

MEMORANDUM: 12-040

DATE: November 21, 2012

TO: Yong-Li McFarland,
Chairman, Engine Oil Water Tolerance Surveillance Panel

FROM: Michael T. Kasimirsky *Michael T. Kasimirsky*

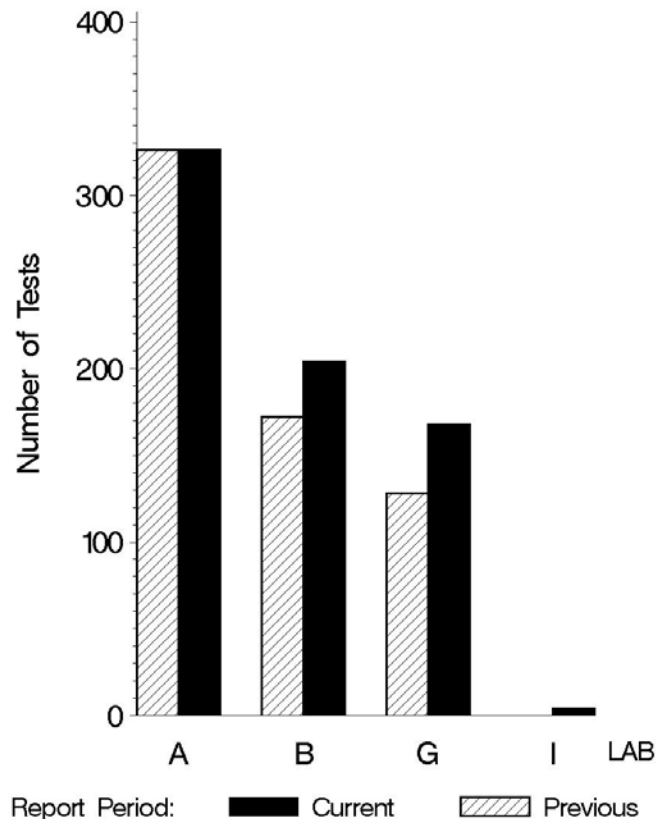
SUBJECT: EOWT Testing from April 1, 2012 through September 30, 2012

A total of 702 EOWT tests were reported to the Test Monitoring Center during the period from April 1, 2012 through September 30, 2012. Following is a summary of testing activity this period.

| | |
|----------------|----------------|
| | Reporting Data |
| Number of Labs | 4 |

Tests reported this period were distributed as shown below:

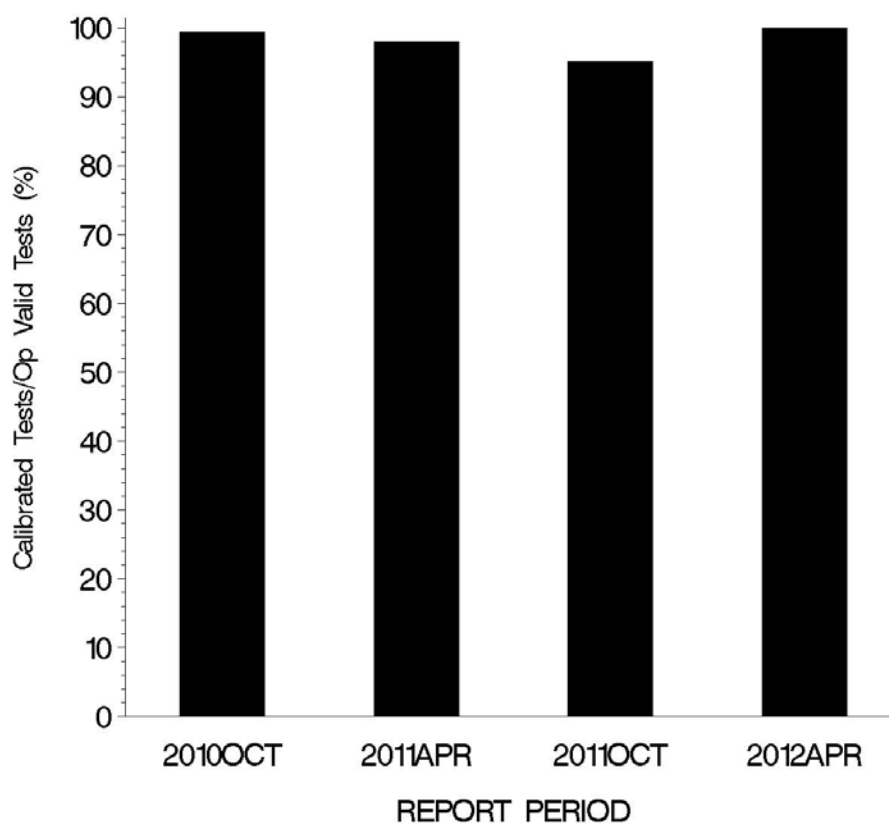
NUMBER OF TESTS REPORTED BY LAB AND REPORT PERIOD



Test Distribution by Oil, Treat Level and Validity

| | | By Oil | | | | By Treat Level | | | | Totals | |
|---------------------------------|----|--------|------|------|------|----------------|-----|-----|-----|-------------|-------------|
| | | 77-1 | 77-2 | 78-1 | 78-2 | 0.6 | 1.0 | 2.0 | 3.0 | This Period | Last Period |
| Accepted for Calibration | AC | 339 | 0 | 0 | 323 | 165 | 165 | 165 | 167 | 662 | 624 |
| Accepted for Target Generation | NI | 0 | 28 | 0 | 0 | 7 | 7 | 7 | 7 | 28 | 0 |
| Rejected Tests | OC | 3 | 0 | 0 | 7 | 3 | 3 | 3 | 1 | 10 | 1 |
| Operationally Invalid (lab) | LC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Operationally Invalid (lab/TMC) | RC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Aborted Calibration | XC | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 1 |
| Total | | 343 | 28 | 0 | 331 | 175 | 175 | 175 | 177 | 702 | 626 |

**OPERATIONALLY VALID TESTS
MEETING ACCEPTANCE CRITERIA**



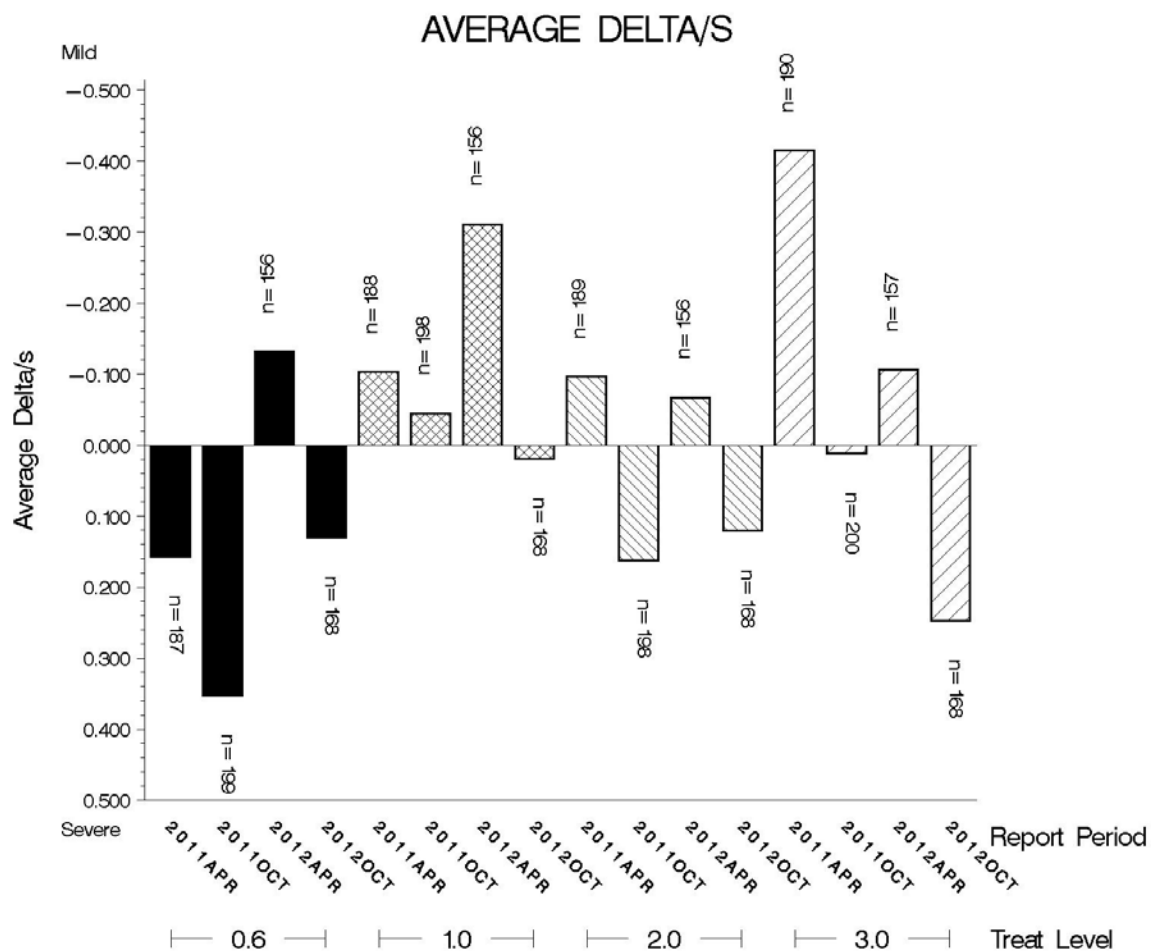
The above chart shows the percentage of accepted operationally valid tests.

Causes for Lost Tests

| | | Oil | | | | Validity | | | Loss Rate | | |
|--------|----------------|------|------|------|------|----------|-----|------|-----------|--------|------|
| Lab | Cause | 77-1 | 77-2 | 78-1 | 78-2 | LC | RC | XC | Lost | Starts | % |
| A | Sample Spilled | ● | | | | | | ● | 1 | 702 | 0.1% |
| | Mixing Error | | | | ● | | | ● | 1 | 702 | 0.1% |
| Total | | 1 | 0 | 0 | 1 | 0 | 0 | 2 | | | |
| Starts | | 343 | 28 | 0 | 331 | 702 | 702 | 702 | | | |
| % | | 0.3% | 0% | 0% | 0.3% | 0% | 0% | 0.2% | | | |

Average Δ /s by Lab and Treat Level

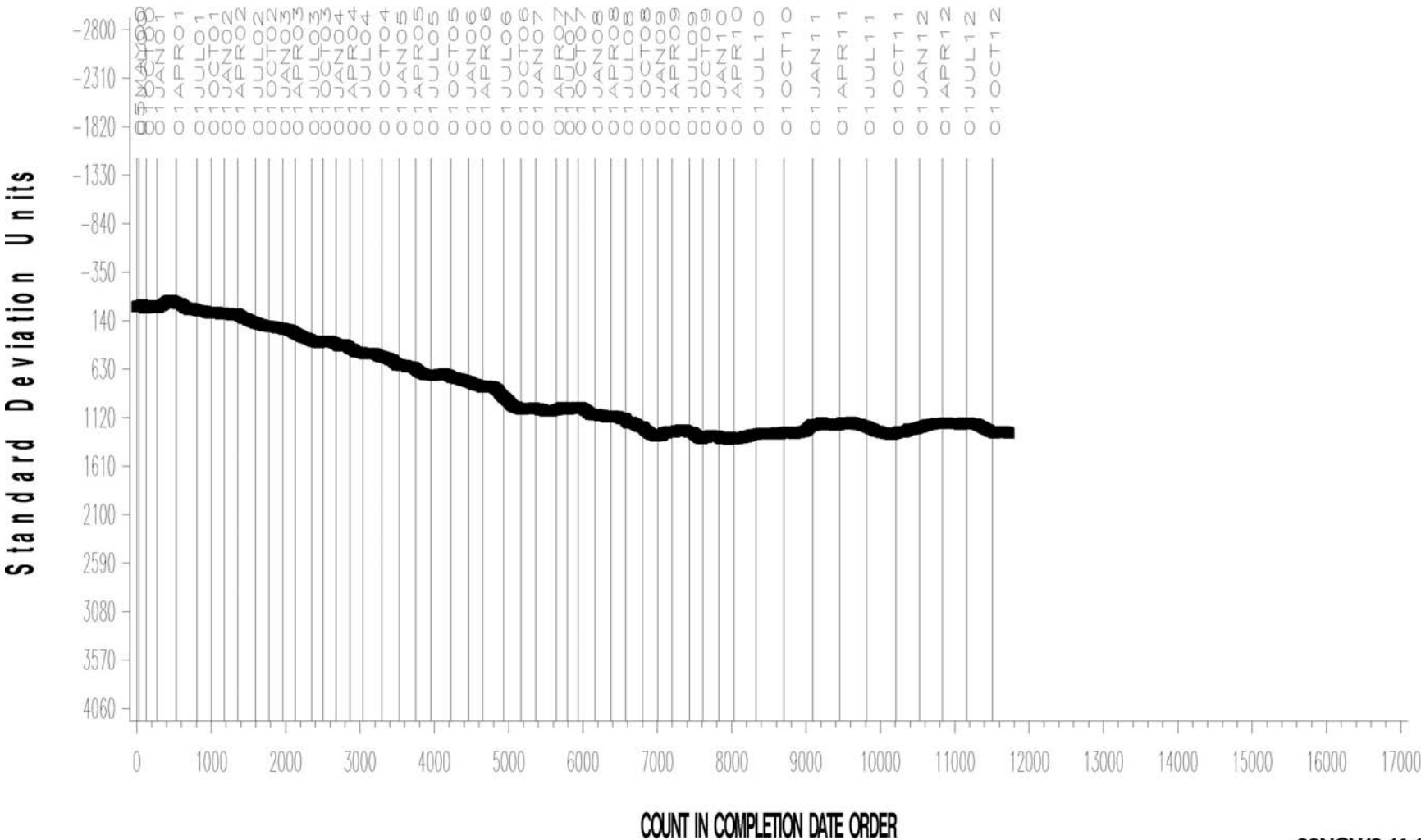
| Treat Level | Lab | n | CFAYI |
|-------------|----------|-----|--------|
| 0.6 | A | 78 | 0.006 |
| | B | 50 | 0.037 |
| | G | 39 | 0.471 |
| | I | 1 | 1.082 |
| | Industry | 168 | 0.130 |
| 1.0 | A | 78 | 0.190 |
| | B | 50 | -0.251 |
| | G | 39 | 0.027 |
| | I | 1 | -0.050 |
| | Industry | 168 | 0.019 |
| 2.0 | A | 78 | 0.162 |
| | B | 50 | -0.124 |
| | G | 39 | 0.337 |
| | I | 1 | 0.589 |
| | Industry | 168 | 0.120 |
| 3.0 | A | 78 | 0.351 |
| | B | 50 | -0.112 |
| | G | 39 | 0.457 |
| | I | 1 | 1.876 |
| | Industry | 168 | 0.247 |



EOWT INDUSTRY OPERATIONALLY VALID DATA
20 — 25 ML CHANGE IN FLOWRATE AVG.

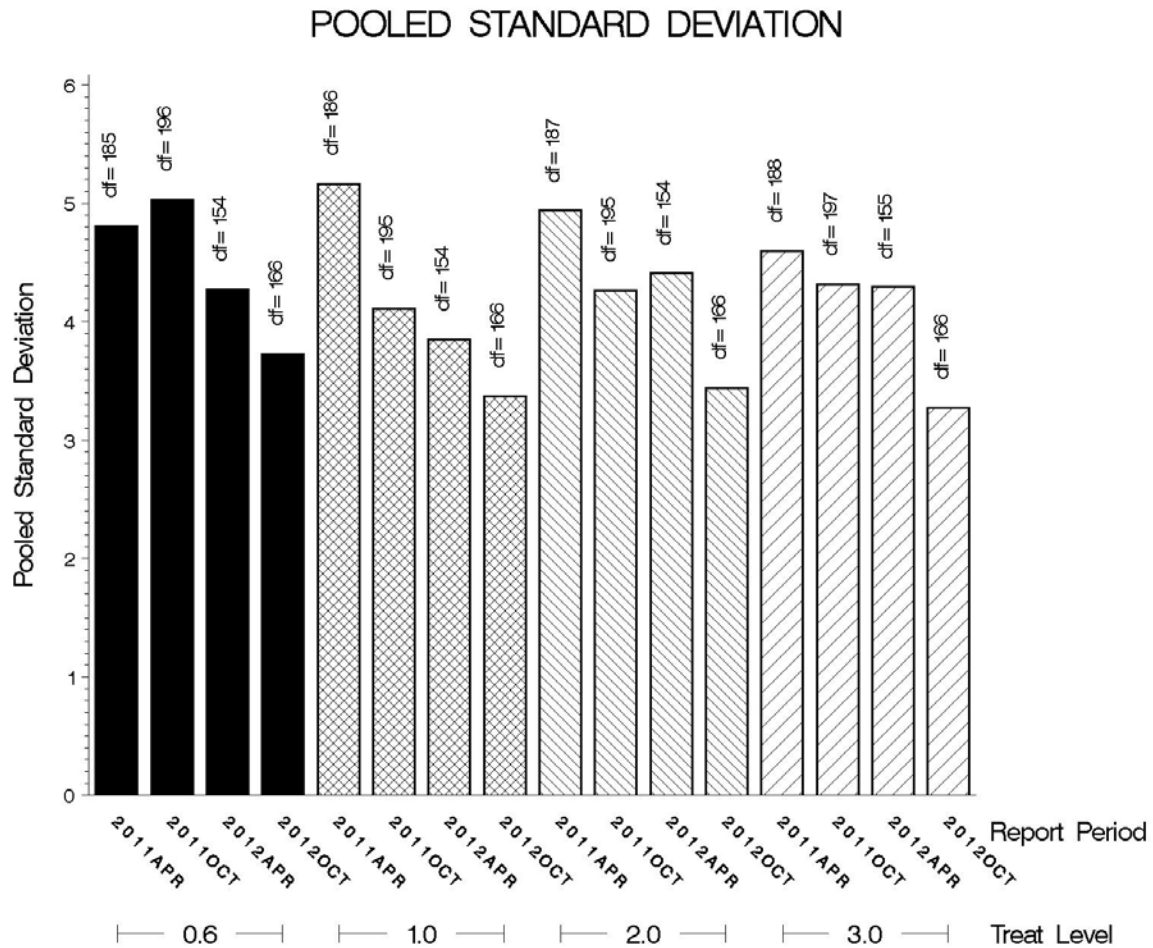


CUSUM Severity Analysis



POOLED S:

Shown below are bar charts comparing the pooled standard deviation values for the EOWT test parameters over the last four report periods.



STATUS OF REFERENCE OIL SUPPLY:

At the end of this report period, the testing oil supply stood as outlined in the following table:

| | | @ TMC | |
|-------|-------------|-------|---------|
| Oil | Cans @ Labs | Cans | Gallons |
| 77-1 | 122 | 541 | 41.7 |
| 77-2 | 48 | 3487 | 268.5 |
| 78-1 | 16 | 0 | 0.0 |
| 78-2 | 118 | 2187 | 168.4 |
| Total | 304 | 6215 | 478.6 |

Be aware that this table presumes that all of each of these oils at the TMC is dedicated to EOWT use. This is not the case, as oils 78-1 and 78-2 are also used in the EOFT test.

INFORMATION LETTER

No information letters were issued during this report period.

SUMMARY

- Over the course of this report period, CFA severity as measured by cusum plotting remained on target.
- Precision, as measured by pooled standard deviation, has improved when compared to the previous period, and is at the lowest levels in recent history.
- The TMC supply of reference oil 78-1 has been exhausted.

MTK/mtk/astm1012.doc/mem12-040.doc.doc

c: F. M. Farber

J. A. Clark

EOWT Surveillance Panel

<ftp://ftp.astmtmc.cmu.edu/docs/bench/eowt/semiannualreports/eowt-10-2012.pdf>

Distribution: email