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March 27, 2003

Richard E. Grundza Reply to:

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Unapproved Minutes of the March 19, 2003 Sequence VG Surveillance Panel Meeting held in Detroit, MI

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The meeting was called to order at 8:00 AM by Chairman Gordon Farnsworth. A membership list was circulated for members and guests to sign in. The signed membership list is included as Attachment 1. A copy of the agenda is included as Attachment 2. No changes to the membership were reported during this meeting. Minutes from the November 20th, 2002 meeting were approved as written, motion to approve, Jerry Brys, Bill Buscher, 2nd.

Review of Action Items from Previous Meeting

- 1) Future Engine Supply-Gordon informed the panel that Mike Riley may agree to chair this panel. Ongoing
- 2) Bore Wear Measurements-Ford has received 7 blocks to date. Labs will continue to ship blocks. Measurements on 2000 model engines may not be practical due to multiple use and cost associated with measuring devices. Ongoing.
- 3) Withdraw of Test Method D5302. Being balloted, Completed.
- 4) Roller Pin and Ring Wear-RSI will be analyzing candidate data, to be completed in approximately one month. Ongoing.
- 5) Industry Part Survey-Dan Worcester to survey labs monthly. Ongoing.
- 6) Definition of Kit Parts-Completed.

See attachment 3.

O&H Report

Dan Worcester gave the O & H report. A listing of Motion and action items is included as attachment 4. Dwight Bowden moved that redistribution of parts be added to the Surveillance Panel Scope and Objectives, which was seconded by Dan Worcester and approved unanimously by the panel. It was agreed to measure the piston diameter at 42mm below the top of the piston crown. The bore measurement used to determine piston to bore clearance will be the average of the three transverse bore measurements. Labs are to document their build practices for the May O & H meeting. For the 2000 model year engines, a build out of 200 cylinder heads will be conducted at AER. New valve springs and seals will be used and new guides will be installed. Amounts of 1994 hardware available will be disseminated monthly. Ford will investigate whether pistons in the kits are from the same batch and will ask the supplier to identify batch codes of pistons for subsequent kits. Future piston batches will have chamfers of 0.4±0.05 mm. Gordon Farnsworth will advise both the Engine Oil Class Panel and Subcommittee D0.02.B0 that 355 2000 model year engines are still available from Ford Power Products. Mike Riley will suggest that Power Products do one more solicitation for these engines. Engine kits will be available from TEI. Reworked 1994 model year cylinder heads will be maintained at TEI and TEI will advise AER when additional heads are needed. Matrix results were reviewed in the O&H meeting and were recapped. Alfredo Montez briefly discussed the results of analysis of the data conducted by Jo Martinez. She noted a difference in the means for oil screen clogging with reference oil 925-3, as well as a bore size difference for AEV with oil 1006. Lab differences were also noted with oil 925-3 for oil screen clogging. The Surveillance Panel accepted the O&H Subpanel's recommendations on the use of the 2000 model year hardware as moved by Dwight Bowden and seconded by Bill Buscher. The panel also agreed to adjust the reference oil assignments on the 1994 hardware to reference oils 1009 and 1006-2 to facilitate target generation on these oils before moving to the 2000 model year hardware. This motion, made by Rich Grundza and seconded by Bill Buscher, was approved unanimously. Dan's report was approved by the panel, Motion to approve, Dan Worcester, second, Dwight Bowden.

Letter on Additional 2000 Model Year Engine Source.

Gordon discussed the status of a letter received from AER, stating that they no longer intended to be an alternate source for the 2000 model year hardware. A copy of this letter is included as Attachment 5. Gordon asked if there were any problems with having this ballot rescinded and there were none. Gordon will contact Subcommittee D0.02.B0 and ask that this ballot be rescinded.

Lambda Values During Break-In

Recently, it was noted that Test Method D6593 still contains exhaust gas values for stages 2 and 3. The panel agreed that typical lambda values of 1.0 for stage 2 and 0.75 for stage 3 should be targeted. The TMC was directed to issue an information letter to address this. Also, Jerry Brys informed the panel that Section 7.10.4.1 wrongly identifies Figure A13, when it should identify Annex A10. This item will be corrected via information letter. Both items were deemed non controversial.

New Business

The panel was advised that another adjustment to the fuel stored by Dow was made in February. Jim Carter presented the results of monthly fuel analysis conducted by Dow. The panel requested that Dow perform analytical tests on the fuel before and after adjustment, when adjustments are deemed necessary. The status of bi-monthly analysis of fuel stored at labs was also discussed. It appears that there are communications breakdowns occurring between the individual test labs and Dow. The TMC agreed to

Sequence VG Surveillance Panel Meeting March 19, 2003

contact the labs to see that they have received their Hazmat packs and to make sure they know where these samples are to be shipped. In addition, the TMC will see that Dow receives these samples in a timely manner. Labs were reminded to sample tanks in accordance with practice D4057, as reference in the test method. Dow requested to transfer the balance of the fuel in storage from one large tank to two smaller tanks. These tanks have floating lids and the quantity will be depleted from one tank before the other tanks is drawn from. This request was approved by the panel.

The meeting was adjourned at 9:20 AM.

A copy of the Motions and Action Items from this (March 2003) meeting is included as Attachment 6.

Sequence V Serveillance Panel Meeting March 19, 2003

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Agenda

Sequence VG Surveillance Panel March 19, 2003 8:00PM – 12:00 Noon Detroit, Michigan

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	Chairman	comments
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- 2. Attendance sign-in sheet distribution
- 3. Membership changes
- 4. Motion and Action recorders
- 5. Approval of minutes for November 20, 2002 All
- 6. Review action Items from last meeting G. Farnsworth
- 7. VG O&H subpanel report
 - Romeo Engine/AER cyl. Head
 - Four runs per Romeo block
 - AER engine redistribution
- 8. Old Business
 - -Tech B ballot "AER as an alternate engine supplier"
 - Lambda during break-in
- 9. New Business
- 10. Adjourn

D. Worcester

G. Farnsworth

Action Items Review

- 1.) Establish future engine supply Task Force determine an industry method for purchase and procurement of test hardware for the VG and future sequence testing. Chair selected but no meeting yet (Mike Riley?)
- 2.) Evaluate new Ford bore measurement procedure to determine need. <u>In progress by Barry Jecewski</u> (Mike Riley?)
- 3.) SP chair to request of B1 that the VE test method be withdrawn as an ASTM standard. Done
- 4.) Roller pin and ring wear measurements will cease at the May 2003 SP meeting, unless the data from references and RSI convince this panel of their value. This assumes that RSI will grant Barry's request to analyze the candidate data. Status on Ford request to RSI?
- 5.) Dan Worcester will survey the industry again regarding AER hardware for future redistribution.

 Done
- 6.) Bill Buscher and Beto Araiza to get together to firm up the kit parts required now that we are going to AER heads. Done

Sequence VG Operations & Hardware Subpanel Meeting

March 18, 2003 (9:00AM – 5:00 PM)

Detroit Marriott, Romulus MI

Motions and Action Items

- 1. Establish a formal system for final redistribution of 1994 model year Sequence VG hardware, referencing of test stands and introduction of 2000 model year Sequence VG hardware. Have system finalized by May 2003 surveillance panel meeting.
- 2. Measure piston diameter at 42mm down from top of piston. Calculate cylinder bore diameter as the average of the three transverse bore measurements. Target a piston to cylinder bore clearance of 0.020 0.046 mm.

Jerry Brys/Bill Buscher, Passed unanimously.

- 3. Labs to document build practices for the Sequence VG test conducted with the 2000 model year hardware by May 2003 surveillance panel meeting. SwRI to establish as list of items to include.
- 4. Instruct AER to only use new valve springs and valve guides on rebuilt cylinder heads.
- 5. O&H chairman to issue a monthly update on quantity by lab of 1994 model year Sequence VG hardware still on-hand.
- 6. Ford to investigate if the pistons supplied in the kits are from one batch or multiple batches and ask piston supplier if they mark the batch code identification on the pistons.
- 7. Coordinate and schedule first AER cylinder head build for industry. Request that AER use their cores for the first build.
- 8. Recommend to the surveillance panel that the Sequence VG test conducted with the 2000 model year hardware utilizing four cylinder bore sizes be accepted as equivalent to the Sequence VG test conducted with the 1994 model year hardware. Recommend that the current reference oil targets will be utilized for the Sequence VG test conducted with the 2000 model year hardware.

Bill Buscher/Dwight Bowden, Passed unanimously.

Attachment 5



AER Manufacturing 1605 Surveyor Blvd. P.O. Box 979 Carrollton, TX 75011-0979 Phone (972) 418-8499 Fax (972) 417-3150

March 17, 2003

To Whom it May Concern:

Based on arrangements with Ford Motor Company, AER is not currently able to offer engine code 0G-804-AA to be used for the VG testing purposes. We apologize for any inconveniences we have caused in offering and then resending our offer of these engines earlier.

Sincerely,

Mark Spaulding

Vice President of Operations

March 19, 2003 8:00PM – 12:00 Noon Detroit, Michigan

Motions and Action Items

- 1. Establish a formal system for final redistribution of 1994 model year Sequence VG hardware, referencing of test stands and introduction of 2000 model year Sequence VG hardware. Have system finalized by May 2003 surveillance panel meeting. Add this system to the scope and objectives of the Sequence VG surveillance panel.
- 2. Action item # 1 will be added as an objective for the Sequence VG surveillance panel. Redistribution of hardware will be added to the scope of the Sequence VG surveillance panel. The deadline for completion of the objective is the May 2003 surveillance panel meeting.
 - Dwight Bowden/Dan Worcester, Passed unanimously.
- 3. Readjust reference oil assignments to target oils 1006-2 and 1009 exclusively for Sequence VG tests conducted with the 1994 model year hardware. Rich Grundza/ Bill Buscher, Passed unanimously.
- 4. Accept O&H subpanel's recommendation to accept the Sequence VG test conducted with the 2000 model year hardware utilizing four cylinder bore sizes as equivalent to the Sequence VG test conducted with the 1994 model year hardware. Accept O&H subpanel's recommendation to utilize the current reference oil targets for the Sequence VG test conducted with the 2000 model year hardware.
 - Dwight Bowden/Bill Buscher, Passed unanimously.
- 5. Authorize transfer of all Haltermann SVGM2 fuel (approximately 374,000 gallons) from the one large fuel tank to the recommended two smaller fuel tanks.

Dwight Bowden/Jerry Brys, Passed unanimously.