



Test Monitoring Center

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MEMORANDUM: 04-024

DATE: April 12, 2004

TO: Patrick Lai, Chairman, Two-Cycle Diesel Surveillance Panel

FROM: Jeff Clark

SUBJECT: 6V92TA Reference Testing for the April 2004 ASTM Report Period

There were two 6V92TA reference oil tests completed during the April 2004 ASTM period, which began October 1, 2003 and ended March 31, 2004. The following summarizes the status of the reference oil tests reported to the TMC:

Test Description	TMC Validity Code	Number of Tests
Operationally and Statistically Acceptable	AC	1
Failed Acceptance Criteria	OC	0
Operationally Invalid	LC	0
Aborted	XC	1
Total		2

The aborted test was due to high oil temperature.

Severity and Precision:

Figures 1, 2, and 3 (attached) show the cusum delta/s for Fire Ring Distress, 2nd & 3rd Ring Distress, and Average Liner Distress. For all three parameters, it appears as though the industry may still be following the mild trend that began in 1994. Low-test activity makes it difficult to determine if this is indeed the case or if the long-term mild trend will abate.

The TMC has historically provided yearly pooled (across all reference oils) standard deviation as an estimate of test precision. The precision estimates are shown in the following table. Due to low testing frequency, no estimate of precision can be made for any individual year from 1995 through 1997. Instead, 1995 through 1998 are combined into a single estimate. No estimate of precision is available for 1999. The estimate of test precision since 2000 is also shown. The continued low frequency of testing prevents any meaningful commentary regarding current precision levels. Note, the degrees of freedom (df) equals $\Sigma(\text{no. obs. per oil} - 1)$.

6V92TA Pooled Precision by Year

Parameter	1992 df = 5	1993 df = 8	1994 df = 8	1995 – 1998 df = 9	2000 - 2003 df = 7
Average Fire Ring Distress	0.044	0.058	0.113	0.032	0.022
2 nd & 3 rd Ring Distress	0.018	0.036	0.033	0.028	0.031
Liner Distress	8.69	8.22	14.91	7.68	6.58

Reference Oils and Hardware:

The table below shows the current reference oil targets.

6V92TA Reference Oil Targets

Parameter	Oil	N	Mean	s
Avg. Fire Ring Distress	861-1	15	0.301	0.079
2 nd & 3 rd Ring Distress			0.225	0.009
Liner Distress			58.6	7.5
Avg. Fire Ring Distress	862-1	13	0.117	0.024
2 nd & 3 rd Ring Distress			0.113	0.032
Liner Distress			21.4	7.8

TMC Lab Visitations:

No TMC lab visitations were performed during this ASTM period.

Information Letters:

No information letters were issued during this ASTM period.

LTMS Deviations:

No LTMS Deviations were issued during this ASTM period.

Additional Information:

The 6V92TA industry database, LTMS plots, and timeline, may be accessed from the TMC home page. If you have any questions on accessing this information, contact the TMC.

JAC/jac/mem04-024.jac.doc

Attachments

c: J. L. Zalar, TMC
 F. M. Farber, TMC
 Two-Cycle Diesel Surveillance Panel
<ftp://ftp.astmtmc.cmu.edu/docs/diesel/6v92/semiannualreports/6v92-04-2004.pdf>

Distribution: Email

Figure 1
6V92 INDUSTRY OPERATIONALLY VALID DATA

Average Fire Ring Distress

CUSUM Severity Analysis

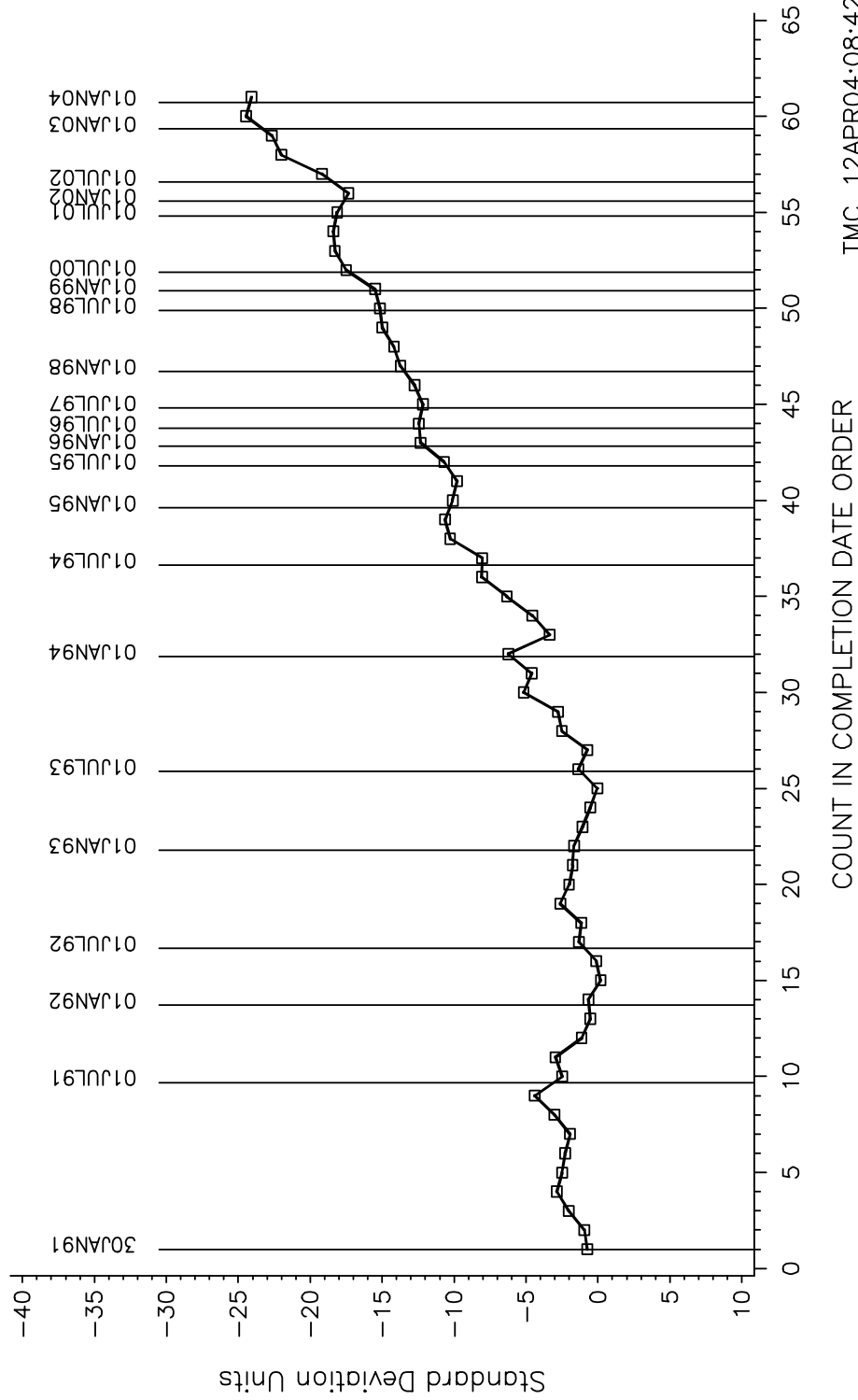


Figure 2
6V92 INDUSTRY OPERATIONALLY VALID DATA

Average 2nd & 3rd Ring Distress

CUSUM Severity Analysis

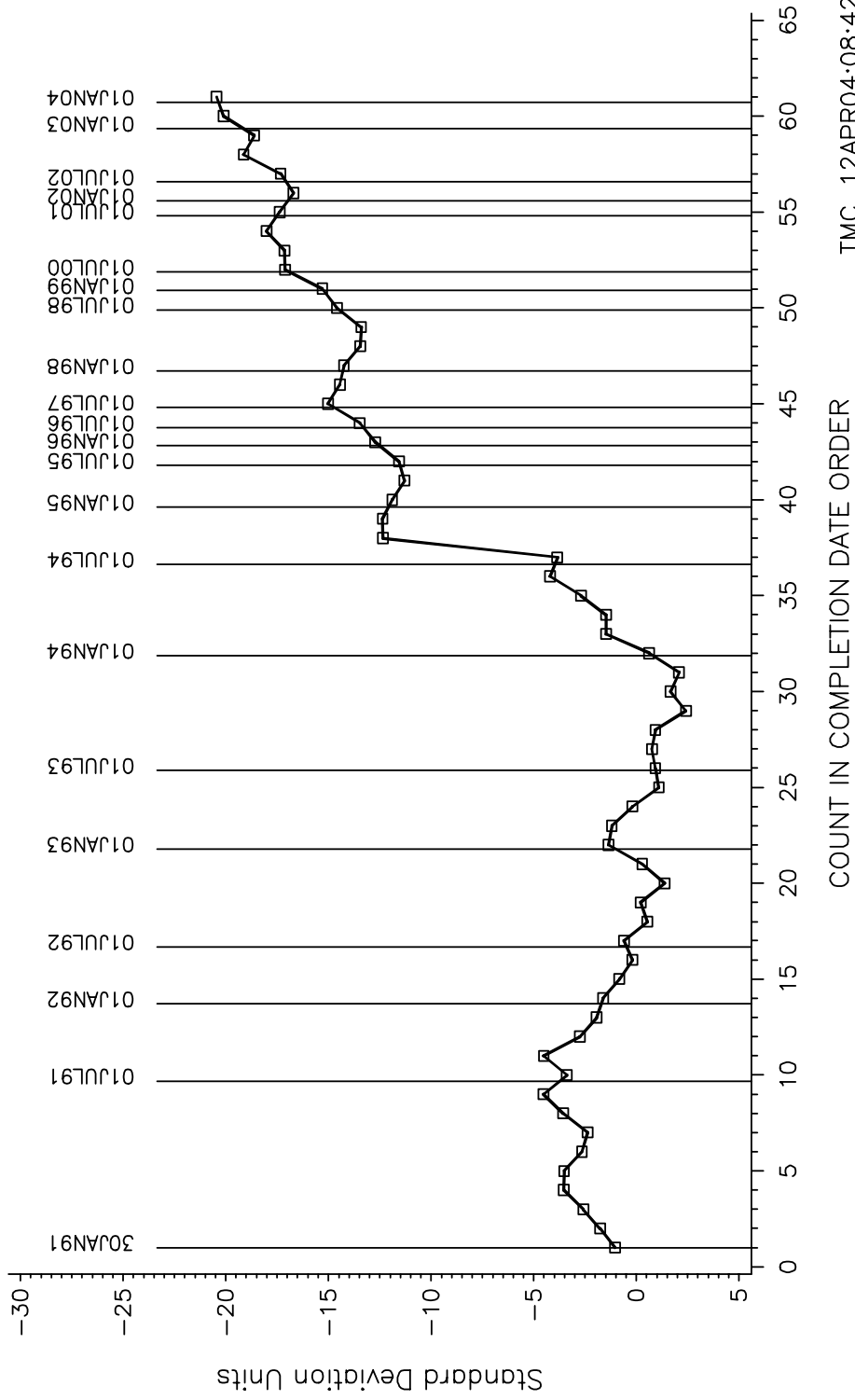


Figure 3
6V92 INDUSTRY OPERATIONALLY VALID DATA

Average Linear Distress

CUSUM Severity Analysis

