



Test Monitoring Center

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MEMORANDUM: 05-051

DATE: June 8, 2005

TO: Warren Totten, Chairman, Cummins Surveillance Panel

FROM: Jeff Clark

SUBJECT: ISM Calibration Testing for the April 2005 ASTM Report Period

The ASTM Test Monitoring Center began monitoring the ISM test on March 28, 2005. The following is a summary of ISM reference oil tests completed during the April 2005 ASTM report period, which began on October 1, 2004 and ended on March 31, 2005. In addition to summarizing testing activity for this ASTM period, this report also includes tests from the discrimination and development mini-matrix that occurred prior to this period.

Test Status	TMC Validity Code	Number of Tests
Acceptable Calibration Test	AC	6
Failed Calibration Test (LTMS Criteria)	OC	1
Acceptable Donated Test	AG	8
Aborted Donated Test	XG	3
Total		18

All of the donated tests were run as part of the test development and discrimination mini-matrix. One of those tests was aborted due to high oil consumption and two were aborted due to the engines being assembled with the wrong pistons. The failed calibration test was due to severe oil filter plugging.

Severity and Precision:

Figures 1, 2, 3, and 4 (attached) show the current industry EWMA severity, EWMA precision, and cumsum charts for Crosshead Weight Loss (CWL), Filter Plugging Delta P (FPD), Average Sludge Rating (ASR), and Injector Adjusting Screw Weight Loss (IAS). All parameters are currently within control chart limits, however, low-test activity makes it difficult to offer any meaningful commentary regarding severity trends.

Precision estimates will be presented on an annual basis. The precision estimate for 2004 is shown in the table below. No estimate is yet available for 2005.

ISM Precision Estimates

Parameter	2004
df	6
CWL	1.4
FPD (ln units)	0.4227
ASR	0.13
IAS	7.0

Reference Oils:

The current reference oil test targets are shown below:

Oils	N	Parameter	Mean (cSt)	S
830-2	7	CWL	4.8	1.4
		FPD	2.4556	0.4227
		ASR	9.04	0.20
		IAS	30.0	7.0

Once 10 tests have been completed on oil 830-2, the TMC will provide a target update for surveillance panel consideration.

Information Letters:

No ISM Information Letters were issued this ASTM period.

TMC Laboratory Visits:

No TMC laboratory visits were conducted this ASTM period.

Additional Information:

The ISM database, timeline, and alarm logs can be accessed on the TMC's homepage. If you have any questions on how to access this information, contact the TMC.

JAC/jac/mem05-051.jac.doc

Attachments

c: J.L. Zalar, TMC

F.M. Farber, TMC

Cummins Surveillance Panel

<ftp://ftp.astmtmc.cmu.edu/docs/diesel/cummins/semiannualreports/ISM-04-2005.pdf>

Distribution: Email

FIGURE 1 ISM INDUSTRY OPERATIONALLY VALID DATA

CROSSHEAD WEIGHT LOSS

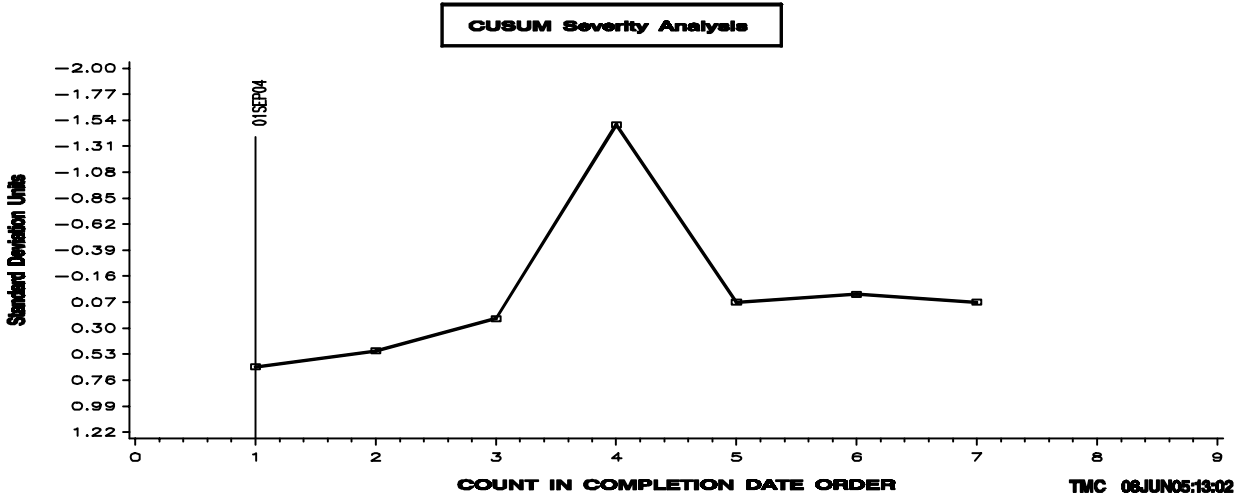
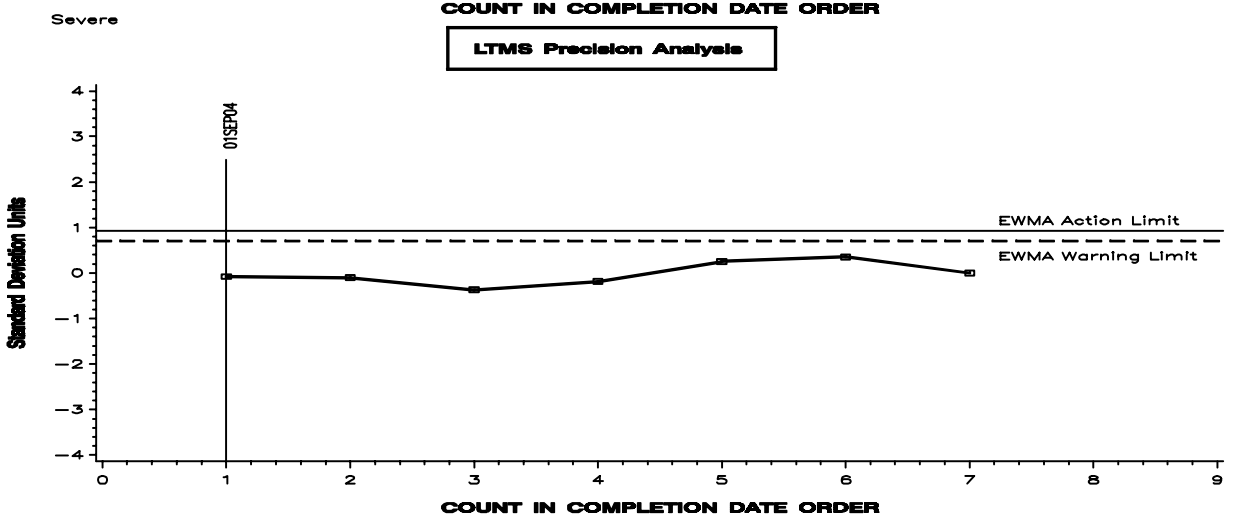
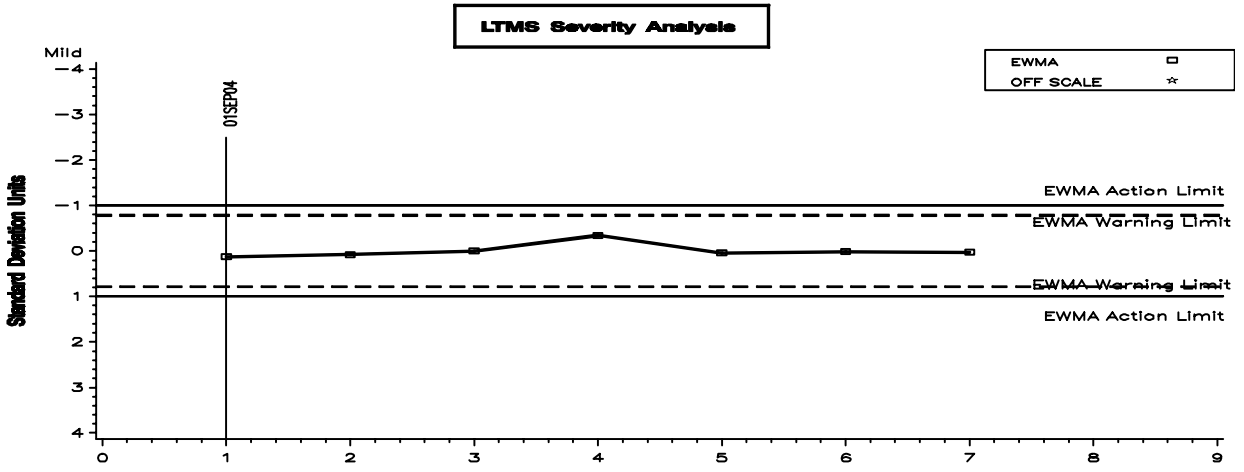


FIGURE 2 ISM INDUSTRY OPERATIONALLY VALID DATA

FILTER PLUGGING DELTA P

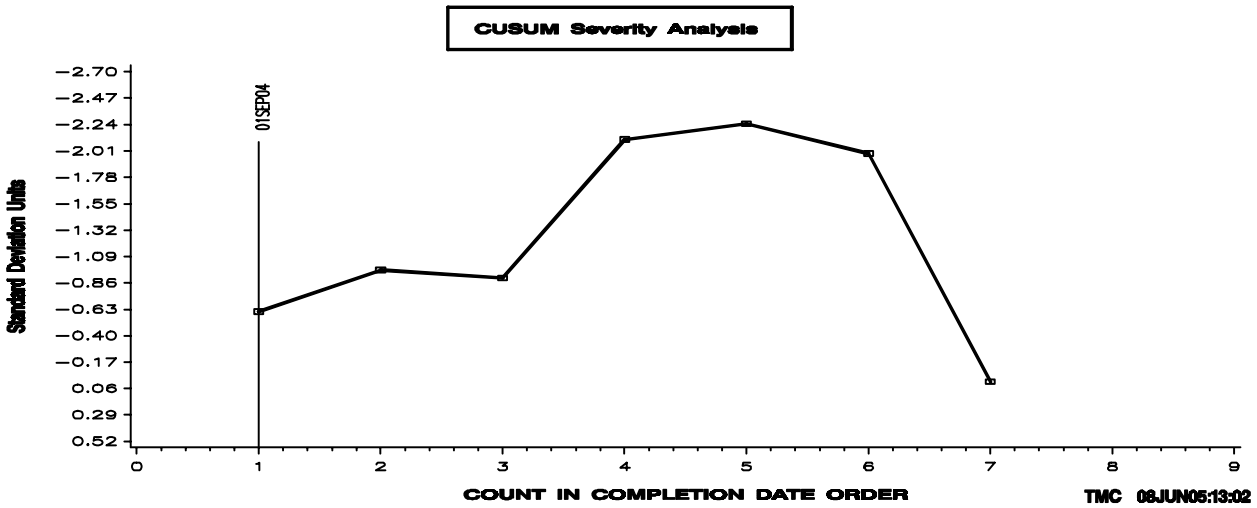
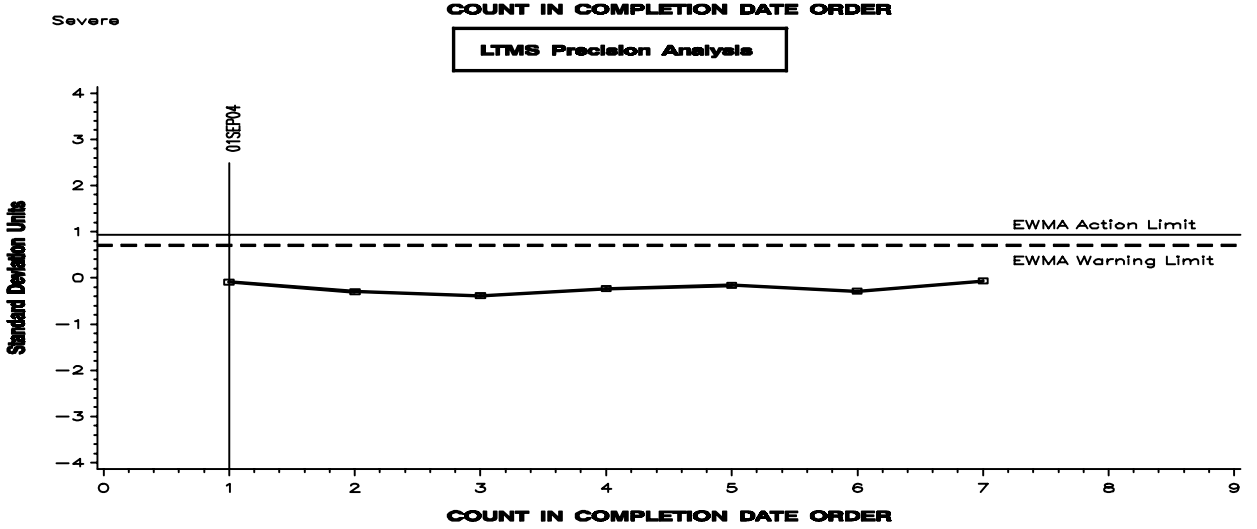
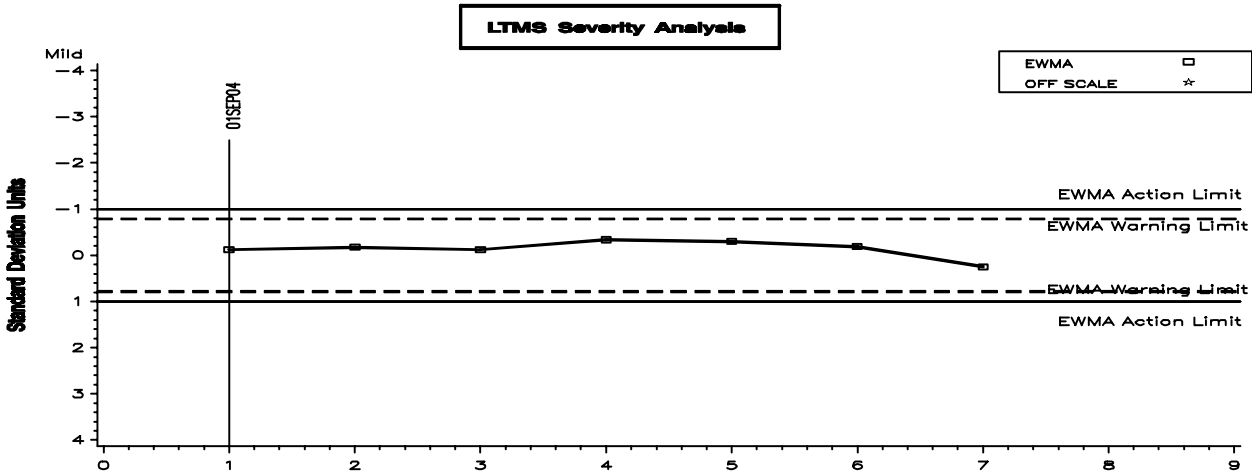


FIGURE 3 ISM INDUSTRY OPERATIONALLY VALID DATA

AVERAGE SLUDGE RATING

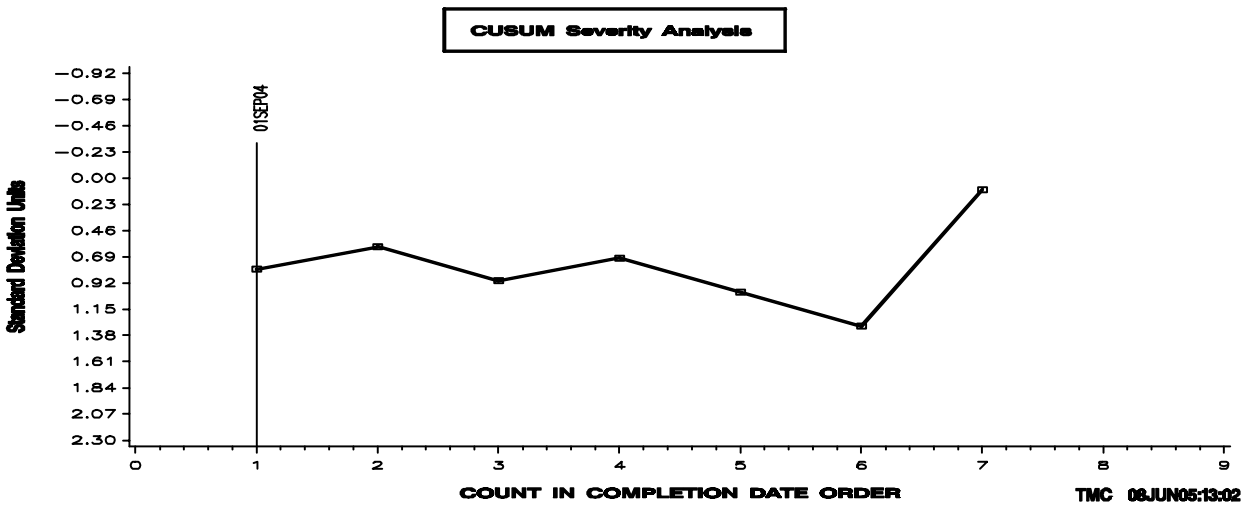
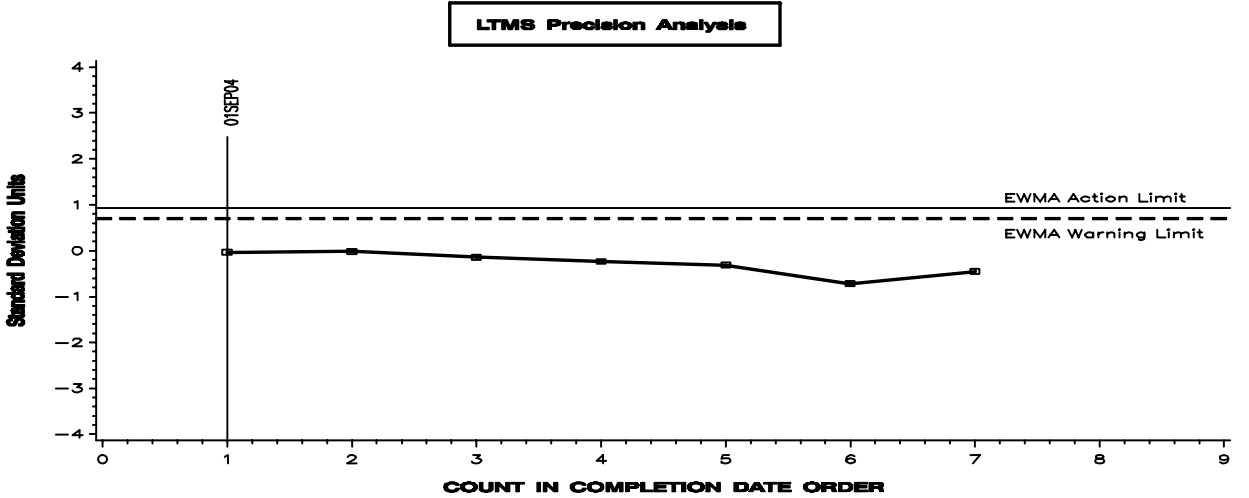
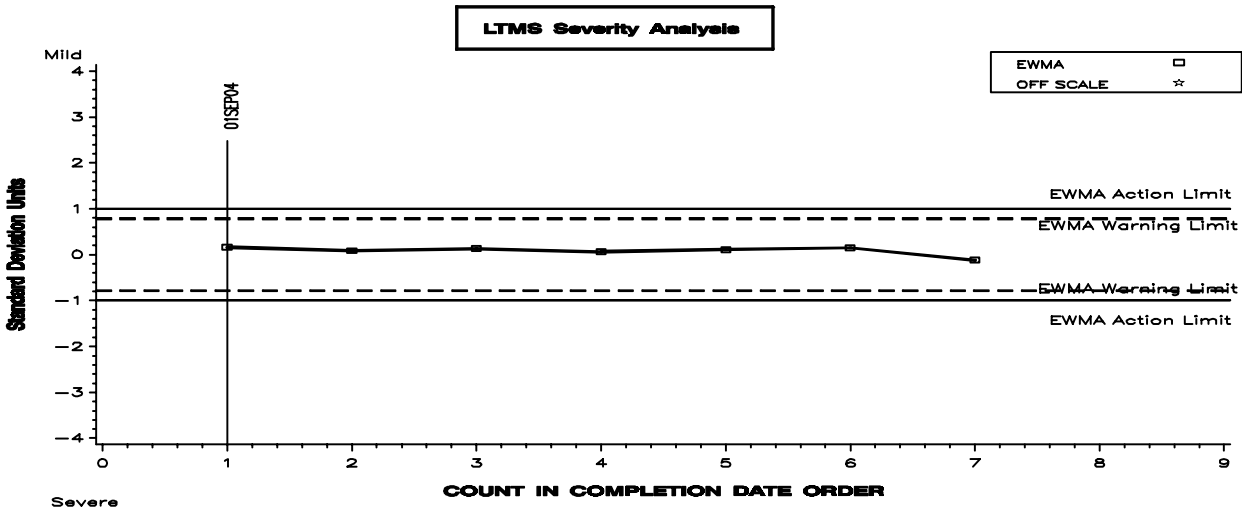


FIGURE 4 ISM INDUSTRY OPERATIONALLY VALID DATA

INJECTOR ADJUSTING SCREW WEIGHT LOSS

