



Test Monitoring Center


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

MEMORANDUM: 16-003

DATE: April 7, 2016

TO: Brian Koehler, Chairman, High Temperature Cyclic Durability Test
Surveillance Panel

FROM: Scott Parke 

SUBJECT: HTCT Testing from October 1, 2015 through March 31, 2016

Please find attached a summary of testing activity this period.

SDP/sdp/mem16-003.sdp.doc

cc: Frank Farber
Jeff Clark

HTCT Surveillance Panel

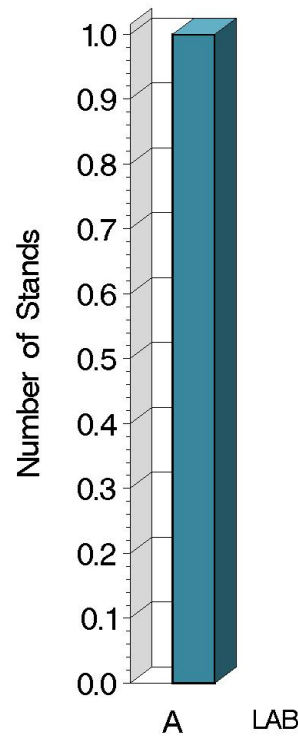
<ftp://ftp.astmtmc.cmu.edu/docs/gear/htct/semiannualreports/htct-04-2016.pdf>

Distribution: email

High Temperature Cyclic Transmission

| | Reporting Data | Calibrated on 3-31-16 |
|------------------|----------------|-----------------------|
| Number of Labs | 1 | 1 |
| Number of Stands | 1 | 1 |

BY-LAB STAND
DISTRIBUTION



Report Period:  Current

1346:12 07APR2016

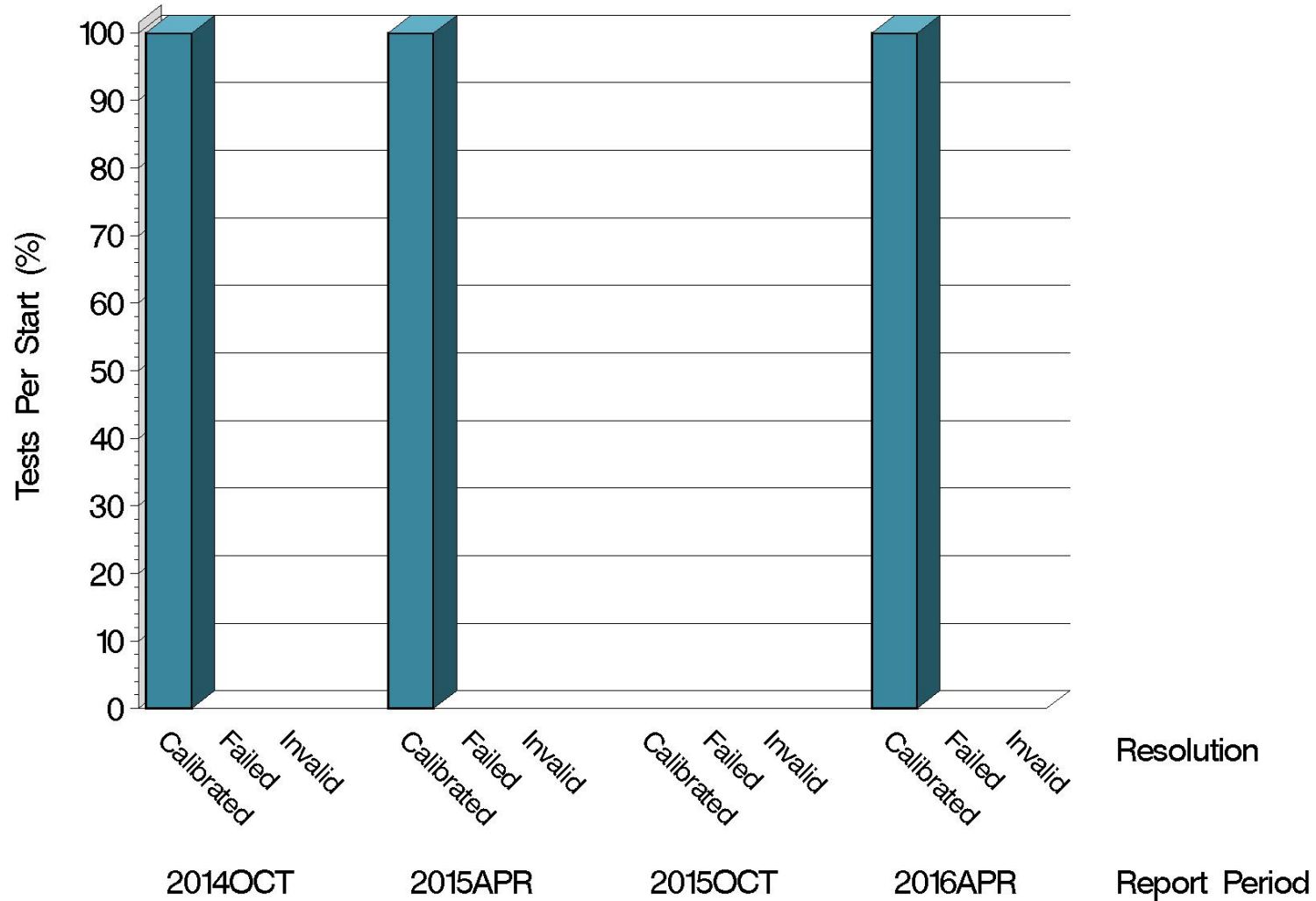
High Temperature Cyclic Transmission

Test Distribution by Oil and Validity

| | | | | | Totals | |
|--------------------------|----|----------|----------|----------|-------------|-------------|
| | | 154 | 155 | 155-1 | Last Period | This Period |
| Accepted for calibration | AC | 0 | 0 | 1 | 0 | 1 |
| Rejected (Mild) | OC | 0 | 0 | 0 | 0 | 0 |
| Rejected (Severe) | OC | 0 | 0 | 0 | 0 | 0 |
| Rejected (Precision) | OC | 0 | 0 | 0 | 0 | 0 |
| Invalidated calibration | LC | 0 | 0 | 0 | 0 | 0 |
| Aborted | XC | 0 | 0 | 0 | 0 | 0 |
| Accepted information run | NI | 0 | 0 | 0 | 0 | 0 |
| Total | | 0 | 0 | 1 | 0 | 1 |

High Temperature Cyclic Transmission

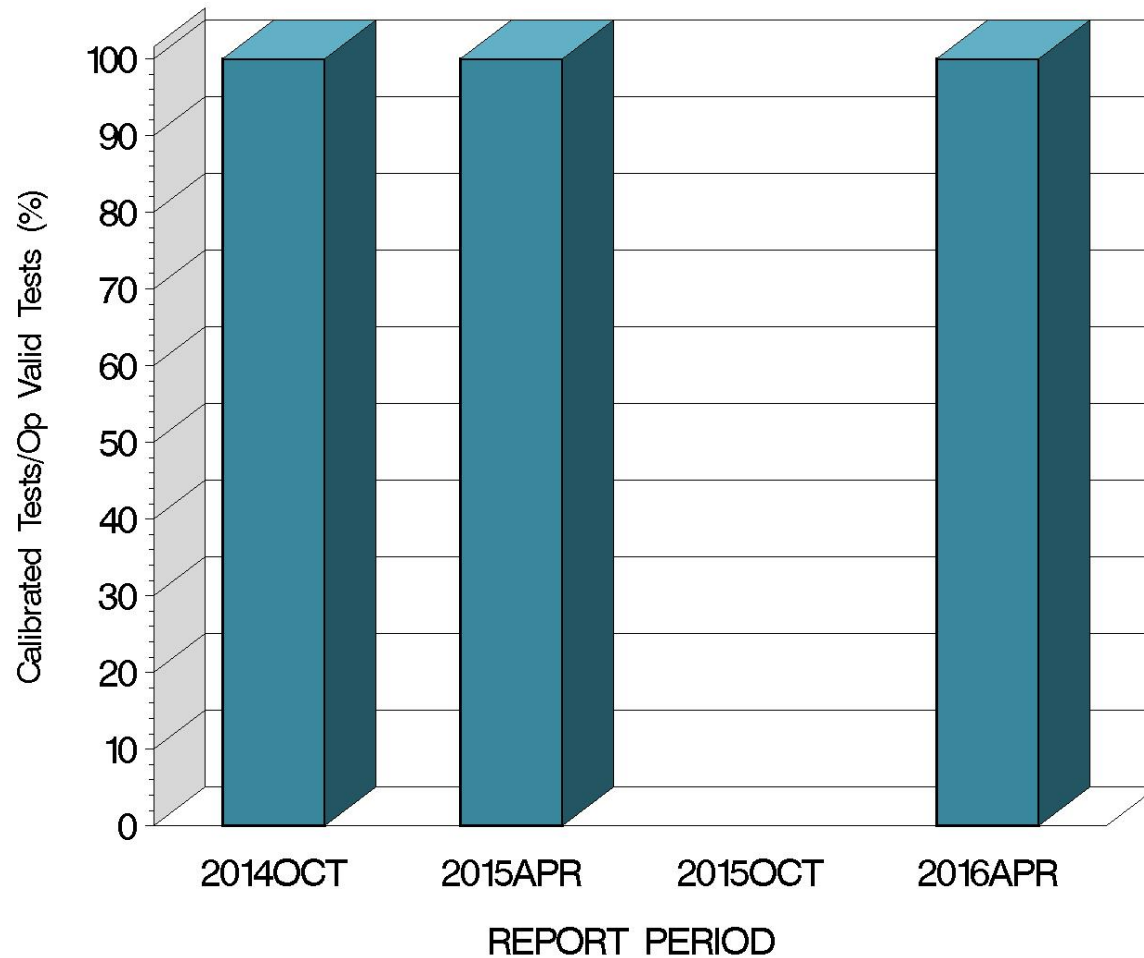
CALIBRATION ATTEMPT SUMMARY



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High Temperature Cyclic Transmission

OPERATIONALLY VALID TESTS
MEETING ACCEPTANCE CRITERIA



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High Temperature Cyclic Transmission

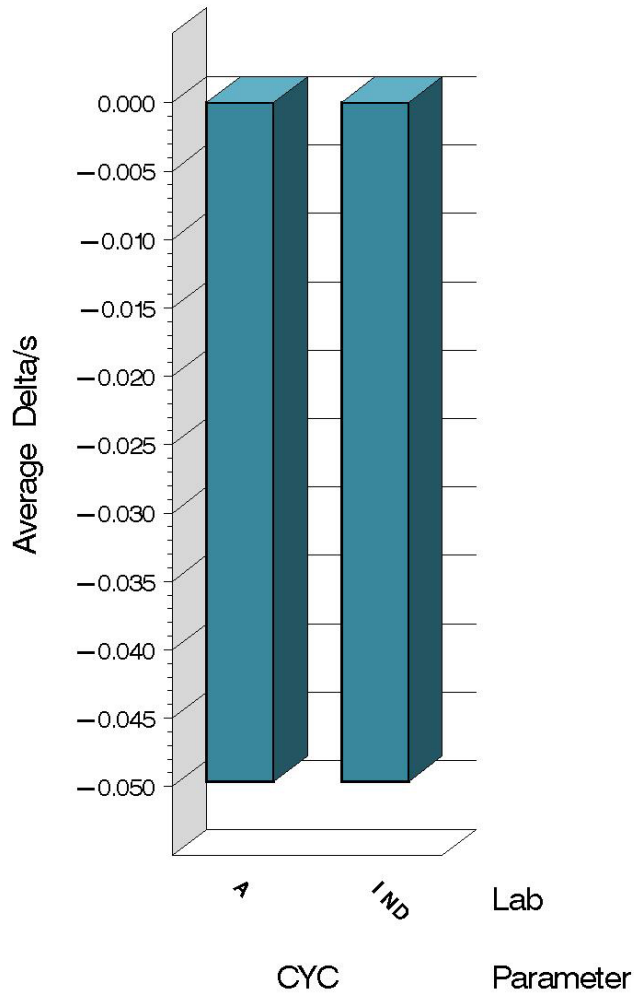
CAUSES FOR LOST TESTS

| | | Oil | | | Validity | | | Loss Rate | | |
|-----|---------------------------------|-----|-----|-------|----------|----|----|-----------|--------|----|
| Lab | Cause | 154 | 155 | 155-1 | RC | LC | XC | Lost | Starts | % |
| | No tests were lost this period. | | | | | | | 0 | 1 | 0% |
| | Lost | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | Starts | 0 | 0 | 1 | 1 | 1 | 1 | | | |
| | % | 0% | 0% | 0% | 0% | 0% | 0% | | | |

High Temperature Cyclic Transmission

TEST SEVERITY

DELTA/S BY LAB

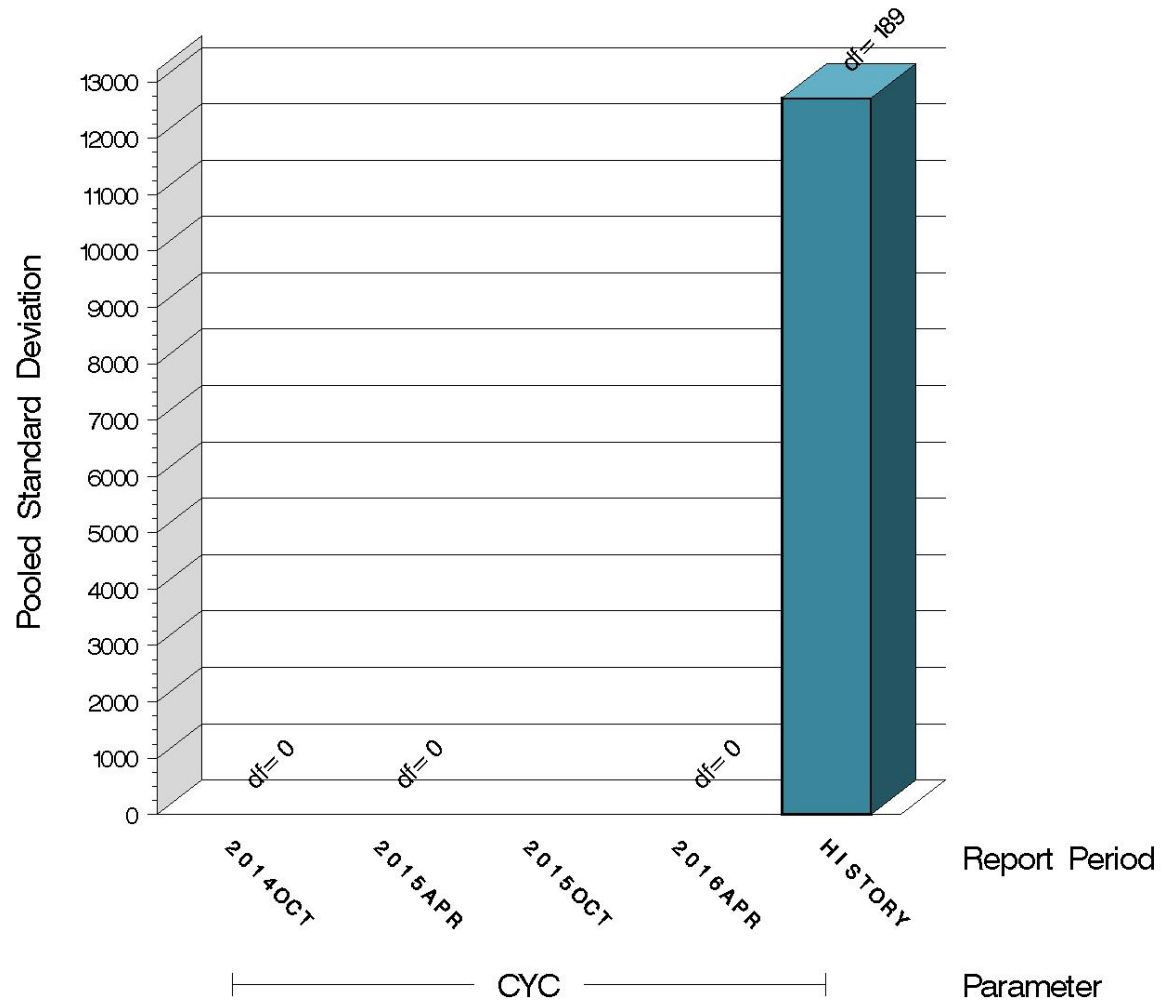


| Average Δ/s by Lab | | |
|---------------------------|---|-------|
| Lab | n | CYC |
| A | 1 | -0.05 |
| Industry | 1 | -0.05 |
| Shift | 1 | -480 |

High Temperature Cyclic Transmission

TEST PRECISION

POOLED STANDARD DEVIATION
BY SIX-MONTH ASTM REPORT PERIOD



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High Temperature Cyclic Transmission

SUMMARY OF SEVERITY & PRECISION

Severity

The CYC result reported this period was within industry control chart limits.

Precision

The CYC result reported this period did not result in any precision alarms.

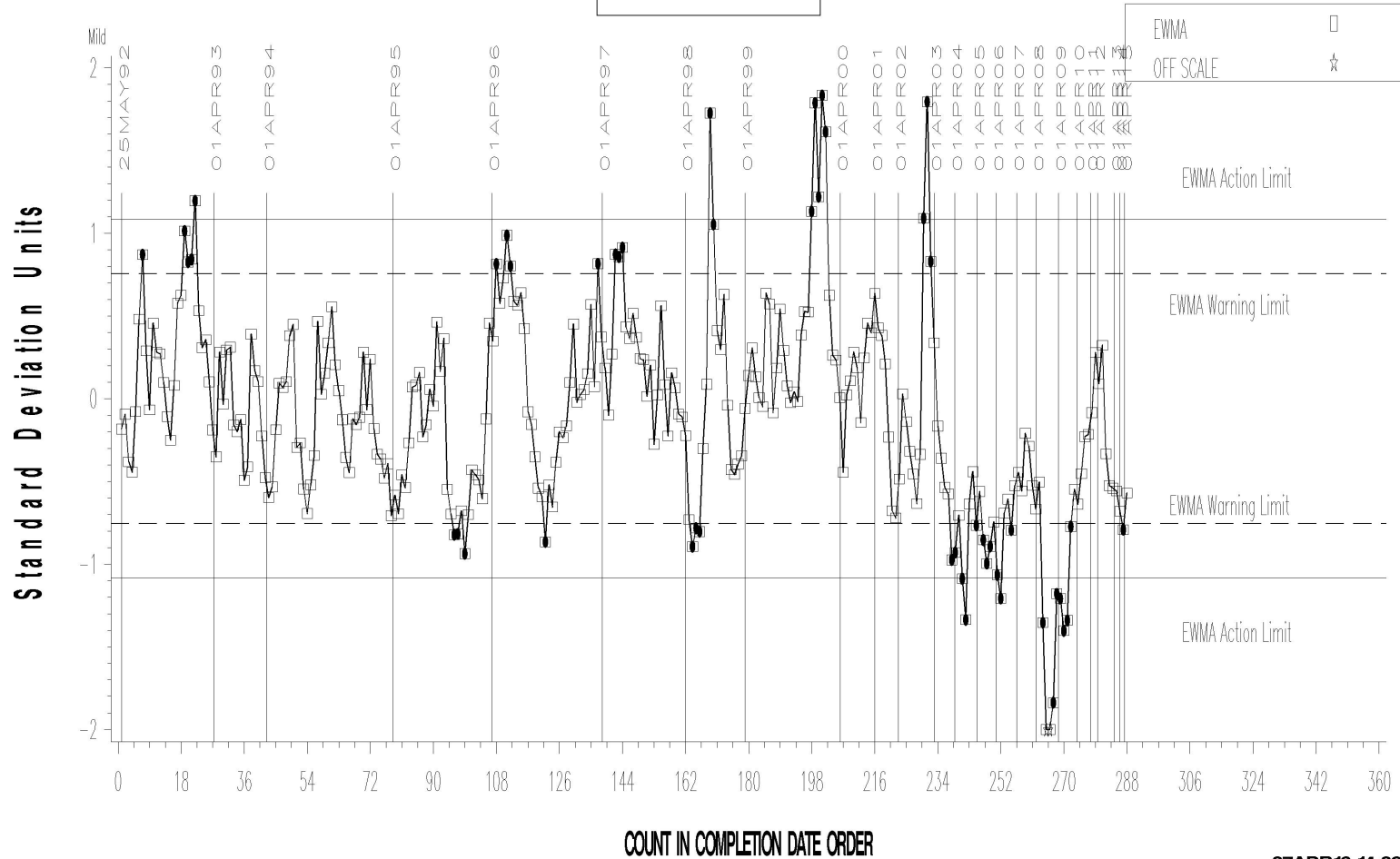
Industry control charts follow.

High Temperature Cyclic Transmission

HTCT INDUSTRY OPERATIONALLY VALID DATA

END OF TEST CYCLES

LTMS Severity Analysis



Severp

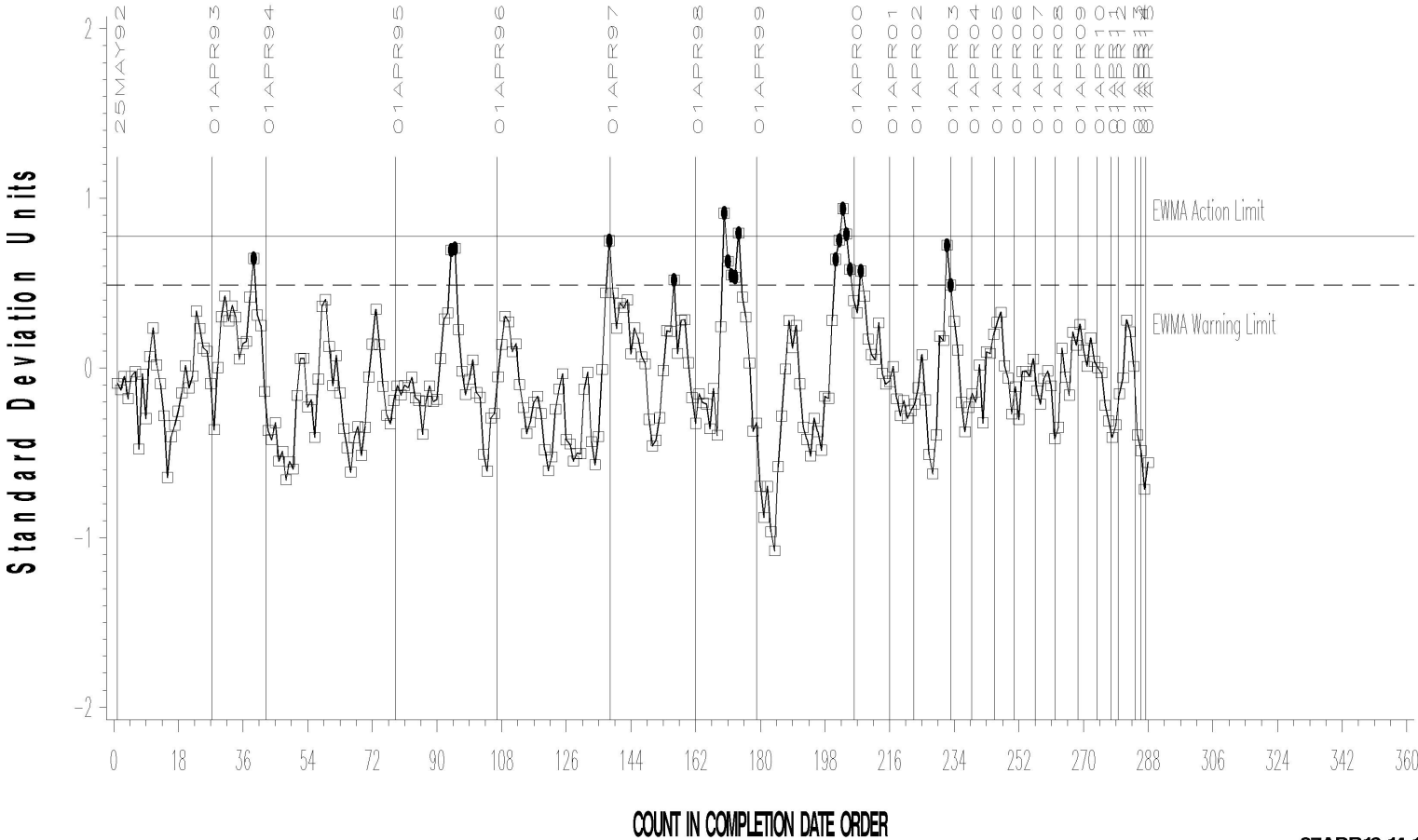
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High Temperature Cyclic Transmission

HTCT INDUSTRY OPERATIONALLY VALID DATA

END OF TEST CYCLES

LTMS Precision Analysis



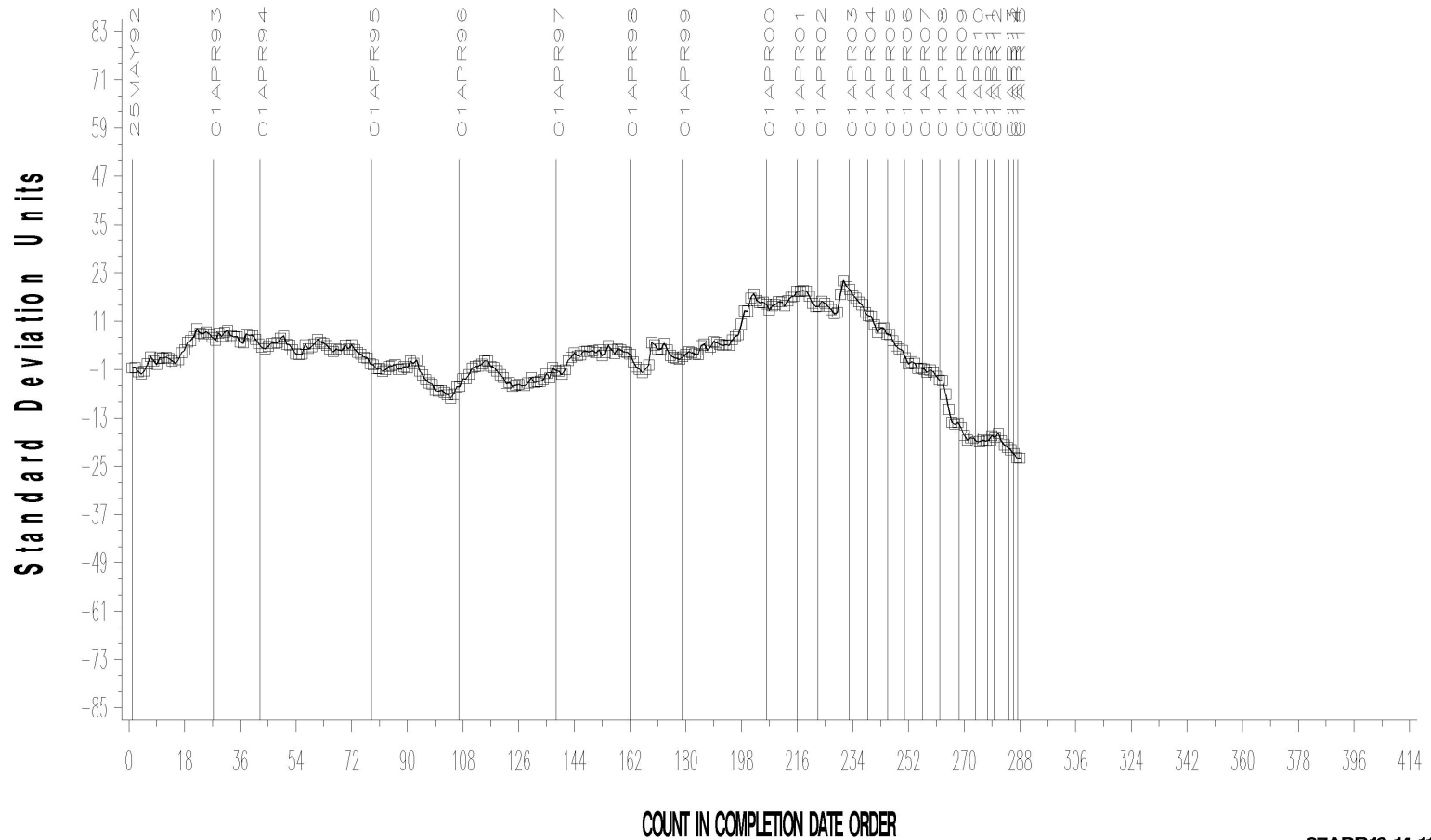
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High Temperature Cyclic Transmission

HTCT INDUSTRY OPERATIONALLY VALID DATA

END OF TEST CYCLES

CUSUM Severity Analysis



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High Temperature Cyclic Transmission

TIMELINE ADDITIONS

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

High Temperature Cyclic Transmission

LAB VISITS

No HTCT lab visits were conducted during this period.

INFORMATION LETTERS

No information letters were issued this report period.

High Temperature Cyclic Transmission

STATUS OF REFERENCE OIL SUPPLY

| Oil | Cans @ Labs | @ TMC | |
|--------------|-------------|-----------|--------------|
| | | Cans | Gallons |
| 154 | 2 | 16 | 176.0 |
| 155 | 0 | 1 | 15.0 |
| 155-1 | 2 | 21 | 231.0 |
| Total | 4 | 38 | 422.0 |

The TMC quantity remaining presumes usage only for HTCT testing. Oil 155/155-1 is also used in other test areas (L-33-1, L-37 and L-37-1). Oil 154 is the discrimination oil used only for new hardware approval.