




Test Monitoring Center

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

MEMORANDUM: 14-020
DATE: June 12, 2014
TO: Chris Pregelman, Chairman, L-37 Surveillance Panel
FROM: Scott Parke 
SUBJECT: L-37 Rater Calibration from October 1, 2013 through March 31, 2014

Please find attached a summary of L-37 rater calibration activity this period.

SDP/sdp/mem14-020.sdp.doc

cc: Frank Farber

Jeff Clark

L-37 Surveillance Panel

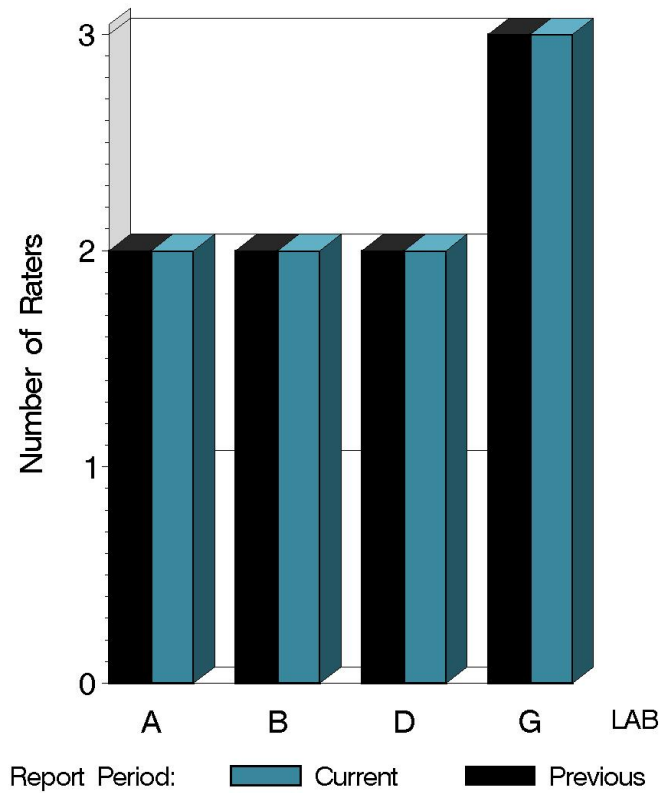
<ftp://ftp.astmtmc.cmu.edu/docs/gear/l37rc/semiannualreports/l37rc-04-2014.pdf>

Distribution: email

L-37 Rater Calibration

	Reporting Data	Calibrated on 3-31-14
Number of Labs	4	4
Number of Raters	9	9

BY-LAB RATER
DISTRIBUTION



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L-37 Rater Calibration

Test Distribution by Validity

		Totals	
		Last Period	This Period
Accepted for calibration	AC	11	11
Rejected (Mild)	OC	1	0
Rejected (Severe)	OC	1	0
Rejected (Multiple)	OC	1	0
Rejected (Precision)	OC	0	0
Workshop data	AG	18	24
<hr/>			
Total		32	35

L-37 Rater Calibration

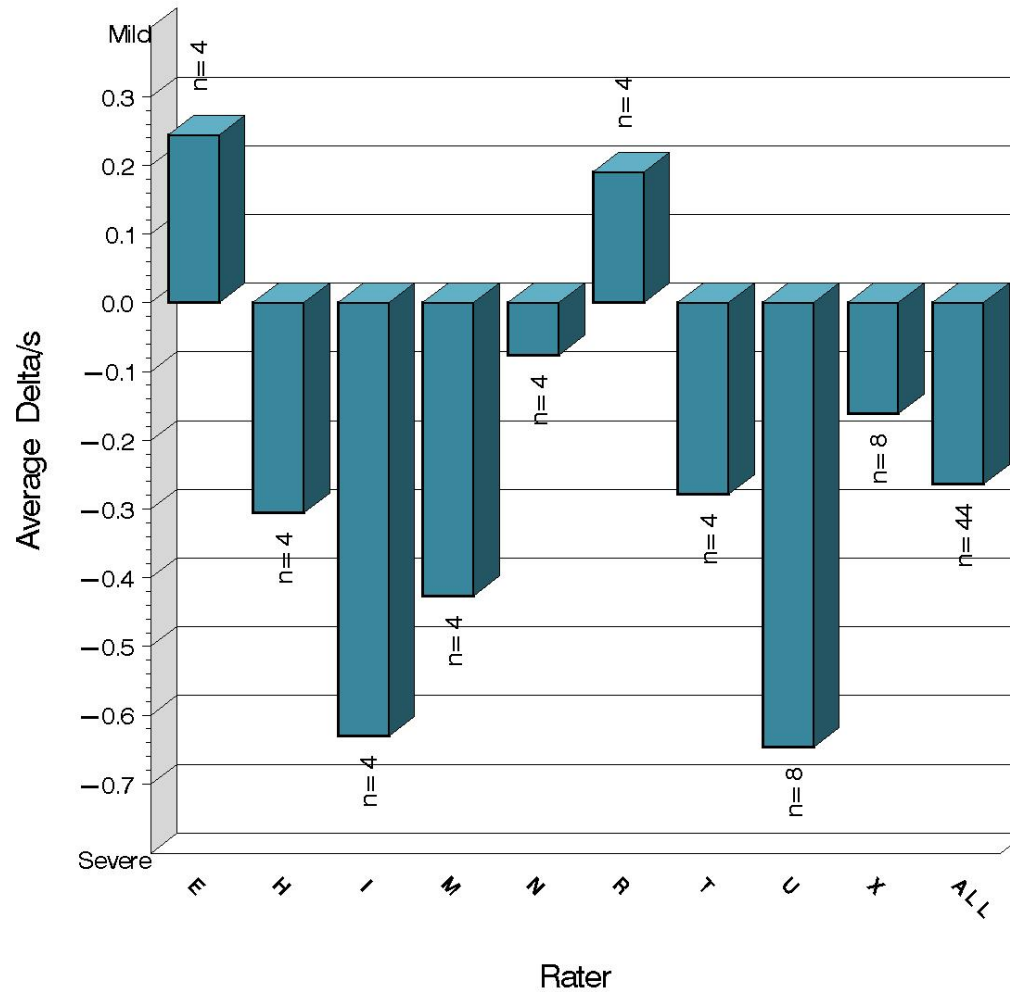
Rater	N	RIDG		RIPP		SPIT		WEAR	
		Avg Yi	STD*	Avg Yi	STD*	Avg Yi	STD*	Avg Yi	STD*
E	4	0.244	1.058	0.152	1.312	-0.242	0.266	0.511	0.868
H	4	-0.306	0.059	-0.154	0.236	-0.085	0.446	-0.083	1.116
I	4	-0.631	1.131	-0.049	1.557	-0.070	0.410	-0.150	0.841
M	4	-0.426	1.018	-0.211	0.626	0.703	1.406	-0.267	0.335
N	4	-0.076	0.866	0.047	0.588	0.015	0.293	0.042	0.616
R	4	0.191	0.451	0.065	0.611	0.047	0.491	0.319	0.576
T	4	-0.278	0.812	-0.513	1.458	-0.056	0.447	-0.323	0.671
U	8	-0.646	0.677	-0.274	0.569	0.162	0.406	0.021	0.451
X	8	-0.161	1.390	-0.167	0.489	-0.365	0.595	-0.158	1.058
ALL	44	-0.263	0.912	-0.141	0.802	-0.009	0.610	-0.021	0.742

* Due to the small number of ratings per pinion, the standard deviation of the Yi values is given in place of a pooled standard deviation.

L-37 Rater Calibration

RIDGING

Severity as Measured by Delta/s

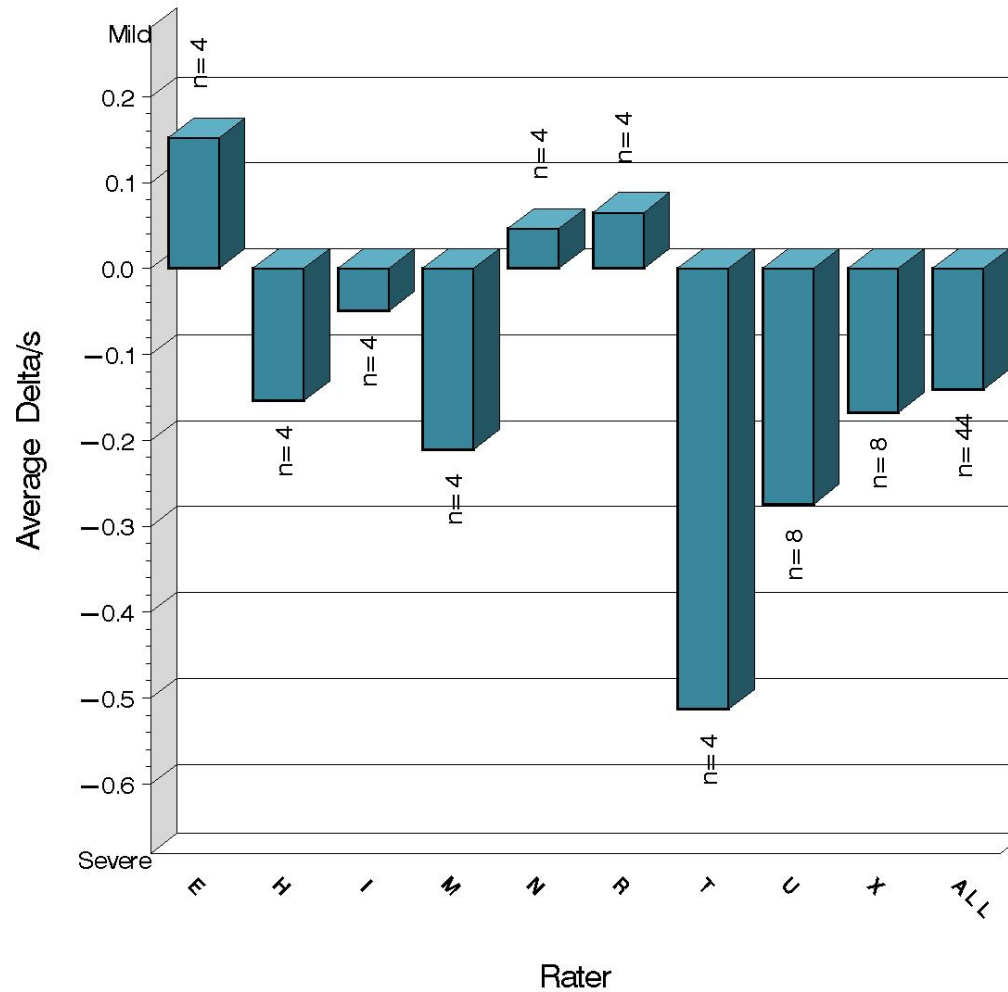


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L-37 Rater Calibration

RIPPLING

Severity as Measured by Delta/s

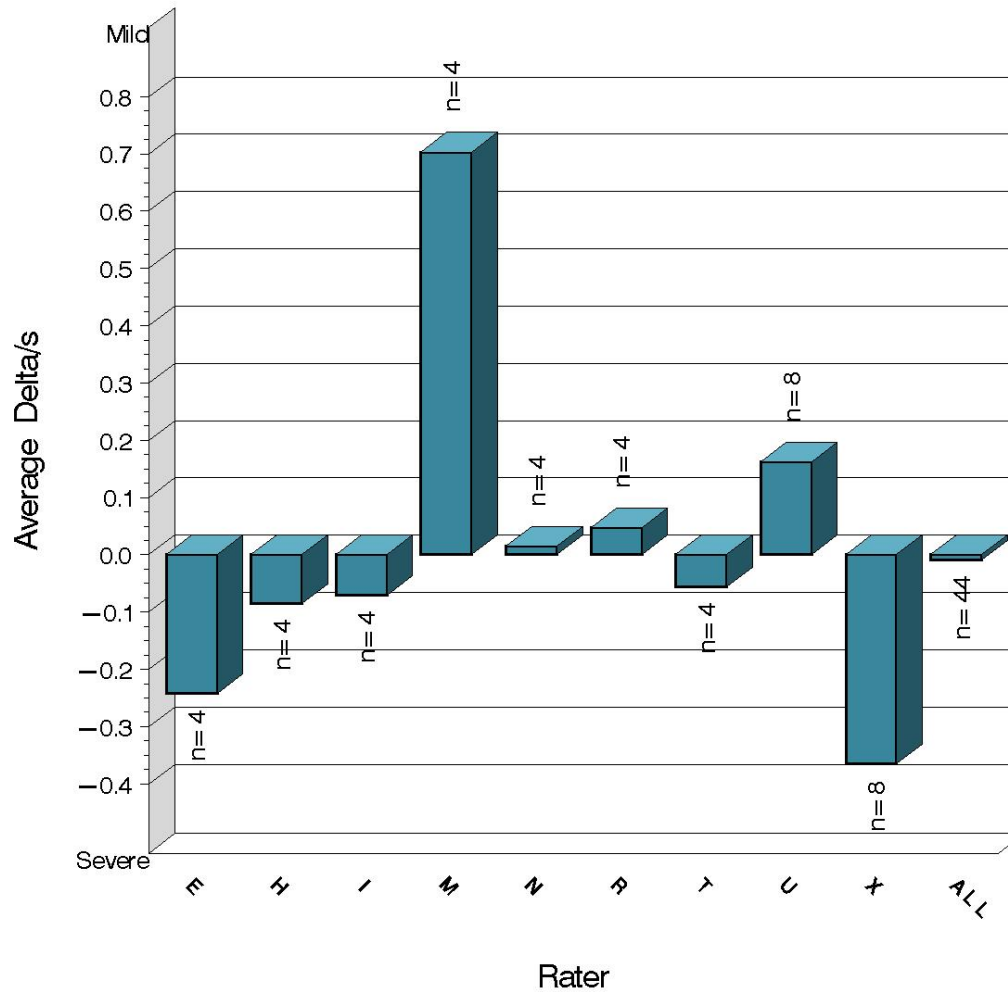


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L-37 Rater Calibration

SPITTING

Severity as Measured by Delta/s

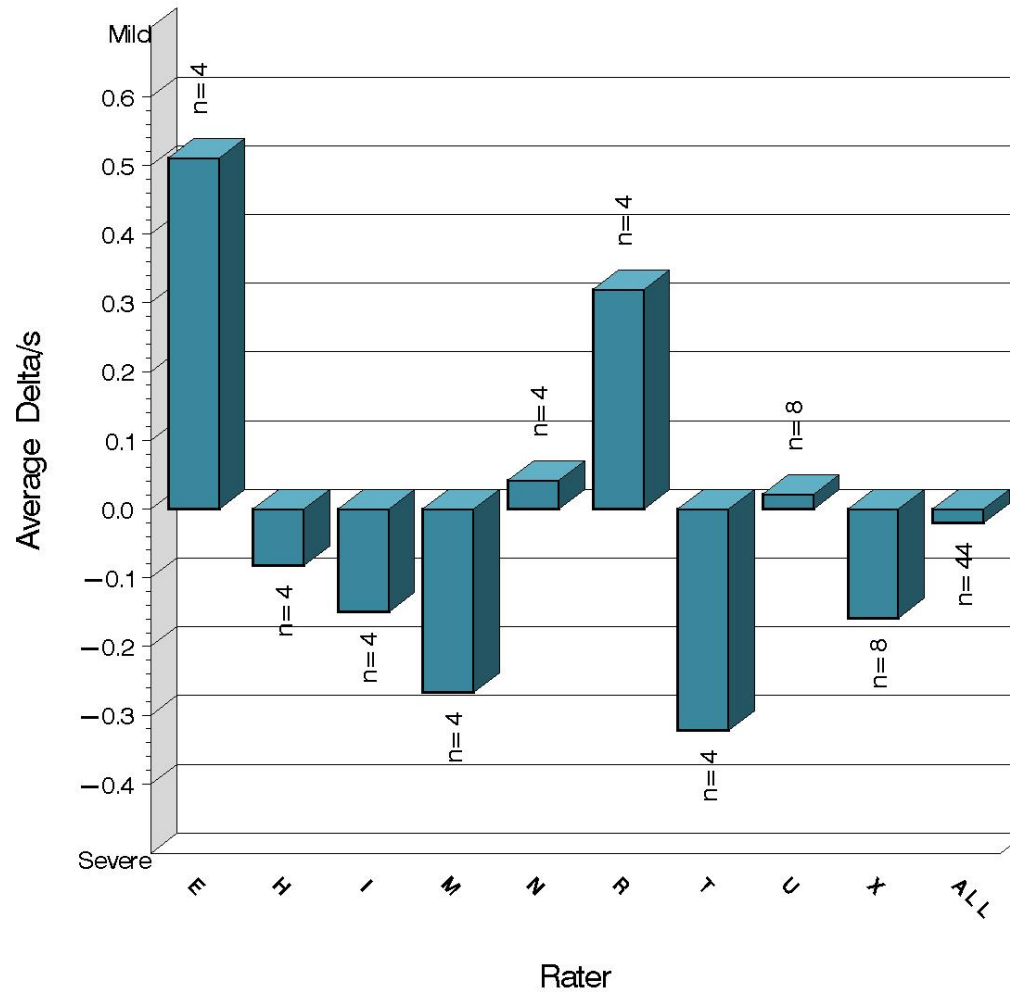


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L-37 Rater Calibration

WEAR

Severity as Measured by Delta/s

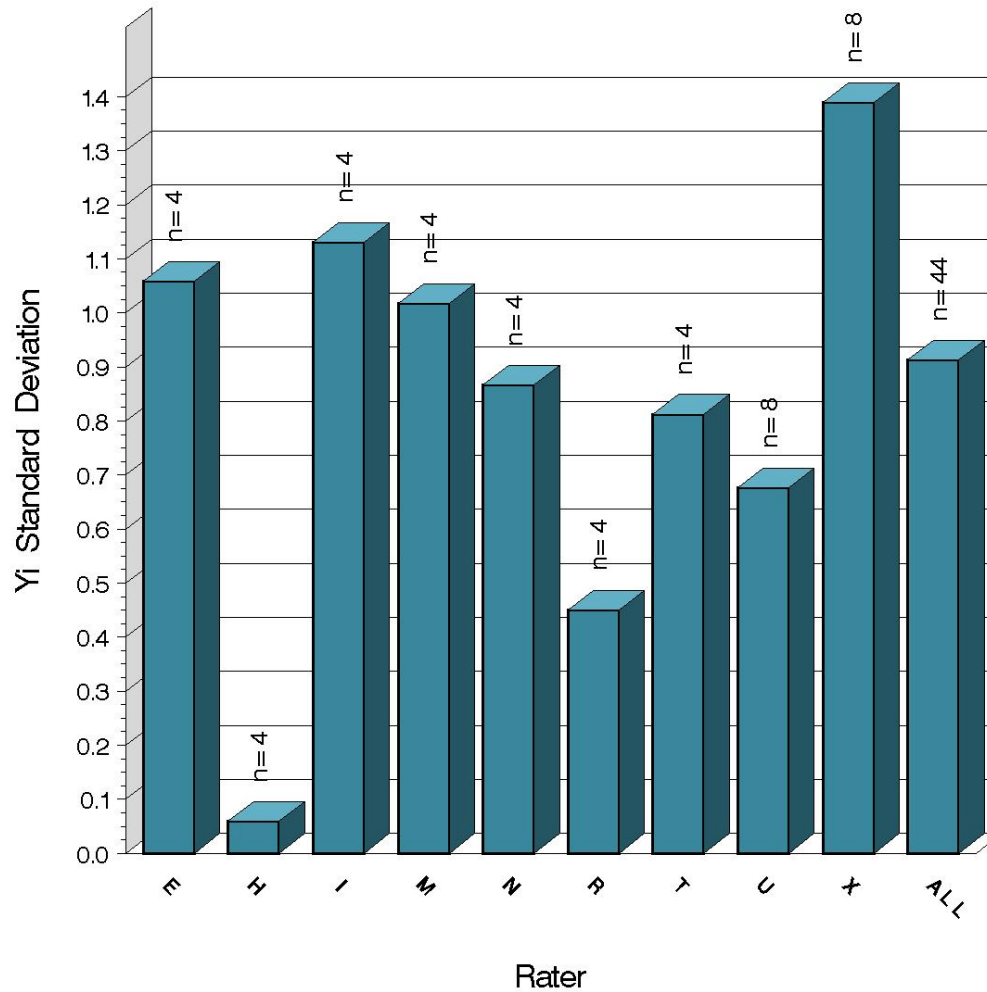


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L-37 Rater Calibration

RIDGING

Precision as Measured by Yi STD

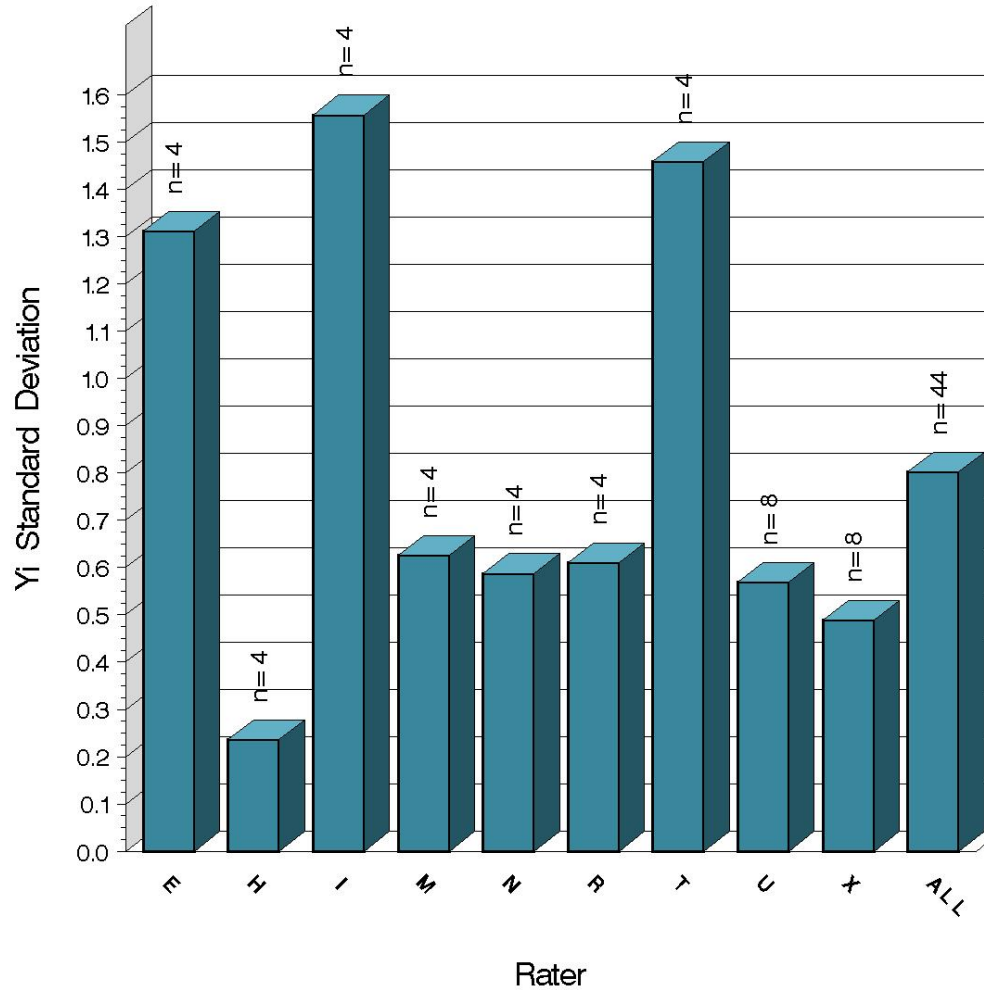


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L-37 Rater Calibration

RIPPLING

Precision as Measured by Y_i STD

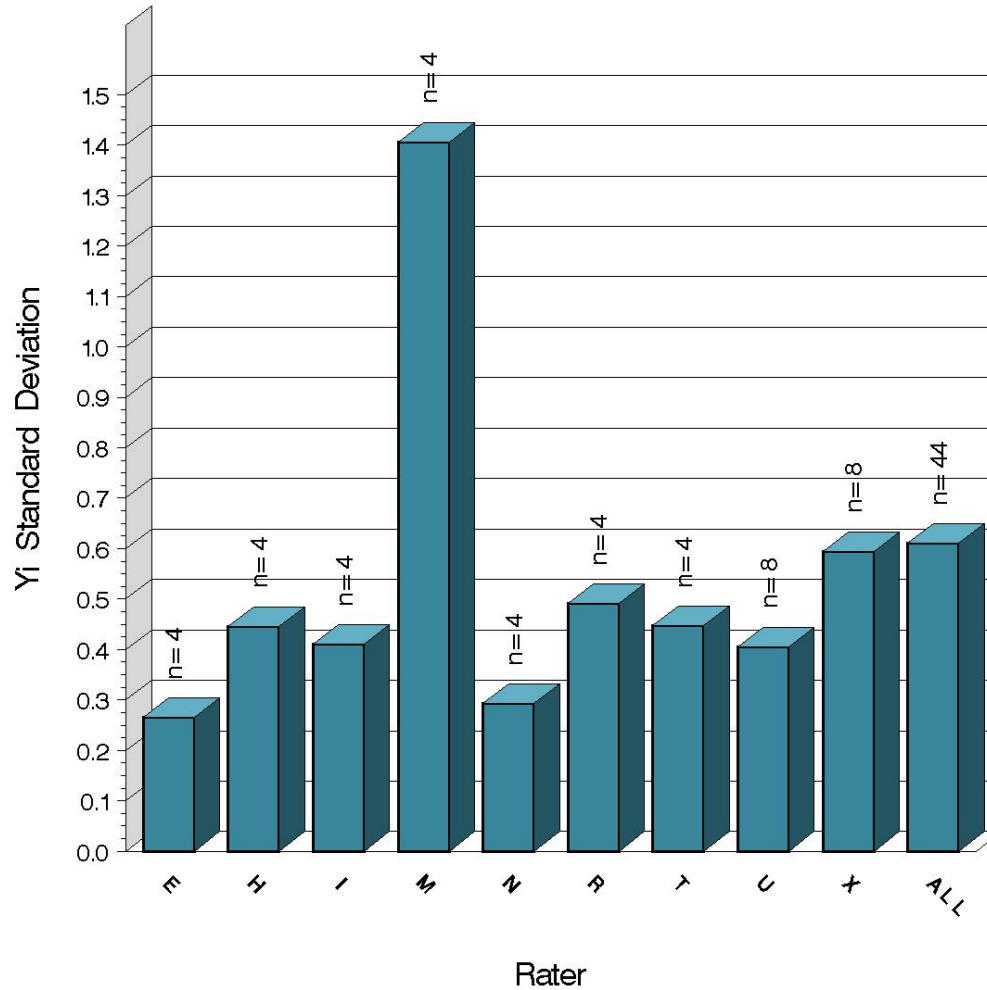


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L-37 Rater Calibration

SPITTING

Precision as Measured by Yi STD

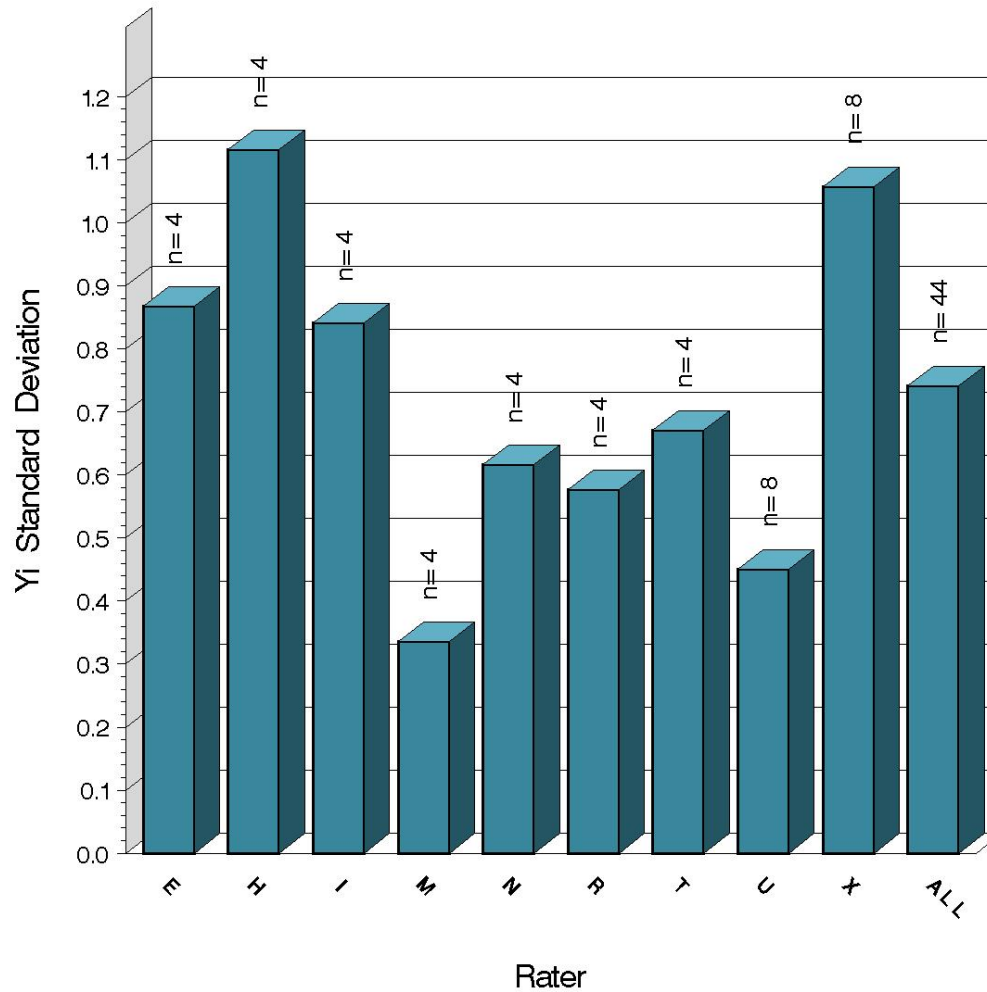


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L-37 Rater Calibration

WEAR

Precision as Measured by Yi STD



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L-37 Rater Calibration

SUMMARY OF SEVERITY & PRECISION

Severity

RIDG results continue to generally be slightly severe of target. This has been the case since charting began.

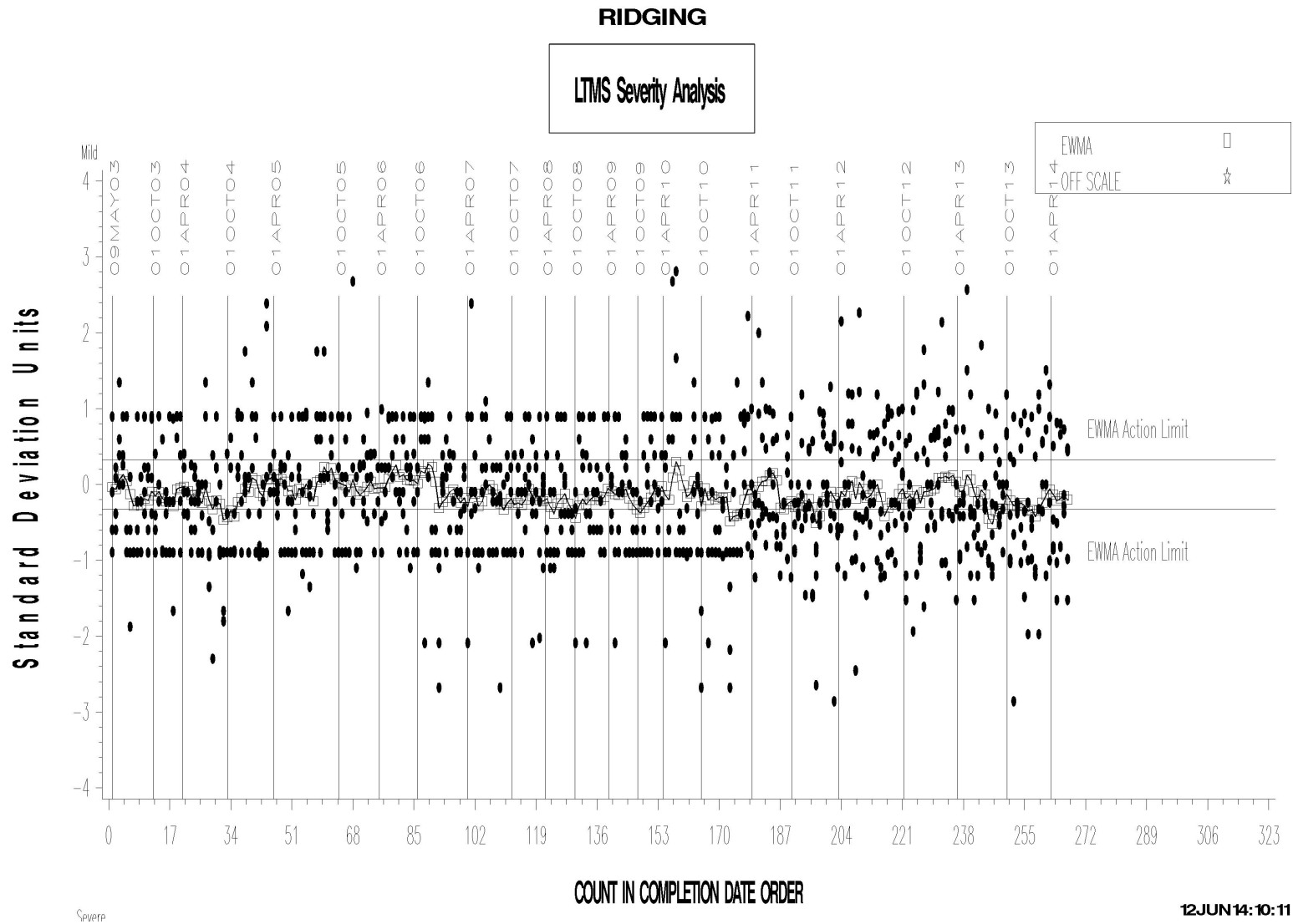
Precision

In March 2011, targets were updated. The target standard deviation for most pinions decreased. This is the cause for the apparent increase in variability shown in testing seen since then. Despite this, industry precision for all parameters remains good.

Industry control charts follow.

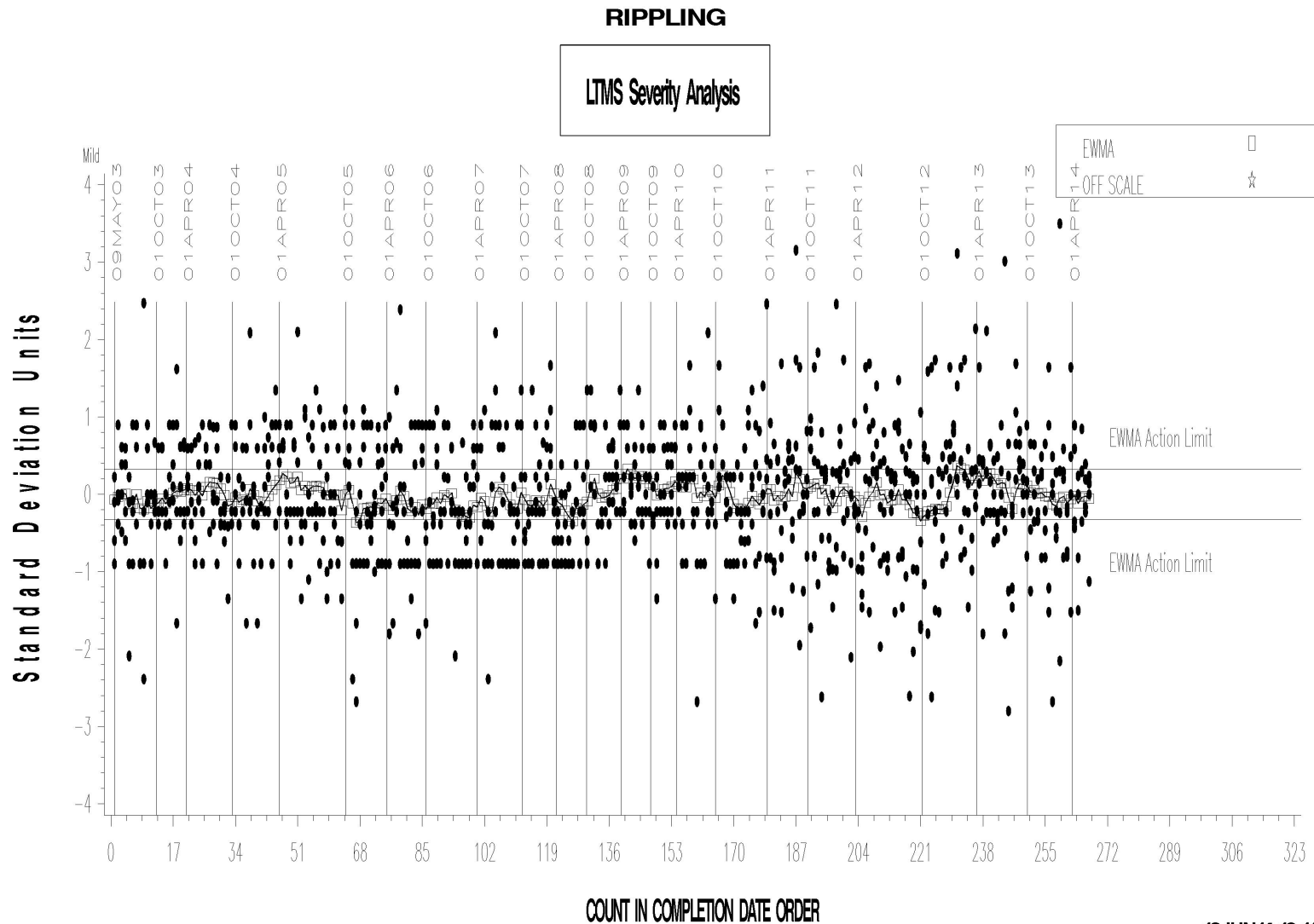
L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA



L-37 Rater Calibration

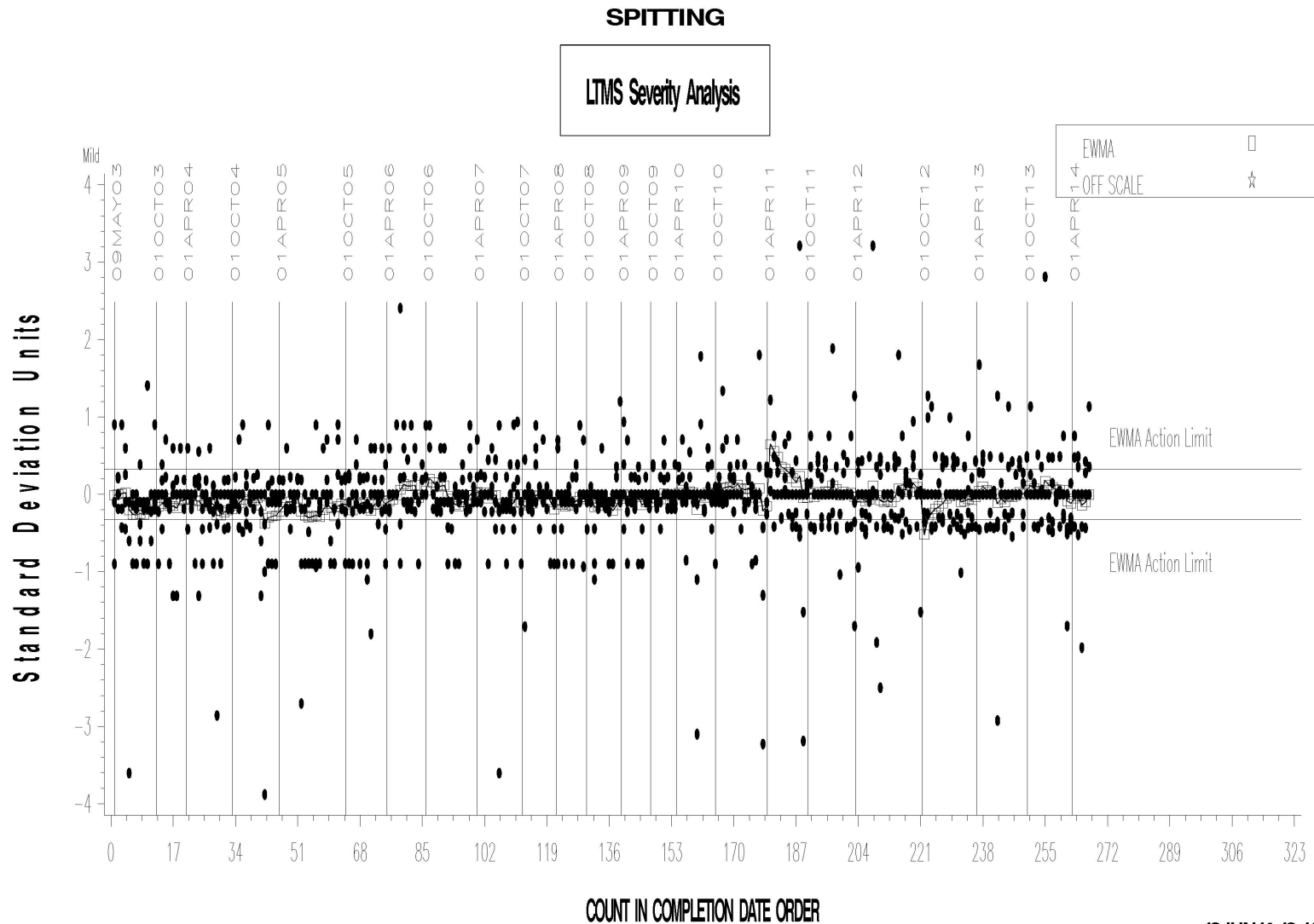
L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA



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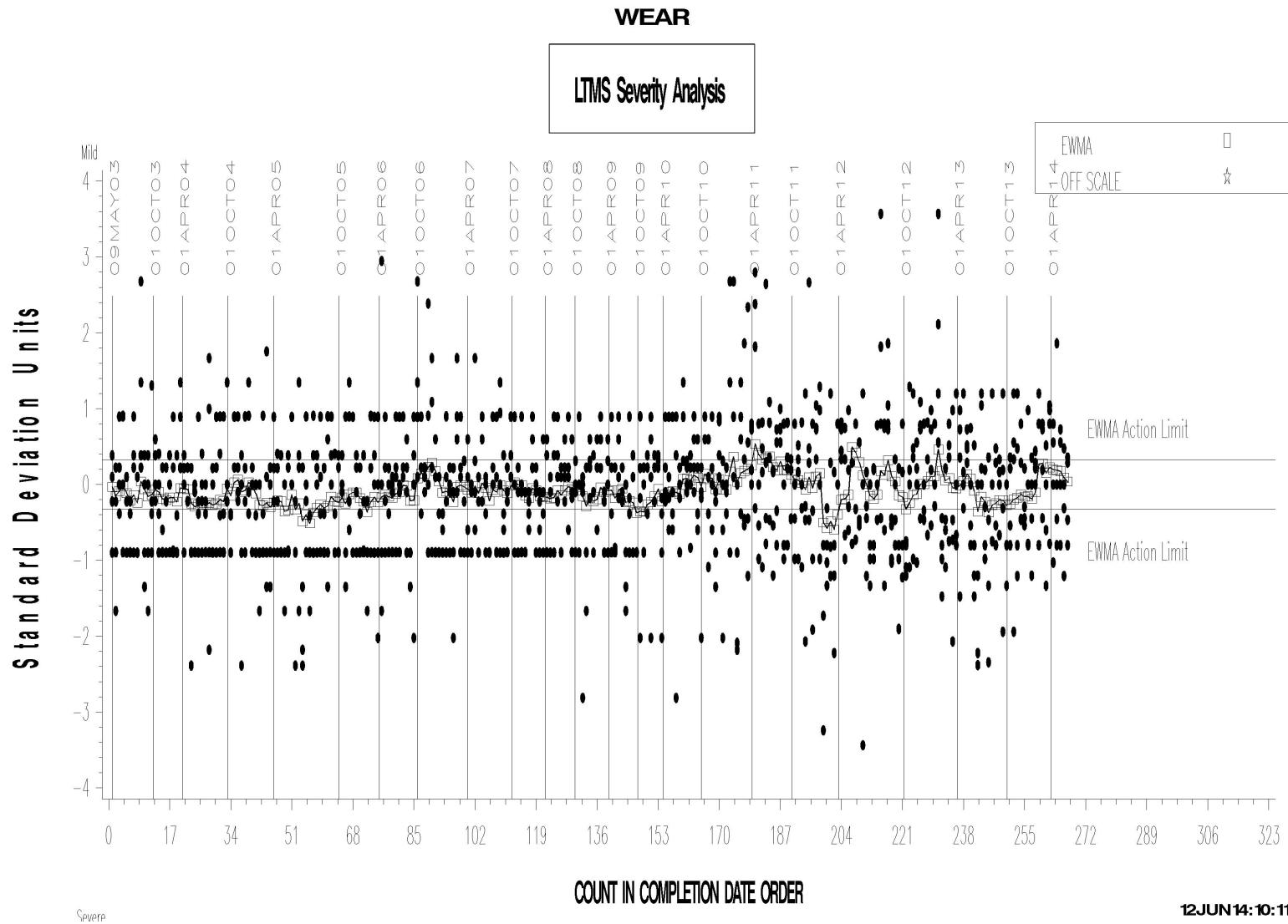
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

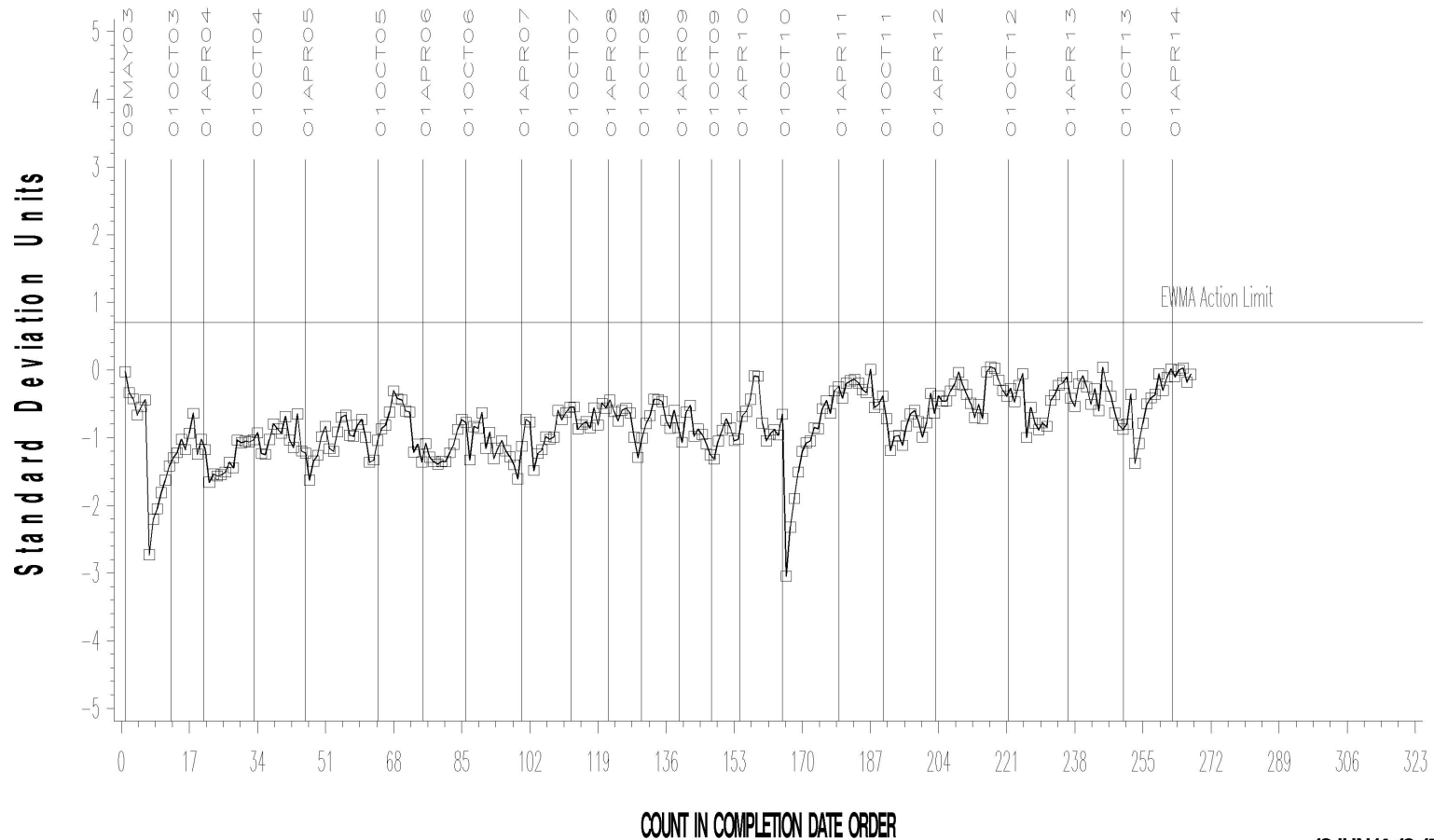


L-37 Rater Calibration

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RIDGING

LTMS Precision Analysis



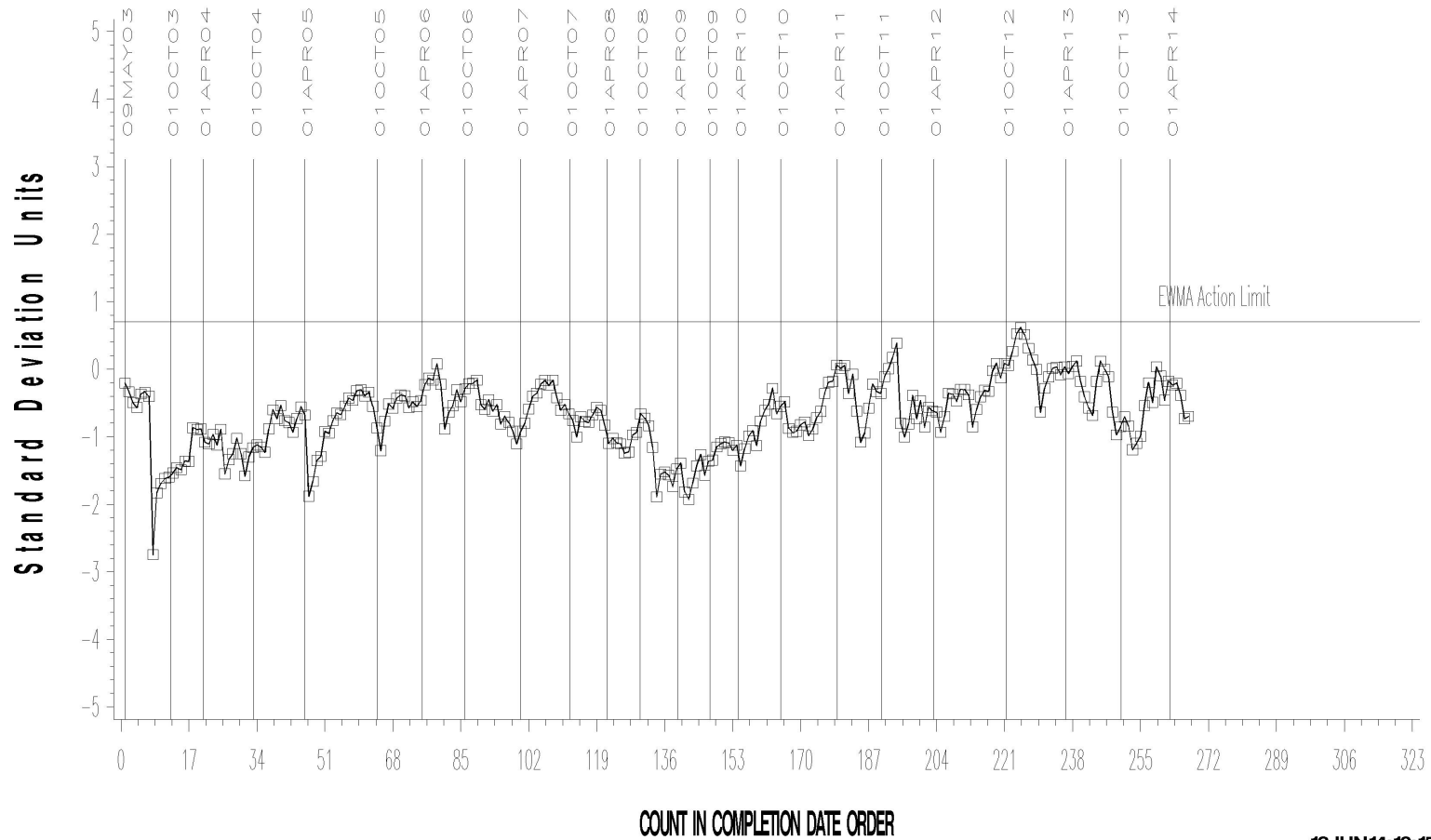
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIPPLING

LTMS Precision Analysis



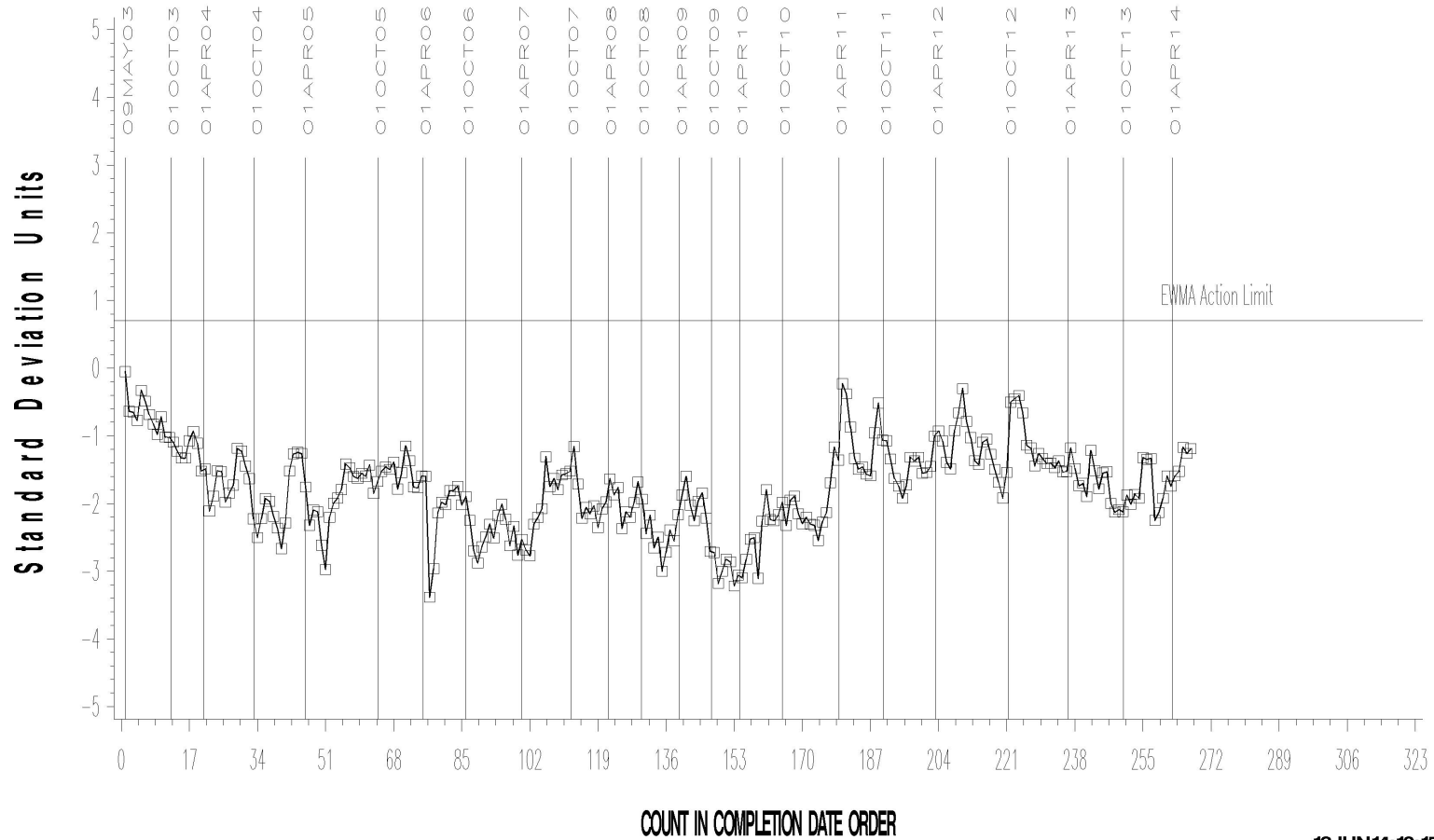
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

SPITTING

LTMS Precision Analysis



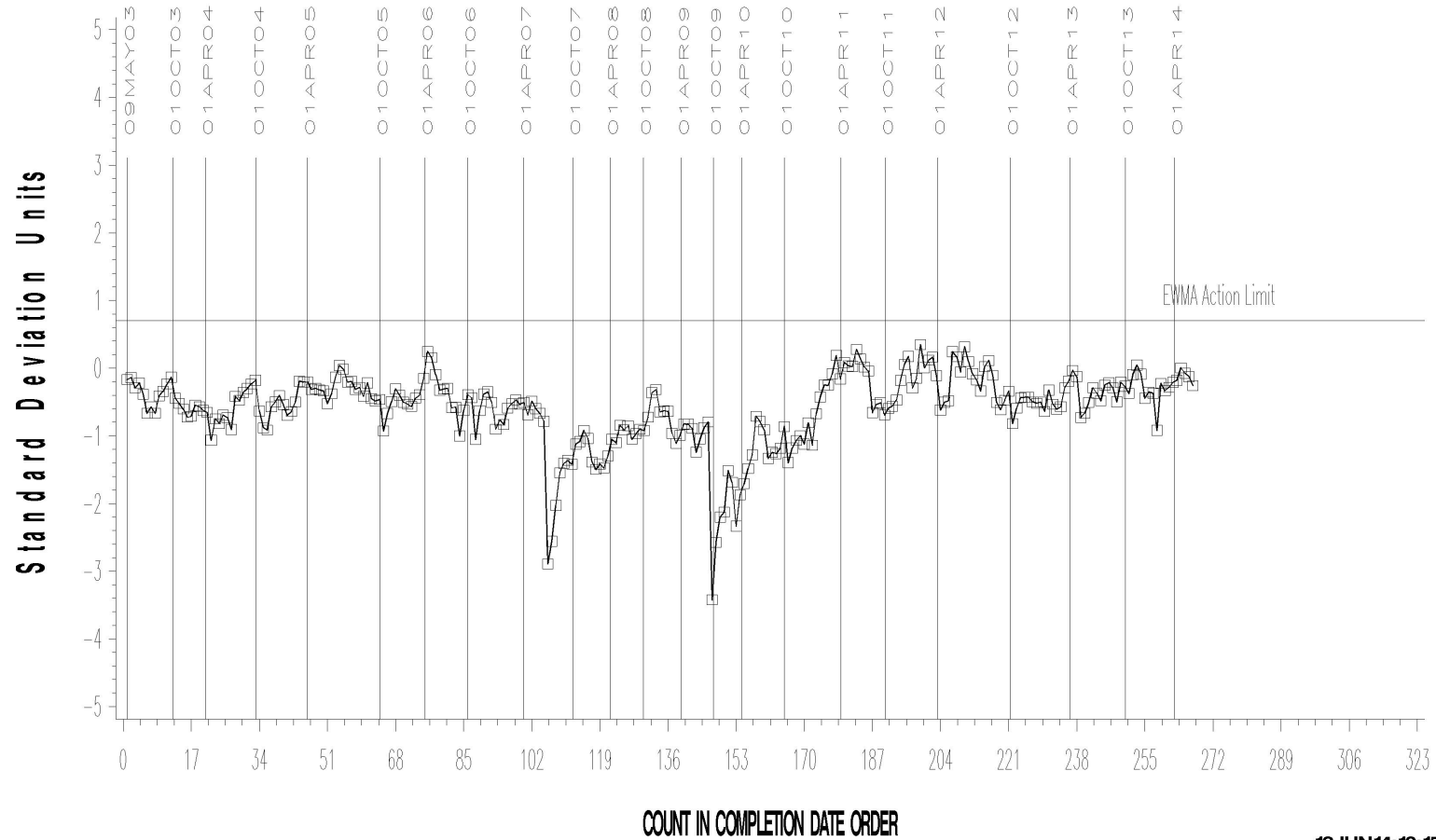
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

WEAR

LTMS Precision Analysis



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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIDGING

CUSUM Severity Analysis



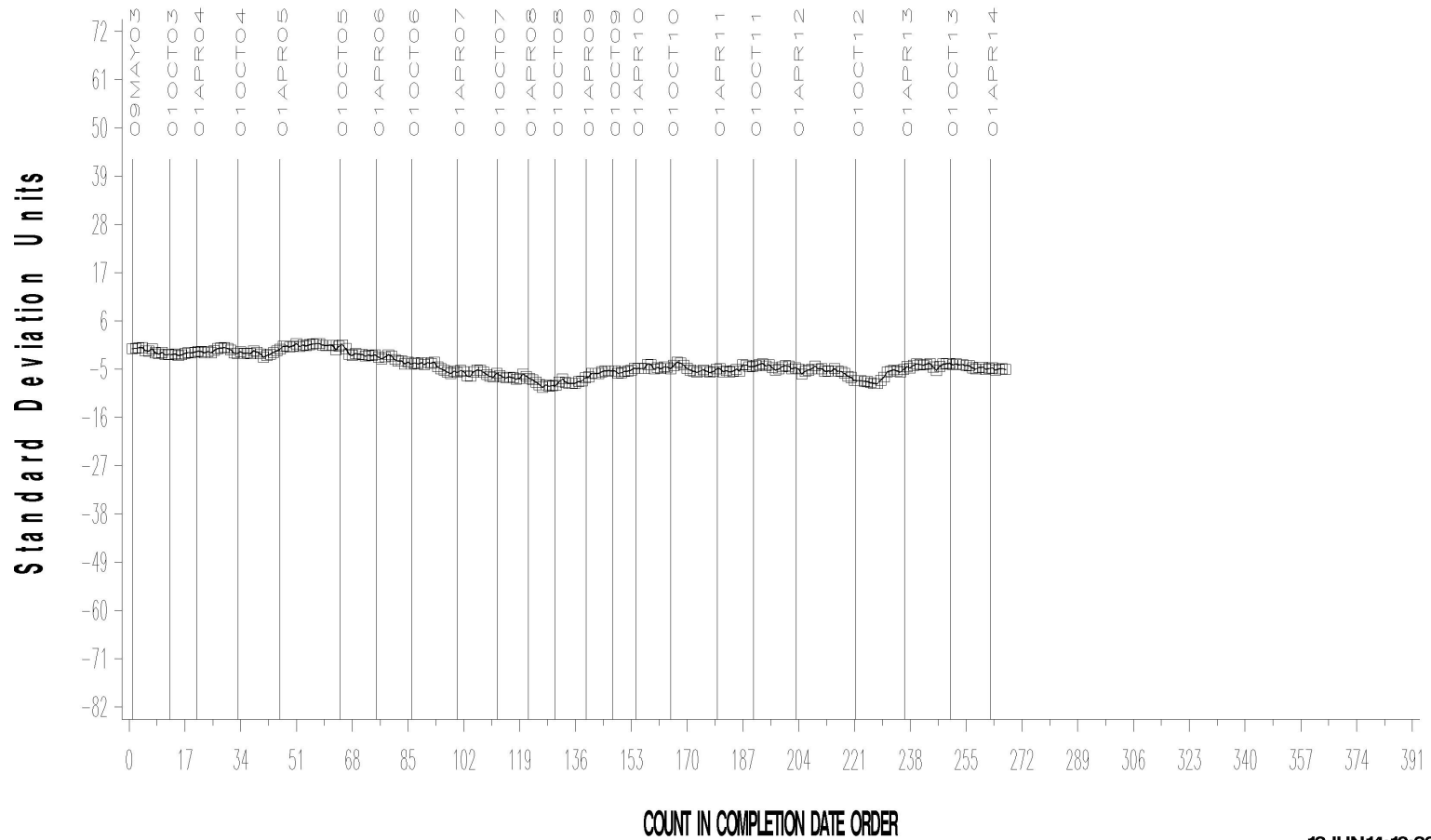
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIPPLING

CUSUM Severity Analysis



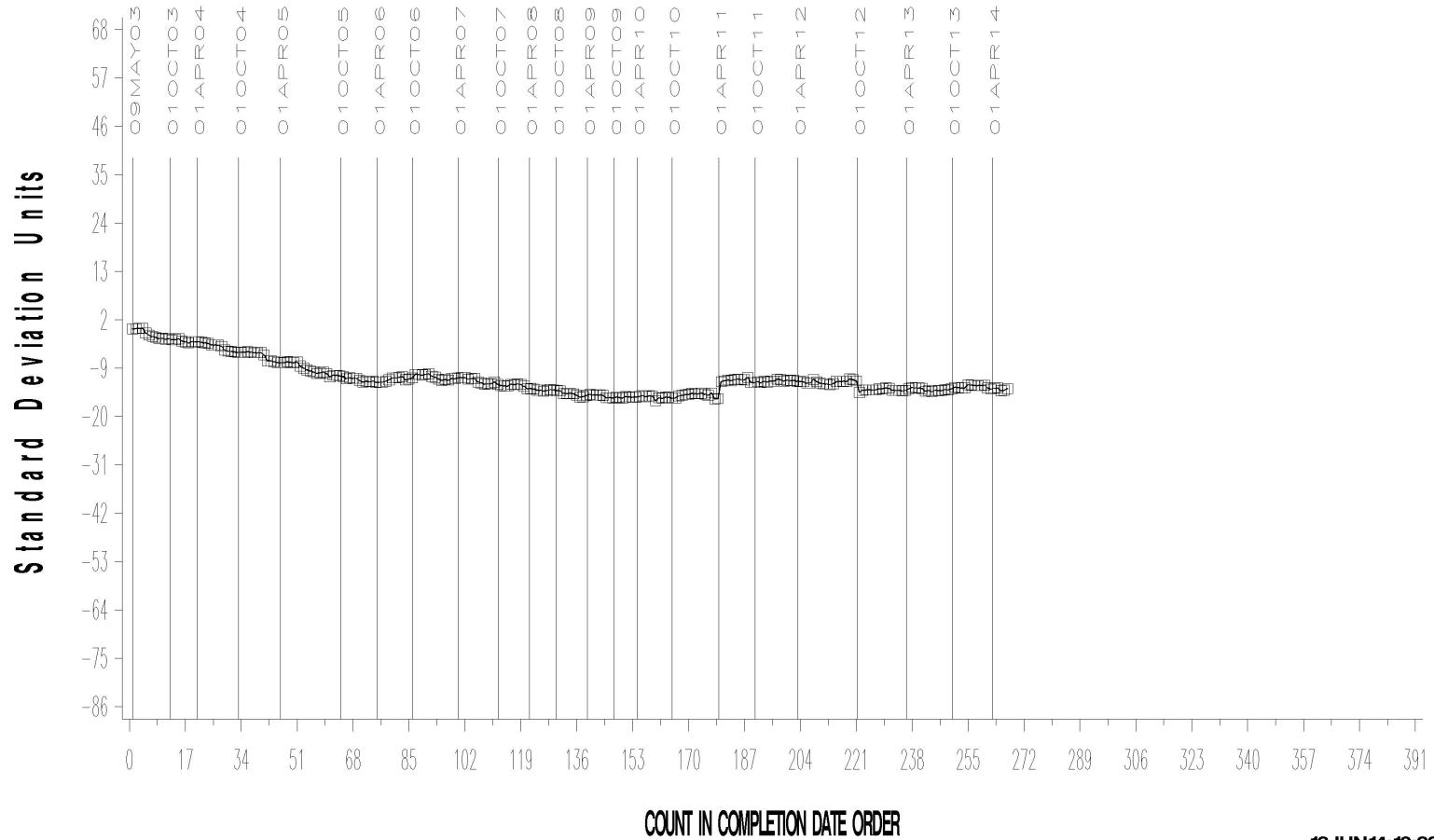
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

SPITTING

CUSUM Severity Analysis



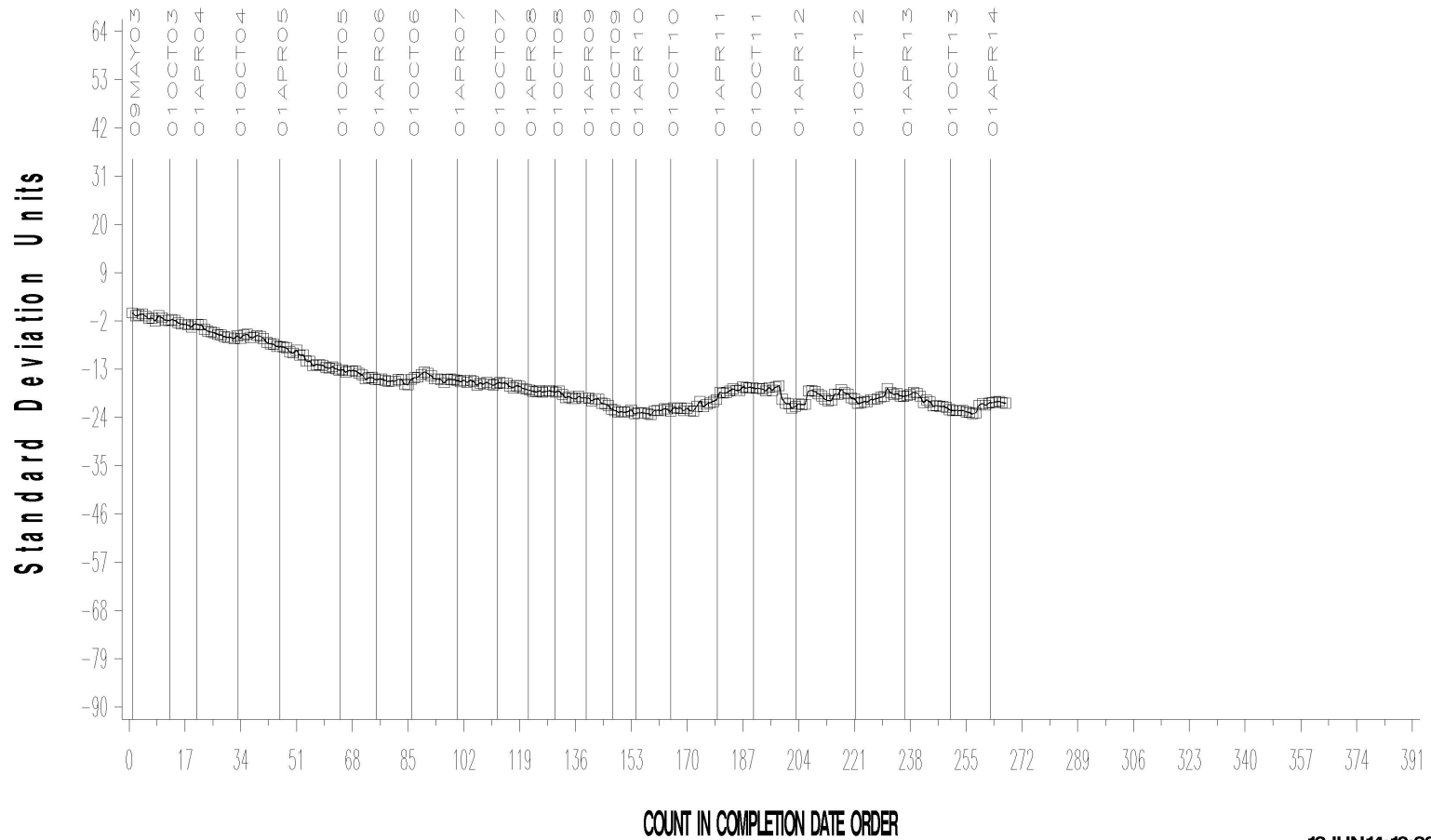
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L-37 Rater Calibration

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WEAR

CUSUM Severity Analysis



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