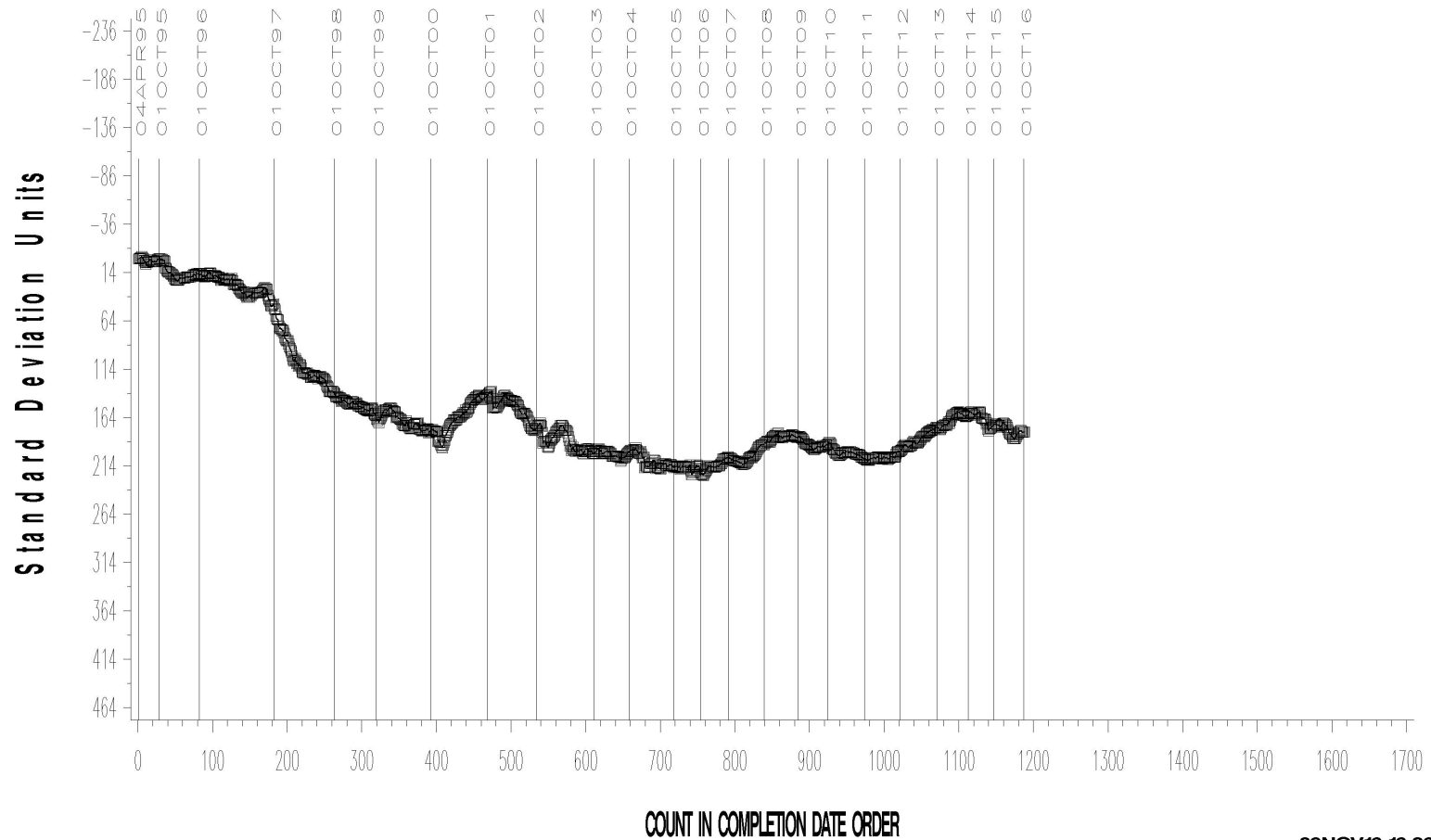
09NOV16:16:25

L-42 (D7452)

L-42 INDUSTRY OPERATIONALLY VALID DATA

FINAL EOT PINION SCORING COAST SIDE

CUSUM Severity Analysis



09NOV16:16:26

L-42 (D7452)

TIMELINE ADDITIONS

Effective Date	Information Letter	Event
		No industry timeline additions were made this period.

L-42 (D7452)

LAB VISITS

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

INFORMATION LETTERS

No information letters were issued this period.

L-42 (D7452)

STATUS OF REFERENCE OIL SUPPLY

Oil	Cans @ Labs	@ TMC	
		Cans	Gallons
112-2	0	0	0.0
113	15	112	56.0
116-1	2	0	0.0
117	36	846	423.0
Total	53	958	479.0

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.