



100 Barr Harbor Drive ■ West Conshohocken, PA 19428-2959

Telephone: 610-832-9500 ■ Fax: 610-832-9555 ■ e-mail: service@astm.org ■ Website: www.astm.org

Committee D02 on PETROLEUM PRODUCTS AND LUBRICANTS

Chairman: N DAVID SMITH, North Carolina Dept Of Agric, 2 West Edenton St, PO Box 27647, Raleigh, NC 27611, (919) 733-3313, FAX:919-715-0524, EMail: david.smith@ncdamail.agr.state.nc.us

First Vice Chairman: SUSAN E. LITKA, UOP Research Center, 50 East Algonquin Road, PO Box 5016, Des Plaines, IL 60017-5016, (847) 391-3390, FAX: 847-391-3330

Second Vice Chairman: KURT H. STRAUSS, 69 Brookside Rd, Portland, ME 04103, (207) 773-4380, FAX: 207-775-6214

Secretary: KENNETH O. HENDERSON, Cannon Instrument Co, PO Box 16, State College, PA 16804-0016, (814) 353-8000, FAX: 814-353-8007, EMail: kenohenderson@worldnet.att.net

Assistant Secretary: W JAMES BOVER, Exxon Biomedical Sciences, Mettlers Rd Cn2350, East Millstone, NJ 08875-2350, (732) 873-6318, FAX: 732-873-6009, EMail: james.bover@erc.exxon.sprint.c

Staff Manager: EARL R. SULLIVAN, (610) 832-9709, EMail: esulliva@astm.org

June 12, 2006

Please forward any comments to:

Charlie Leverett

Intertek Automotive Research

Email: charlie.leverett@intertek.com

Unconfirmed Minutes from the ASTM Sequence VIII Surveillance Panel Held in San Antonio, TX June 7, 2006

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Call to Order

Chairman Fred Gerhart opened the Surveillance Panel, the agenda was distributed and is shown in *Attachment #1*.

Select Action Item and Motion Recorder

William Busher of Southwest Research Institute, was the action item and motion recorder for this Surveillance Panel meeting. Charlie Leverett of Intertek AR is the retiring VIII secretary. Fred as for a volunteer to replace Charlie, no one offered as-of the meeting adjournment. The attendance roster is shown in *Attachment #2*, there were 10 voting members present. The motions and action items from this meeting are shown in *Attachment #3*.

Approval of Minutes

The minutes for the November 2005 meeting were unanimously approved as-is. Minutes including this meeting will no longer be mailed, it was decided that they would be posted on the TMC Web Site at:

<ftp://ftp.astmtmc.cmu.edu/docs/gas>

These minutes will be in a pdf format. Any questions concerning the access of these documents should be directed to TMC. Once these minutes are posted the secretary will inform all members and others currently on the mailing list by Email of these postings. Please forward any changes that may occur to your Email address to Fred Gerhart @ SWRI.

TMC Report

Rich Grundza presented a summary of the Semiannual Reports for the Sequence VIII which is shown in *Attachment #4*, Rich also included some information on previous new bearing batch acceptance. The complete Sequence VIII report for this period may be found on the TMC web site at the following link:

<ftp://ftp.astmtmc.cmu.edu/docs/gas/sequenceviii/semiannualreports/>

CPD Report

Zack Bishop presented the CPD report shown in *Attachment #5* and gave a detailed presentation in the new bearing batch production. The identification for these will be Batch # 03-06 and Part number 1000341.

The SP had a discussion on how we should introduce these and it was determined that Surveillance panel chairman would send a letter to the ACC PAPTAG chairman, the ILSAC/OIL chairman and the surveillance panel members to solicit funding for a 15 test matrix (including 3 reference oils) to approve the new bearing batch. Labs will be required to fund 2/lab for calibration status.

No other hardware issues were noted by the CPD.

New Business

Jerry Brys of The Lubrizol Corp. offered a GF-5 reference oil for the VIII at the established GF-5 pass limit. More details to follow once the limit is set.

Review of Scope and Objectives

The Scope and Objectives for this panel are shown in *Attachment #6*

Adjournment

Meeting was adjourned

ATTACHMENT #1
Sequence VIII Surveillance Panel Agenda
SwRI in Building 209, Conference Room 103.

June 7, 2006 (Wednesday)

10:30-12:00 noon

1. Call to Order by Chairman – Fred Gerhart
2. Secretary Items – Charlie Leverett
 - a. Approval of minutes (*November 2005*)
 - b. Motion and Action Items Recorder
 - c. Membership Changes
 - d. Attendance Sign-in
3. TMC Report– Rich Grundza
 - a. Lead leaching rate
 - b. Any industry precision or severity issues?
 - c. Reference oil inventory.

Please note due to the limited time this report will not be reviewed in detail, please do this prior to the meeting and have questions prepared in advance
4. CPD Report
 - a. Production of New Bearing Batch
 - i. SEM Results
 - ii. How to Introduce?
 1. Use standard lab referencing?
 2. Any other options?
 - b. Any other hardware issues?
5. New Business
 - a. Any GF4 / GF5 oils for consideration as potential reference oils? Currently all reference oils provide passing results. So we still need a failing oil.
 - b. This is Charlie’s last meeting as Sequence VIII Secretary. Any volunteers for the Sequence VIII Surveillance Panel Secretary position?
6. Review Scope and Objectives
7. Next Meeting – At the call of the chairman
8. Adjournment

Attachment #2

ASTM SEQUENCE VIII SURVEILLANCE PANEL VOTING MEMBERSHIP ATTENDANCE RECORD

Name	Address	Phone/Fax/Email	Attendance
Knight, Clayton	Test Engineering Inc 12718 Cimarron Path San Antonio, TX 78249-3423	Phone: 210-690-1958 Fax: 210-690-1959 cknight@tei-net.com	<i>Clayton Knight</i>
Caudill, Timothy	Valvoline 21st and Front Streets Ashland, KY 41101	Phone: 606-329-1960 ext 5708 Fax: 606-329-2044 Tcaudill@ashland.com	<i>Timothy Caudill</i>
Bowden, Dwight	OH Technologies, Inc. P O Box 5039 Mentor, OH 44061-5039	Phone: 440-354-7007 Fax: 440-354-7080 dhwbowden@ohtech.com	<i>Dwight Bowden</i>
Buscher, Jr., Bill	Buscher Consulting Services P O Box 112 Hopewell Jct., NY 12533	Phone: 845-897-8069 Fax: 845-897-8069 BuschWA@aol.com	
Clark, Sid	GM Powertrain Engine Engineering Building 823 Joslyn Rd MC 483-730-322 Pontiac, MI 48340-2920	Phone: 248-857-9959 Fax: sidney.l.clark@gm.com	<i>Sid Clark</i>
Ritchie, Andy	Infineum P O Box 735 1900 East Linden Ave Linden, NJ 07036-0735	Phone: Fax:	<i>Andy Ritchie</i>
Gerhart, Fred	Southwest Research Institute 6220 Culebra Road P O Box 28510 San Antonio, TX 78228-0510	Phone: 210-522-3842 Fax: 210-684-7523 fgerhart@swri.org	<i>Fred Gerhart</i>
Glaenger, David	Afton Chemical 500 Spring Street P O Box 2158 Richmond, VA 23218	Phone: 804-788-5214 Fax: 804-788-6358 Dave.Glaenger@aftonchemical.com	
Riley, Mike	Ford Motor Company 21500 Oakwood Blvd POEE Bldg Rm DR 167 MD 44 Dearborn, MI 48121-2053	Phone: 313-390-3059 Fax: 313-845-3169 Mriley2@ford.com	
Grundza, Rich	ASTM/TMC 6555 Penn Ave Pittsburgh, PA 15206-4489	Phone: 412-365-1031 Fax: 412-365-1047 reg@astmtmc.cmu.edu	<i>Rich Grundza</i>
Leverett, Charlie	Intertek 5404 Bandera Road San Antonio, TX 78238	Phone: 210-647-9422 Fax: 210-523-4607 charlie.leverett@perkinelmer.com	<i>Charlie Leverett</i>
Miranda, Timothy	BP Lubricants USA 1500 Valley Rd Wayne, NJ 07470	Phone: 973-305-3334 Fax: 973-686-4039 Timothy.Miranda@BP.com	
Brys, Jerry	Lubrizol Corporation 29400 Lakeland Blvd Wickliffe, OH 44092	Phone: 440-347-2631 Fax: 440-347-4096 jabs@lubrizol.com	<i>Jerry Brys</i>
Sutherland, Mark	Chevron Oronite Company LLC 4502 Centerview Ste. 210 San Antonio, TX 78228	Phone: 731-5605 Fax: 731-5621 MSUT@chevrontexaco.com	<i>Mark Sutherland</i>
<i>Dawn Bowden</i>	<i>OHTechnologies, Inc.</i>	<i>dhbowden@ohtech.com</i>	<i>Dawn Bowden</i>

**ASTM SEQUENCE VIII SURVEILLANCE PANEL
NON-VOTING MEMBERSHIP and GUESTS ATTENDANCE RECORD**

Name	Address	Phone/Fax/Email	Attendance
[Redacted]	L. Arizel 3000 Lakeside Blvd Wickliffe OH 44090	440 347 2161 PAR@LUSRI24.COM	[Signature]
Ben Wilbur	SWRI	210-522-5911	Ben Wilbur
Zack Bishop	TEI		ZRB
FRANCO FARISSIO	TMC	412 525 1080 Fran@astmtmc.cmu.edu	Fran
Rich Grundza	ASTM TMC	412-365-1031 reg@astmtmc.cmu.edu	Rich
ADAM BOWDEN	OH TECHNOLOGIES	440.354.7007 440.354.7080 (F) adbowden@drtech.com	Adam
Jason Bowden	OH Technologies, Inc.	440 354-7007 440 357-7000 jbowden@drtech.com	JHB
WAYNE K. PETERSON	HALLICRAFTMAN PRODUCTS	1091 630 2111 187-550-3347 wpeterson@drtech.com	Wayne
Jo Martinez	Chrysler Group 3000 Lakeside Blvd Wickliffe OH 44090	416 942 5163 jo.martinez@chrysler.com	Jo
WILLIAM A BUSCHER III	SWRI	210-522-6802 wbuscher@swri.edu	William A Buscher

ASTM SEQUENCE VIII SURVEILLANCE PANEL
NON-VOTING MEMBERSHIP and GUESTS ATTENDANCE RECORD

Name	Address	Phone/Fax/Email	Attendance
Patrick LANG	SWRI	210-522-2820	P.L.
Dwayne Rouse	In Fineum 1900 East Linden Ave Linden, NJ 07036	908 474-3176 Dwayne.Rouse@Lifineum.com	DWR

Attachment #3

Sequence VIII Surveillance Panel

June 7, 2006

10:30AM – 12:00PM

SwRI, Building 209, Conference Room 103

San Antonio, TX

Motions and Action Items

As Recorded at the Meeting by Bill Buscher

1. Motion – Approval of Minutes for 11/10/05. Approved without changes.
Fred Gerhart / Dwight Bowden / Passed unanimously
2. Action Item – Surveillance panel chairman to draft a letter to the ACC PAPTAG chairman, the ILSAC/OIL chairman and the surveillance panel members to solicit funding for a 15 test matrix (including 3 reference oils) to approve the new bearing batch.

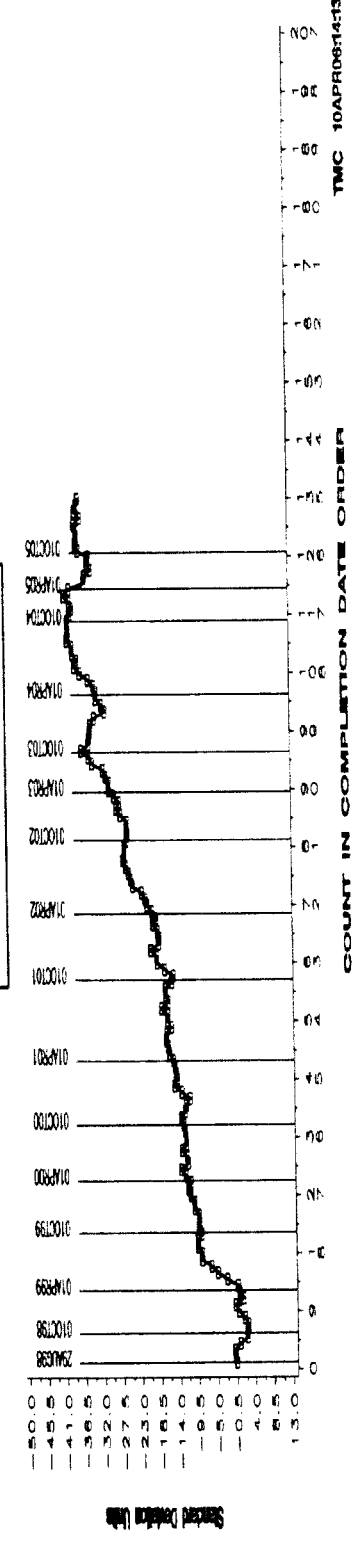
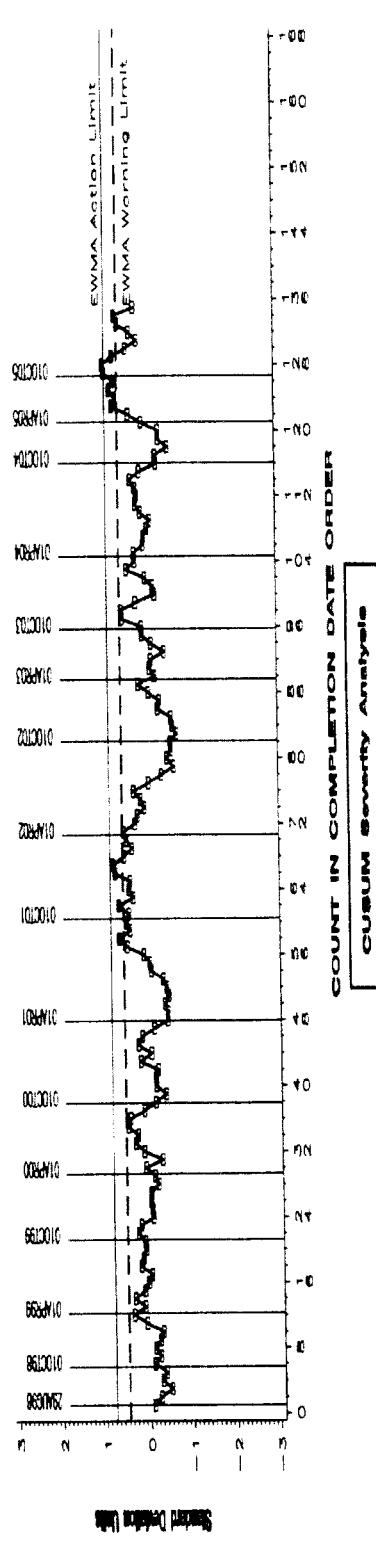
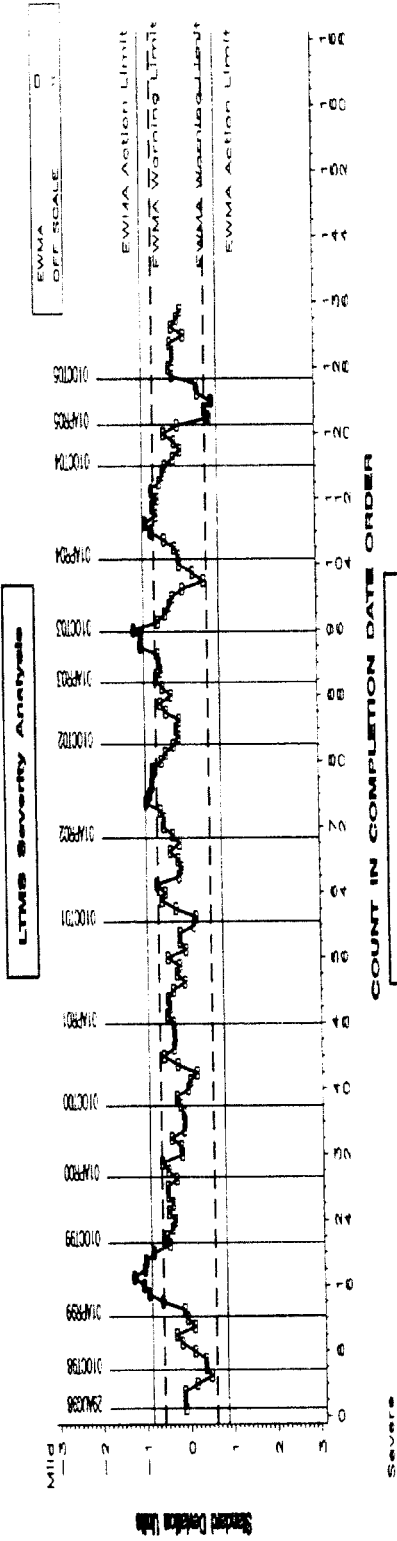
Attachment #4

Sequence VIII Update

June 7, 2006

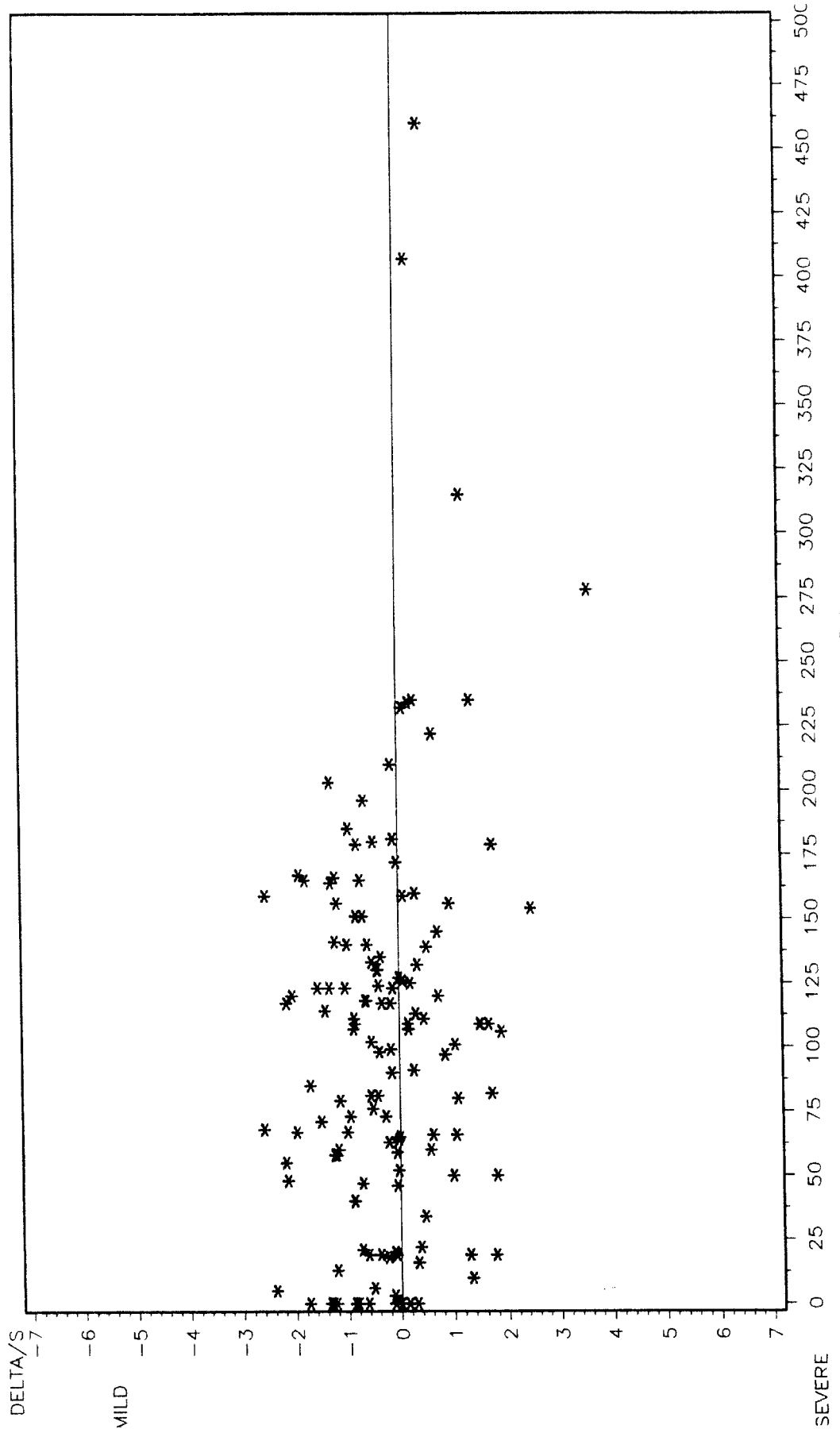
SEQUENCE VIII INDUSTRY OPERATIONALLY VALID DATA

FINAL BEARING WEIGHT LOSS



SEQUENCE VIII BWL DELTA/S vs LEAD PPM

All LTMS Data



(*) BEARING BATCH 11/93

Introduction of New Bearings

- 11-93 Batch of H-24 Bearings Introduced with 12 test matrix. (Copies of O&H and SP Minutes included below).
- Correction necessary due to different bearings (Previous H-35 bearings were different composition than H-24).
- LTMS requires two tests per lab to introduced new bearing batch.

Attachment #5

CPD Report to Sequence VIII Surveillance Panel June 7, 2006

•New Batch of Rod Bearings Manufactured

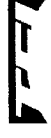
- Bearings batch identified as “03-06”
- Part number is unchanged (1000341)
- Produced at Federal Mogul plant in Mexico
- H-24 material sintered onto steel backing at ~850 C
- Sintered stock cut into bearing shape and stamped
- A double broaching process was incorporated
 - 1st cut (rough cut) removed ~ 0.0005” surface material
 - 2nd cut (finish cut) removed ~ 0.0003” surface material
- Final broaching was done without replacing cutters
 - All bearings will be identified as Lot Code 1
 - Total number of bearings produced 5,098 (2,549 sets)



CPD Report to Sequence VIII Surveillance Panel June 7, 2006

•New Batch of Rod Bearings

- A sample of the finished bearing was analyzed at FM
 - % Pb = 22.38 (acceptable range = 21.0 - 27.0)
 - % Sn = 1.06 (acceptable range = 0.60 - 1.25)
 - % Fe = 0.01 (acceptable range = 0.25 max)
 - % Cu = 76.55 (remainder)



CPD Report to Sequence VIII Surveillance Panel June 7, 2006

•New Batch of Rod Bearings

- Bearing batch 03-06 was 100% inspected at FM
- All handling of bearings was done with gloves on
- Rejected only 7 bearing pieces of total inspected
- Bearings were immediately placed into jars of PAO
- New batch of bearings now at TEI
- SEM analysis done on initial and end of run pieces
 - 250X and 1000X
- Analysis of PAO to be performed as benchmark
 - Two sample containers will be selected
 - Annual analysis will be performed to track any changes



CPD Report to Sequence VIII Surveillance Panel June 7, 2006

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CPD Report to Sequence VIII Surveillance Panel June 7, 2006

•New Batch of Rod Bearings (SEM)

CPD Report to Sequence VIII Surveillance Panel June 7, 2006

1

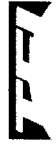
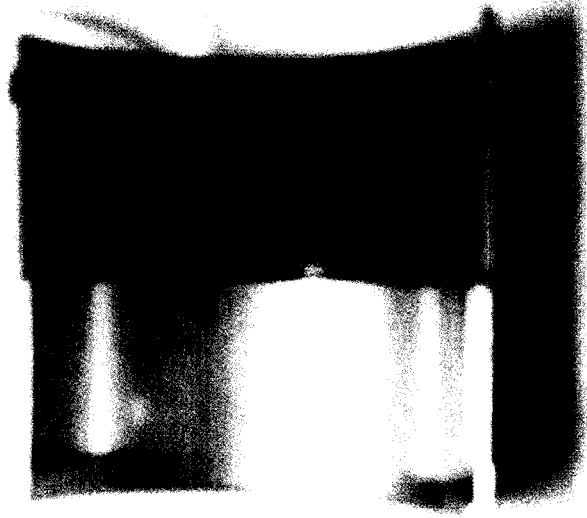
#4 X250 20kV 100µm SWRI #0013

#4 X1000 20kV 10µm SWRI #0016



**CPD Report to
Sequence VIII Surveillance Panel
June 7, 2006**

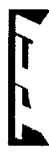
- New Batch of Rod Bearings compared to Old Batch



CPD Report to Sequence VIII Surveillance Panel June 7, 2006

•New Batch of Rod Bearings

- Bearings will be made available for any referencing
 - TEI will furnish the required number of sets for this purpose
- All bearings will be placed in Argon storage cabinet
 - 11-92 bearings will be removed from storage and replaced with the 03-06 batch after approval.



CPD Report to Sequence VIII Surveillance Panel June 7, 2006

- **Annual Parts Order**

–Annual orders for 2006 have been processed. All hardware with the exception of connecting rod bearings were issued. The orders will be completed when the new bearing batch has been approved.



Attachment #6

SEQUENCE VIII SURVEILLANCE PANEL SCOPE AND OBJECTIVES

SCOPE

The Sequence VIII Surveillance Panel is responsible for the surveillance of the Sequence VIII test procedure (ASTM D 6709-01). This panel works in conjunction with Test Engineering Inc. (TEI) who supplies the test hardware. Improvements in the test operation, test monitoring, and test validation will be accomplished through continual communications with the test hardware supplier, the ASTM Test Monitoring Center, the Technical Guidance Committee, and the ACC Monitoring Agency. The panel will maintain an up-to-date evaluation of the precision of the VIII reference oils and will report this precision and test severity levels to D02.BO.01 Oil Classification Panel and section.

These combined efforts will help to assure that the Sequence VIII test method will continue to provide the industry with a precise method for evaluating a lubricant's ability to protect against copper-lead bearing weight loss and to evaluate the viscosity stability of multi-viscosity-grade oils.

OBJECTIVES

Continue monitoring of lead leaching rate in storage oil	Ongoing
Plan for bringing new bearing batch into the system	Nov 2006
Chair to send solicitation letter to ACC PAPTAG chairman for 15 test matrix to approve new bearing batch	July 2006
Request reference oils with performance close to 26 mg TBWL	Nov 2006
Continue to look at improved bearing storage methods	Ongoing

