

Reply to: William M. Nahumck  
The Lubrizol Corporation  
29400 Lakeland Boulevard  
Wickliffe, OH 44092  
Phone: 440-347-2596  
Fax: 440-347-2377  
Email: [wmn@lubrizol.com](mailto:wmn@lubrizol.com)

Unapproved Minutes of the January 14, 15 & 20, 2004  
Sequence III Surveillance Panel Teleconference

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*Note: These minutes were written as a single entity as the teleconference that was started on January 14, 2004 was continued on January 15, 2004 and January 20, 2004.*

Attendees on 1-14-04: Sid Clark, Mike Kasimirsky, Pat Lang, Bill Nahumck, Phil Scinto, Larry Hamilton, Monica Beyer, Gordon Farnsworth, Dwight Bowden, Jason Bowden, Adam Bowden, Irwin Goldblatt, Tom Franklin, Charlie Leverett, Jo Martinez, Dave Glaenzer, Tim Caudill, Mark Mosher

**Meeting was called to order at 11:05 ET on 1-14-04.** The agenda consisted of the following items.

IIIG Referencing issues related to RO 438  
Editorial change to Form 4 for Sequence IIIF  
Procedural changes for Sequence IIIG

### **IIIG Referencing Issues Related to RO 438**

The meeting started with a review by Charlie Leverett of some test results that occurred in his lab using RO 438. He has had two runs that have given low ACLW results of 6.4 and 9.0 microns, both of which were in Stand 5. Both of these mild runs fall outside of the expected band for the wear results. Runs with RO 434 and 435 in other stands in his lab have been on target. Other laboratories have reported results with RO 438 and have not seen results outside of the acceptance bands. SwRI reported a low result of 13.5 microns which was just inside the band. Results in other labs with all of the reference oils generally have been on target. This only confounds the situation. The discussion led to several factors that could be involved. Those factors included a laboratory effect, stand effect, change in RO 438, cam dip batch, changes from the honing workshop, use of the test oil to lubricate the entire camshaft or some interactions among all of these factors.

The discussion moved to what options were available to address this issue with 438. These included using all available data to calculate targets, temporarily suspend the lower acceptance band for ACLW, obtain additional test data from the lab in question (as well as others) and review the transform that has been used. The rare event criteria were reviewed and Michael Kasimirsky noted that the 6.4 micron result is considered a rare event by current definition and the 9.0 micron result may also. Dwight Bowden noted that the phosphate weight per unit area of the current camshaft batch was in the same range as batch used for the Precision Matrix. Charlie Leverett made a motion to use RO 438 for the honing workshop demonstration reference run. As there was no second, the motion failed.

As no firm conclusions were being reached, the panel decided to discuss this within their respective organizations and then resume this discussion tomorrow.

### **Editorial change to the Sequence IIIF Test Report and Changes to the Sequence IIIG Test Procedure**

Bill Nahumck brought to the panel's attention that there is needed Sequence IIIF test report change and the procedural changes will be needed to the IIIF and IIIG test procedures. The panel asked that they be delayed to the next teleconference.

### **Adjournment**

The meeting was recessed at approximately 11:55 AM and we agreed to resume on 1-15-04 at 3:00 pm ET.

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The meeting from 1-14-04 was resumed at 3:05 pm ET on 1-15-04.

Attendees on 1-15-04: Sid Clark, Mike Kasimirsky, Pat Lang, Bill Nahumck, Phil Scinto, Larry Hamilton, Monica Beyer, Gordon Farnsworth, Hanna Murray, Dwight Bowden, Jason Bowden, Adam Bowden, Irwin Goldblatt, John Glaser, Tom Franklin, Charlie Leverett, Martin Chadwick, Jo Martinez, Dave Glaenzer, Tim Caudill, Mark Mosher

The agenda consisted of the following items.

Continued Discussion about Referencing Issues Related to RO 438  
Editorial change to Form 4 for Sequence IIIF  
Editorial changes for Sequence IIIG

### **Continuation of the Discussion of IIIG Referencing Issues Related to RO 438**

The meeting started with a motion by Charlie Leverett and seconded by Dwight Bowden.

**Motion 1:** *For oil 438 ACLW use the raw data (non-transformed) to determine mean and standard deviation. SA calculations for ACLW only will use the pooled standard deviation of oils 434 and 435. The targets and standard deviations will be updated using the current data*

*for these oils prior to calculation of the pooled standard deviation. If this motion is accepted PerkinElmer will agree to run a reference oil test using RO 434 or 435 in their stand 5. For clarification, the raw data is only for ACLW. Vis increase (PVIS) and WPD will still use currently assigned transformed data.*

The motion was discussed and further clarified that it will be based on updated targets before calculating the pooled standard deviation. Tom Franklin reviewed the oil consumption for each of those runs but there was not a strong correlation. Charlie Leverett also sent out a histogram (see Attachment 1) that shows the skewing of the data by the transform (represented by the bell curve) compared to that using the untransformed data. Dwight Bowden also provided reference oil wear data that he asked the TMC to provide from the Precision Matrix and since the Precision Matrix. (See Attachment 2.) (Please accept the apologies from the chairman for not forwarding these attachments to the membership prior to the teleconference.) Also agreed upon was that the motion implied that the application of the new pooled standard deviation would not be retroactive. The discussion proceeded with several lab representatives expressing uncertainty as to the impact on their lab.

Based on the discussion, Sid Clark made a motion (**Motion 2**) to table the vote on the previous motion (Motion 1) to allow all laboratories a chance to evaluate the influence on their respective lab charts and confer with other members of their staff. The motion was seconded by Dave Glaenzer. The motion to table the vote on the first motion was unanimous. The panel agreed to schedule the next conference call for 1-20-04 at 2:00pm ET.

## **Issues related to the Sequence IIIF Test Report and the Sequence IIIG Test Procedure**

### **GM Sealer**

**Motion 3:** By Dwight Bowden, seconded by Sid Clark. *To accept the proposal by Sid Clark of including both the tube and cartridge part numbers for the GM sealer specified in the IIIF and IIIG test procedures and assembly manuals. The part numbers have also been recently changed for those components as noted below. These changes will be released via the Information Letter system.*

The old part numbers are:

- > 12346192 Tube
- > 12346193 Cartridge
- > The new numbers are:
- > 12346141 Tube
- > 12551715 Cartridge

The motion approved unanimously by the panel.

### **EF-411 Supply and Usage**

**Motion 4:** By Charlie Leverett, seconded by Sid Clark. *Due to uncertainty around the supply of EF-411 build oil, allow on a temporary basis the use of a 20% EF-411/80% solvent*

*mixture where the procedure states a 50% EF-411/50% solvent mixture. This motion is being proposed to avoid a possible EF-411 shortage until the supply system is resolved.*

During the discussion, it was brought to the panel's attention that steps are being made to actively resolve the EF-411 supply situation ASAP by the current supplier and by the test sponsor. Mark Mosher will report back to the Surveillance Panel when he has more information. With that knowledge, the seconder withdrew his second and the motion died for a lack of a second.

#### **Sequence IIIF – Form 4**

**Motion 5:** By Michael Kasimirsky, seconded by Dwight Bowden. *To modify Form 4 of the Sequence IIIF test report so that the last reference section designates SACLW instead of ACLW. This change will be released via the Information Letter system.*

During the discussion, Bill Nahumck brought to the panel's attention that on Form 4 of the Sequence IIIF test report, the last reference section still refers to ACLW instead of SACLW. The TMC confirmed that all labs are reporting SCALW but the label for the report is wrong and needs to be corrected.

The motion approved unanimously by the panel.

#### **Combustion Air**

Dave Glaenzer brought to the attention of the Surveillance Panel that the IIIG (also in IIIF) procedure has a discrepancy related to the combustion air specification listed in the test procedure in Section 6.12 is reported in different units on Form 5 of the test report.

Section 6.12 of IIIG procedure

"Maintain the throttle body intake air at a moisture content of  $11.4 \pm 0.7$  g/kg..."

IIIG report Form 5

Intake air dewpoint, °C

"Non-Controlled" Parameter

We have two different units of measurement and one place saying it is controlled and another saying it is non-controlled (but there are limits to maintained). We need to make the report consistent with the procedure. Dave didn't think it is serious enough to warrant an Information Letter on its own, but should be added to one. The topic was tabled until the next conference call to give us time to determine how to implement the necessary changes.

#### **Re-Worked Cylinder Heads**

Sid Clark informed the Surveillance Panel that although Motorsports are keeping up with orders, supplies of cylinder heads is very tight. He is working with manufacturing to improve the situation. Sid stated that he has worked with Swartz to re-work the 300 cylinder heads that were return because they have the short exhaust valve seat inserts. They have worked out a method to remove the short seat and properly install our deeper

exhaust seat. This has been successfully run in a Sequence IIIG test using RO 435 at SwRI as a demonstration. These will be noted by 2001 serial numbers. New serial numbers will NOT be assigned.

**Motion 6:** By Sid Clark, seconded by Dave Glaenzer. *Move to allow the use of previously recalled shallow seat pocket cylinder heads after they have been reworked, installing new exhaust seats with deeper seat pockets (0.200" seat pocket). Reworked cylinder heads are to be repackaged and identified on the exterior of the packaging as reworked materials. Distribution of reworked cylinder heads to laboratories will not exceed 20% of ordered quantities. If any laboratory experiences problems with reworked materials, all laboratories will be notified and test usage will stop until investigation of such problem.*

The motion approved unanimously by the panel.

## **Adjournment**

The meeting was recessed at approximately 3:45 pm. The next (and hopefully conclusive) meeting will be at 2:00 pm ET on 1-20-04.

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Meeting was resumed at 2:05 pm ET on 1-20-04.

Attendees on 1-20-04: Sid Clark, Mike Kasimirsky, Pat Lang, Bill Nahumck, Phil Scinto, Monica Beyer, Gordon Farnsworth, Dwight Bowden, Jason Bowden, Adam Bowden, Irwin Goldblatt, Tom Franklin, Charlie Leverett, Martin Chadwick, Jo Martinez, Dave Glaenzer, Tim Caudill, Mark Mosher

The agenda consisted of the following items.

Resolution of the Referencing Issues Related to RO 438  
New Business

## **Continuation of the Discussion of IIIG Referencing Issues Related to RO 438**

The meeting started with Motion 1 being brought to the table. It reads:

*For oil 438 ACLW use the raw data (non-transformed) to determine mean and standard deviation. SA calculations for ACLW only will use the pooled standard deviation of oils 434 and 435. The targets and standard deviations will be update using current data for these oils prior to calculation of the pooled standard deviation. If this motion is accepted PerkinElmer will agree to run a reference oil test on 434 or 435 in their stand 5. For clarification, the raw data is only for ACLW. Vis increase (PVIS) and WPD will still use currently assigned transformed data.*

A brief discussion indicated that although the above motion will help the lab in question, another lab will have a result change from a B1 alarm to a B2 alarm.

The motion passed with a vote of 6 for, 1 against and 5 waive. The negative vote was reflecting that the action to positively address a situation in one lab should not have negative consequences in another lab.

**Motion 7:** By Charlie Leverett, seconded by Gordon Farnsworth. *To have the effective date for Motion 1 as 24:00 (Midnight) on 1-20-04.*

The motion passed with a vote of 11 for, 0 against and 1 waive.

## **New Business**

### **Number 2 Main Bearing**

Dwight Bowden discussed #2 main bearing photos taken by Charlie Leverett (see Attachment 3) that were distributed prior to the conference call via email. Batch Code 9, #2 main bearings may have flash plating on the flange one side of the bearing. This is not allowed per the engineering print. If this condition is observed at build, the material is to be returned to OHT for replacement. In addition, BC9, #2 main bearings have a relief at the parting line that visually appears to be neither copper nor flash plating. This relief is allowed per the engineering print. Material with this condition is acceptable for test. However, future material will have 100% copper exposed on the flange similar to historical batches.

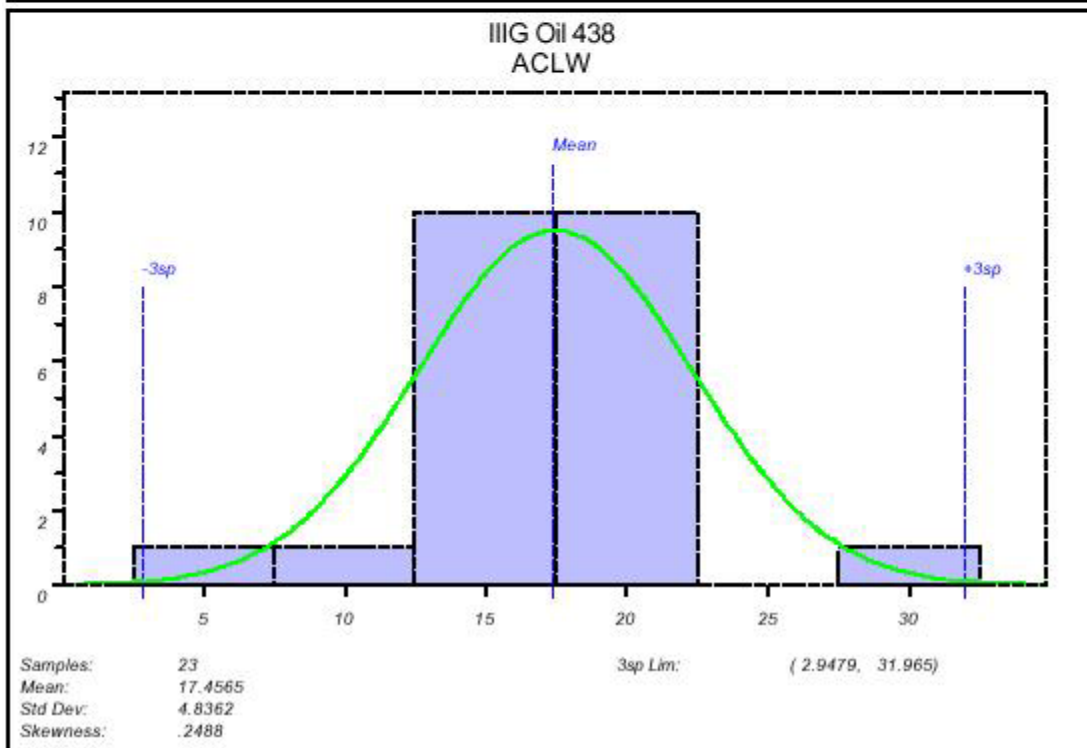
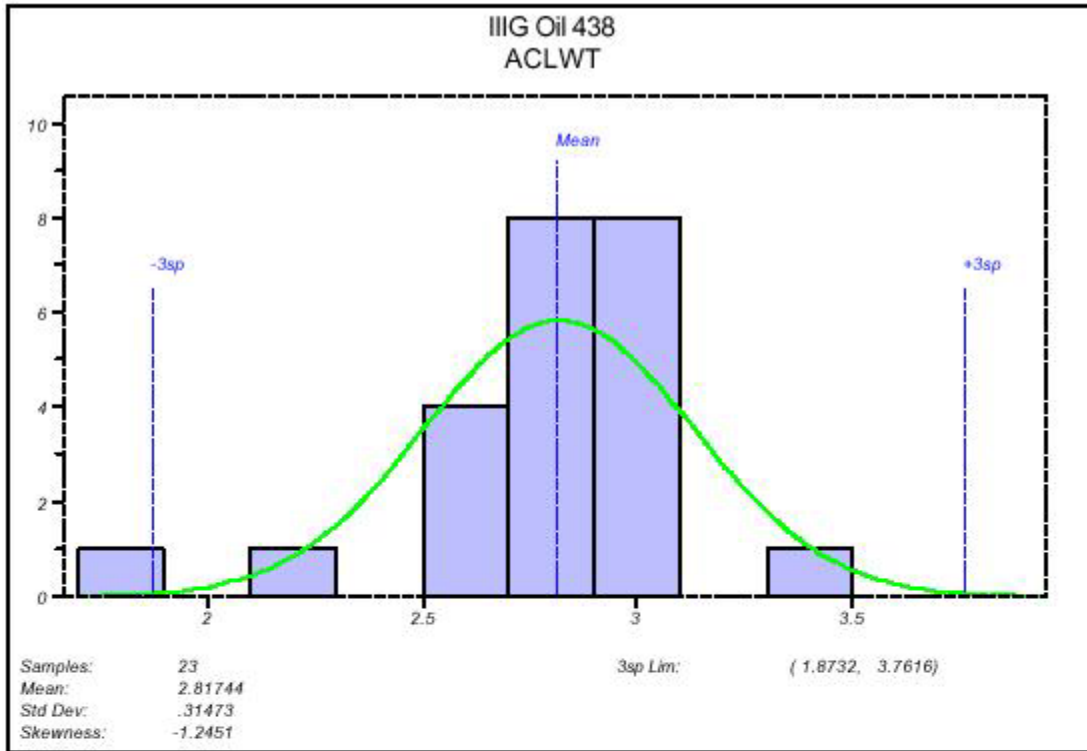
### **IIIG Research Report**

The Chairman reminded the panel to keep reviewing the IIIG Research Report so that an approval vote can be taken soon (approximately 2 weeks).

## **Adjournment**

The meeting was adjourned at approximately 2:40 pm. The next meeting will be at the call of the chairman.

# Attachment 1



## Attachment 2

The SAS System using the MEANS procedure

08:19 Wednesday, January 14, 2004

----- TMC OIL CODE=434 MATRIX -----

Variable	N	Mean	Std Dev	Minimum	Maximum
ACLW	8	36.8375000	5.5528468	26.2000000	43.7000000
OIL CONSUMPTION	8	4.0237500	0.3813486	3.4700000	4.6500000

----- TMC OIL CODE=434 POST-Matrix -----

Variable	N	Mean	Std Dev	Minimum	Maximum
ACLW	12	29.6250000	4.5948835	24.0000000	40.7000000
OIL CONSUMPTION	12	4.0616667	0.4993966	3.4400000	4.8500000

----- TMC OIL CODE=435 MATRIX -----

Variable	N	Mean	Std Dev	Minimum	Maximum
ACLW	8	37.2750000	8.4678805	26.8000000	48.7000000
OIL CONSUMPTION	8	4.0850000	0.2433692	3.7400000	4.3100000

----- TMC OIL CODE=435 POST-Matrix -----

Variable	N	Mean	Std Dev	Minimum	Maximum
ACLW	10	35.3100000	6.4964007	25.7000000	46.3000000
OIL CONSUMPTION	10	3.7570000	0.3920898	3.2800000	4.4100000

----- TMC OIL CODE=438 MATRIX -----

Variable	N	Mean	Std Dev	Minimum	Maximum
ACLW	8	18.4375000	3.1972924	14.4000000	22.0000000
OIL CONSUMPTION	8	3.6962500	0.4165826	3.2800000	4.3300000

----- TMC OIL CODE=438 POST-Matrix -----

Variable	N	Mean	Std Dev	Minimum	Maximum
ACLW	15	16.9333333	5.5497319	6.4000000	30.8000000
OIL CONSUMPTION	15	3.2606667	0.4459895	2.6300000	4.1900000





CURRENT  
BC 9



OLD BATCH

