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### **Committee D02 on PETROLEUM PRODUCTS AND LUBRICANTS**

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Reply to: Michael S. Griggs  
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February 17, 2004

To: Members of the Single Cylinder Oil Test Engine (SCOTE) Surveillance Panel and guest participating in the February 13, 2004 teleconference.

Enclosed are the minutes of the SCOTE Surveillance panel teleconference. Please forward any corrections or additions to my attention.

Michael S. Griggs  
Secretary, SCOTE Surveillance Panel

## **TELECONFERENCE MINUTES**

### **SINGLE CYLINDER DIESEL SURVEILLANCE PANEL**

HELD February 13, 2004  
VIA TELECONFERENCE  
At 14:00 CST

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#### **1.0 CALL TO ORDER**

- 1.1 This teleconference was scheduled by Scott Parke at the request of Chairman Jim McCord.
- 1.2 Chairman Jim McCord began the teleconference with a roll call of voting members. The list of participants is attachment 1.

#### **2.0 1K/1N NEW LINERS**

- 2.1 The SCOTE Surveillance conducted a teleconference on 2-13-2004, 14:00 CST to discuss adoption of new Cat 1K/1N liners.
- 2.2 Chuck Dutart provided background information on the difficulties Caterpillar has been experiencing with the 1K/1N liner supplier. Chuck commented that the liners Cat received had about an 85% failure rate (dimension and/or porosity) which suggested that the supplier did not inspect them. In summary, Caterpillar has lost faith in the supplier and has given up on them. Chuck offered two options- Caterpillar could be the liner source or another supplier could be sought.
- 2.3 Chuck suggested that production liners be inspected and then be passed onto Morton for distribution as a test part. These liners have a plateau honed finish and could affect severity. An

alternative to using the plateau honed liners would be to intercept them before they are production honed and have them honed to replicate the existing 1K/1N liner finish. Dan Domonkos commented that when he inspected some production liners he found the finish to be quite rough. Chuck Dutart suggested that these liners might be old stock and that Dan should verify the part numbers and change level (e.g. 01, 02, 03 etc.). The plateau honed liners are part number 1979322. Chuck commented that he thought a production run of about 300 liners would suffice to carry the 1N through PC-10.

- 2.4 The panel briefly discussed lack of test data on production liners. The discussions then turned to the need for reference testing. Abdul suggested that the details for bringing in the production liners be worked out quickly. Dan Domonkos agreed saying that his lab was out of liners and he has 2 references due in February. Abdul said that his favorite option was to use production liners as is. This suggestion seemed agreeable to the panel. Chuck Dutart added that production liners would have to still be 100% inspected for dimensional conformance and porosity. He would insist on a special run to make production liners.
- 2.5 Dan Domonkos asked the panel how to handle the interim phase with both existing and production liners in use. Scott Parke reviewed how the VG panel addressed a similar problem by running 9 donated tests to generate data on new engines and then reallocating old engines so that each lab would run out of them around the same time. When labs transitioned to the new engines, 2 reference tests were required. Bob Campbell and Dan Domonkos expressed willingness to run their upcoming references on production liners. At this point in the teleconference, the discussions focused on the question of how many references could be run and how soon. Stacy Bond expressed concern with going too long without determining equivalency. Scott Parke reminded the panel that despite having 15 1M-PC reference runs, it took another 15 references to see that the 1M-PC liners were more severe. Stacy commented that he thought oil consumption performance would support equivalency. Dan Domonkos agreed and asked Chuck Dutart if liner surface parameters could be provided. Chuck agreed to forward a table and document describing the surface parameters.
- 2.6 Stacy Bond asked Chuck Dutart if the piston rings used with production liners were different. Chuck thought the rings would also be of a low friction design and if necessary maybe the old rings could be retained for use. Stacy cautioned that mixing the existing rings with plateau honed liners might cause serious oil consumption problems. Chuck said he would compare existing and new rings. He also commented that Cat data does show that there is not any difference in ring weight loss.
- 2.7 Discussions returned to the issue of getting sufficient data in a timely manner. Scott Parke expressed serious concern that there would not be enough tests to determine equivalency since Lubrizol and Ethyl were the only labs ready to run reference tests on production liners. He commented that it was a waste of time if in 6 months only four references could be run. Bob Campbell asked the panel how many liners were out there. There are about 20 each at SWRI and PE. Abdul Casim suggested that the panel get new liner data first, then think about reallocation. He then asked the panel for consensus. Quite a bit of discussion followed concerning

having sufficient and timely data. Stacy Bond reiterated the need to do something decisive and suggested following the VG scenario. He added the need for each Lab to “belly up” and run references by an agreed timeline. Scott Parke reiterated that 4 runs would be of no value. The idea of extending references was discussed at length. Scott Parke was emphatic that the panel needs a definite commitment in lieu of letting extensions do the job and asked the labs to commit on the number or reference tests. Lubrizol promised 2 and Ethyl, PE and SWRI each 1. Following this verbal commitment, Scott asked for a formal commitment to ensure that all labs participate as they have indicated verbally. After a lot of discussion on the need for such a formality, a motion began to take shape. Bob Campbell made the formal motion and it was seconded by Jim McCord. The following motion carried 8-0-0:

**All Cat 1N calibrations will terminate 4-5-2004 unless labs complete a reference run on the new liner. TMC will work with extending existing calibrations pending analysis of the data.**

- 2.8 Scott Parke agreed to provide all labs the same oil (1004). Abdul Casim asked Chuck Dutart to begin the process of getting liners. Chuck said he would work quickly to get an initial batch of 10 liners.

### **3.0 EF-411 BUILD OIL**

- 3.1 Jim McCord informed the panel that Mobil will start production of EF-411 and go through TEI for distribution. Bob Campbell asked if it was necessary to go through TEI. He would prefer to bypass this step. Dan Domonkos commented that this impacts other test areas and asked if it should go up a level. Tom Franklin replied that ASTM could not force Exxon/Mobil to sell to individuals but could pass on panel recommendations. Stacy Bond reviewed an e-mail he had received from Dan Wooster stating that the use of TEI was interim pending relocation of Exxon/Mobil’s EF-411 production capability. Bob Campbell ask for clarification as to whether TEI would be involved after long term EF-411 production is established. Stacy will look into this.

### **4.0 NEXT MEETING**

Chairman McCord will reconvene a teleconference when the new liners are made available to labs.

Attachment 1

February 17, 2004

**SCOTE Teleconference Participants**

Abdul Cassim- Caterpillar  
Chuck Dutart- Caterpillar  
Scott Parke- TMC  
Bob Campbell- Ethyl  
Dan Domonkos- Lubrizol  
Mike Griggs- Lubrizol  
Chris Mazuca- PerkinElmer  
Jim Wells- SWRI  
Jim McCord- SWRI  
Mark Sutherland- Oronite  
Pat Fetterman, Infinium  
Tom Franklin- PerkinElmer  
Stacy Bond- PerkinElmer