



# Test Monitoring Center

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MEMORANDUM: 06-025  
DATE: April 13, 2006  
TO: Jim Gutzwiller, Chairman, C13 Surveillance Panel  
FROM: Jeff Clark  
SUBJECT: C13 Calibration Testing for the April 2006 ASTM Report Period

The following is a summary of C13 reference oil tests completed during the April 2006 ASTM report period, which began on October 1, 2005 and ended on March 31, 2006.

Test Status	TMC Validity Code	Number of Tests
Acceptable Calibration Test	AC	1
Failed Calibration Test (LTMS Criteria)	OC	1
Operationally Invalid Test	LC	0
Aborted Test	XC	0
Total		2

The test that failed the LTMS criteria (OC) was due to severe top groove carbon.

### Severity and Precision:

Figures 1 through 4 (attached) show the current industry EWMA severity, EWMA precision, and cusum charts for Top Groove Carbon (TGC), Top Land Carbon (TLC), Second Ring Top Carbon (R2TC), and Delta Oil Consumption (OC). All four parameters are currently within control chart limits. However, low-test activity makes it difficult to offer any meaningful commentary regarding severity.

Precision estimates will be presented on an annual basis, in the table below. The precision estimate for 2005 was primarily generated from the PC-10 matrix program. No estimate is yet available for 2006.

**C13 Precision Estimates**

<b>Parameter</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
df	22				
TGC	7.36				
TLC	5.99				
R2TC	0.3088				
OC	1.1881				

Reference Oils:

The current reference oil test targets are shown below:

<b>Oils</b>	<b>N</b>	<b>Parameter</b>	<b>Units</b>	<b>Mean</b>	<b>S</b>
831 (PC10B)	8	TGC	Demerits	45.18	7.42
		TLC	Demerits	24.99	7.59
		R2TC	LN(Dem.)	2.8954	0.2055
		OC	SQRT(g/h)	5.7336	0.7280

To date, eight tests have been completed on oil 831. The TMC will notify the surveillance panel when ten tests have been completed.

Information Letters:

No C13 Information Letters were issued this ASTM period.

TMC Laboratory Visits:

No TMC laboratory visits were conducted this ASTM period.

Additional Information:

The C13 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/mem06-025.jac.doc

Attachments

c: J.L. Zalar, TMC

F.M. Farber, TMC

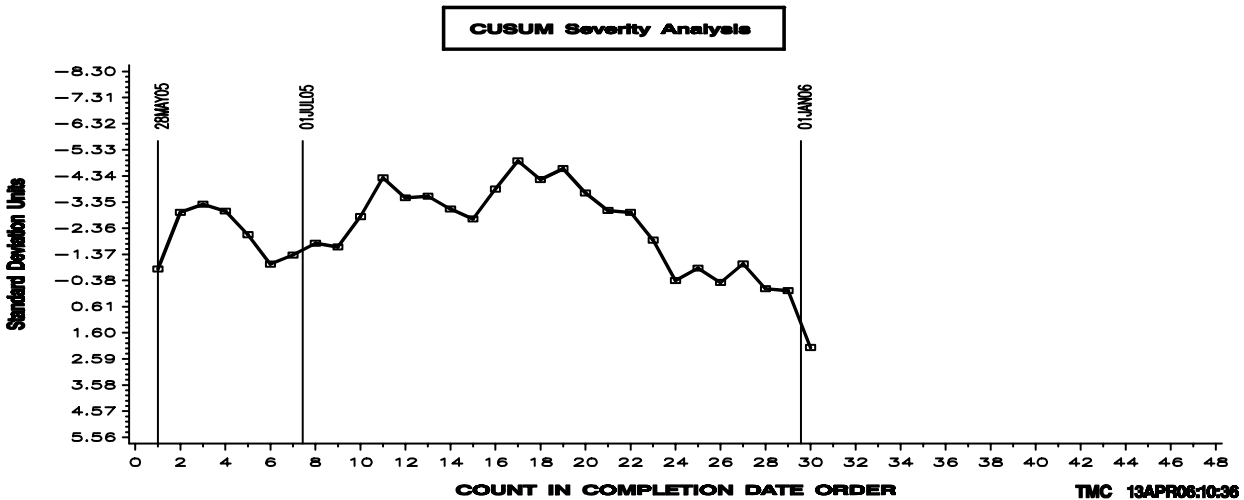
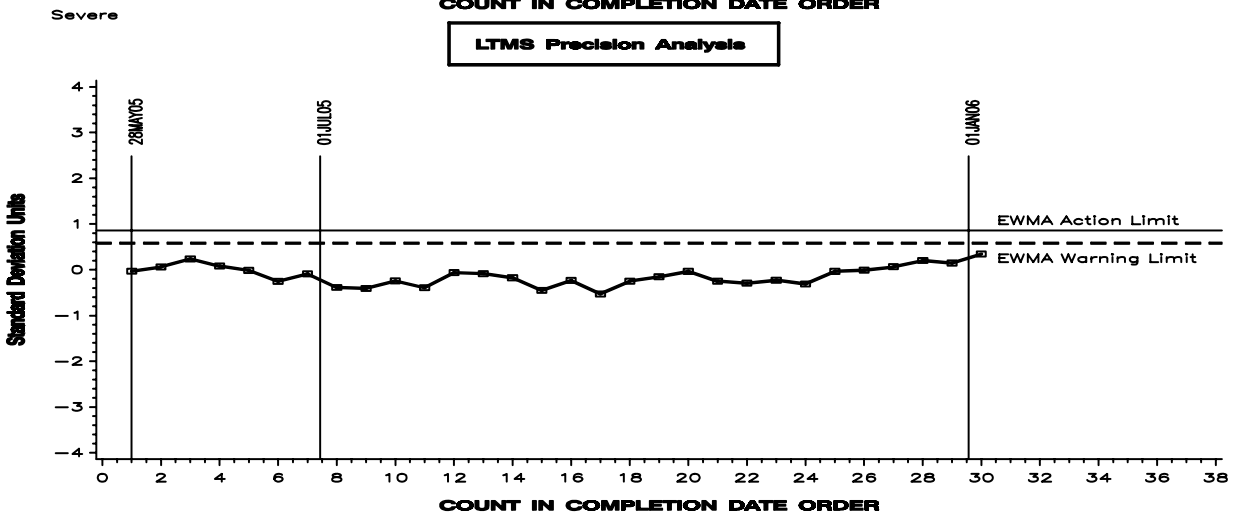
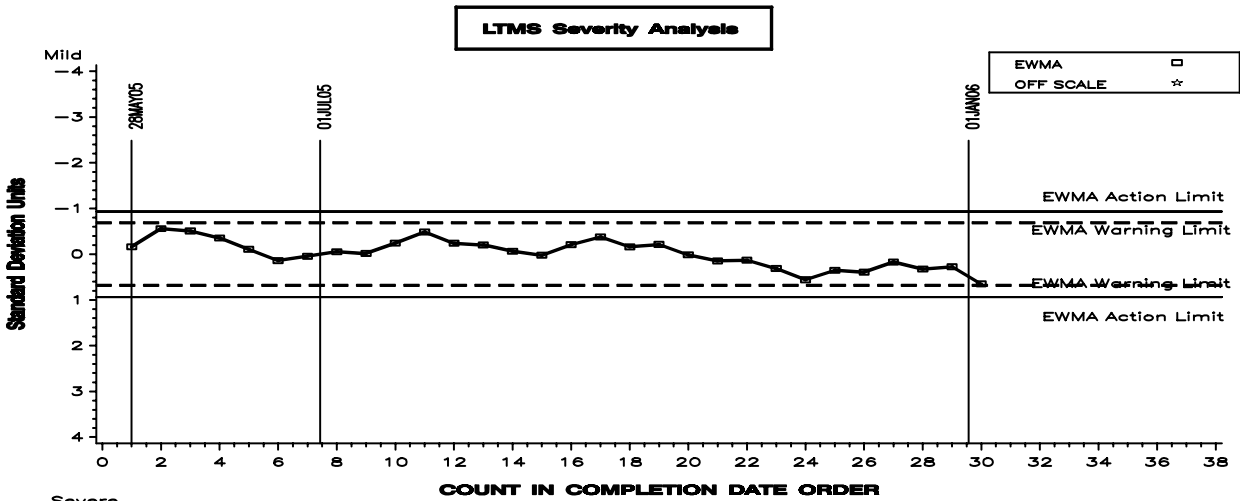
Cummins Surveillance Panel

[ftp://ftp.astmtmc.cmu.edu/docs/diesel/cat\\_c13/semiannualreports/C13-04-2006.pdf](ftp://ftp.astmtmc.cmu.edu/docs/diesel/cat_c13/semiannualreports/C13-04-2006.pdf)

Distribution: Email

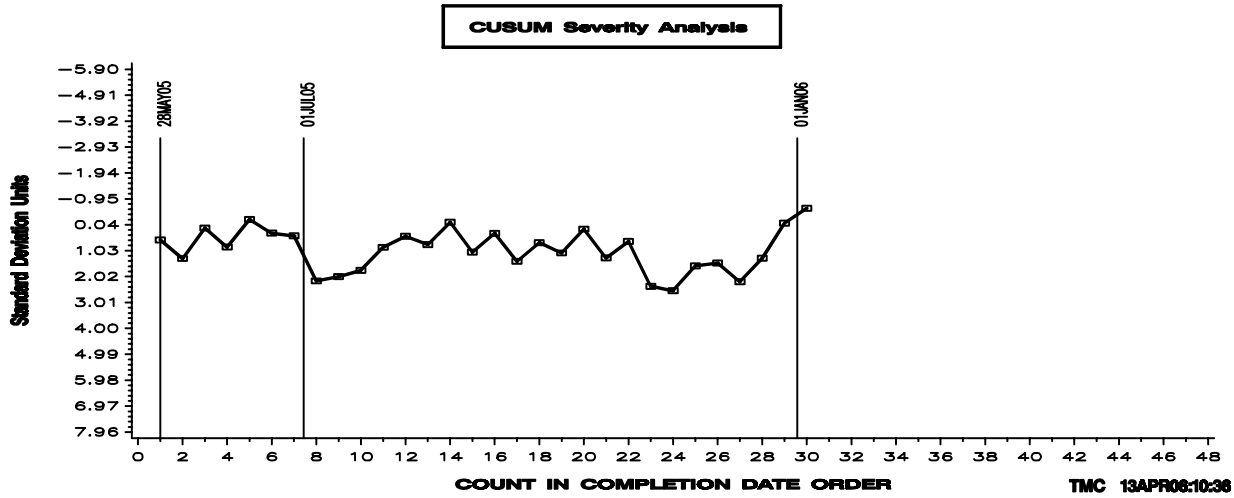
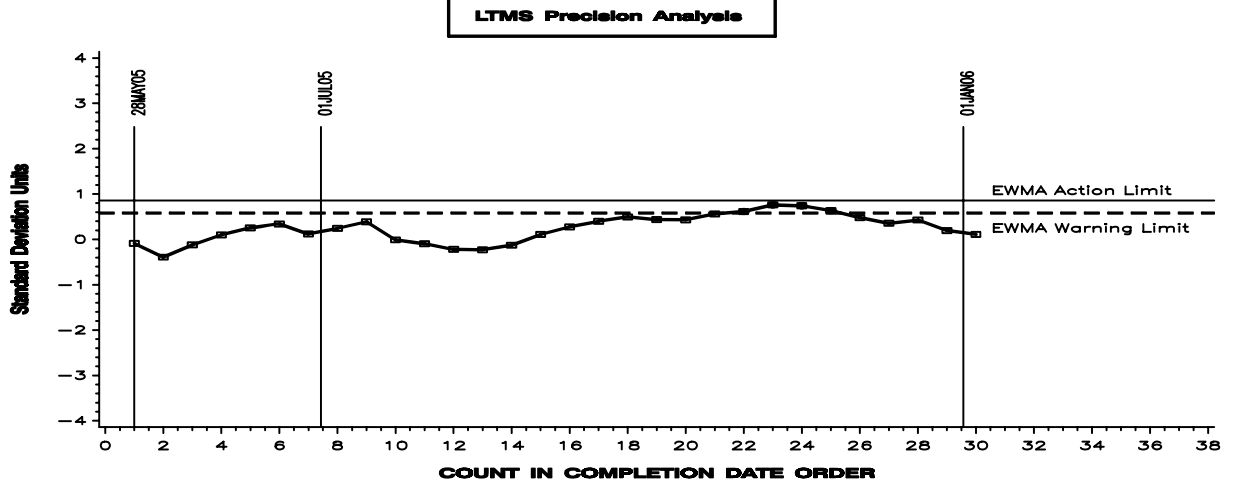
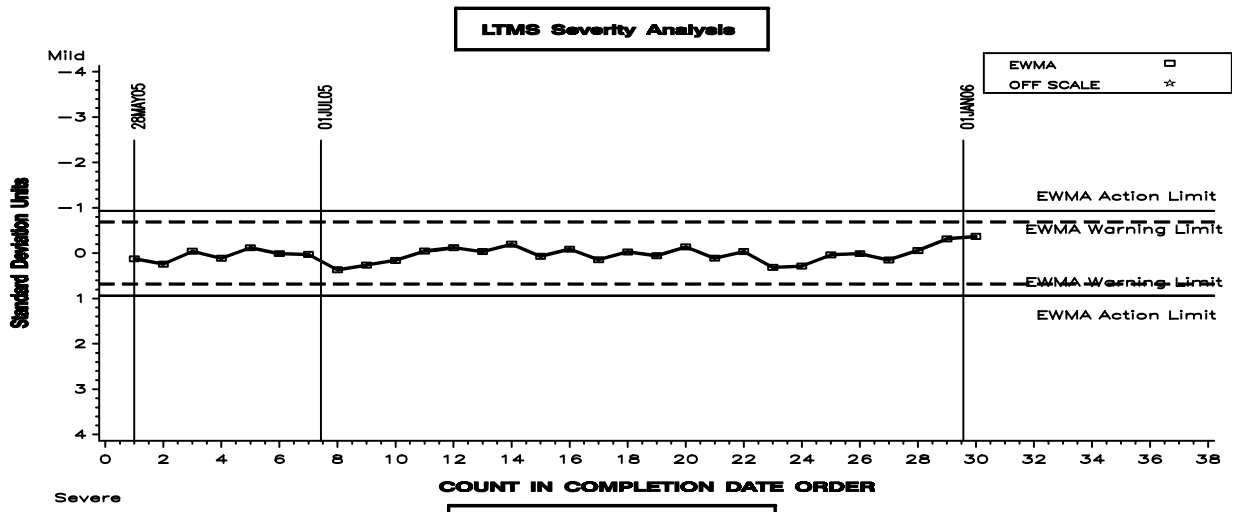
**FIGURE 1**  
**C13 INDUSTRY OPERATIONALLY VALID DATA**

**AVERAGE TGC**

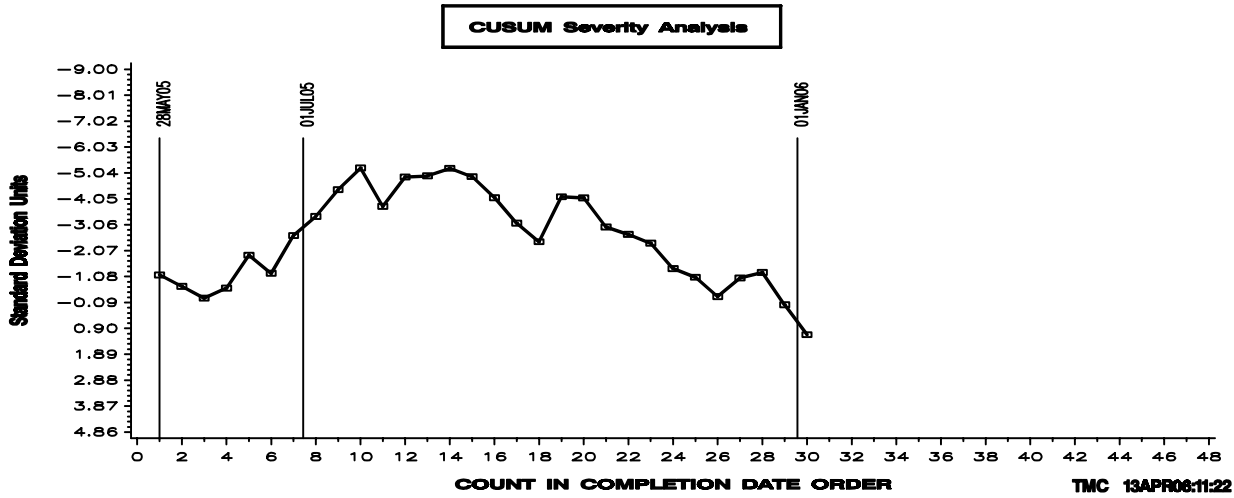
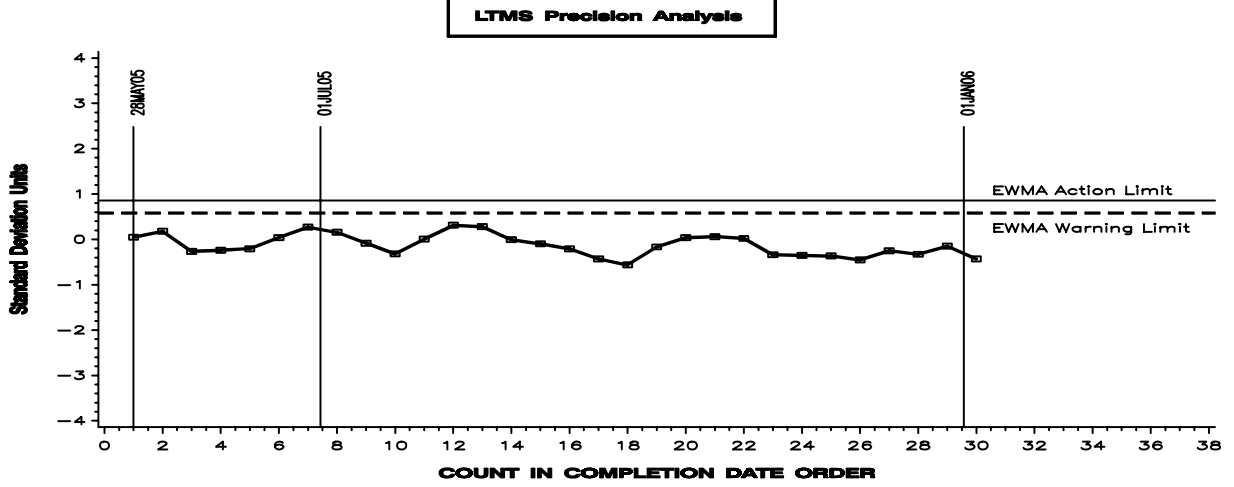
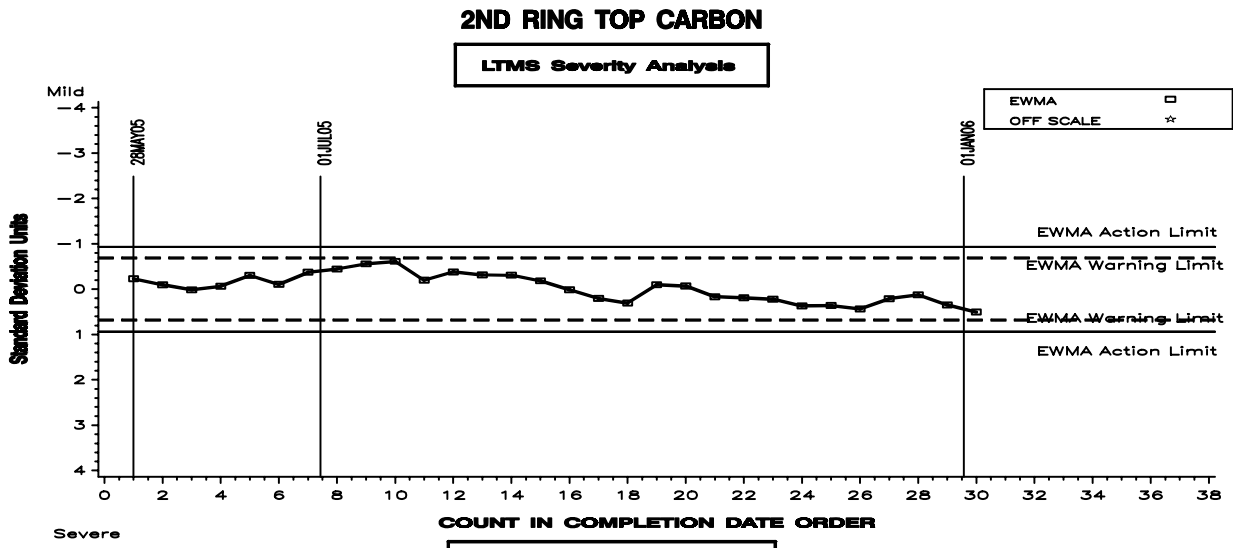


# FIGURE 2 C13 INDUSTRY OPERATIONALLY VALID DATA

## AVERAGE TLC



**FIGURE 3**  
**C13 INDUSTRY OPERATIONALLY VALID DATA**



**FIGURE 4**  
**C13 INDUSTRY OPERATIONALLY VALID DATA**

