



Test Monitoring Center

203 Armstrong Drive, Freeport, PA 16229, USA

www.astmtmc.org
412-365-1000

MEMORANDUM: 22-011

DATE: June 13, 2022

TO: Matthew Sangpeal, Chairman, L-42 Surveillance Panel

FROM: Dylan Beck *Dylan Beck*

SUBJECT: L-42 Reference Oil Testing from October 1, 2021 through March 31, 2022

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

DJB/djb/mem22-011.djb.doc

cc: Frank Farber

Jeff Clark

L-42 Surveillance Panel

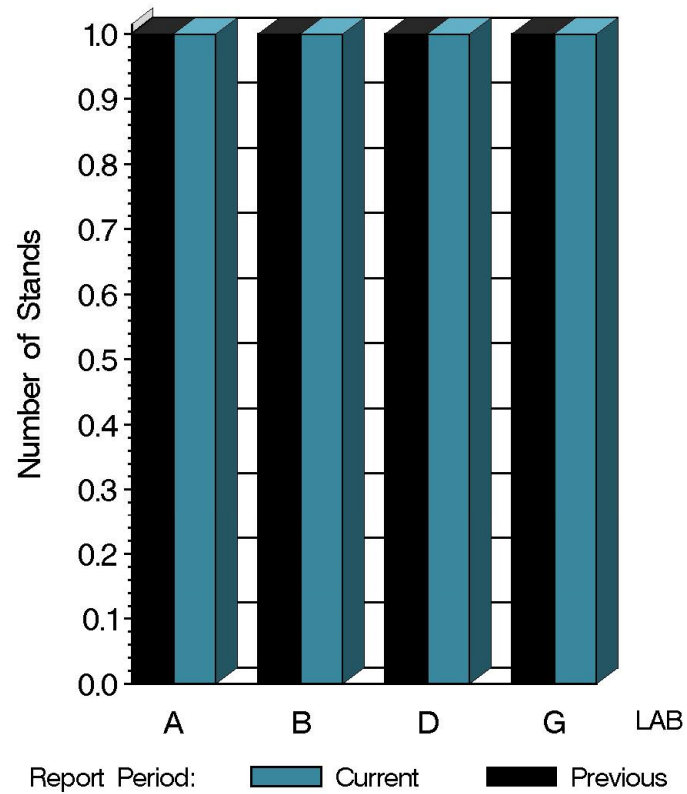
<https://www.astmtmc.org/ftp/docs/gear/l42/semiannualreports/l42-04-2022.pdf>

Distribution: email

L-42 (D7452)

	Reporting Data	Calibrated on 3-31-22
Number of Labs	4	4
Number of Stands	4	4

BY-LAB STAND DISTRIBUTION



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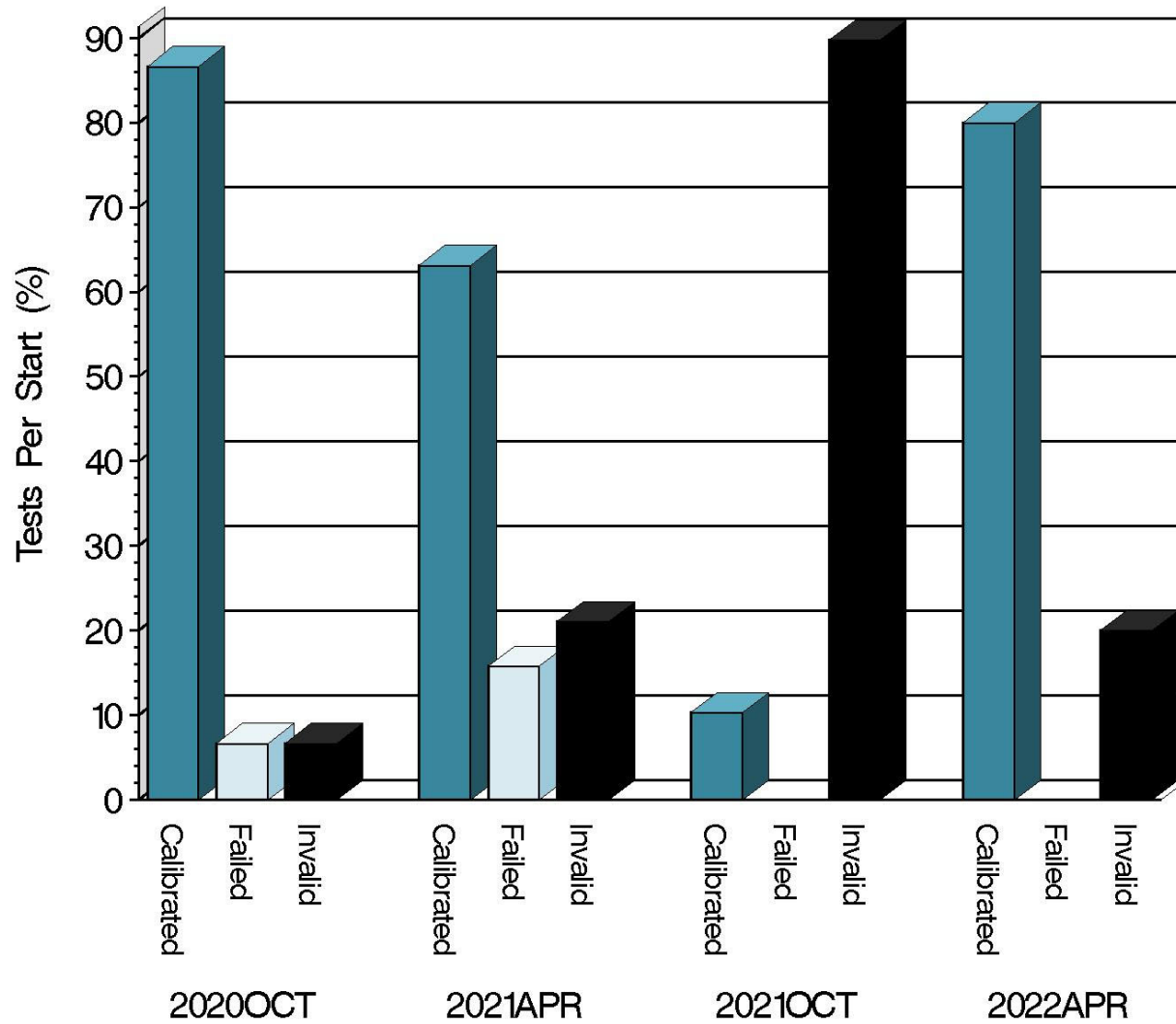
L-42 (D7452)

Test Distribution by Oil and Validity

					Totals				
					113	117	119	Last Period	This Period
Accepted for calibration	AC	0	12	0	14	12			
Rejected (Mild)	OC	0	0	0	0	0			
Rejected (Severe)	OC	0	0	0	0	0			
Rejected (Precision)	OC	0	0	0	0	0			
Operationally Invalid (determined by lab)	LC	0	1	0	2	1			
Accepted discrimination	AS	1	0	4	2	5			
Unacceptable discrimination run	MS	1	0	0	2	1			
Unacceptable calibration	MC	0	0	0	1	0			
Aborted	XC	0	2	0	1	2			
Aborted discrimination run	XS	1	0	0	5	1			
Total		3	15	4	27	22			

L-42 (D7452)

CALIBRATION ATTEMPT SUMMARY



Resolution

Report Period

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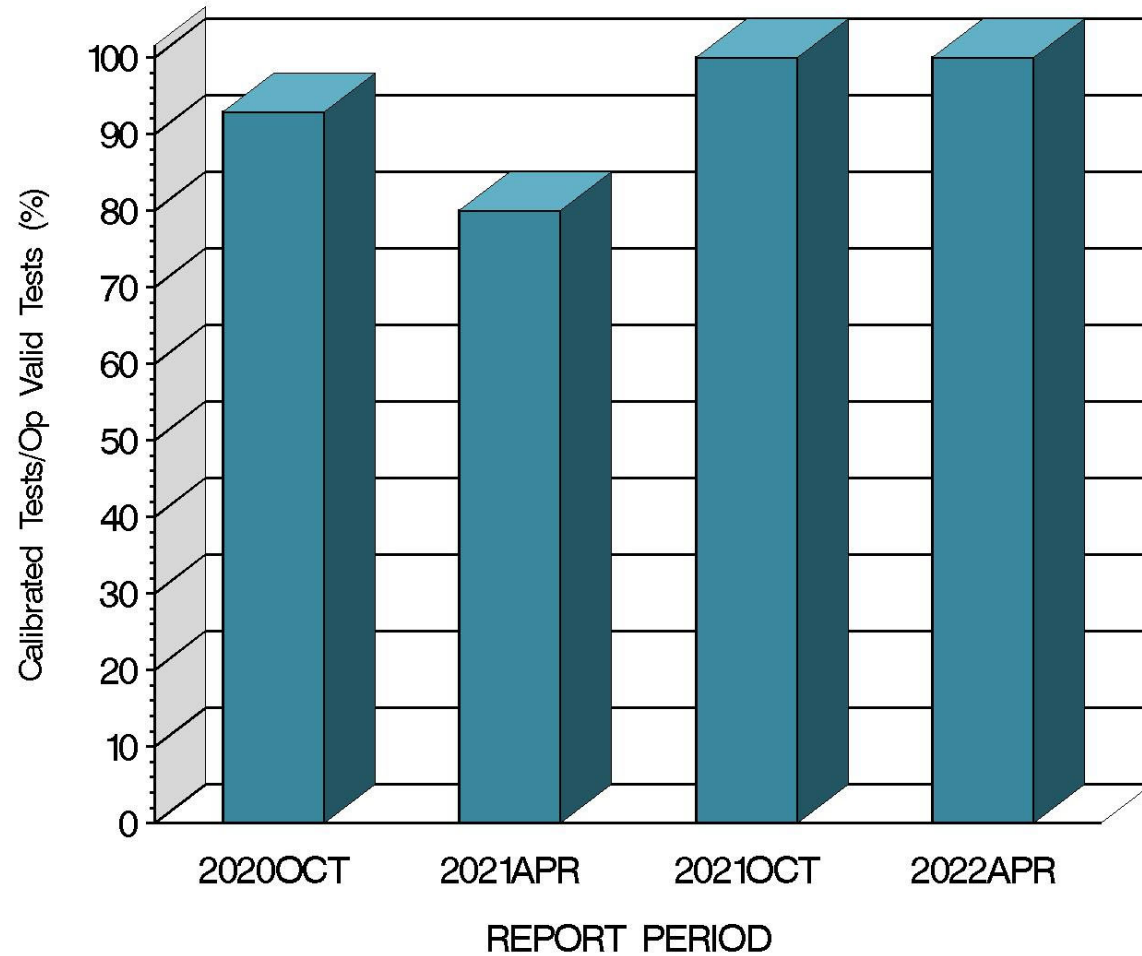
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L-42 (D7452)

OPERATIONALLY VALID TESTS
MEETING ACCEPTANCE CRITERIA



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L-42 (D7452)

CAUSES FOR LOST TESTS

		Loss Rate								
Lab	Cause	113	117	MS	XS	XC	LC	Lost	Starts	%
A	Shock 2 avg. out of spec	•		•				2	5	40%
	Broken torque meter		•				•			
G	Axle temp out of spec	•			•			1	4	25%
B	Fuel pump failure		•			•		2	7	29%
	DAQ system failure		•			•				
Lost		2	3	1	1	2	1			
Starts		3	15	22	22	22	22			
%		66%	20%	4.5%	4.5%	9.0%	4.5%			

L-42 (D7452)

			Coast Side Pinion Scoring		
Oil	Gear Batch	N	Mean	Std. Dev.	Average Δ/s
117	C1L446/P8AD132	2	24.0	2.83	0.18
117	C1L637/P8AD132	4	26.0	1.83	0.55
117	C1L925/P8AD078X	6	24.2	3.82	0.21

		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	0.18	1	2.83	0.71	0.00
B	0.46	3	3.00	2.83	0.00
D	0.55	3	1.83	0.96	0.00
G	-0.27	1	4.95	4.95	0.00

L-42 (D7452)

SUMMARY OF SEVERITY & PRECISION

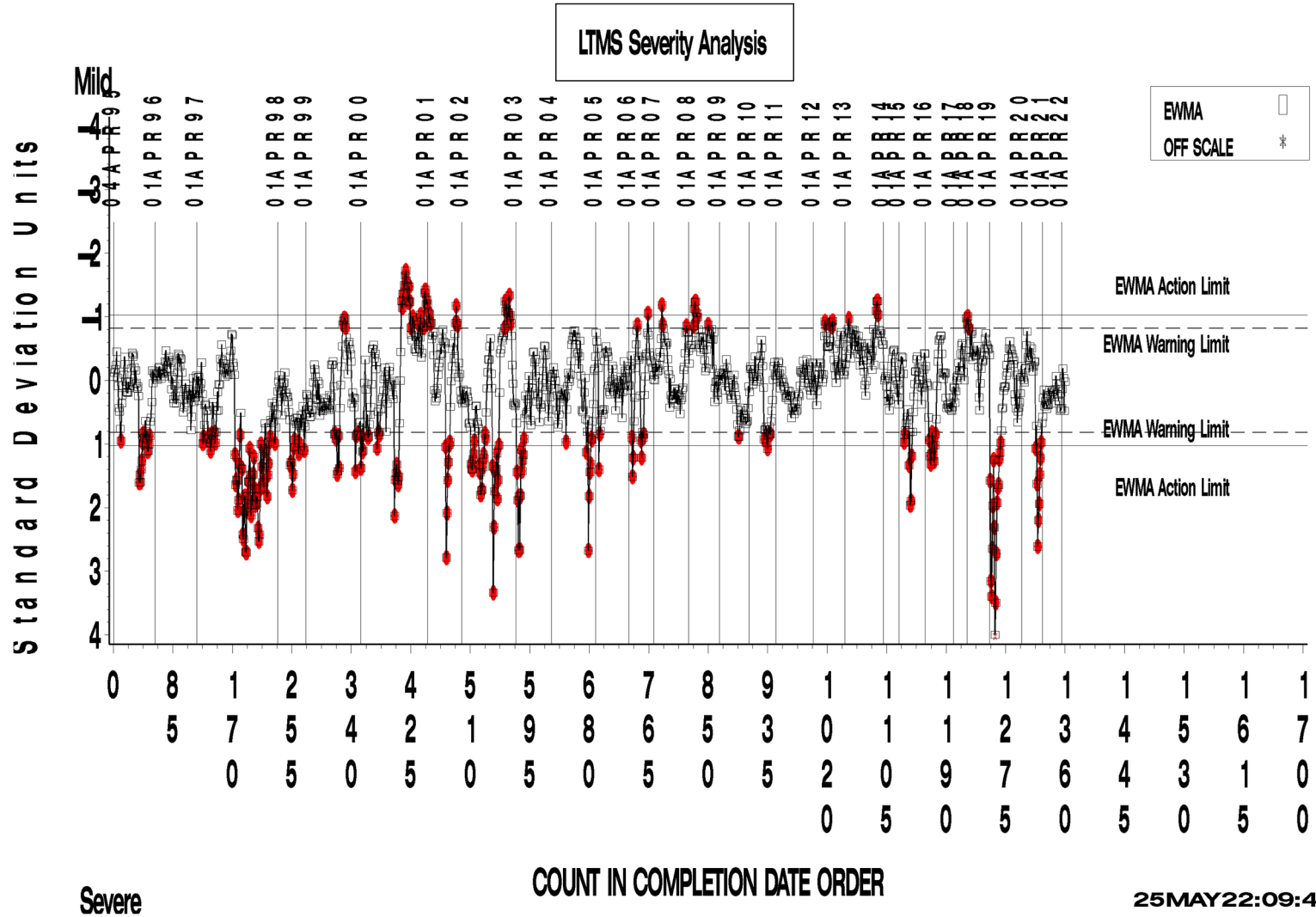
Severity
Pinion scoring remained within the limits this period.
Precision
Pinion scoring remained within the limits this period.

Industry control charts follow.

L-42 (D7452)

L-42 INDUSTRY OPERATIONALLY VALID DATA

FINAL EOT PINION SCORING COAST SIDE



Severe



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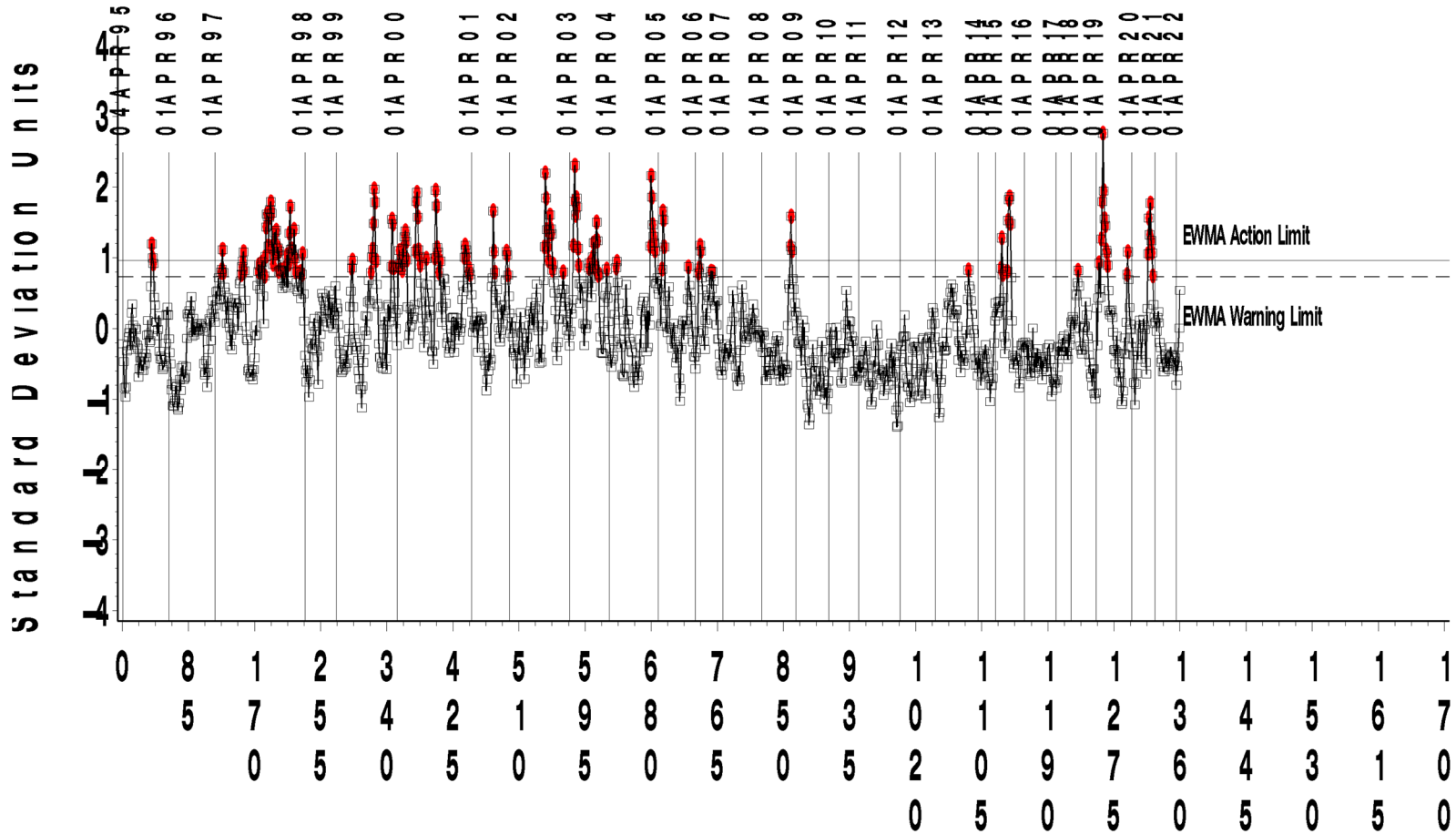
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L-42 INDUSTRY OPERATIONALLY VALID DATA

FINAL EOT PINION SCORING COAST SIDE

LTMS Precision Analysis



COUNT IN COMPLETION DATE ORDER

25MAY22:09:49



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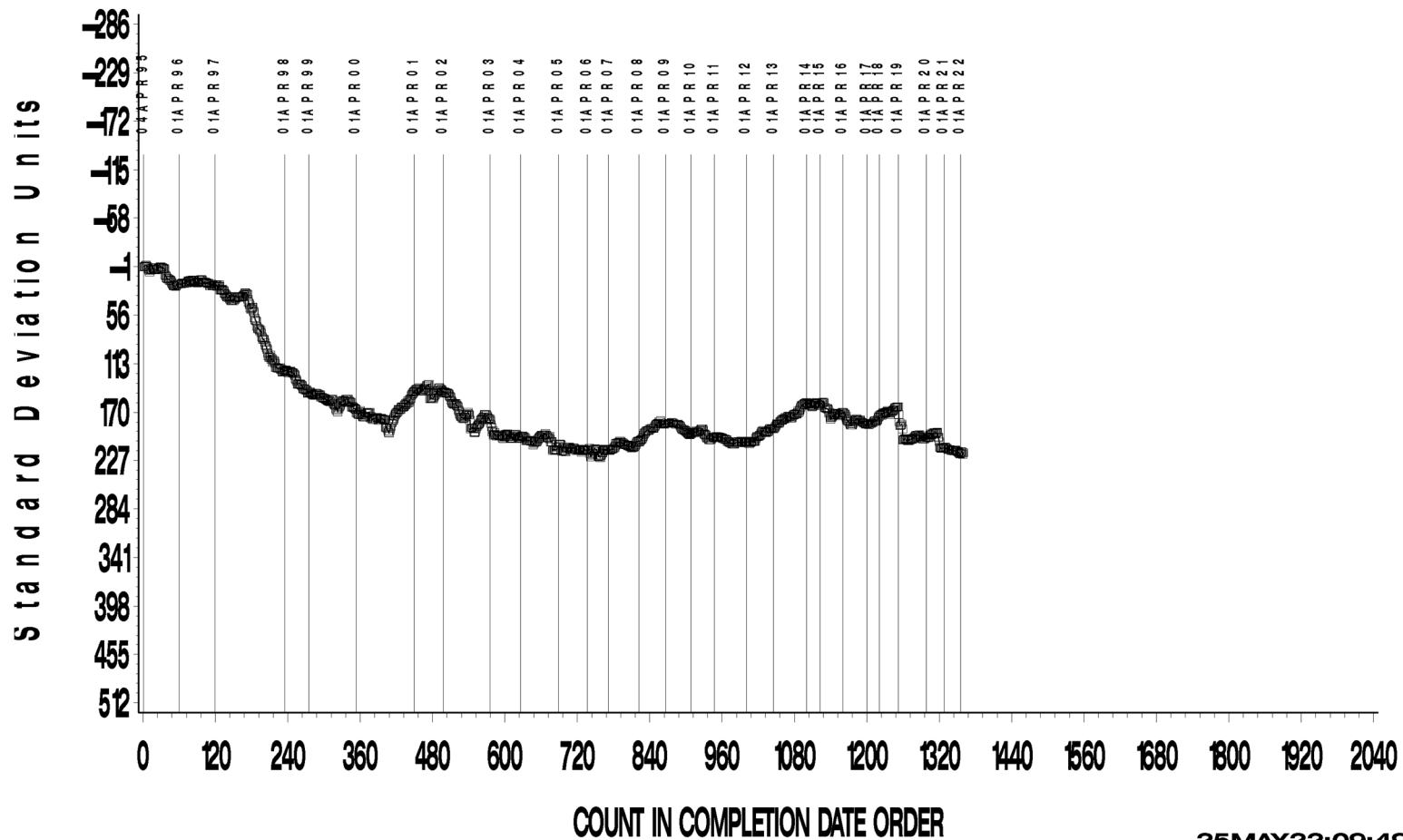
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L-42 INDUSTRY OPERATIONALLY VALID DATA

FINAL EOT PINION SCORING COAST SIDE

CUSUM Severity Analysis



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TIMELINE ADDITIONS

Effective Date	Information Letter	Event
No timeline additions during this period.		

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LAB VISITS

No lab visits were conducted during this period.

INFORMATION LETTERS

No information letters issued during this period.



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STATUS OF REFERENCE OIL SUPPLY

Oil	Cans @ Labs	@ TMC	
		Cans	Gallons
113	0	57	28.7
117	40	563	281.8
119	15	71	35.7
Total	55	692	346.2

Oil 117 meets J2360 specifications, and produces somewhat milder scoring than its predecessor 116-1. Oil 117 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.

119 oil has been approved as a replacement for discrimination oil 113. The remaining inventory of 113 at the test labs will be used, and then replaced by shipments of 119 oil.