A Program of ASTM International

Test Monitoring Center

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

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

MEMORANDUM: 10-036

DATE: August 27, 2010

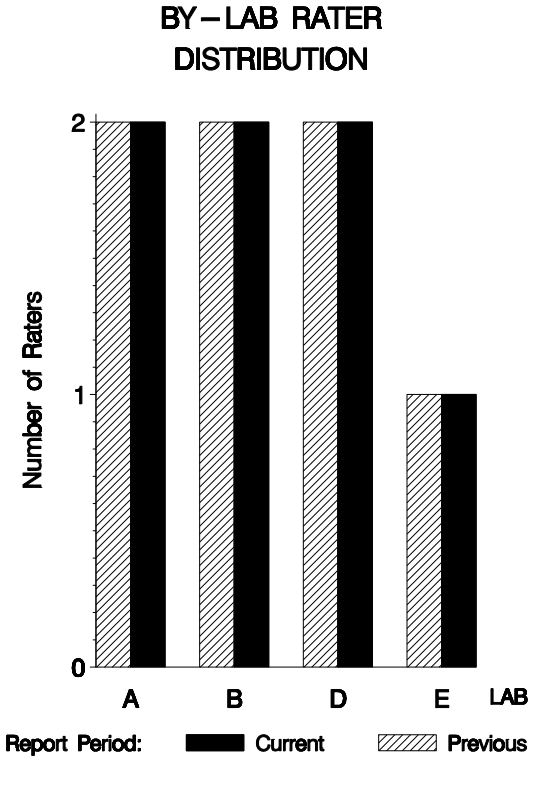
TO: Galen Greene, Chairman, L-37 Surveillance Panel

FROM: Scott Parke

SUBJECT: L-37 Rater Calibration from October 1, 2009 through March 31, 2010

The following is a summary of L-37 rater calibration activity from October 1, 2009 through March 31, 2010.

	Reporting Data	Calibrated on 3-31-2010
Number of Raters	7	7

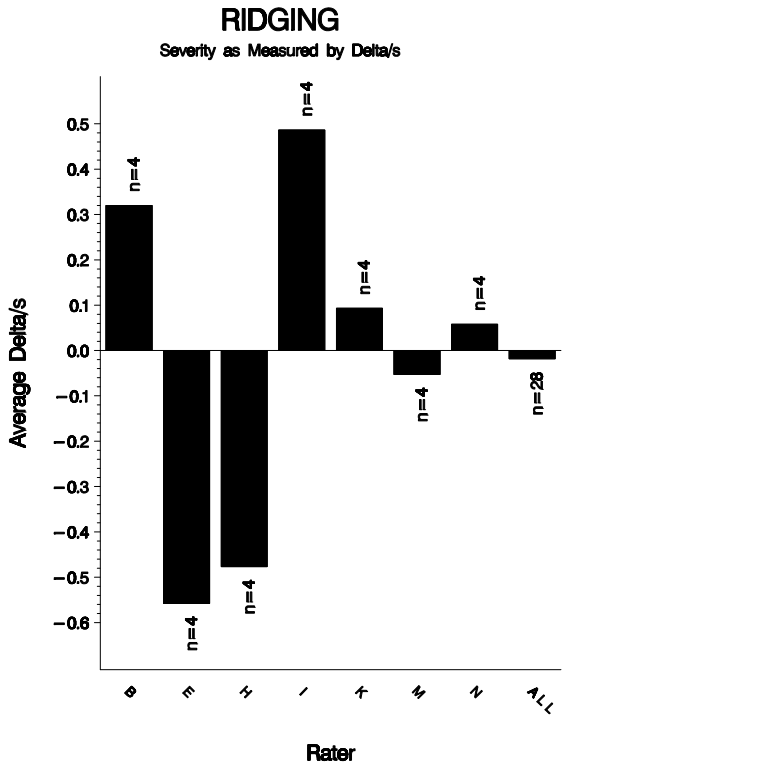


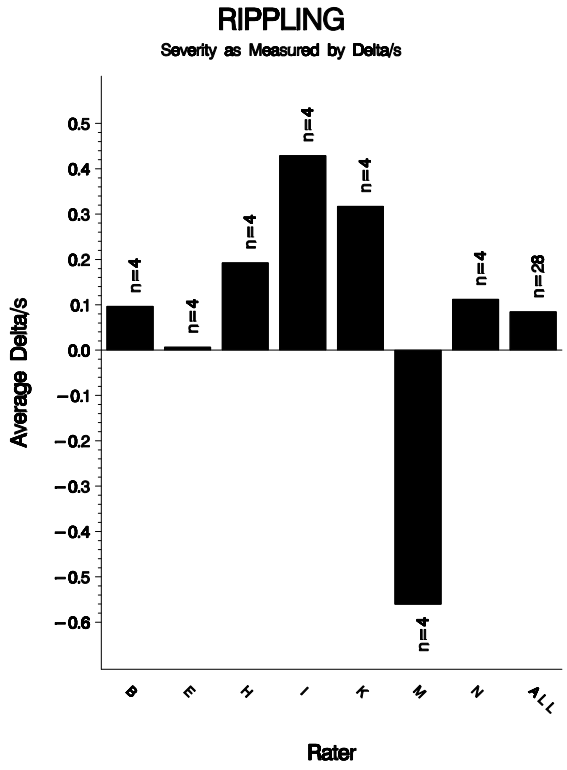
Test Distribution by Oil and Validity

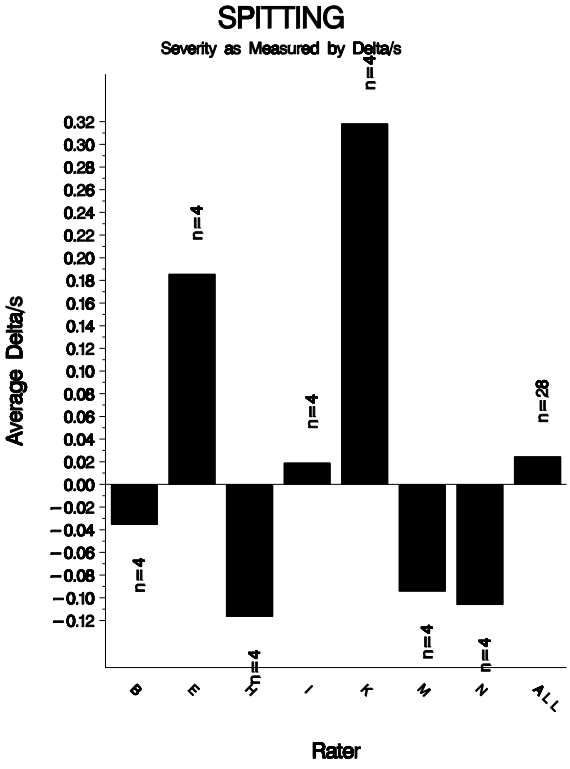
		Totals	
		Last Period	This Period
Accepted for calibration	AC	7	7
Rejected (mild)	OC	0	0
Rejected (severe)	OC	1	0
Workshop data	AG	24	18
Total		32	25

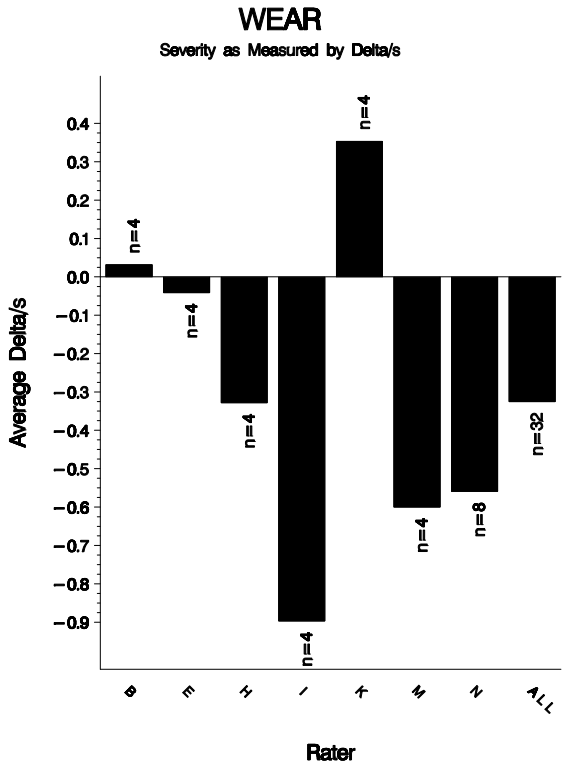
		Ridging		Rippling		Spitting		Wear	
Rater	N	Avg Yi	STD*	Avg Yi	STD*	Avg Yi	STD*	Avg Yi	STD*
B	4	0.320	0.424	0.096	0.476	-0.035	0.194	0.152	0.262
E	4	-0.558	0.389	0.007	0.446	0.185	0.214	-0.271	1.249
H	4	-0.477	0.347	0.192	0.375	-0.116	0.087	0.327	0.076
I	4	0.486	0.531	0.429	0.559	0.019	0.256	-0.871	0.825
K	4	0.093	0.813	0.317	0.519	0.318	0.299	-0.108	1.317
M	4	-0.053	0.837	-0.560	0.698	-0.094	0.073	-0.391	0.589
N	4	0.058	0.740	0.112	0.534	-0.106	0.275	0.112	0.340
ALL	28	-0.019	0.652	0.085	0.551	0.024	0.247	-0.150	0.804

* 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.




RIPPLING
Severity as Measured by Delta/s
Average Delta/s
0.5
0.4
0.3
0.2
0.1
0.0
−0.1
−0.2
−0.3
−0.4
−0.5
−0.6
n=4
n=4
n=4
n=4
n=4
n=4
n=4
n=28
B
E
H
I
K
M
N
ALL
Rater
10:39:28 28AUG2010


SPITTING
Severity as Measured by Delta/s
Average Delta/s
0.32
0.30
0.28
0.26
0.24
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
−0.02
−0.04
−0.06
−0.08
−0.10
−0.12
n=4
n=4
n=4
n=4
n=4
n=4
n=4
n=28
B
E
H
I
K
M
N
ALL
Rater
10:39:28 28AUG2010



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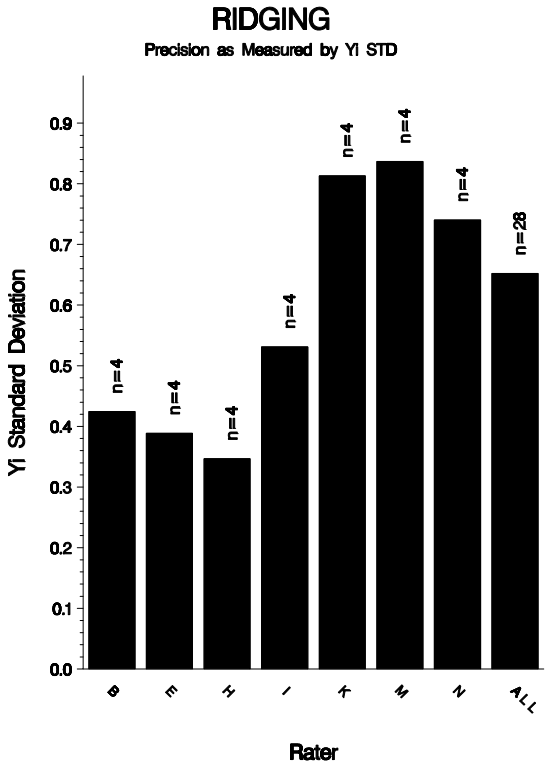

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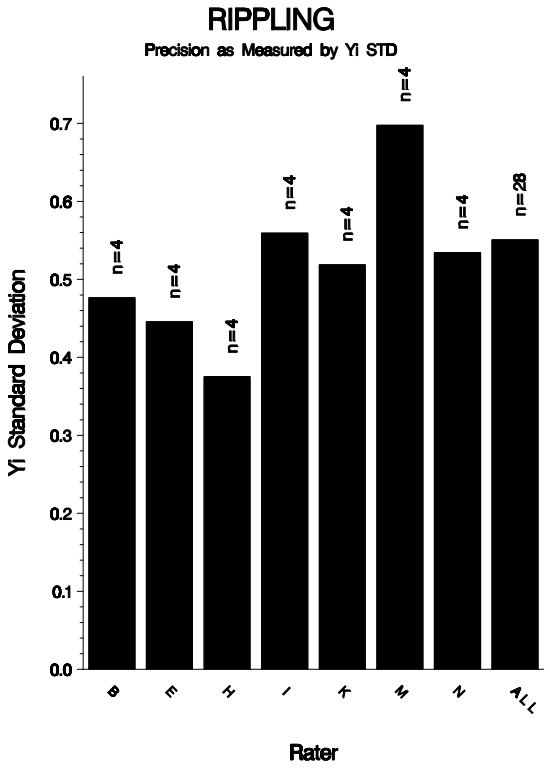
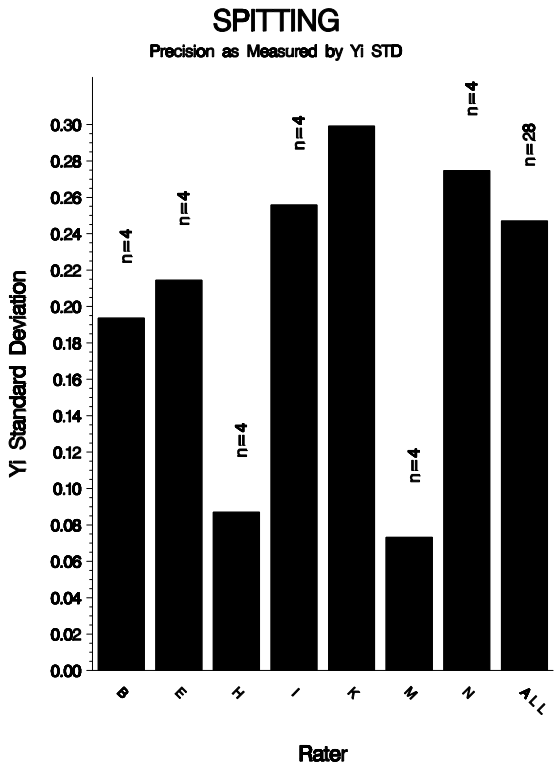
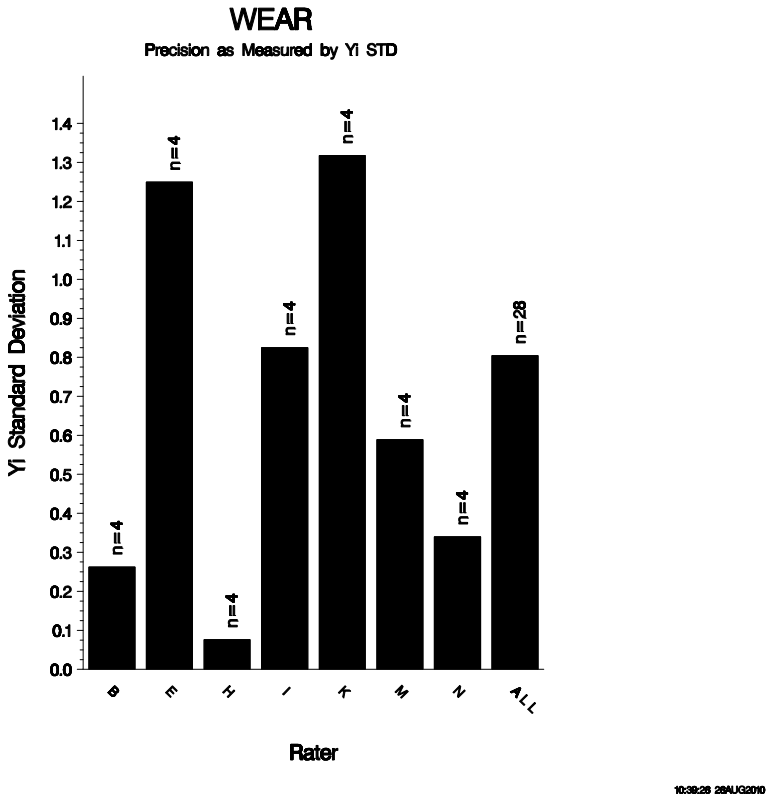

RIPPLING
Precision as Measured by Yi STD
Yi Standard Deviation
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
n=4
n=4
n=4
n=4
n=4
n=4
n=4
n=28
B
E
H
I
K
M
N
ALL
Rater
10:39:28 26AUG2010

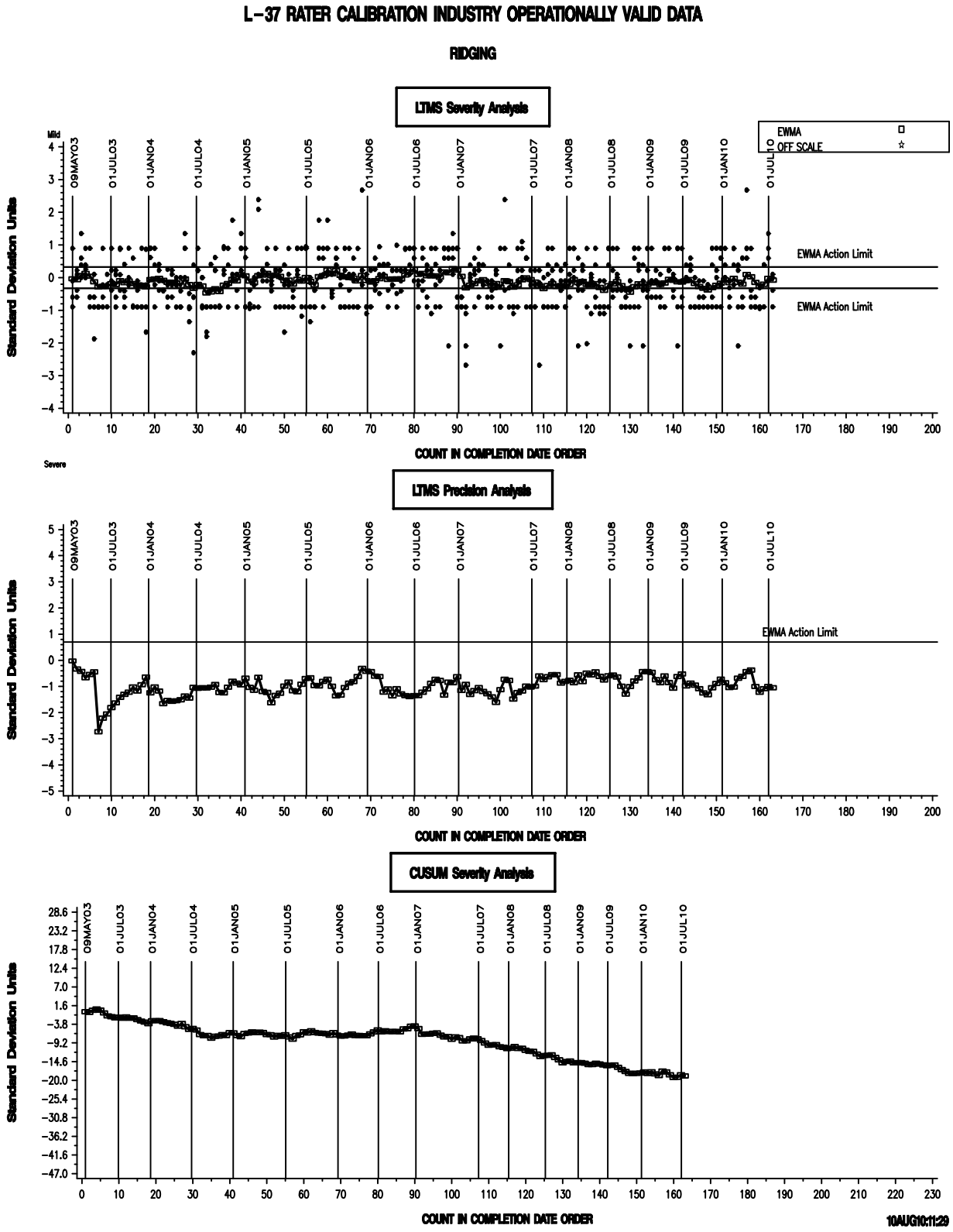

SPITTING
Precision as Measured by Yi STD
Yi Standard Deviation
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
0.18
0.20
0.22
0.24
0.26
0.28
0.30
n=4
n=4
n=4
n=4
n=4
n=4
n=4
n=28
B
E
H
I
K
M
N
ALL
Rater
10:39:28 26AUG2010



INDUSTRY CONTROL CHARTS:

The industry control charts are shown beginning on the following page.

During this report period, RIDG, RIPP, SPIT, and WEAR all remained within both severity and precision control limits.


L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA
RIDGING
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
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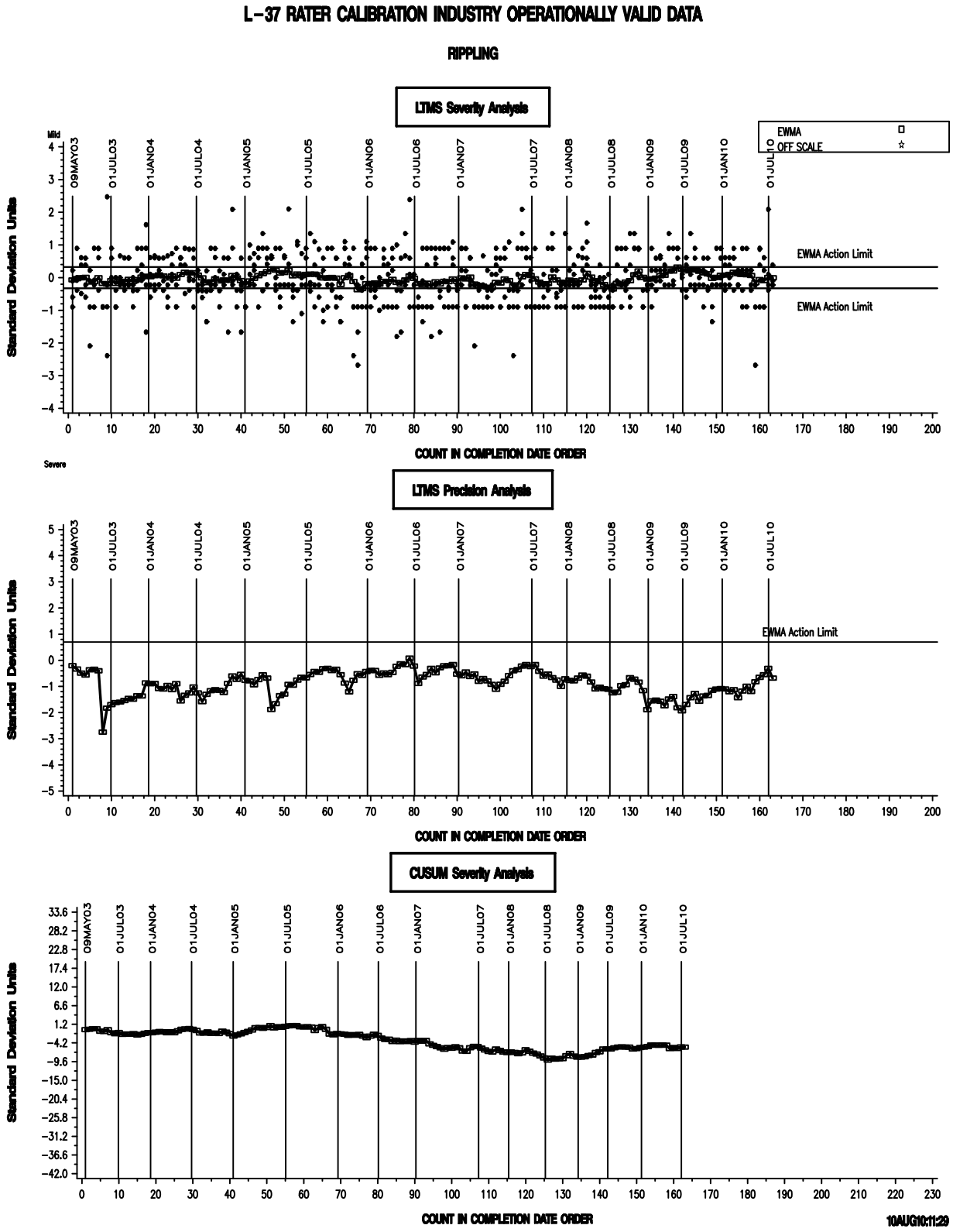
L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA
RIPPLING
LTMS Severity Analysis
EWMA
OFF SCALE
Mild
Severe
Standard Deviation Units
EWMA Action Limit
EWMA Action Limit
09MAY03
01JUL03
01JAN04
01JUL04
01JAN05
01JUL05
01JAN06
01JUL06
01JAN07
01JUL07
01JAN08
01JUL08
01JAN09
01JUL09
01JAN10
01JUL10
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
COUNT IN COMPLETION DATE ORDER
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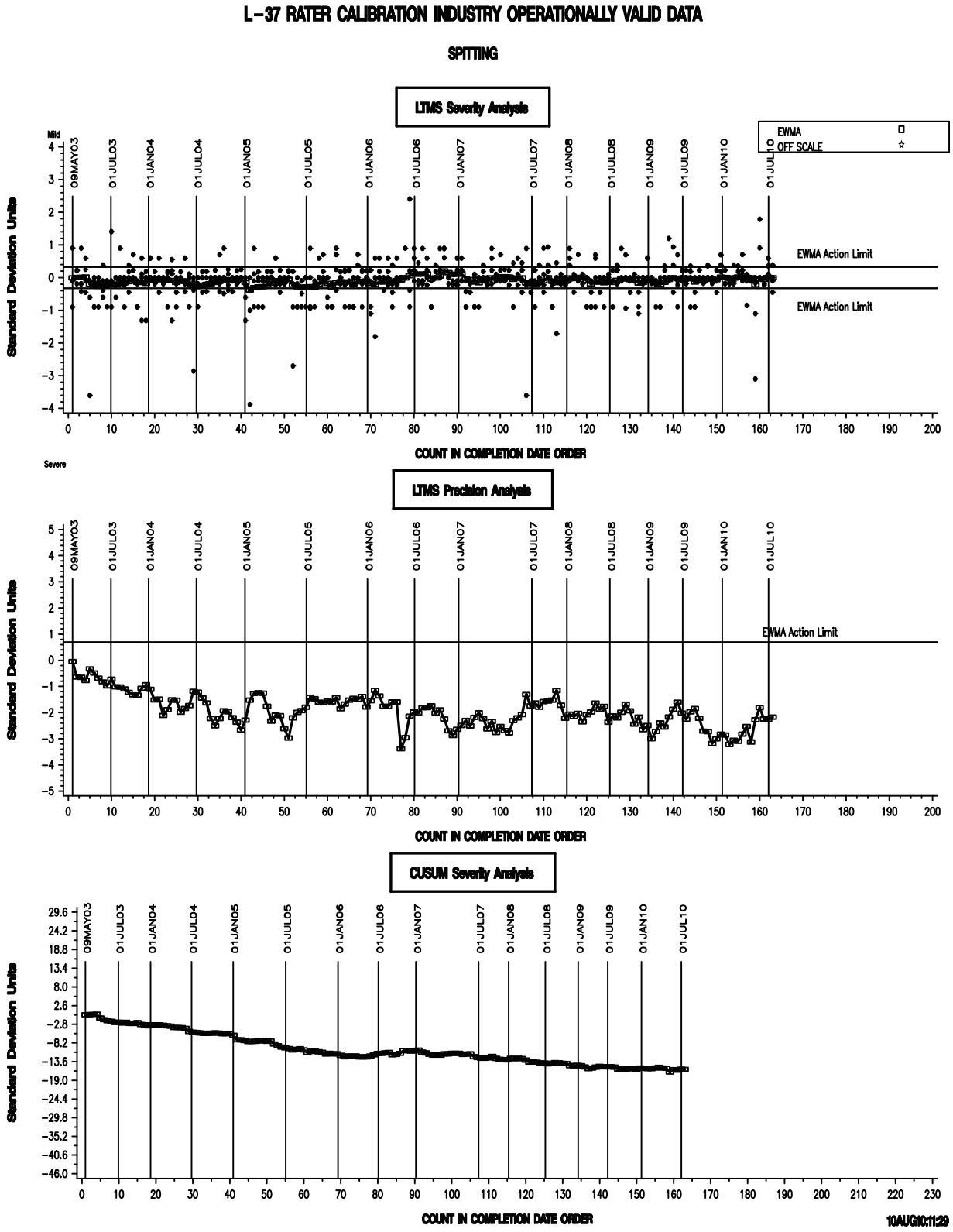
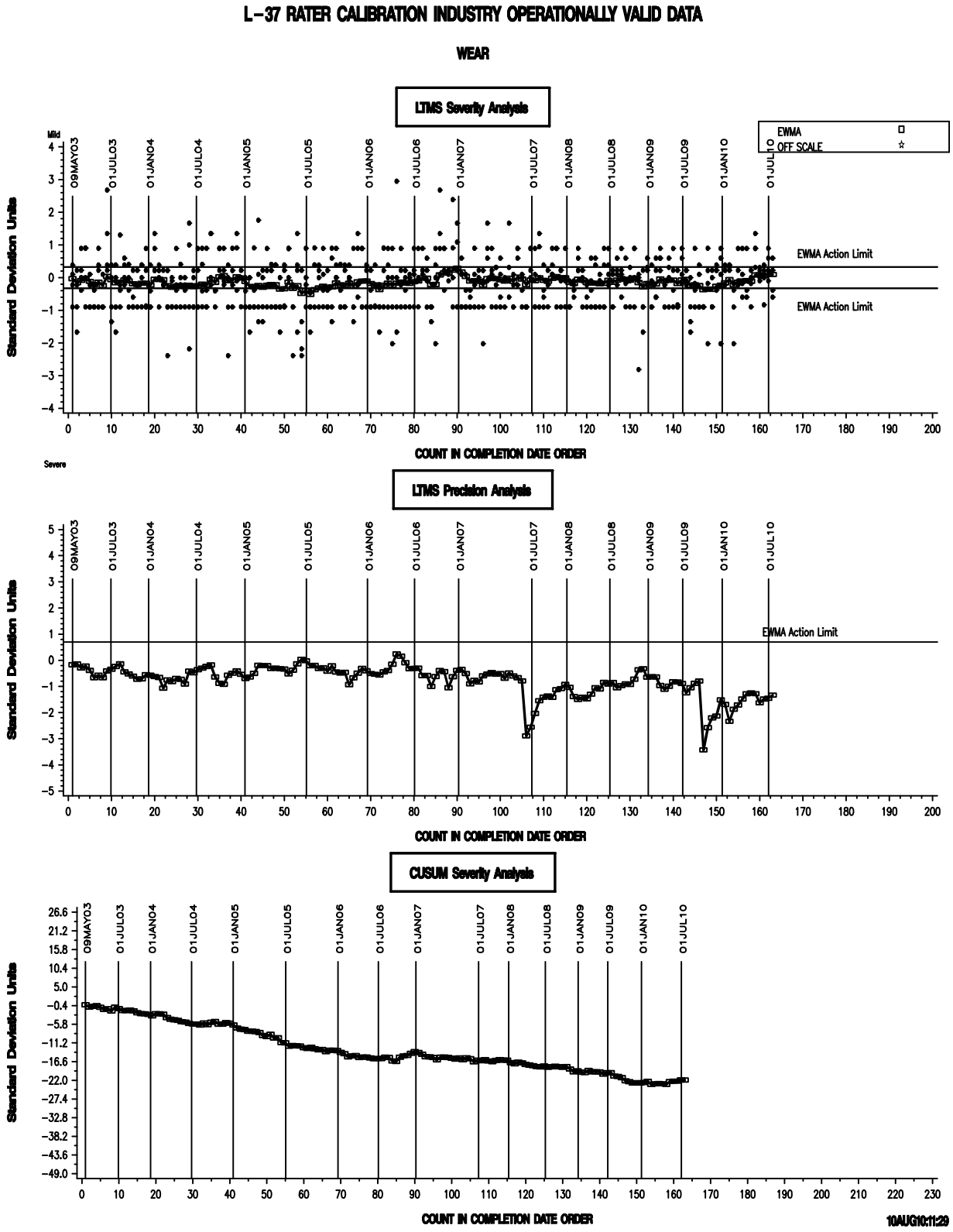

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA
SPITTING
LTMS Severity Analysis
Mild
EWMA
OFF SCALE
EWMA Action Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
Severe
LTMS Precision Analysis
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
10AUG10:11:29


L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA
WEAR
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
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SDP/sdp/astm0410.doc/mem10-036.sdp.doc
c: Frank Farber
Jeff Clark
Don Lind
L37 Surveillance Panel
ftp://ftp.astmtmc.cmu.edu/docs/gears/l37rc/semiannualreports/l37rc-04-2010.pdf

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