

Test Monitoring Center

203 Armstrong Drive, Freeport, PA 16229, USA

www.astmtmc.org 412-365-1000

MEMORANDUM: 24-012

DATE: May 14, 2024

TO: Caroline Louis, Chairman, High Temperature Cyclic Durability Test

DAN Bego

Surveillance Panel

FROM: Dylan Beck

SUBJECT: HTCT Testing from October 1, 2023 through March 31, 2024

Attached is a summary of testing activity this period.

DJB/djb/mem24-012.djb.doc

cc: Jeff Clark Sean Moyer

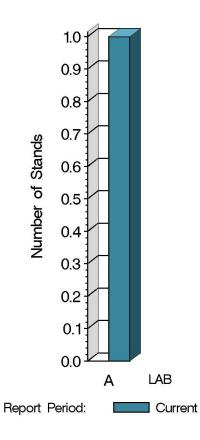
HTCT Surveillance Panel

https://www.astmtmc.org/ftp/docs/gear/htct/semiannualreports/htct-04-2024.pdf

Distribution: email

| | Reporting Data | Calibrated on 3-31-24 |
|------------------|----------------|-----------------------|
| Number of Labs | 1 | 1 |
| Number of Stands | 1 | 1 |

BY-LAB STAND DISTRIBUTION



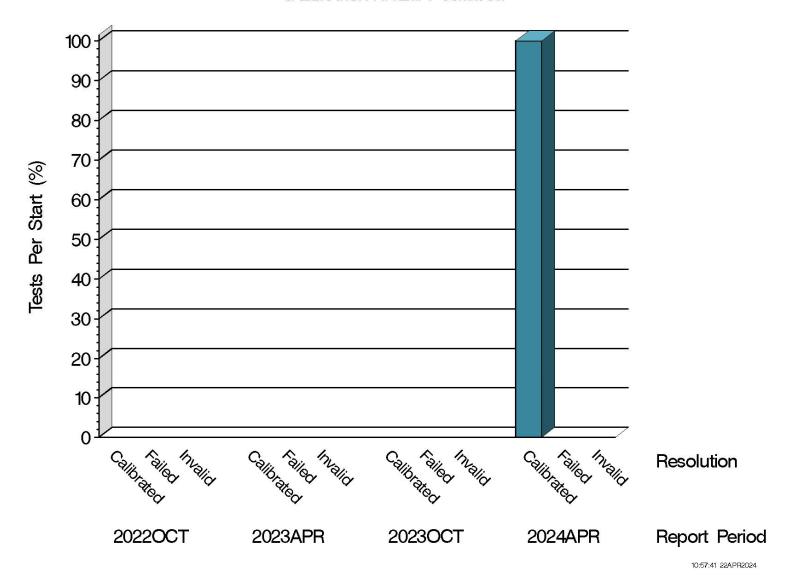
10:57:41 22APR2024



Test Distribution by Oil and Validity

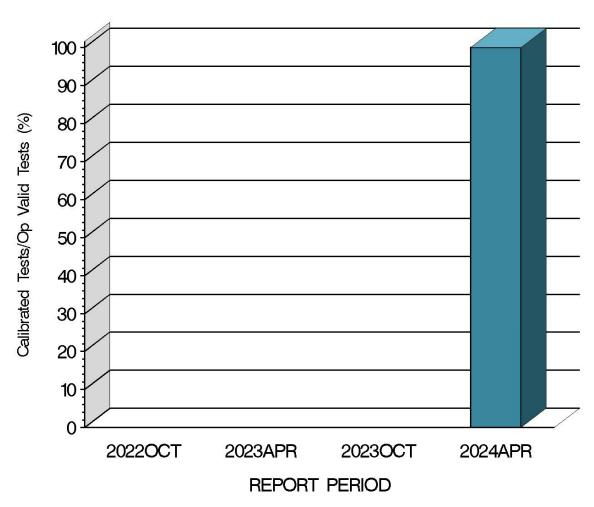
| | | | | Totals | | |
|--------------------------|----|-----|-------|----------------|----------------|--|
| | | 155 | 155-1 | Last Period | This Period | |
| Accepted for calibration | AC | 0 | 1 | 0 | 1 | |
| Rejected (Mild) | OC | 0 | 0 | 0 | 0 | |
| Rejected (Severe) | OC | 0 | 0 | 0 | 0 | |
| Rejected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

CALIBRATION ATTEMPT SUMMARY





OPERATIONALLY VALID TESTS MEETING ACCEPTANCE CRITERIA



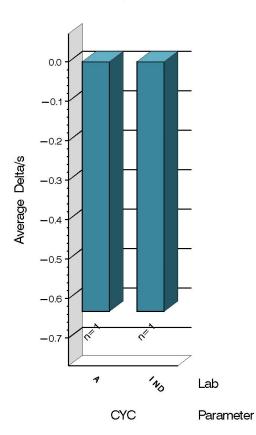
10:57:41 22APR2024



High Temperature Cyclic Transmission CAUSES FOR LOST TESTS

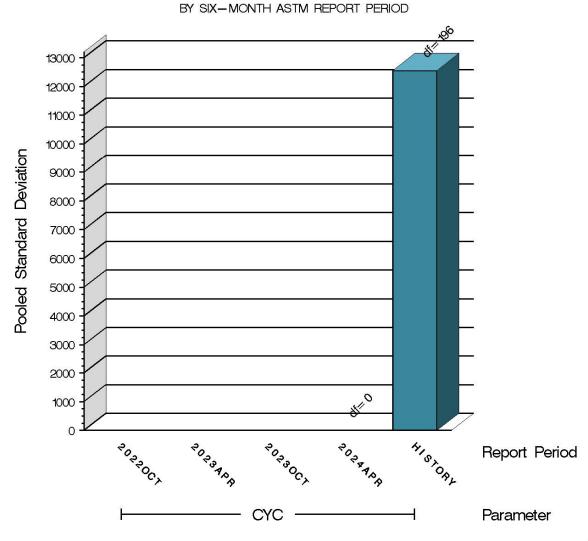
| | | | Oil | | | Validity | | | Loss Rate | | |
|-----|-----------------------|-----------|-----|-----|-------|----------|----|----|-----------|--------|----|
| Lab | Cause | | 154 | 155 | 155-1 | RC | LC | XC | Lost | Starts | % |
| | No tests were leading | lost this | | | | | | | 0 | 1 | 0% |
| |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





| Average ∆/s by Lab | | | | | |
|--------------------|-----|----------|--|--|--|
| Lab | CYC | | | | |
| А | 1 | -0.63 | | | |
| Industry | 1 | -0.63 | | | |
| Shift | 1 | -6117.38 | | | |

TEST PRECISION POOLED STANDARD DEVIATION



10:57:41 22APR2024



High Temperature Cyclic Transmission SUMMARY OF SEVERITY & PRECISION

Severity

The CYC result reported this period was outside of the EWMA warning limit in the severe direction. The test still received calibration due to the Shewhart severity limit not being exceeded.

Precision

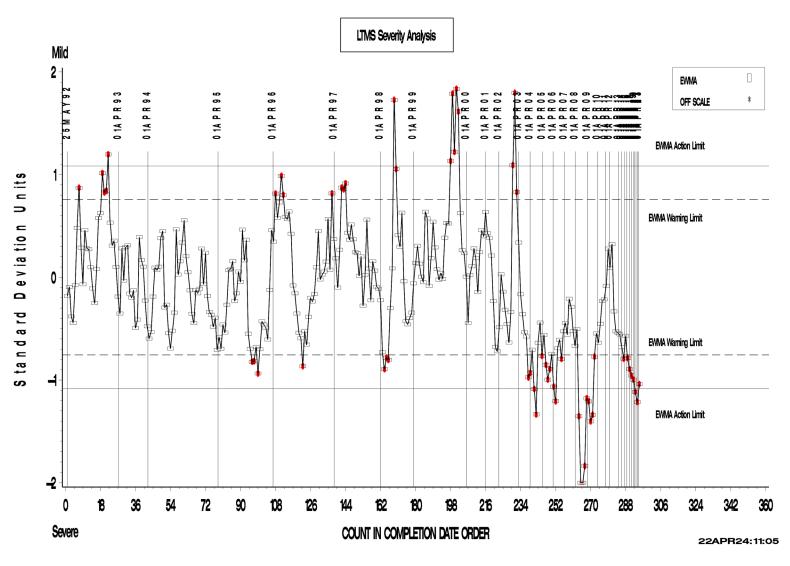
The CYC result reported this period did not result in any precision alarms.

Industry control charts follow.



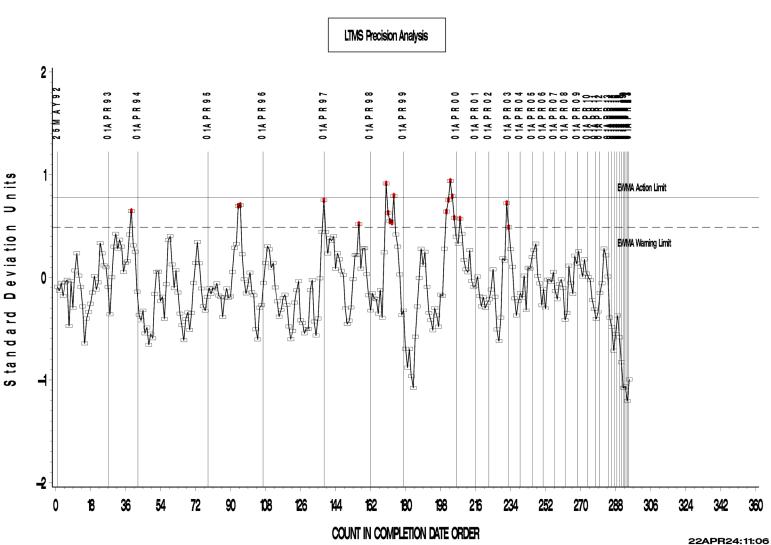
HTCT INDUSTRY OPERATIONALLY VALID DATA

END OF TEST CYCLES



HTCT INDUSTRY OPERATIONALLY VALID DATA

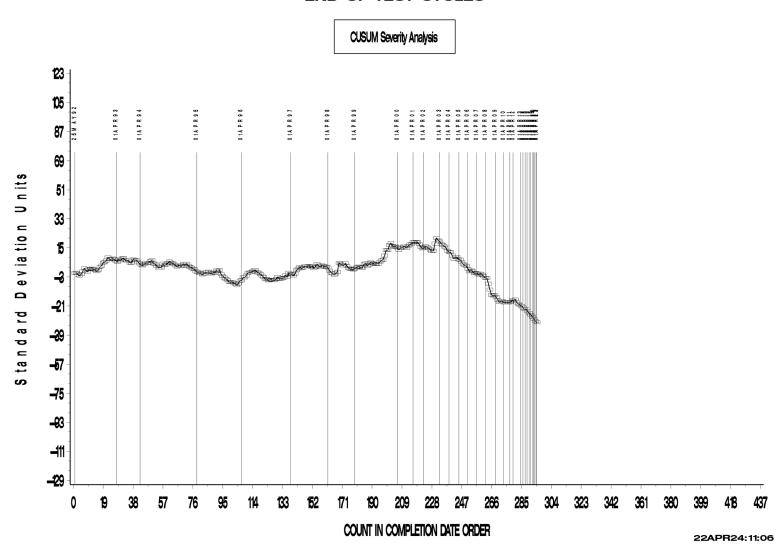
END OF TEST CYCLES





HTCT INDUSTRY OPERATIONALLY VALID DATA

END OF TEST CYCLES





TIMELINE ADDITIONS

| Effective Date | Information Letter | Event | | | |
|-------------------|-----------------------|--|--|--|--|
| | | No information letters were issued during this reporting period. | | | |

LAB VISITS

No lab visits were conducted during this period.

INFORMATION LETTERS

No information letters issued during this reporting period.



STATUS OF REFERENCE OIL SUPPLY

| <u>Oil</u> | <u>Tests</u> | <u>Year</u> | Blend Quantity | TMC Inventor | Estimated Life Comme | ent 💌 |
|------------|-------------------------|-------------|----------------|--------------|----------------------|-------|
| | L-33-1, L-37-1, L-60-1, | | | | | |
| 155-1 | HTCT, OSCT | 2010 | 495 | 27.14 | 1.5 years | |
| | L-33-1, L-37-1, L-60-1, | | | | | |
| 155-2 | HTCT, OSCT | 2020 | 265 | 208 | 6 years | |

Oil 155-1/155-2 is also used in other test areas (L-33-1, L-37, L-60-1 and L-37-1). Oil 154 is the discrimination oil used only for new hardware approval. Reference oil 155-2 is a reblend of 155-1 and has not gone through a surveillance panel approval process yet.