



Committee D-2 ON PETROLEUM PRODUCTS AND LUBRICANTS

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April 15, 2000

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Unconfirmed Minutes of the ASTM Mack T10 Task Force

**Held in Reno, Nevada
On December 6, 1999**

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1. Call to Order

1.1 An agenda is shown as Attachment 1.

1.2 The attendance list is shown as Attachment 2.

2. Minutes from the September 9, 1999 Meeting

2.1 The minutes from the November 16, 1999 meeting were approved with no corrections.

3. Membership Changes

3.1 Jim McGeehan asked to be added to the meeting minutes distribution list.

4. Test Sponsor Update

4.1 Greg Shank presented plots showing wear with and without EGR which are shown in Attachment 3. Greg also presented plots of TBN and TAN and a plot of lead versus time.

4.2 Greg Shank indicated he will work with sponsors and labs running discrimination tests concerning oil temperature level. Labs should run discrimination pairs at the same operating conditions.

5. Operations and Hardware Sub Panel Issues

5.1 The group decided to begin monitoring oil sump temperature.

5.2 A teleconference meeting was proposed in January 2000 to resolve details concerning the oil temperature control system, fuel temperature measurement location, oil sump temperature measurement location and humidity control.

5.3 Bob Campbell proposed that everyone should use the same oil sump configuration and suggested the front sump configuration. The group agreed to specify the front sump configuration for the T10 test.

5.4 Greg Shank suggested labs use the PDI and Talysurf devices to measure liner wear for the round-robin matrix.

6. Chemical Analysis Sub Group

6.1 Joe Franklin presented a report from the subgroup. The handout from this report is shown as Attachment 4.

6.2 In search of a better TAN technique, ASTM Subcommittee D02.06 oversaw analysis on 15 samples using the proposed new procedure and two versions of D664. The oil samples included base oils, THF, heavy duty and light duty automotive engine oils. Three samples were EOT drains from T8 and T9 tests. Unfortunately overall precision doubled with the proposed new procedure. Brian Lawrence asked Joe if his group could analyze the data from the three heavy duty oil samples to see if the revised methods showed improvement.

6.3 ASTM Subcommittee D02.06 will continue to work on improvements to the TAN procedure. However this process will take too long to be useful for PC9, so the old procedure will be approved.

7. CPD Report

7.1 Gary Tietze indicated two action items from the last meeting were still being completed. Ken Goshorn is working to get critical parts to TEI. TEI will be providing all EGR related parts.

8. PC9 Timeline

8.1 Brent Shoffner presented an updated version of the timeline as shown in Attachment 5.

9. Scope and Objectives

9.1 Brian Lawrence presented the Scope and Objectives as shown in Attachment 6. Brent Shoffner asked whether we want to include the values for precision and discrimination from Appendix K of the CMA Code of Practice between section 7 and 8 in the Scope and Objectives.

9.2 Greg Shank noted that the EMA agree in principle with the CMA Code of Practice but don't agree to being held to the numerical values in the CMA Code of Practice.

9.3 Brian Lawrence noted that piston deposits have been added as a secondary test parameter.

10. Next Meeting

10.1 The next meeting will be at the call of the chairman.

11. Adjournment

Attachment 1

Mack T-10 Task Force Meeting

Date: Monday, December 6, 1999
Time: Immediately following Mack Test Surv. Panel
(approx. 4:30PM - 5:45PM)
Location: J. Ascuaga's Nugget - Pavilion C
Reno, Nevada

Agenda

1. Membership Mark Cooper
2. Minutes - November 16 meeting Mark Cooper
3. Test sponsor's update Greg Shank
 - Procedural issues
 - Discrimination matrix status
4. O&H Sub-Group Report/issues Brian Lawrence (for Jim Collum)
 - Fuel temp thermocouple positioning
 - Humidity control
5. Chemical Analysis Sub-Group Report Joe Franklin
6. Lab visitation issues (if any) Jeff Clark
7. CPD issues (if any) Gary Tietze
8. Timeline Update Brent Shoffner
9. TF Scope & Objectives - Review Brian Lawrence
10. Next Meeting/Adjournment

NB: Will presenters kindly remember to bring a copy of their material on a 3.5" floppy disk, for inclusion in the minutes (MS Word preferred, Powerpoint or Excel acceptable). Thank you.

Secretary: Mark Cooper/Oronite 210-731-5606	Chairman: Brian Lawrence/Infineum 210-732-8123
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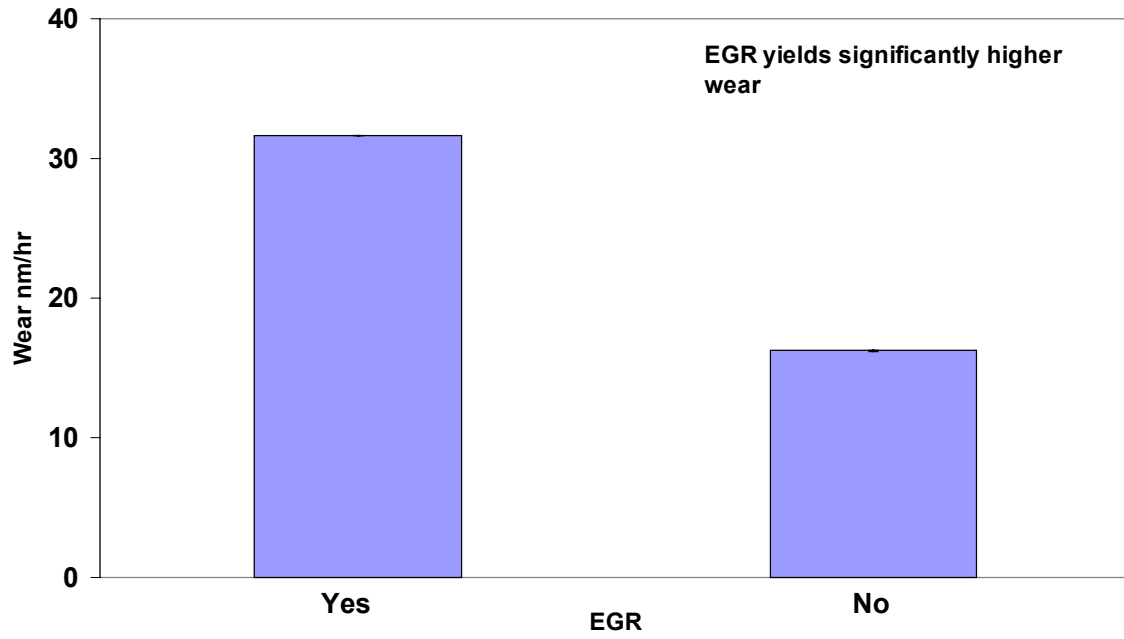
Attachment 2

Attendance Roster

Name	Company
Brian Lawrence	Infineum
Mark Cooper	Oronite
Ron Buck	TEI
Bill Buscher	Texaco Global Products
Bob Campbell	Ethyl
Wayne Cave	consultant
Gil Clark	Specified Fuels & Chemicals
Jeff Clark	TMC
Stacy Bond	Perkin Elmer
Pat Fetterman	Infineum
Joe Franklin	Perkin Elmer
Redescal Gomez	INTEVEP
John Graham	Cummins
Andy Liaw	Infineum
Don Marn	Lubrizol
Jim McGeehan	Chevron Products
Charlie Passut	Ethyl
Dino Righi	Lubrizol
Otto Rojas	Infineum
Greg Shank	Mack
Brent Shoffner	Perkin Elmer
Mark Stevens	Infineum
Mark Sutherland	Ethyl
Gary Tietze	TEI
Richard Tucker	Shell International
Wim van Dam	Oronite
Jim Wells	SwRI

Attachment 3


Effect of EGR



Confidential

Attachment 4

T10 Chem. Sub-Group Report 12/6/99



- Meeting held 10/27/99.
 - Refined the list of tests and actioned out work.
- Meeting held 12/6/99.
 - New method Photo-acoustic IR.
 - Dilution technique FTIR.
- First trail oils to be sent out this week.
- Oils from Infineum and Mack sponsored tests.

Attachment 5



T-10_time9911.PDF

Attachment 6

Mack T-10 Task Force

Scope & Objectives

Revision Date - November 16, 1999

Scope:

This Task Force is responsible for development of the Mack T-10 engine test. It is accountable to the ASTM Heavy Duty Engine Oil Classification Panel and subsequently to ASTM Sub-Committee B0.02.

The Task Force will strive to achieve its objectives via close co-operation and interaction with the test sponsor, participating test laboratories and other ASTM functions (including Task Force Sub-Groups, the Test Monitoring Center and designated Critical Parts Distributor).

Objectives:	Completed
1. Evaluate preliminary test configuration and operational conditions and develop accordingly.	12/6/99
2. Expedite "fit-for-purpose" test/test procedure consistent with PC-9 timeline.	
3. Identify and evaluate key performance criteria.	
4. Demonstrate discrimination with respect to key performance criteria.	
5. Optimize test procedure for maximum test precision and reliability.	
6. Monitor PC-9 Precision/BOI matrix execution.	
7. Monitor/assist statistical evaluation of matrix data.	
8. Recommend HDEOCP endorsement of T-10 test, key performance criteria and associate limits.	
9. Complete ASTM ballots for test approval/PC-9 inclusion.	
10. Complete ASTM ballots of Mack T-10 Research report.	

Specific Activities:

Develop primary test parameters:

1. Average Ring Weight Loss.
2. Average Cylinder Liner Wear.

Evaluate and compare range of secondary test parameters including:

1. Lead content of EOT lubricant.
2. Lubricant TBN depletion.
3. Lubricant TAN accumulation.
4. TBN/TAN interaction.
5. Oxidation/Nitration assessment via IR or alternative analytical method.
6. Bearing weight loss.
7. Piston deposits.