Test Monitoring Center
6555 Penn Avenue
Pittsburgh, PA 15206-4489
(412) 365-1000

MEMORANDUM: 08-036

DATE: May 27, 2008

TO: James McCord,
Chairman, Single Cylinder Diesel Surveillance Panel

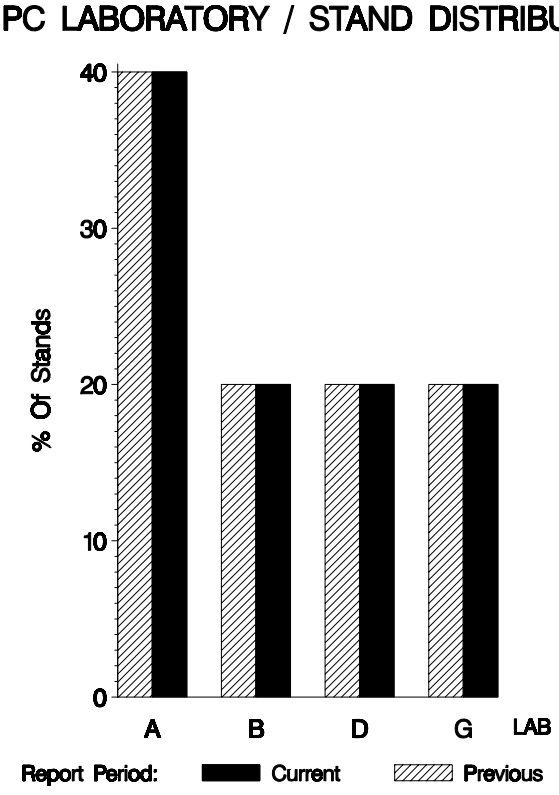
FROM: Scott Parke

SUBJECT: 1M-PC Testing from October 1, 2007 through March 31, 2008

Five calibration tests were reported to the Test Monitoring Center during the period from October 1, 2007 through March 31, 2008. The data from operationally valid tests is shown on page 6. Following is a summary of testing activity this period.

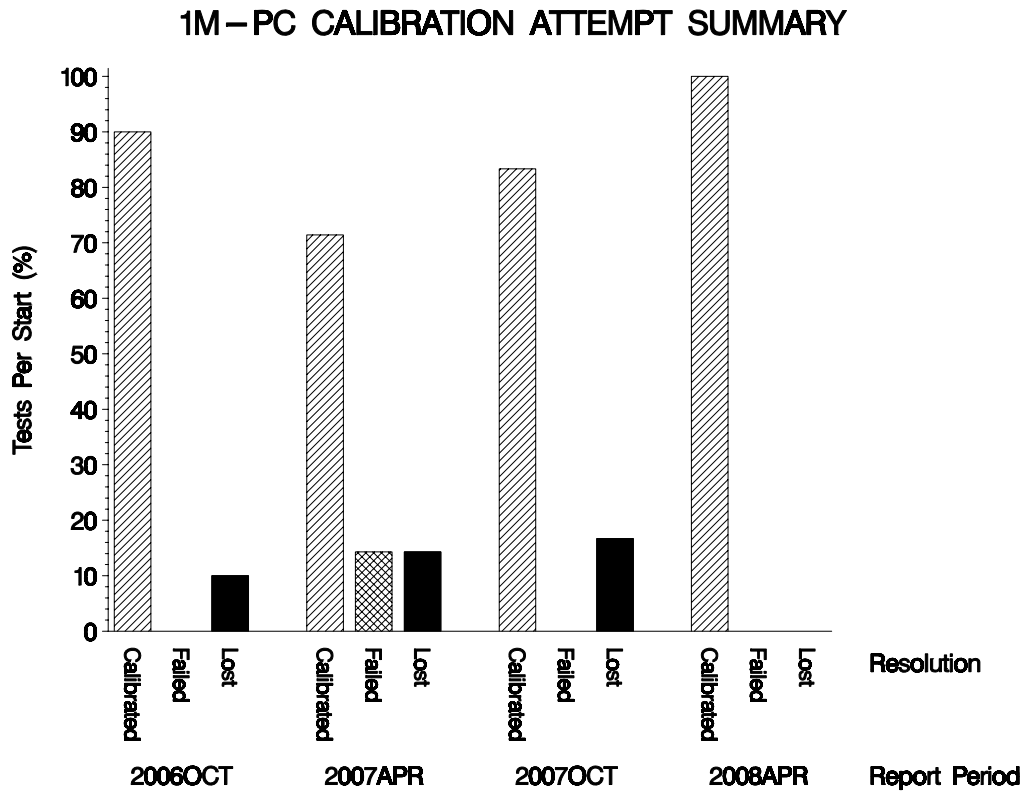
	Reporting Data	Calibrated on 3-31-08
Number of Labs	4	4
Number of Stands	5	5

Stands reporting data this period were distributed as shown below:

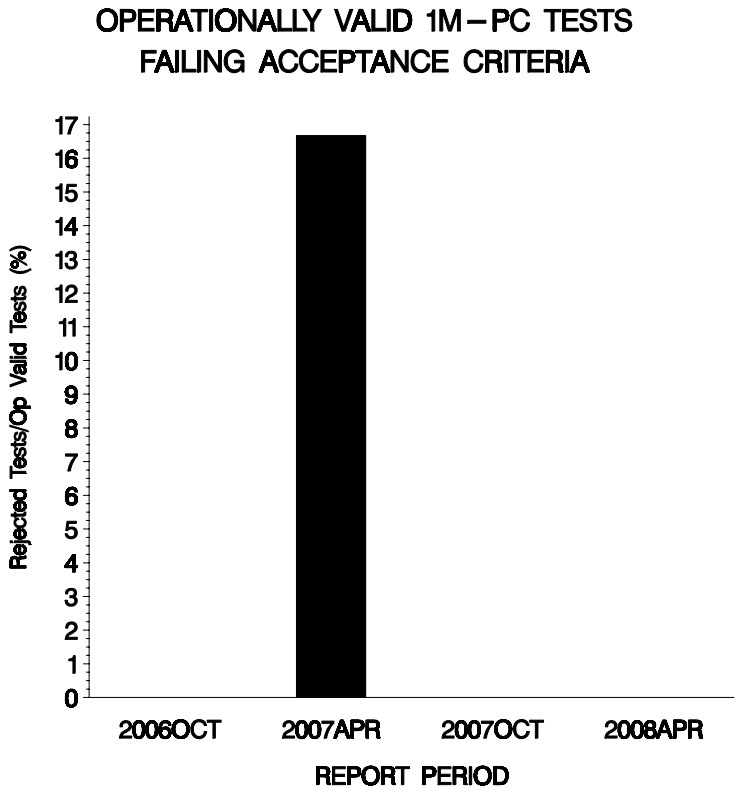


Test Distribution by Oil and Validity

				Totals	
		873-1	**873-2**	Last Period	This Period
Accepted for Calibration	AC	0	5	5	5
Rejected Mild	OC	0	0	0	0
Rejected Severe	OC	0	0	0	0
Operationally Invalid (lab)	LC	0	0	0	0
Operationally Invalid (lab/TMC)	RC	0	0	0	0
Aborted Calibration	XC	0	0	1	0
Total		0	5	6	5

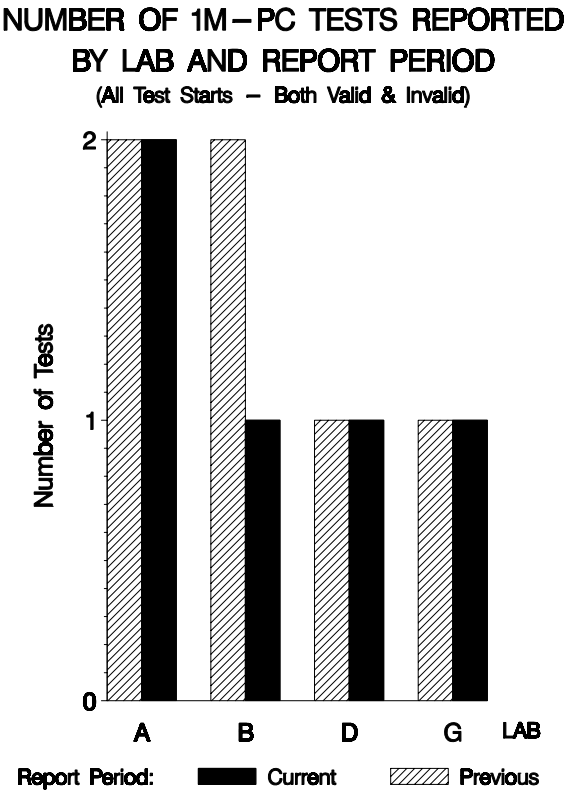


The test-per-start ratio for calibrated, failed, and lost tests is shown above.

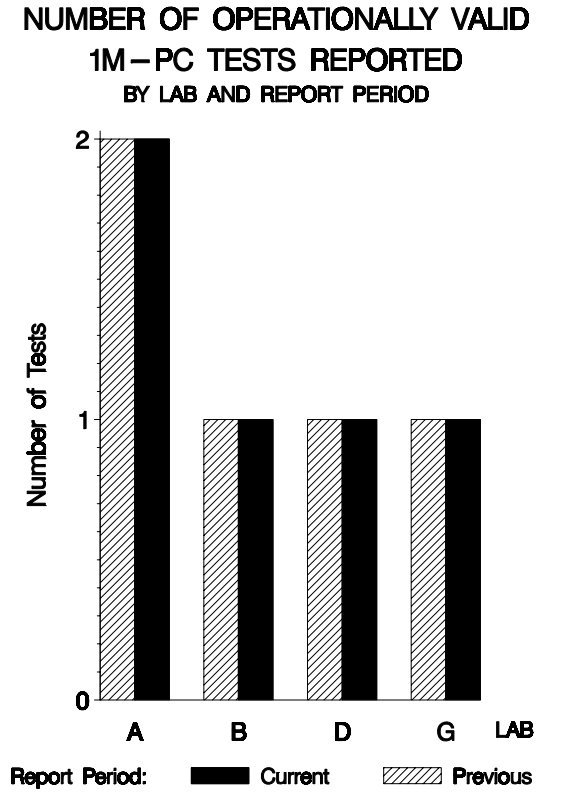


No LTMS deviations were written this period. A total of two deviations have been written over the life of this test. No tests failed this period.

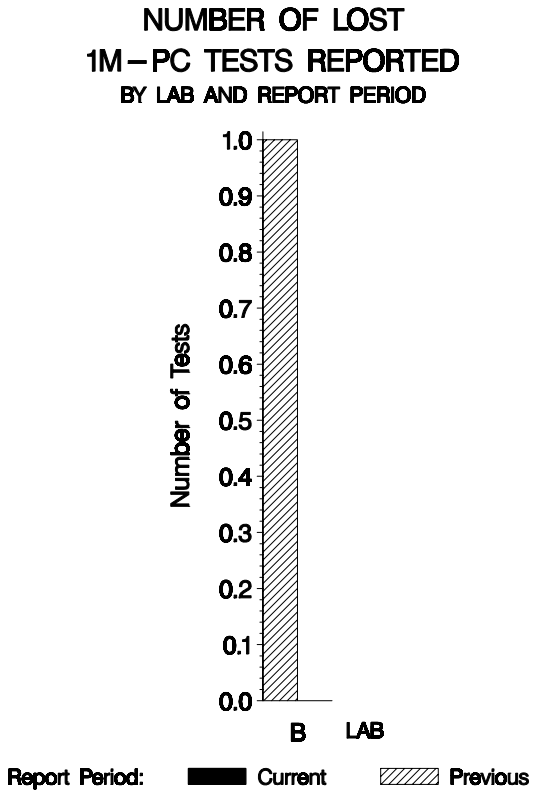
By lab, the tests run this report period were distributed as shown below:



With all operationally invalid tests removed, the distribution looks like this:



And the by-lab distribution of lost tests:



Lost Tests per Start by Oil and Lab:

	873-1			873-2			Total		
Lab	Lost	Starts	%	Lost	Starts	%	Lost	Starts	%
A				0	2	0	0	2	0
B				0	1	0	0	1	0
D				0	1	0	0	1	0
G				0	1	0	0	1	0
Total				0	5	0	0	5	0

Lost tests are those that were either aborted, rejected by lab, or operationally invalid.

Causes for Lost Tests:

		Oil		Validity			Loss Rate		
Lab	Cause	873-1	873-2	LC	RC	XC	Lost	Starts	%
	No tests were lost this period.						0	5	0%
	Lost	0	0	0	0	0			
	Starts	0	5	5	5	5			
	%	0%	0%	0%	0%	0%			

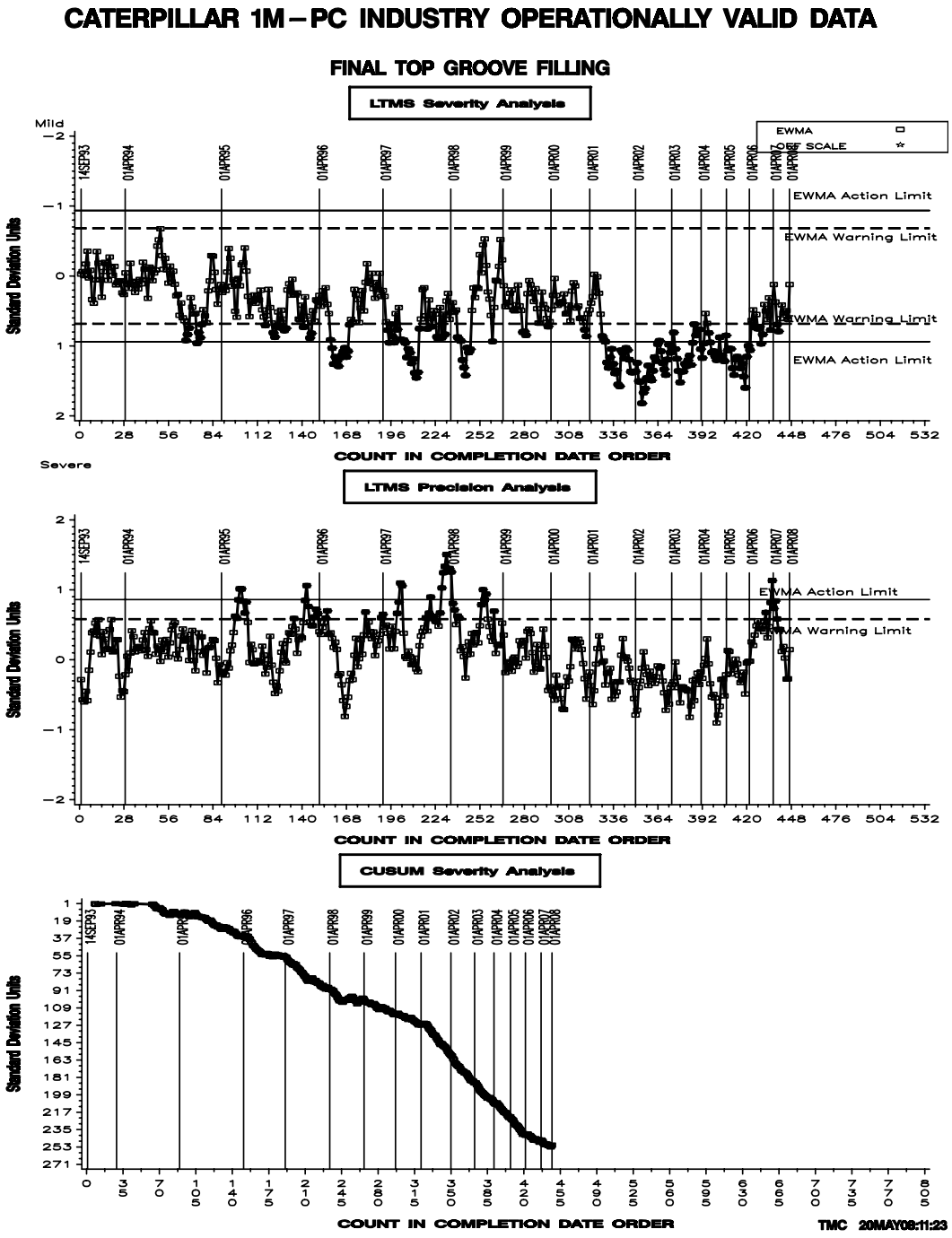
Average Δ/s by Lab			
Lab	n	TGF	WTD
A	2	0.745	-0.219
B	1	0.373	-1.337
D	1	1.118	-0.196
G	1	-0.373	1.261
Industry	5	0.522	-0.142

DATA FROM ALL OPERATIONALLY VALID TESTS REPORTED THIS PERIOD:

LTMS DATE	LAB	STAND	OIL	TG	WD	TGYI	WDYI
20071014	G	13A	873-2	35	296.2	-0.373	1.261
20071120	A	9	873-2	57	220.0	0.994	-0.248
20071125	A	10	873-2	49	222.9	0.497	-0.190
20071219	B	8A	873-2	47	165.0	0.373	-1.337
20080113	D	2	873-2	59	222.6	1.118	-0.196

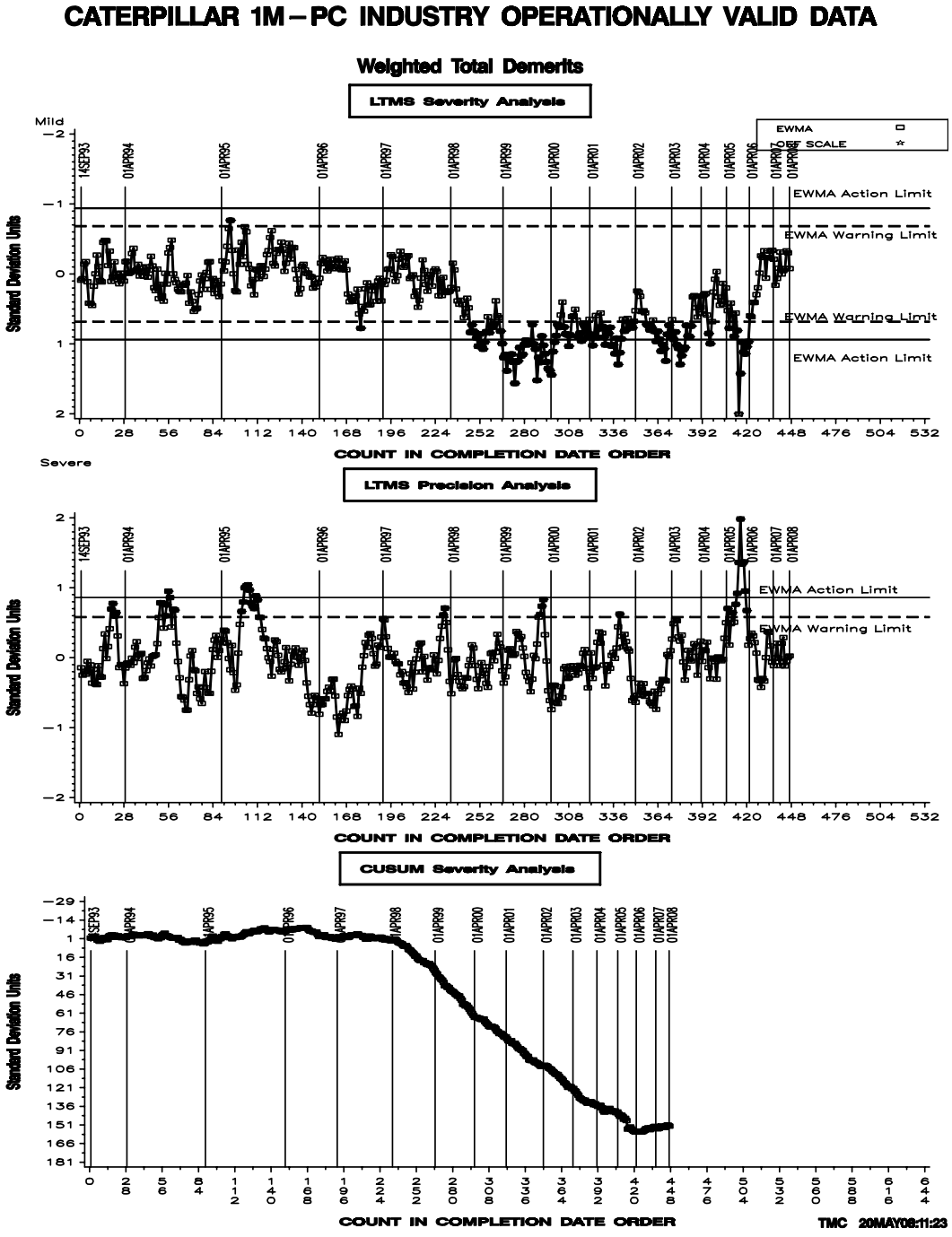
DISCUSSION OF INDUSTRY PERFORMANCE OVER THIS PERIOD

TGF:
Results using the 5H5657 liner and SDTF2 fuel have been generally milder than tests using the 1Y3995 liner. The industry average TGF Yi this period, however, was 0.522 severe (see table on previous page). Using 873-1's test target standard deviation of 16.1 to compute an average Δ yields 8% severe.

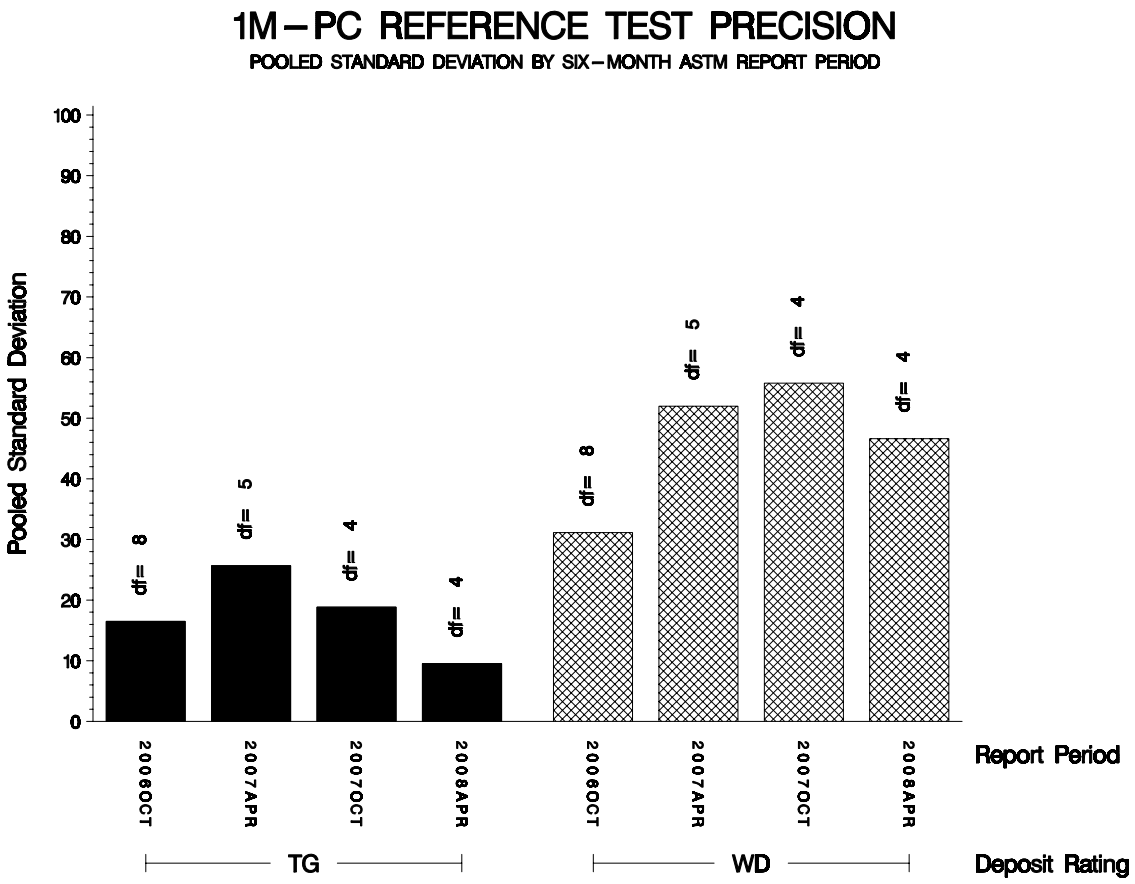


WTD:

WTD results are also generally milder since the liner and fuel changes. This period's average WTD Yi was nearly on target at –0.142 mild (equivalent to 7.2 demerits when multiplied by 873-1's standard deviation of 50.5). Both severity and precision for this parameter are currently within limits.



POOLED S:
Shown below is a bar chart comparing the pooled s values for the 1M-PC test parameters over the last four report periods. Precision for both parameters, as measured by pooled s, is comparable to previous periods.



STATUS OF REFERENCE OIL SUPPLY:
At the end of this report period, the testing oil supply stood as outlined in the table below:

		@ TMC	
Oil	Cans @ Labs	Cans	Gallons
873-1	3	2	25
873-2	9	40	406
Total	12	42	431

* Future reblends of any oils marked with an asterisk are not obtainable by TMC.

TIMELINE OF SIGNIFICANT EVENTS IN THE LIFE OF THE 1M-PC TEST:

Effective Date	Info Letter	
19940419		FIRST USE OF 873-1
19940927		FIRST EXHAUST BARREL TEST
19941031		LAST USE OF 873
19941225		LAST NON-EXHAUST BARREL TEST
19950401		LTMS INTRODUCTION
19950728	95-1	REWRITTEN PROCEDURE ISSUED ALONG WITH INFORMATION LETTER 95-1
19950728	95-1	LINER WEAR STEP MEASUREMENT TECHNIQUE CHANGED TO CONFORM TO 1K/1N
19950728	95-1	REMOVAL OF MAXIMUM ALLOWABLE LSC SPECIFICATION
19950728	95-1	ADOPTION OF THE STANDARDIZED TEST REPORT COVER SHEET
19950728	95-1	EXHAUST BACKPRESSURE SPECIFICATION CHANGED TO ABSOLUTE PRESSURE
19950728	95-1	EXHAUST TEMPERATURE SPECIFICATION LOWERED
19950926	95-1	IMPLEMENTATION OF DATA DICTIONARY AND REPORT FORMS (VERSION=19950607)
19960315	96-1	FUEL FLOW MEASUREMENT DEVICE SPECIFICATION CLARIFIED
19960315	96-1	HUMIDITY CALIBRATION SCHEDULING REQUIREMENT CHANGED
19960315	96-1	EDITORIAL CHANGES
19960414	96-1	FORMS CHANGES
19980209	98-1	REVISED WARRANTY PROCEDURE & FORMS
19980209	98-1	FUEL SUPPLIER NAME CHANGE
19980209	98-1	COOLANT ADDITIVE NAME CHANGE(PENCOOL 2000)
19980209	98-1	TMC FAX NUMBER CHANGE
19980430	98-2	ADD FUEL, LTMS, AND OTHER 1K/1N-TYPE FORMS & EXAMPLES TO TEST REPORT
19980824	98-3	ADD RATING WORKSHEET (FORM 4A) TO TEST REPORT
19981109	98-4	ADD AREAS FOR CLEAN TO RATING SHEETS 5 & 5A
19981109	98-5	CORRECTION TYPO IN 98-2 TO FUEL AND COOLANT SUPPLIER NAMES
19990419	99-1	UPDATED INTAKE AIR FILTER REQUIREMENTS
19990419	99-1	RE-CALIBRATION REQUIREMENTS WHEN CRANK IS REMOVED
19990419	99-1	VISUAL INSPECTION OF INTAKE AIR BARRELS
19990419	99-1	COOLANT SYSTEM FLUSHING REQUIREMENTS
19990419	99-1	TEST STAND INSTRUMENTATION CALIBRATION REQUIREMENTS
19990419	99-1	USE OF MOBIL EF-411 AS BUILD-UP/FLUSHING OIL
19990419	99-1	TIME ZONE FOR USE IN EOT REPORTING
19990419	99-1	FUEL INJECTION PUMP REPLACEMENT
19990419	99-1	EDITORIAL
20010508		FIRST 1Y3995 LINER TEST
20020428		FIRST 873-2 TEST
20031121	03-1	1M-PC DATA DICTIONARY AND REPORT FORMS (VERSION=20031022) SEPARATED FROM THE STANDARD
20050321		FIRST 5H5657 PRODUCTION LINER TEST
20050321	05-1	EDITORIAL (SOLVENT SPEC, PRECISION STMNT, CAL FREQ ADJUSTMENT)
20060620		FIRST SDTF2 TEST

RATING:

No referee re-rates were requested this report period.

Rating Re-rate Summary

Number of tests where lab rating was changed	0
Number of tests where referee rating was changed	0
Number of tests where no changes were made	0
Total number of re-rates requested	0

LAB VISITS:

No 1M-PC lab visits were completed during this period.

INFORMATION LETTERS:
No information letters were issued during this report period.

SUMMARY

- Over the course of this report period, TGF and WTD again reported results closer to target than they have in some time. This may be attributable to either the introduction of 5H5657 liners or SDTF2 fuel or a combination of the two. Both TGF and WTD are currently within severity limits.

- Precision for both TGF and WTD are currently within limits.

SDP/sdp/astm0408.doc/mem08-036.sdp.doc
c: J. L. Zalar
F. M. Farber
Hind Abi-Akar, Caterpillar
Jade Katinas, Caterpillar
Single Cylinder Diesel Surveillance Panel
ftp://ftp.astmtmc.cmu.edu/docs/diesel/scote/semiannualreports/1mpc-04-2008.pdf

Distribution: email