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Committee D02 on PETROLEUM PRODUCTS AND LUBRICANTS

Reply to:

Scott Parke
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March 7, 2004

To: Single Cylinder Diesel Surveillance Panel

Enclosed are the minutes of the SCOTE Surveillance panel teleconference held February 11, 2005. Please address any corrections during the time allotted for minutes approval at the next meeting.

Scott Parke
Secretary SCOTE Surveillance Panel

Attachments
cc: ftp://ftp.astmtmc.cmu.edu/docs/diesel/scote/minutes/TELECONFERENCE%202005-02-11.pdf

distribution: Email

TELECONFERENCE MINUTES

SINGLE CYLINDER DIESEL SURVEILLANCE PANEL

HELD FEBRUARY 11, 2005

13:00cst CALL TO ORDER

The teleconference began at 13:00 cst; the participants are listed in attachment 1. The agenda is shown as attachment 2.

13:02cst 1N LINER INTRODUCTION STATUS

During the last teleconference (December 3, 2004), Phil Scinto (Lubrizol) and Jim Rutherford (ChevronTexaco) were asked to determine whether or not TGF ought to be transformed. Phil was not present but Jerry Brys (Lubrizol) summarized Phil's findings; Phil doesn't feel that a transform would be helpful. Jim Rutherford went into a bit more detail explaining that his analyses show that a double truncation transformation doesn't help and a natural log transform makes things worse.

Jim McCord (Southwest Research/chairman) felt that data from a second oil should be generated before committing to a full 11% correction for TGF. He's not convinced that the shift is of that magnitude across all oils.

Bob Campbell (Afton) said that he was anticipating starting a 1N run soon and wanted to know if it would be helpful to do that run on a second oil. Since it will be running on PC-9 fuel (and possibly *dyed* PC-9 fuel) Scott Parke (TMC/secretary) preferred that it run the same oil (1004-3). Jim Rutherford concurred.

Given that so much of the willingness to run 1N tests hinges on whether or not the test will be included in PC-10, Chuck Dutart (Caterpillar) moved that this discussion be tabled until after the HDEOCP's February 23 meeting. The HDEOCP might decide on the inclusion of 1N at this meeting. All agreed.

13:24cst 1K LINER INTRODUCTION STATUS

Jerry Brys reported that he had recently managed to track down some 1Y3555 liners to hold him over for a time. His lab has the lowest inventory.

Demand for 1K testing is even lower than that for 1N testing. Recognizing that fact, Scott Parke suggested that the most realistic way forward for 1K might be to just introduce the parts and monitor the results as they accumulate. Jerry Brys moved and Bob Campbell seconded to require 1Y3998 liners beginning with the lab's next 1K reference. The motion was unanimously approved.

13:41cst 1M-PC LINER STATUS

Jerry Brys reported that his lab purchased 5 of the old stock (pre-1Y3995) liners. He feels they look acceptable for use. Scott Parke asked if they had been sent to Cat for 3L inspection as Dan Domonkos suggested during the last teleconference. They have not.

Chuck Dutart said his inventory system shows 63 of these liners still available in the system with the production schedule showing 16 slated for production sometime in July. Jim McCord again solicited the panel for support for buying all 63 available liners to scrap them with the intention of triggering a new batch in Cat's production schedule. Bob Campbell wanted to know how big that next batch would be. He would not be willing to go along with the scheme if the new batch would be some inconsequential number (less than 30). Chuck will find out how big the next batch would be and whether or not they can be eddy current tested. He warned that, because of Cat's changeover to eddy current testing, new liners may not pass the old optical inspection.

14:09cst 1P LINER STATUS

Chuck Dutart reported that delivery of the new 1P liners is not currently on schedule. Availability now looks to be mid- to late-April and fully up to speed in June. Jim McCord stated his preference to move into PC-10 entirely on the new liners. There are currently no 1P liners available at Cat; all available liners are at Holt. Cat sold 76 1P liners in 2004 and 132 in 2003.

14:19cst DYED PC-9 FUEL

The Mack and Cummins panels recently approved a move to dyed PC-9 fuel. Chuck Dutart was asked if he was aware of any problems dyed fuel might present for Cat testing. He was specifically asked if there were any concerns regarding injector plugging or plunger wear. Chuck wasn't aware of any problems in those areas. Bob Campbell moved to adopt dyed PC-0 fuel for 1P, 1N, and 1R testing. Scott Parke asked if there was any data on how the dye might effect piston deposits either by changing the varnish color (if it survived combustion) or increasing deposits in one area or another (after it was combusted). The latter consideration concerned Chuck. Cat had not discussed it. He asked that any move forward be tabled until Cat had an opportunity to investigate. The panel agreed to defer the mater and issue Bob's motion as an email ballot by February 18.

14:43cst 1P FULL MARK

Riccardo Conti (ExxonMobil) discovered that the 1P standard (D 6681) appears to contain a typo regarding instructions on when to set the "full" mark for the oil level. Section 11.1 instructs to set the level after 1 hour of test time; Annex A6 says after 4 hours. Southwest and PerkinElmer are currently using 1 hour; Afton and ExxonMobil are using 4; Jerry Brys wasn't sure what Lubrizol was using. The panel agreed to standardize on 4.

14:46cst PRECISION STATEMENT AND SA STANDARD DEVIATION

Scott Parke reported on recent activity by the Test Monitoring Board and D02.B0.09 that requests that all surveillance panels review and revise their respective precision statements. They have also recently devised guidelines for computing test targets that will impact precision statement calculations and, by extension, the standard deviation that is used for calculating severity adjustments.

Basically, the guidelines govern how data is handled in generating test targets. For consistency, the same data should be used to calculate precision as presented in the precision statement and the same estimate of precision should be used to generate severity adjustments. Scott presented precision figures implementing these guidelines along with a comparison to current severity adjustment standard deviation figures (attachment 3) and moved that they be accepted and implemented with each lab's next reference. Bob Campbell seconded and the motion unanimously passed.

The teleconference ended at 15:10cst.

Attendance:

Representative	Organization
Chuck Dutart	Caterpillar
Jerry Brys	Lubrizol
Jim Rutherford	ChevronTexaco
Jim McCord	Southwest Research
Bob Campbell	Afton Chemical
Chris Mazuca	PerkinElmer
Jim Gutzwiller	Infineum
Scott Parke	Test Monitoring Center
Ron Buck	TEI
Riccardo Conti	ExxonMobil
Mark Sutherland	ChevronTexaco

Agenda:

1) CAT-1N liner review: Transform or not to transform?

2) CAT-1K liner: How and when to bring in the 1Y3998 liners?

3) CAT-1MPC liner: Production liners (use as is or buy up the distributors entire stock)

4) CAT-1P liner: When will the new liners be ready? Do we begin PC-10 testing with 1Y3805 liners and then make the switch as needed?

5) Dyed PC9 Fuel: CAT-1P & CAT-1N?

6) "full" mark for 1P

7) precision statement and SA standard deviation

ASTM Section D02.B0.09 has requested that the precision statement for all test types be updated. The Technical Guidance Committee has recently developed guidelines for calculating test targets and, by extension, the figures used for precision statements. The table below shows the precision estimates for each test type as of February 1, 2005. The columns are headed as follows:

Test	=	Test type
Parameter	=	Test parameter (transformed where applicable)
df_IP	=	Degrees of freedom for the intermediate precision figure
df_R	=	Degrees of freedom for the reproducibility figure
Sip	=	Intermediate precision standard deviation
IP	=	Intermediate precision
Sr	=	Reproducibility standard deviation
R	=	Reproducibility
SA Std	=	Standard deviation value currently used to compute lab severity adjustment

Test	Parameter	df_IP	df_R	Sip	IP	Sr	R	SA Std
1K	TGFti	101	108	13.2	36.9	14.5	40.5	15.7
1K	WDKti	101	108	37.4	104.8	38.1	106.7	35.6
1K	TLHCti	101	108	0.906	2.538	1.044	2.923	1.100
1K	BSOCti	101	108	0.084	0.234	0.084	0.236	0.000
1N	TGFti	111	119	15.7	44.0	15.7	44.0	14.6
1N	WDNti	111	119	24.6	68.8	28.0	78.4	27.1
1N	TLHCti	111	119	0.817	2.287	0.829	2.320	0.900
1N	BSOCti	111	119	0.061	0.171	0.064	0.179	0.000
1M-PC	TGFti	309	316	17.3	48.4	17.8	49.8	16.1
1M-PC	WTDti	309	316	45.7	128.1	47.0	131.6	50.5
1P	TGCti	108	113	7.90	22.11	7.99	22.38	7.74
1P	WDti	108	113	44.9	125.7	46.5	130.1	57.6
1P	TLCti	108	113	10.08	28.22	10.13	28.36	13.15
1P	OCti	108	113	0.2660	0.7450	0.2772	0.7760	0.3238
1P	ETOCti	108	113	0.4467	1.2510	0.4490	1.2570	0.5177
1R	TGCti	36	40	8.86	24.81	8.86	24.81	9.70
1R	WDti	36	40	26.2	73.3	26.2	73.3	29.0
1R	TLCti	36	40	6.82	19.11	6.82	19.11	7.84
1R	BTOCti	36	40	1.12	3.13	1.23	3.44	1.32
1R	ETOCti	36	40	1.25	3.50	1.36	3.81	1.35

To bring all figures into accord with the various TGC and Editorial Board requirements, it is recommended that the SA Std values be changed to the Sip in all cases.