

March 5, 2002

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UNCONFIRMED MINUTES from the SEQUENCE VIB SURVEILLANCE PANEL

**Held in San Antonio, Texas
November 13, 2001**

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Welcome

Chairman Charlie Leverett called the meeting to order. The agenda was accepted and is included as Attachment 1.

Chairman's Comments

The test developer was unable to attend this meeting. The chairman will schedule a teleconference shortly after Thanksgiving to discuss the VIC and cover the test developer's report.

Secretary Items

- Action items and motions were recorded by Ben Weber and are included as Attachment 2.
- Approval of minutes from the previous meeting – approved as posted on the TMC website.
- Attendance list was distributed and is included as Attachment 3.
- Membership changes and/or additions:
William Buscher now represents Buscher Consulting.

Review of Action Items from May 2001 meeting:

- The VIB Surveillance Panel would like to pursue a re-blend of 1008. *Status Report from TMC.*
- Ford has developed a team to investigate the failure mode of the chain tensioners and provide a permanent remedy. *The replacement parts have shown failure.*
- The TMC will facilitate a possible redistribution of BC and BCFHD oils. *Status Report from TMC on reblend of these oils.*
- O&H to review AFR Range. *Patrick Lai to present*
- Define new hardware for future VIB testing. *See AER Report*

TMC Semi-annual Report (Rich Grundza) - included as Attachment 4

The report is also available at

<http://www.tmc.astm.cmri.cmu.edu/docs/gas/sequencevi/semiannualreports/vib-10-2001.pdf>

Information letters 01-2 and 01-3 were issued during the reported period.

Five lab visits were conducted during the period.

Status of BC Blend – included as Attachment 5

Labs have been contacted and quantities defined.

Labs have been invoiced and have 30 days to pay.

Shipment to labs and approval tests, late this year, early 2002.

Re-blend of 1008 – included as Attachment 6

Only 128 gallons remain of the original blend of reference oil 1008.

Some difficulties are delaying the reblend.

Oil 538 – included as Attachment 7

Five donated tests to date with a sixth test in progress.

FEI2 results are lower than supplier data.

Test Developer Semi-annual report (Barry Jecewski)

No report - see Chairmen's comments.

CPD Semi-annual report (Beto Araiza)

Three-year solicitation letters have been sent to the participating laboratories.

Purchase orders need to be submitted by participating laboratories in order for parts to ship by end of January 2002.

R.S.I. Semi-annual report (Rick Oliver) –

The most recent version of this report is available at <http://www.registration-systems.com>.

Anyone having trouble with website please contact Rick Oliver.

59 tests were terminated at Sponsor Request

New Business:

Discussion on Disbanding Surveillance Week

Sequence VIII meeting SP chairmen will form a task force with the B1 Chair to determine how best to handle future SP meetings.

AFR Range Presentation by *Patrick Lai* – included as Attachment 8

Proposed revisions

Change range specification to 14.00:1 to 15.00:1. Will allow labs to run centerline

No change in Delta AFR from maximum stage average reading shall be < or = 0.50

Motion made by Patrick Lai – Seconded by Guy Stubbs to change range specification to 14.00:1 to 15.00:1. Motion passed unanimously. Effective with issuance of information letter.

Proposal to combine the O&H with the SP?

Motion by Charlie Leverett and seconded by Dwight Bowden to combine the O&H panel with the surveillance panel. Motion passed unanimously.

Disband VIA SP and cease TMC monitoring (VIBSJ Replaced need for VIA).

Motion by Charlie Leverett and seconded by Carl Stephens to disband the VIA SP and cease TMC monitoring. Motion passed unanimously.

Chain Tensioner Failure Presentation – Joe Vujica of Lubrizol – Included as Attachment 9
New design – reverted to previous coating. Machined inner surface of the hole, which fits over the dowel.

Windows installed into front cover to study lubrication. Found little or no lubrication.
Improper installation of roll pin in tensioner was root cause for lubrication problem.

Resolution

Ford has not attributed the failures to one specific source.

Action Item – TEI to verify oiling from both tensioners during engine build.

Action Item – The SP Chairman will contact Ford to the diameter Specification of the tensioner.

All laboratories are cautioned to double check the oiling holes on the chain tensioners of new engines.

Old Business:

Review of Scope and Objectives

The Scope and Objectives prior to this meeting are included as Attachment 10.

Adjourn

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

**Sequence VIA/B Surveillance Panel
November 13, 2001
San Antonio, TX**

- 1.) Welcome
- 2.) Attendance Sign-in sheet
- 3.) Membership changes and/or additions.
- 4.) Minutes Approval from May 2001 meeting
- 5.) Action Item Review:
 - A.) The VIB Surveillance Panel would like to pursue a re-blend of 1008. *Status Report from TMC.*
 - B.) Ford has developed a team to investigate the failure mode of the chain tensioners and provide a permanent remedy. *The replacement parts have shown failure.*
 - C.) The TMC will facilitate a possible redistribution of BC and BCFHD oils. *Status Report from TMC on reblend of these oils.*
 - D.) O&H to review AFR Range. *Patrick Lai to present*
 - E.) Define new hardware for future VIB testing. *See AER Report*
- 6.) TMC Report
- 7.) RSI Report
- 8.) Test Sponsors Report –
 - a.) VIC Activities
 - b.) Recent Tensioner problem
- 9.) AER Report
- 10.) Parts Supplier Report (TEI)
- 11.) Reference Oil/Fuel Sub Panel
 - a.) Introduction of GF-3 Category Oil into the VIB
- 12.) Old Business?
- 13.) New Business?
 - a.) Discussion on Disbanding Surveillance Week
 - b.) AFR Range Discussion *Patrick Lai*
 - c.) Proposal to combine the O&H with the SP?
 - d.) Disband VIA SP and cease TMC monitoring (VIBSJ Replaced need for VIA).
- 14.) Review of Scope and Objectives
- 15.) Adjournment

Motions & Action Items

VIB Surveillance Panel

November 13, 2001

As Recorded at the Meeting by Ben Weber

1. TMC will have the new BC oil ready for testing at the labs January 2002.
2. TMC is in the process of pursuing a re-blend of 1008, but is having difficult contacting the supplier.
3. TMC will pursue getting a 10W30 blend of the new GF-3 category reference oil. A 5-year supply will be requested, and a 33% usage rate will be used.
4. Teleconference will be established to cover the test sponsors report sometime shortly after Thanksgiving.
5. TEI will check on the status of the parts solicitation letter.
6. A Task Force will be formed of the Surveillance Panel chairs and the B1 chair to discuss the possibility of disbanding the surveillance panel week biannual meetings, and investigating other more effective ways to do business.
7. Motion by Patrick Lai and seconded by Guy Stubbs to change the AFR specification from to 14.00:1 to 15.00:1. The delta AFR spec will remain at ≤ 0.50 . Passed unanimously. Effective with the issue of the Information Letter.
8. All labs are cautioned to double check the oiling holes on the chain tensioners of new engines. TEI will also verify with AER is checking this during engine assembly. The SP Chairman will also contact Ford for the diameter specification of the oiling hole.
9. Motion by Charlie Leverett and seconded by Dwight Bowden to combine the O&H panel with the surveillance panel. Passed unanimously.
10. Motion by Charlie Leverett and seconded by Carl Stephens to disband the VIA SP and cease TMC monitoring. There already exists a VIBSJ replacement for the VIA.

ASTM SEQUENCE VIA/VIB SURVEILLANCE PANEL
Voting Membership

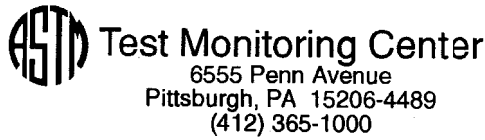
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**ASTM SEQUENCE VIA/VIB SURVEILLANCE PANEL
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JOHN PANDOSH 23003 MARGRAVE DR 78255 SAN ANTONIO, TX	NON-VOTING MAILING	Phone 210-732-8123 FAX 210-732-8450 Email John.Pandosh@Ink.com	
Jason Bowden	OH TECHNOLOGIES, Inc. P.O. Box 5039 Mentor, OH 44061-5039	Phone: 440-354-7007 Fax: 440-354-7080 jbowden@ohtech.com	Jason Bowden
Jim CARTER	3520 OKemos Rd., #6 OKemos, MI 48864-5943 HALTERMANN PRODUCTS	Ph. 517-347-4947 Fx. 517-347-1024 JECARTER@dow.com	Jim Carter
Phil Scinto	Lubrizol 29400 Lakeside Blvd. Wickliffe OH 44092	440-347-2161 PRS@LUBRIZOL.COM	Phil Scinto



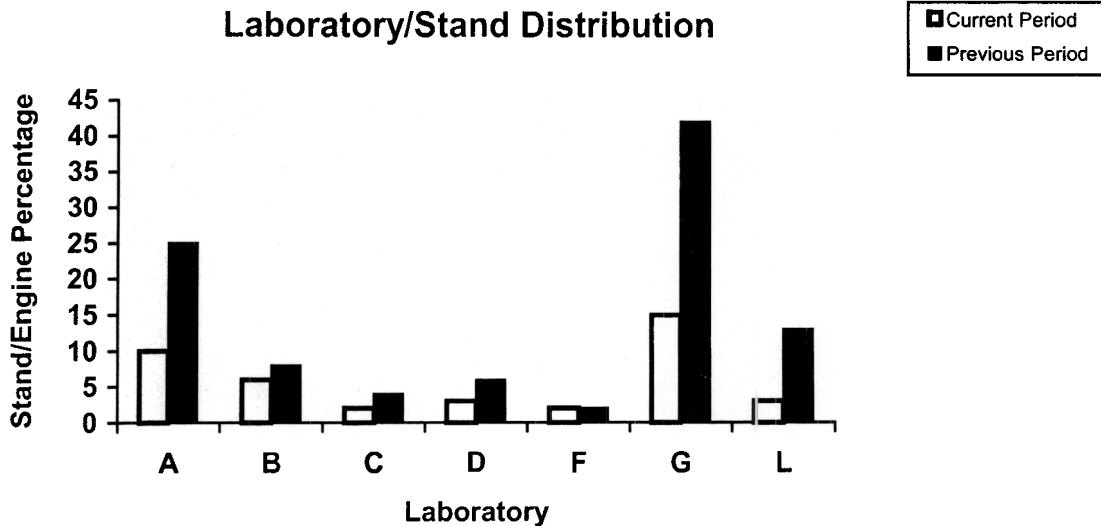
MEMORANDUM: 01-128
DATE: October 8, 2001
TO: Charlie Leverett, Chairman, Sequence VLA/VIB Surveillance Panel
FROM: Richard Grundza
SUBJECT: Sequence VIB Test Results from April 1, 2001 through September 30, 2001

The following is a summary of Sequence VIB reference tests that were reported to the Test Monitoring Center during the period April 1, 2001 through September 30, 2001.

Lab and Stand Summary

	Reported Data During Period	Calibrated as of 09/30/2001
Laboratories	7	6
Stand/Engine Combinations	41	18

The following chart shows the laboratory stand/engine distribution for data reported during this report period:

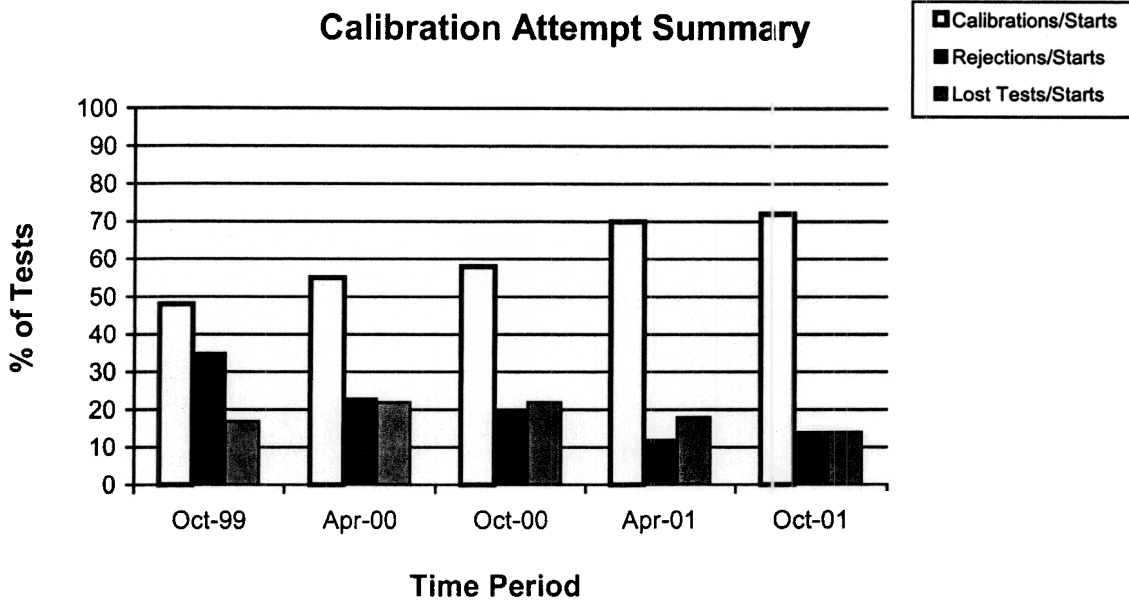


Memo 01-128
Page 2

The following summarizes the status of the reference oil tests reported to the TMC this report period.

	TMC Validity Codes	No. of Tests
Operationally and Statistically Acceptable	AC	79
Failed Acceptance Criteria	OC	16
Operationally Invalid (Laboratory Judgement)	LC	5
Operationally Invalid (Laboratory & TMC Judgement)	RC	1
Aborted	XC	3
Tests Lost Due to Abandoned Engines	MC	7
Total		111

Attempted calibration tests are depicted graphically below by report period:



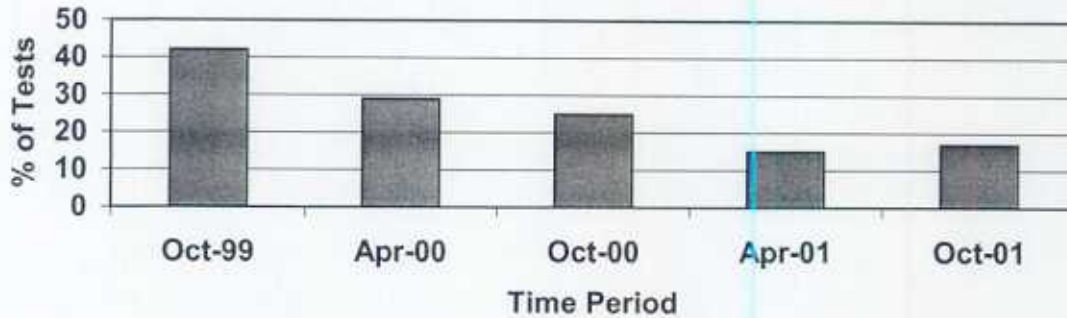
The calibration per start rate has increased slightly this report period. The rejected per start rate has increased and lost test per start rate has decreased this report period.

Memo 01-128

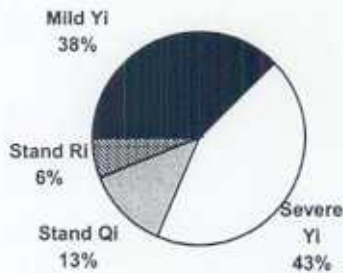
Page 3

The percentage of tests failing the acceptance criteria for operationally valid tests decreased this report period. The percentages are depicted graphically below.

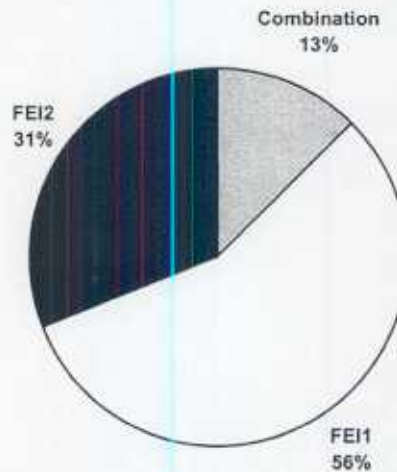
Rejected Operationally Valid Tests



Distribution of LTMS Stand Alarms



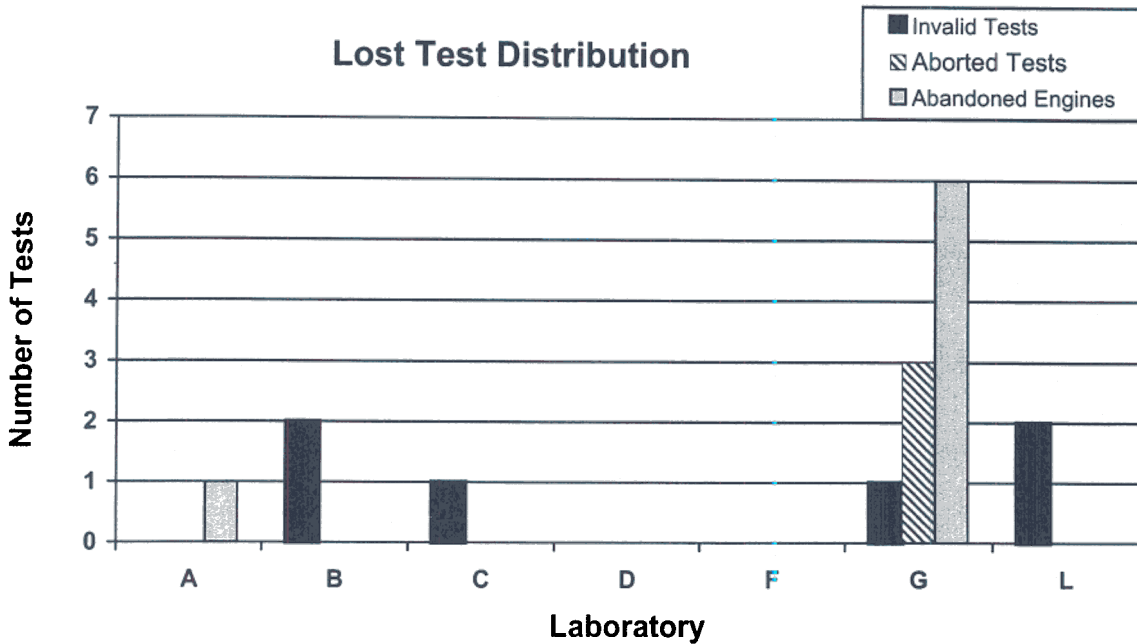
Distribution of Stand Alarms by Parameter



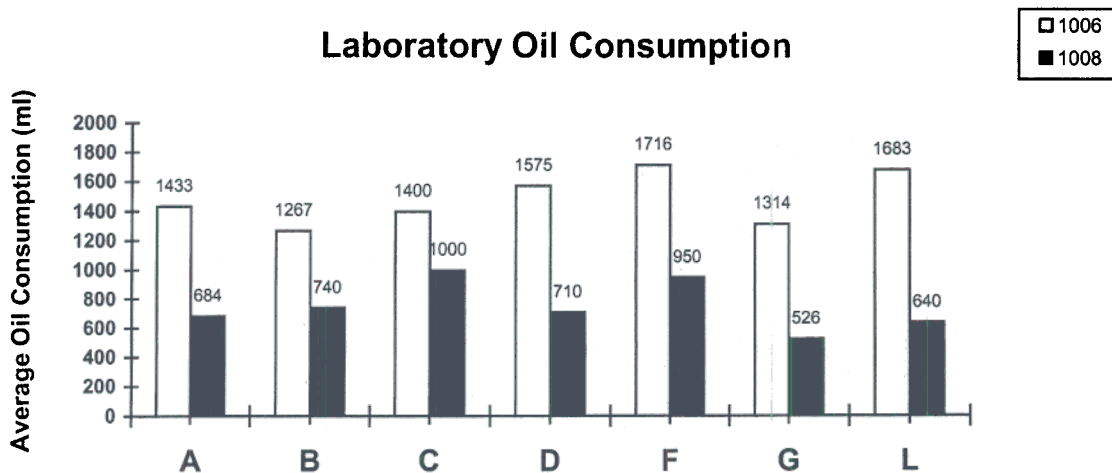
There were seven tests rejected for FEI Shewhart (Yi) severe, six tests rejected for FEI Shewhart (Yi) mild, two tests rejected for EWMA precision alarm (Qi), and one test rejected for Shewhart precision alarm (Ri). There has never been an LTMS deviation written for Sequence VIB.

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Page 4

The laboratory distribution of lost tests is shown below. A detailed list of reasons for tests declared operationally invalid, aborted or lost due to abandoned engines is shown in Table 2 (See Attachment).



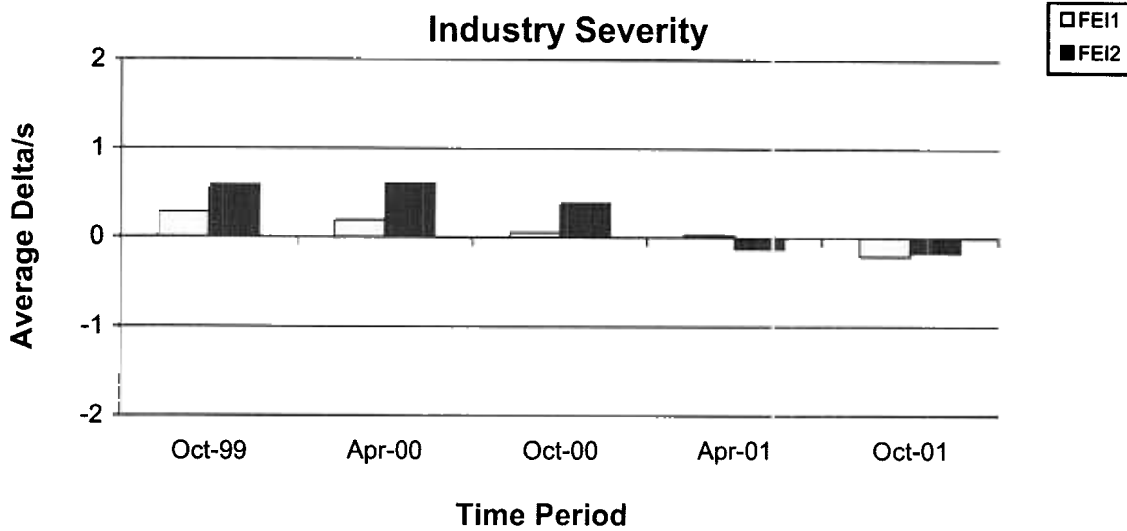
The average oil consumption by oil and laboratory are depicted graphically below. Shown below is a summary of the average oil consumption for all laboratories reporting data this report period.



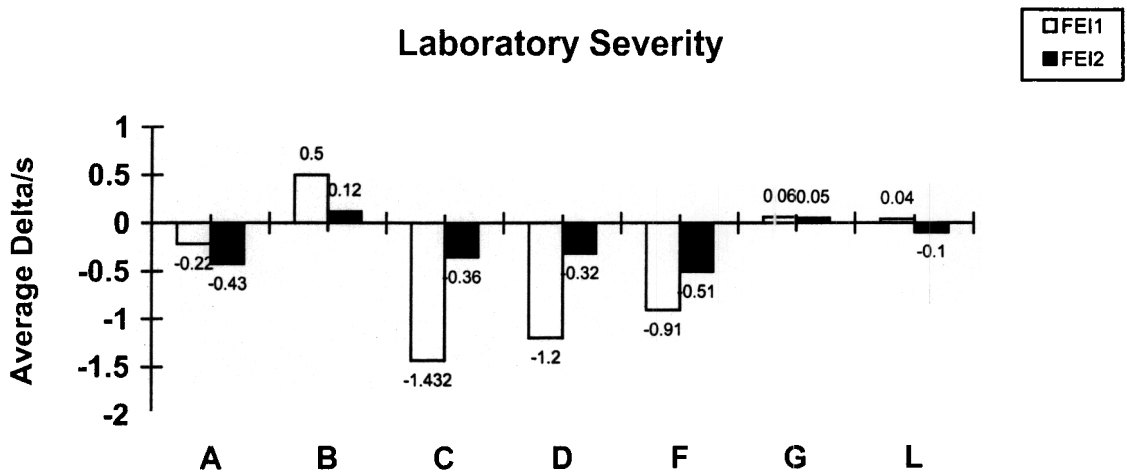
Memo 01-128
Page 5

TEST SEVERITY AND PRECISION

The industry mean Δ 's for FEI1 and FEI2, for this report period, are -0.21 severe and -0.17 severe, respectively. FEI1 and FEI2 severity are slightly severe of target for this report period.



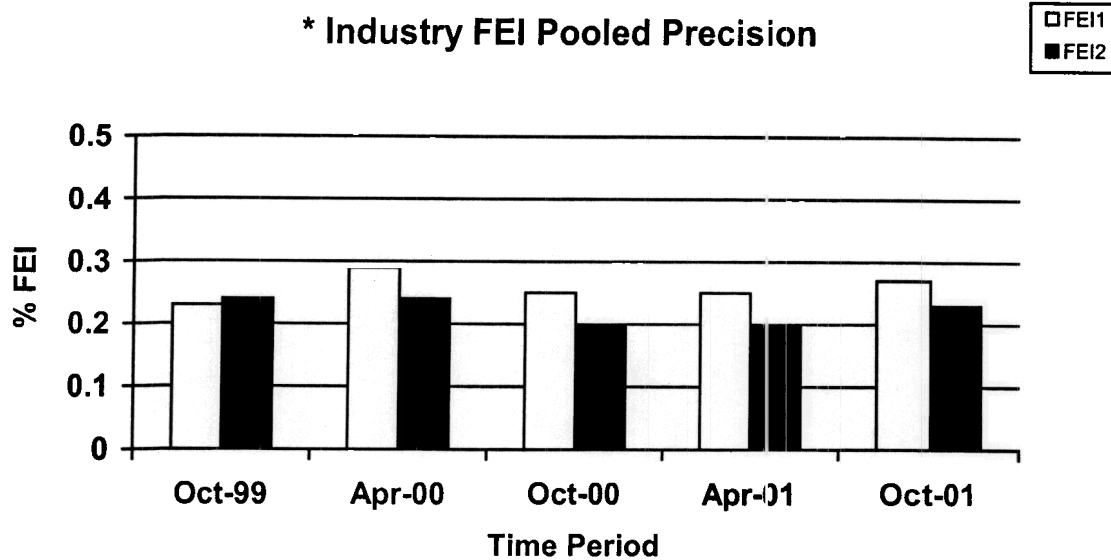
Shown below is a summary of the average FEI Δ 's for all laboratories reporting data this report period.



Memo 01-128

Page 6

The industry precision estimates for FEI1 and FEI2 for this report period are 0.27 and 0.23 (pooled s), respectively. Precision for both FEI1 and FEI2 has shown little change this report period.



*Precision estimates are calculated by pooling lab and stand/engine combination.

INDUSTRY CONTROL CHARTS

FEI1

There were seven severity EWMA warning alarms and fifteen precision alarms (eight action and seven warning) triggered this report period as illustrated in Figure 1. The precision alarms appear to be related to a mix of new engines that have a tendency to produce severe results and older engines that are near the end of the calibration life that give mild results.

FEI2

There were thirteen severity (seven warning and six action) alarms this report period as illustrated in Figure 2. The alarms appear to be related to a mix of new engines that have a tendency to produce severe results and older engines that are near the end of their calibration life that give mild results.

Memo 01-128

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REFERENCE OILS

The following table quantifies reference oils by the number of tests remaining at the TMC and each laboratory. Sequence VIB reference oils are shipped in quantities of 5 gallons per test.

LAB	538	1006	1006-2	1007	1008
A	1	8	0	7	7
B	1	8	0	2	9
C	1	6	0	2	4
D	1	7	0	5	9
F	1	7	0	3	6
G	4	10	0	3	14
L	2	7	0	5	7
TMC	524	0	*	**	***

- * 5,541 Gallons (Multiple test area usage)
- ** 543 Gallons (Multiple test area usage)
- *** 128 Gallons (Multiple test area usage)

Four tests have been completed on reference oil 538. An additional test is currently running.

The following table addresses the potential for re-blending the current Sequence VIB reference oils.

	1006	1007	1008
Viscosity Grade	5W30	5W30	5W30
Additional Re-blends	Yes ¹	No	Yes ²

¹ Currently two re-blends of reference oil 1006 are in the TMC inventory (1006-1 & 1006-2).

² Supplier has been contacted for re-blend.

LAB VISITS

Five lab visits were conducted during this report period.

INFORMATION LETTERS

There were two information letters issued this report period. Information Letter 01-2, Sequence Number 8, was issued on August 22, 2001 and Information Letter 01-3, Sequence Number 10, was issued on October 5, 2001. Items changed with these information letters are documented in the Sequence VIB timeline (Table 3).

Memo 01-128

Page 8

SUMMARY

Severity for FEI1 and FEI2 were slightly severe for this report period and compares well to historic data.

FEI1 and FEI2 precision has shown little change when compared to the last report period.

The percentage of calibrations per starts has increased slightly this report period.

The percentage of lost tests per starts has decreased this report period.

The percentage of statistically rejected tests per starts has increased this report period.

The percentage of operationally valid tests rejected statistically has increased this report period.

REG/reg

Attachments

Sequence VIA/VIB Surveillance Panel

Sequence VIA/VIB Test Engineers

<ftp://www.tmc.astm.cmri.cmu.edu/docs/gas/sequencevi/semiannualreports/vib-10-2001.pdf>

Sequence VIB Semiannual Report
List of Attachments

Table 1 is a historic statistical summary for reference oils through September 30, 2001

Table 1A is a statistical summary for reference oils for the current report period.

Table 2 is a summary of lost tests due to operationally invalid, aborted, abandoned engines or lost due to BC shift exceeding the test limits.

Table 3 is the Sequence VIB Timeline.

Figure 1 graphically present the Industry control charts for FEI1

Figure 2 graphically present the Industry control charts for FEI2.

TABLE 1 PAGE 1

SEQUENCE VIB
 OPERATIONALLY VALID DATA SET
 DATA PRIOR TO 10/01/01

OIL CODE				
N	TEST PARAMETER	MEAN	s	REPORTED RANGE
192	FEI1	1.41	0.30	0.61 - 2.50
192	FEI2	0.53	0.26	-.36 - 1.23
OIL CODE 1007				
N	TEST PARAMETER	MEAN	s	REPORTED RANGE
92	FEI1	0.75	0.30	0.24 - 2.11
92	FEI2	0.45	0.27	-.55 - 1.25
OIL CODE 1008				
N	TEST PARAMETER	MEAN	s	REPORTED RANGE
193	FEI1	1.83	0.24	1.19 - 2.47
193	FEI2	1.23	0.21	0.58 - 1.74

477 TOTAL

TABLE 1A PAGE 1

SEQUENCE VIB
 OPERATIONALLY VALID DATA SET
 DATA FROM 04/01/01 THRU 09/30/01

OIL CODE				
N	TEST PARAMETER	MEAN	s	REPORTED RANGE
49	FEI1	1.37	0.30	0.67 - 2.30
49	FEI2	0.48	0.26	-.36 - 1.18
OIL CODE 1008				
N	TEST PARAMETER	MEAN	s	REPORTED RANGE
46	FEI1	1.81	0.23	1.32 - 2.47
46	FEI2	1.21	0.21	0.85 - 1.74

95 TOTAL

Table 2

Lost Tests Summary

Tests declared operationally invalid, aborted or lost due to abandoned engines are summarized below by laboratory, reason, number of lost tests, and percent of lost tests:

LAB	REASON	Tests Lost	% of Tests Lost
A	Timing Chain Tensioner Failure, Low Oil Pressure, Abandon Engine	1	6%
C	Oil Gallery and Intake Air Temperature Control	1	6%
B	Timing Chain Tensioner Failure	1	13%
	Exhaust Backpressure Out of Specification	1	
C	Oil Leak	1	62%
	Abandon Engine	6	
	Engine Failure	1	
	Oil Consumption	2	
L	Timing Chain Tensioner Failure	1	13%
	Engine Torque Out of Specification	1	

Sequence VIB Timeline

Date	Item Changed	Information Letter
19990809	Reference oil 1006 targets updated	
19990809	Reference oil 1007 targets updated	
19990809	Reference oil 1008 targets updated	
19990924	Calibration requirements	99-1
19990924	Alternative Cooling system	99-1
19990924	Fuel injection flow procedure	99-1
19990924	Requirement for of Use Maintenance log	99-1
19990924	Coolant flow measurement device calibration revision	99-1
19990924	Preparation procedure for oil charge	99-1
19990924	Recording compression pressures	99-1
19990924	Ignition timing checks	99-1
19990924	Valve stem seal replacements	99-1
19990924	Alternative Racor oil filter (LFS-62) use approved	99-1
19990924	Engine serial number added to report	99-1
19991015	Invalid test BC shift limits of -0.5 to 0.8% added	99-2
19991015	Tests terminated due to an FEI result are not permitted	99-2
19991015	Section 11.5.17.3 deleted – Manual data logging no longer required	99-2
19991015	Exhaust back pressure calibration prior to calibration test added	99-2
19991015	Instrumentation calibration requirements	99-2
19991015	Use of Eaton 37KW (50hp) dry gap dynamometer approved	99-2
19991015	New flush oil (BCFHD) and flush oil procedure	99-2
19991015	Micro motion model CMF010 mass flow meter approved	99-2
19991015	Kinematic viscosity measurements on new reference oils permitted	99-2
19991015	Report form editorial change for LABVALID made	99-2
19990924	Valve stem seal revised part number	99-3
20000207	Oil sight glass calibration	00-1
20000207	Revised Figure A2.22 – Oil Level Marker Ruler	00-1
20000207	Revised flush effectiveness procedure	00-1
20000207	Coolant flush procedure	00-1
20000207	Oil consumption validity interpretation	00-1
20000207	Load cell temperature specification	00-1
20000410	Valve Spring Replacement	00-2
20000524	Eliminate Baseline Shift Criteria	00-3
20000601	Maximum Allowable Oil Consumption Test Limit	00-3
20000601	Oil Sample Location Defined	00-3
20000601	Revised Blow-by and Crankcase Ventilation System	00-3
20000807	Fuel Injector Calibration Flow Rate Specification Added	00-3
20000807	Dynamometer Replacement During a test is not permitted	00-3
20000807	Engine Break-in Stand Requirements	00-3
20000807	Removal of Ford Wiring Harness Diagram	00-3
20000807	Addition of Alternative Injector Wiring Harness Part Numbers	00-3
20000807	Addition of Alternative HEGO Sensor Part Numbers	00-3
20000807	Addition of Alternative Throttle Body Adapter Part Number	00-3
20000807	Visteon EEC Control Module	00-3
20000901	Barometric Pressure added to report packet as record only	00-3

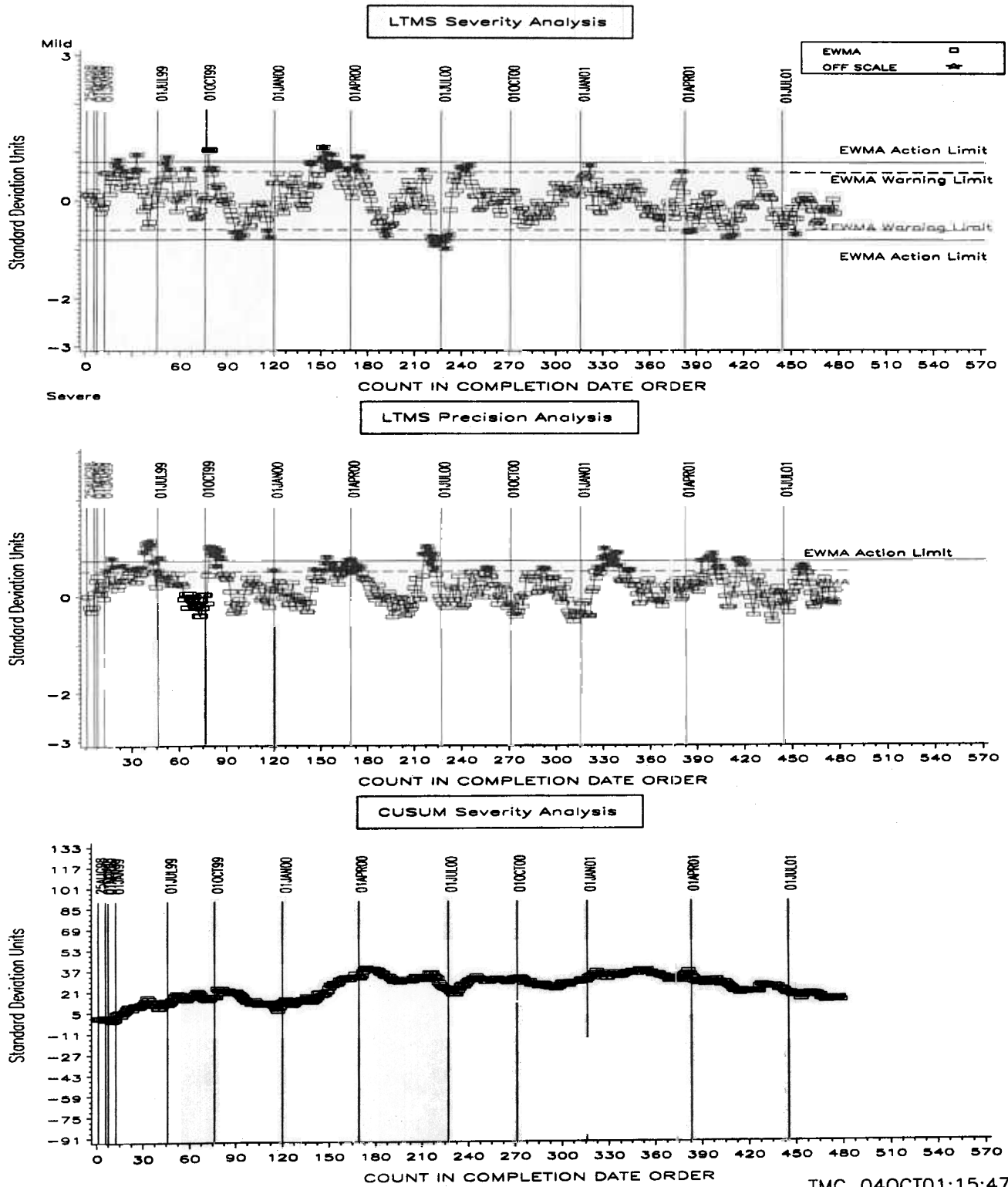
Sequence VIB Timeline

Date	Item Changed	Information Letter
20000801	A Task Force Was Appointed by the VIB Surveillance Panel to Address Lab To Lab Differences with Oil Consumption and FEI Severity. Information Letter 00-4 was a result of the Lab Visit Discrepancies.	
20000915	Increase Oil Charge to 6.0 Liters	00-4
20000915	Revise Oil Level/Sight Glass Calibration Procedure	00-4
20000915	Oil Pan Oil Level Requirement	00-4
20001116	Reduced Calibration Frequency	01-1
20001117	Validity Interpretation During BSFC Measurement Cycle	01-1
20001117	Reporting Stage Restarts or Any Test Time Deviations	01-1
20001117	Alternate HEGO Sensor Part Number	01-1
20001117	Revisions to New Engine Cyclic Break-in	01-1
20010301	Revisions to Test Length Calculation and Reporting Format	01-1
20010301	Additional Oil Analysis Requirements	01-1
20010822	Allowed Timing Chain Tensioner with Subsequent Reference Oil Test	01-2
20010822	Defined Maximum Total Test Length as 150 h	01-2
20010822	Defined Off Test Time and Allows No More Than 2 h of Off Time During Phase I and II Aging	01-2
20010822	Added Reference to Ford 543 Engine Assembly Manual	01-2
20010822	Refined Oil Analysis Procedure for HTHS, CCS Viscosity, Friction Coefficient by HFRR, Fuel Dilution and Infrared for Oxidation & Nitration	01-2
20010822	Correction of Company Suppliers in X1.3 and X1.19	01-2
20011005	Pressurization of Engine Coolant System to 69±13.8 kPa	01-2
20011005	Deleted Requirement to Measure Blowby	01-2
20011005	Revised Load Cell Temperature Delta for 3°C to 6°C in 6.4.2.3	01-2
20011005	Corrected Fuel Supplier Name and Address in Section 7.2 and Footnote 15	01-2

SEQUENCE VIB INDUSTRY OPERATIONALLY VALID DATA

FEI FINAL RESULT PHASE I (x)

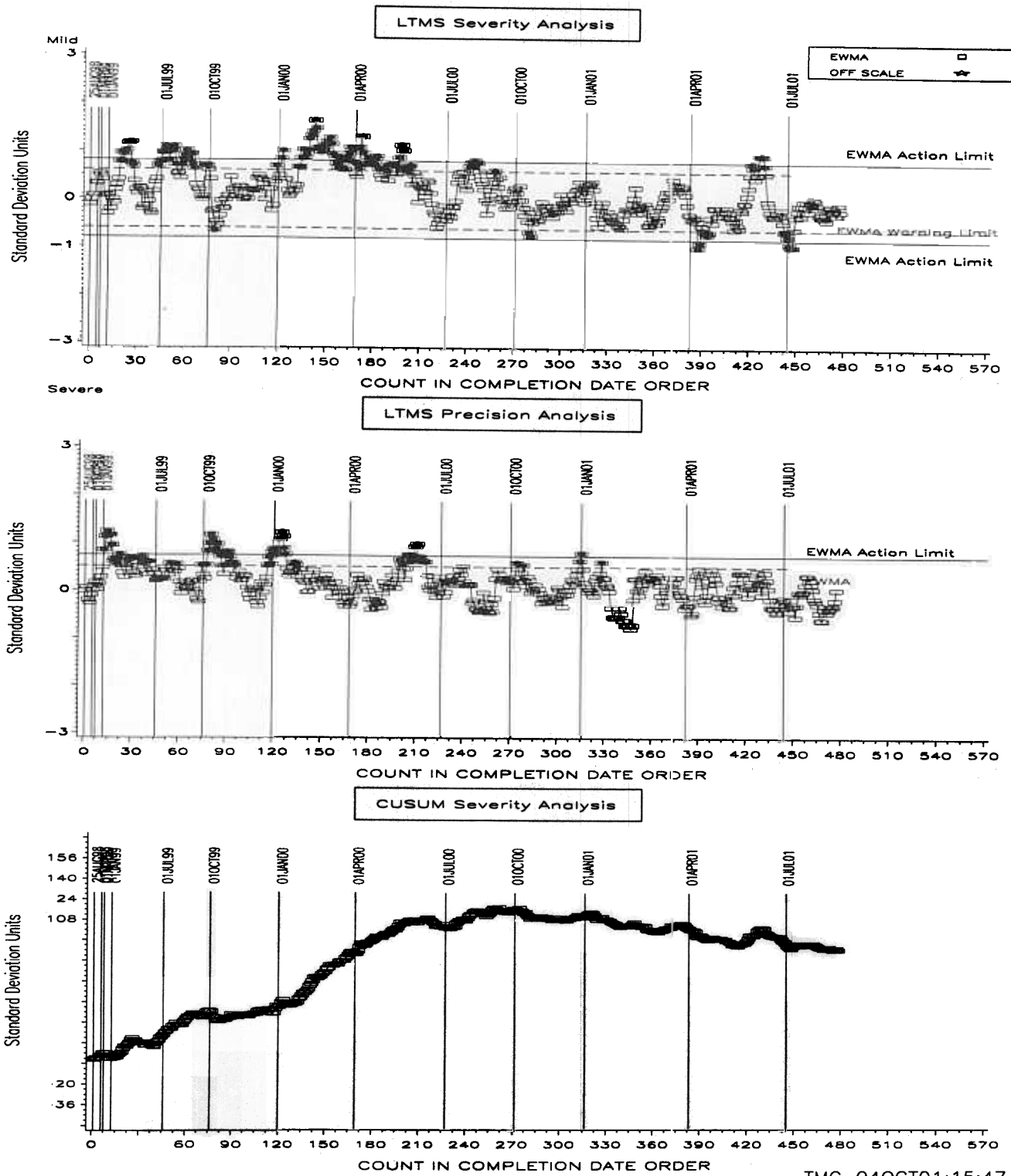
Figure



SEQUENCE VIB INDUSTRY OPERATIONALLY VALID DATA

FEI FINAL RESULT PHASE II (*)

Figure 2



Other TMC Items

BC Blend

- Labs contacted and Quantities Defined
- Labs Invoiced 10/29/01
- Labs have 30 days to respond
- Once all funds received, blending can take place
- Shipment to labs and approval tests, late this year , early 2002.

Other TMC Items

Re-Blend of 1008

- Supplier has been contacted several times, have not gotten pricing information to date.
- Need pricing info to issue P.O. to purchase this oil.

Summary of 538 Results

Lab	FEI1	SA	Corrected FEI1	FEI2	SA	Corrected FEI2	New Engine
A	2.07	0	2.07	1.78	0.07	1.85	No
B	1.84	0	1.84	1.64	0.02	1.66	Yes
C	1.68	0.18	1.86	0.85	0.16	1.01	Yes
D	1.85	0.13	1.98	1.51	0.04	1.55	Yes
F	2.1	0.07	2.17	1.40	0.10	1.50	No
L			Test Started	11/8			No
G							
Mean	1.91		1.98	1.44		1.51	
S	0.18		0.14	0.36		0.31	

Supplier Results MTAC'ed to FEI1 of 2.15 & FEI2 of 1.71

3 results, one discarded because of oil consumption.

SEQUENCE VIB AIR/FUEL RATIO REVIEW

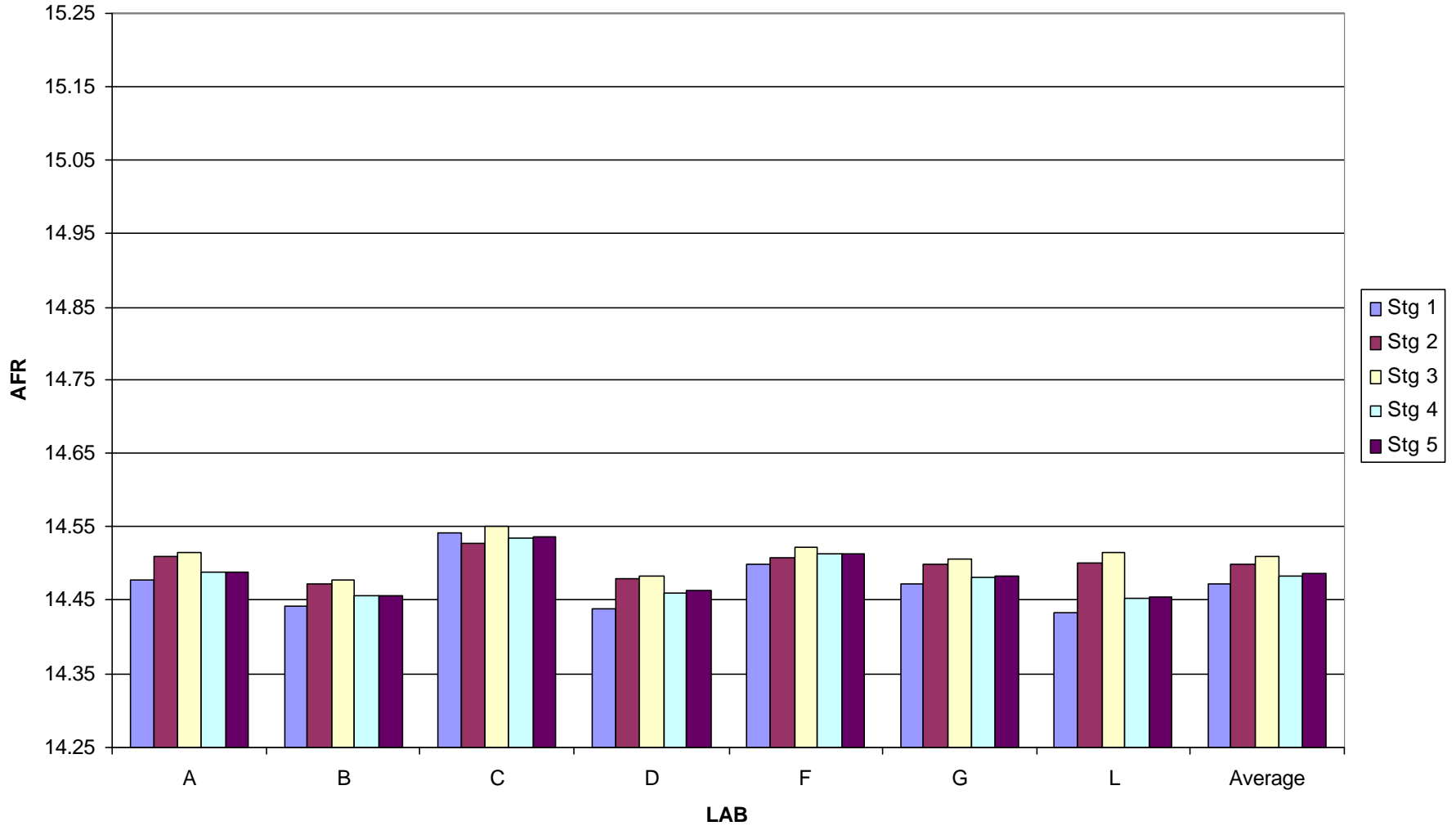
PATRICK LAI, IMPERIAL OIL
SEQUENCE VIB S.P. MEETING

2001-11-13

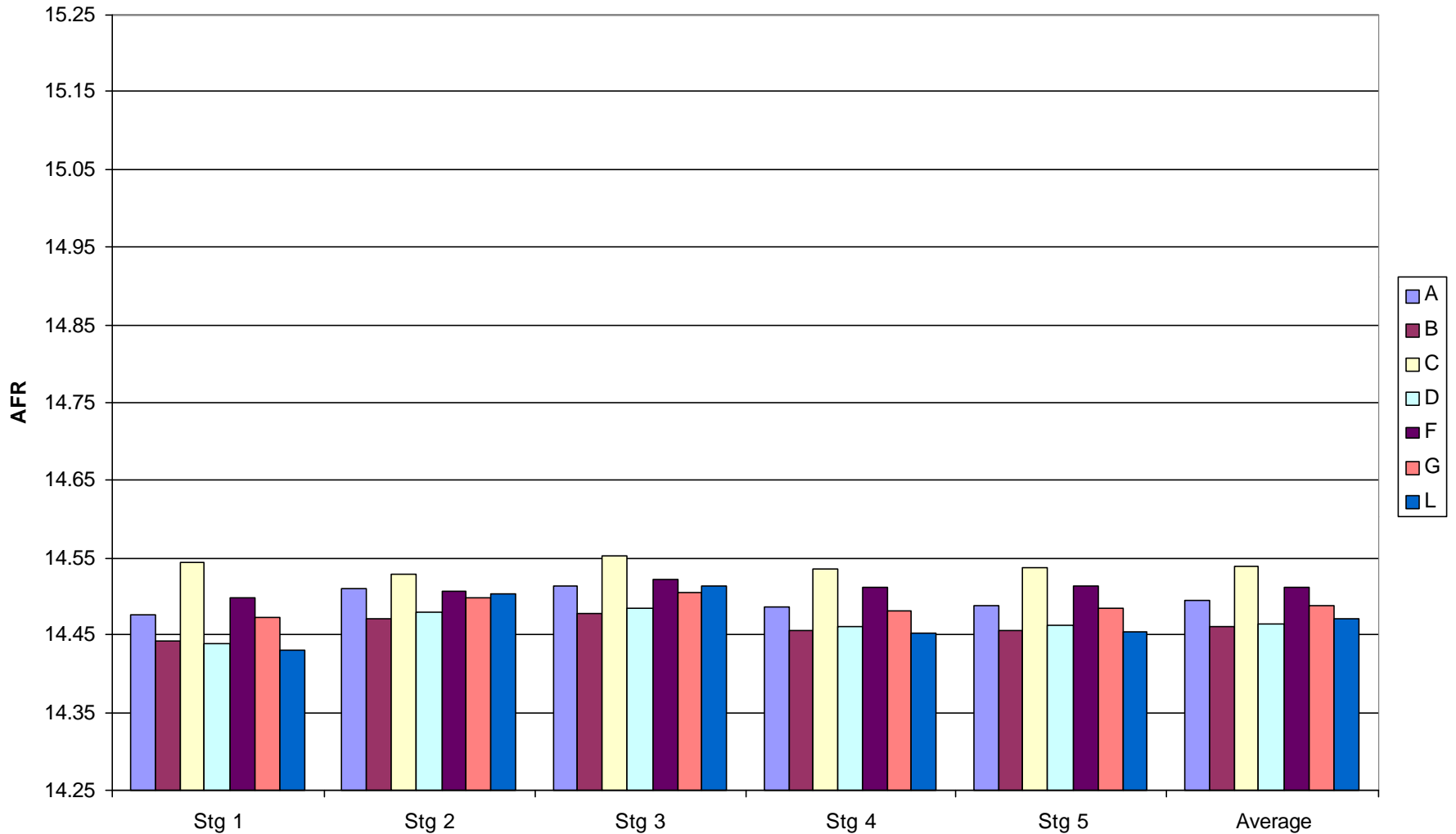
OBSERVATIONS

- AFR IS A CRITICAL PARAMETER
- AFR IS CONTROLLED BY THE EEC COMPUTER, MONITORED BY LAB
- AFR SPECIFIED OPERATING RANGE IS FROM 14.25:1 to 15.25:1
- DELTA AFR FROM MAXIMUM STAGE AVERAGE READING SHALL BE ≤ 0.50
- TMC SUPPLIED DATABASE SHOWED ALL LABS GRAND AVERAGE WAS 14.49:1
- INDIVIDUAL LAB AND STAGE AVERAGES RANGED FROM 14.43:1 to 14.55:1

AFR AVERAGES BY STAGE (TMC SUPPLIED DATABASE)

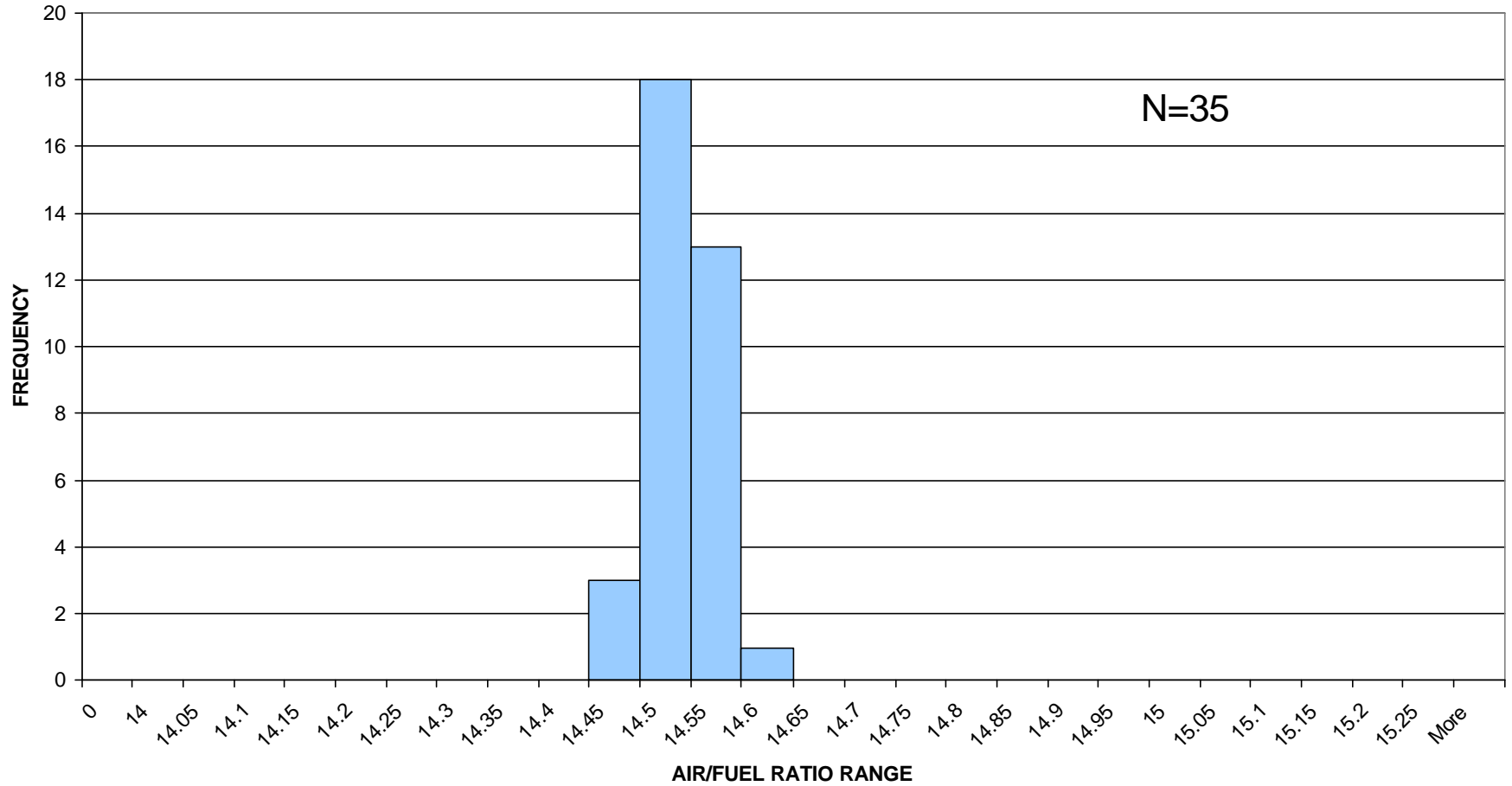


AFR AVERAGES BY STAGE (TMC SUPPLIED DATABASE)



Patrick Lai, Imperial Oil

AIR/FUEL RATIO HISTOGRAM

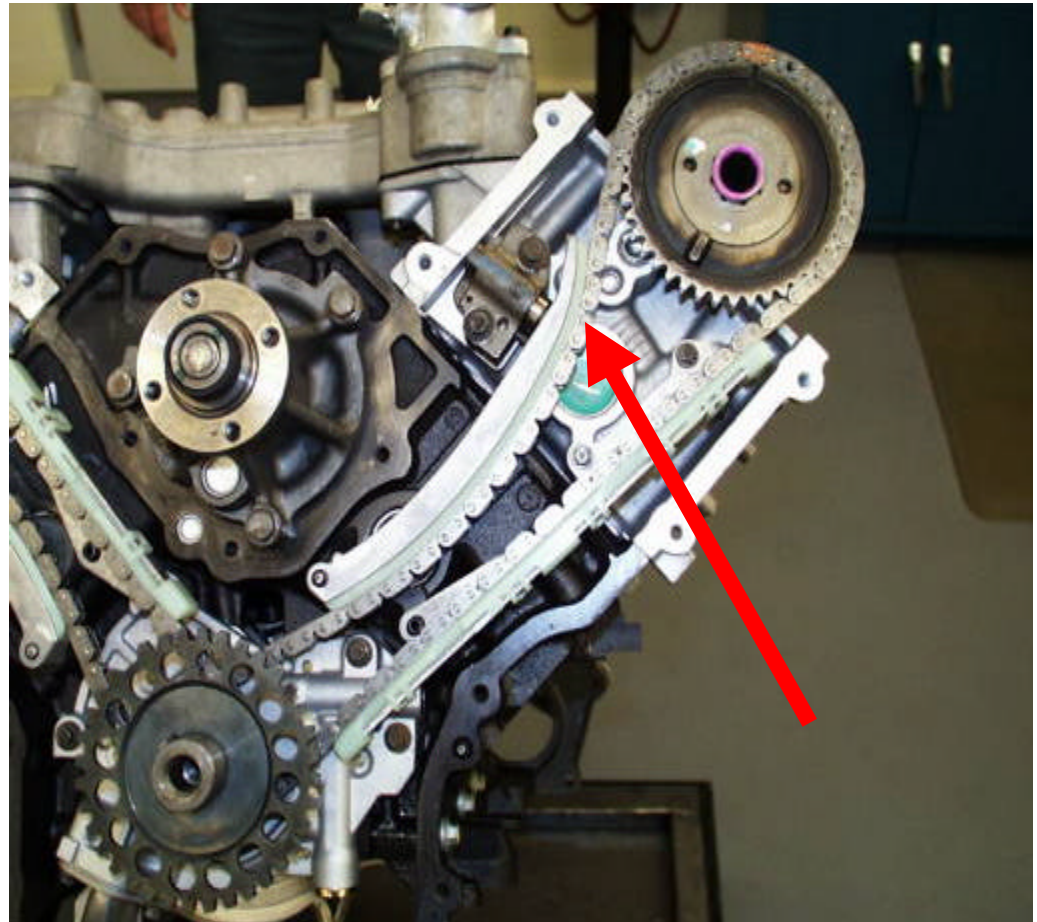


PROPOSED AFR REVISION

- CHANGE AFR SPECIFIED RANGE TO 14.00:1 to 15.00:1
- DO NOT CHANGE “DELTA AFR FROM MAXIMUM STAGE AVERAGE READING SHALL BE $<$ OR $=$ 0.50”

4.6L Chain Tensioner Failures

- The 4.6L engine is experiencing chain tensioner failures.
- Ford has not attributed the problem to a single source, yet.



Timing chain tears through the nylon face and aluminum backbone of the tensioner arms.

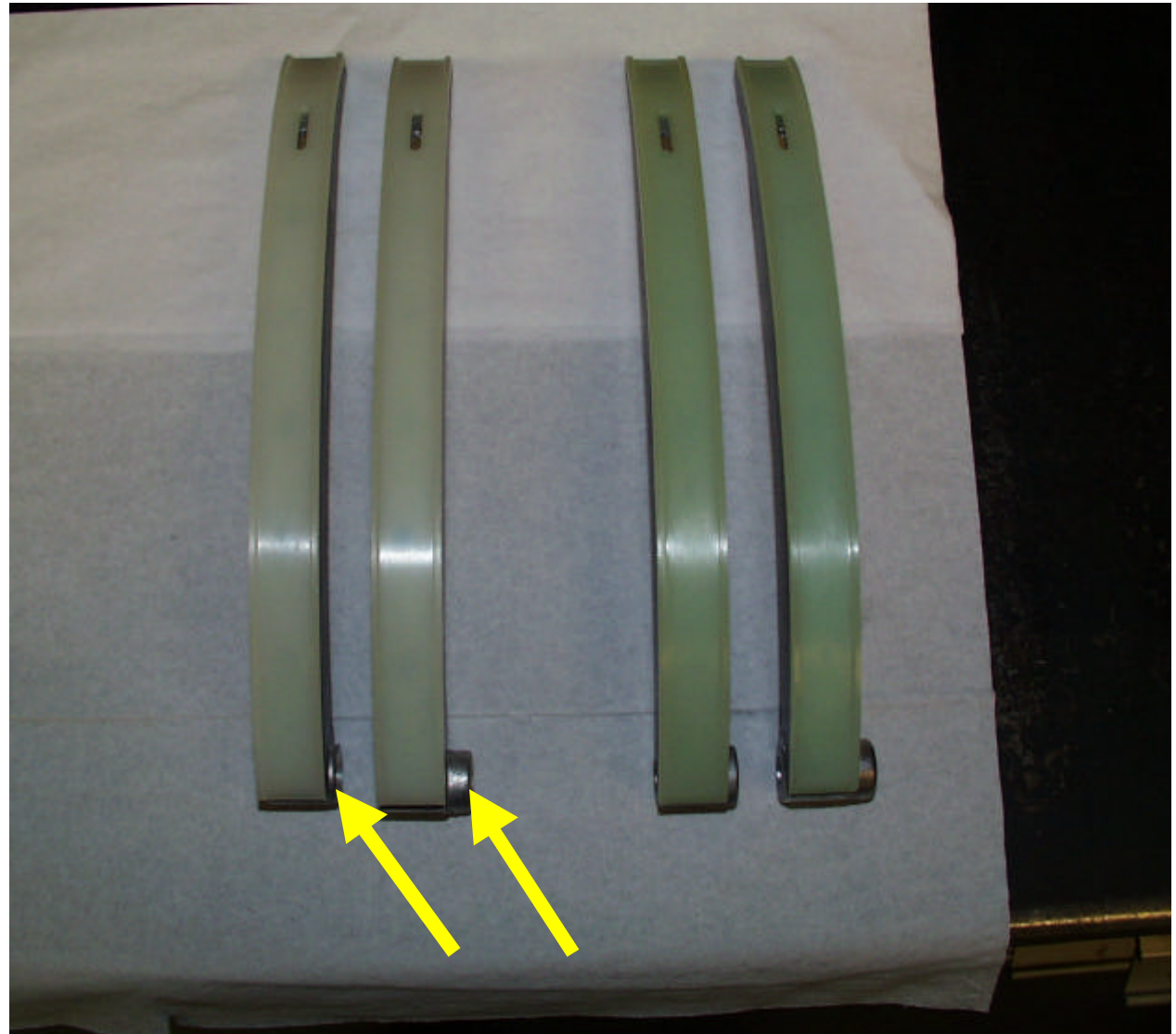


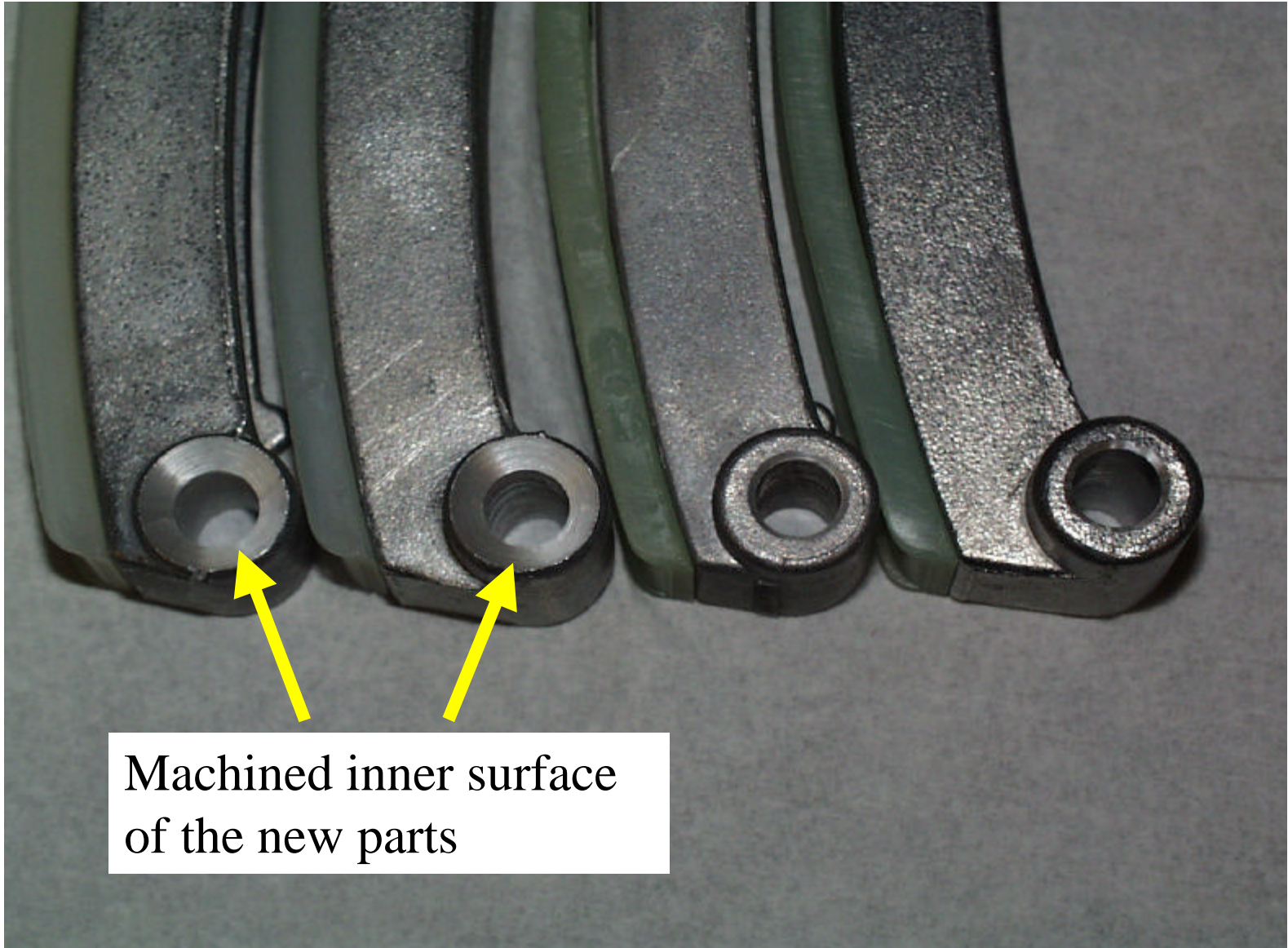
Aluminum and nylon wear particles are having a negative impact on Fuel Economy measurements.



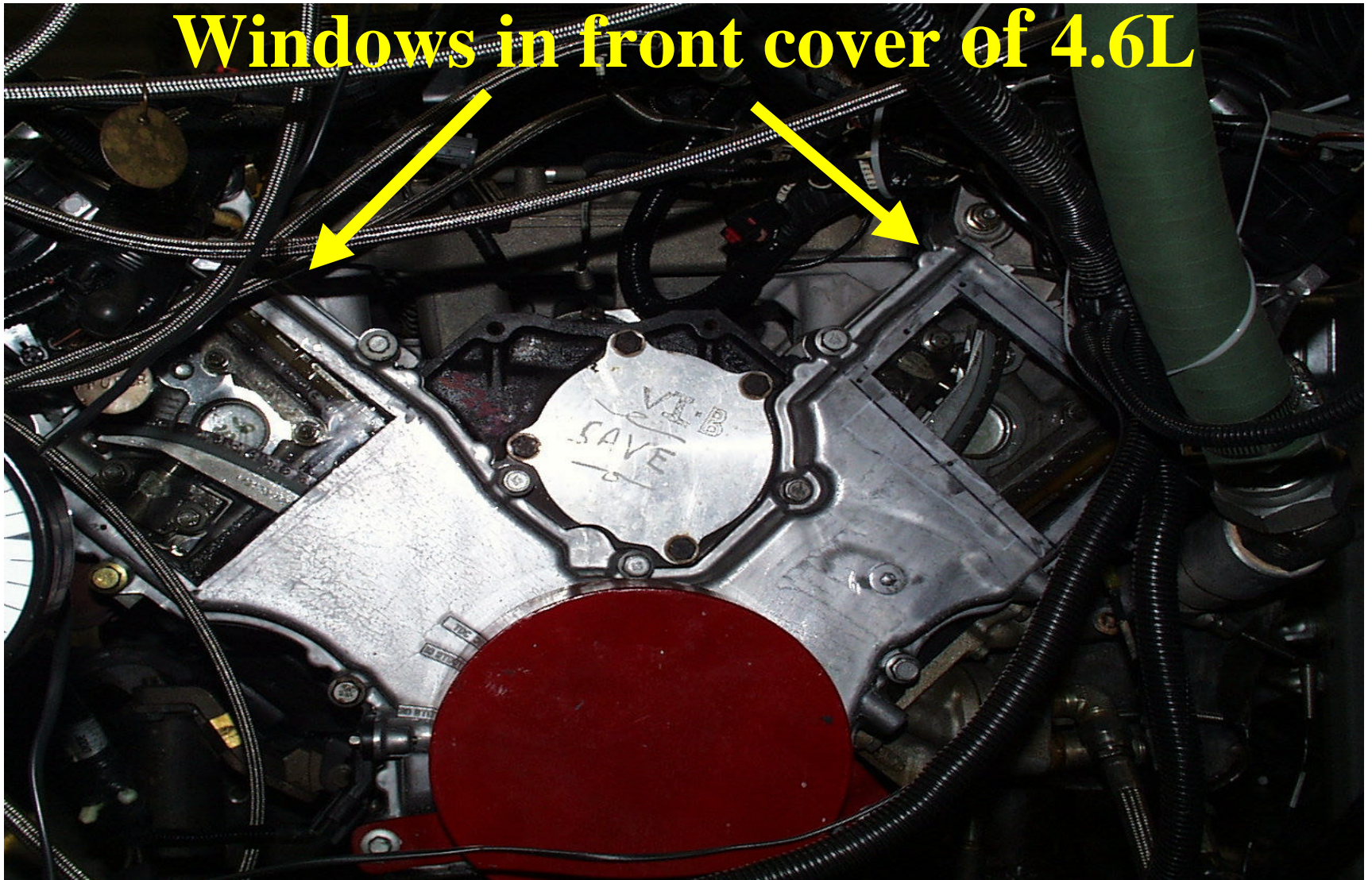
Various Design Changes Are Evident

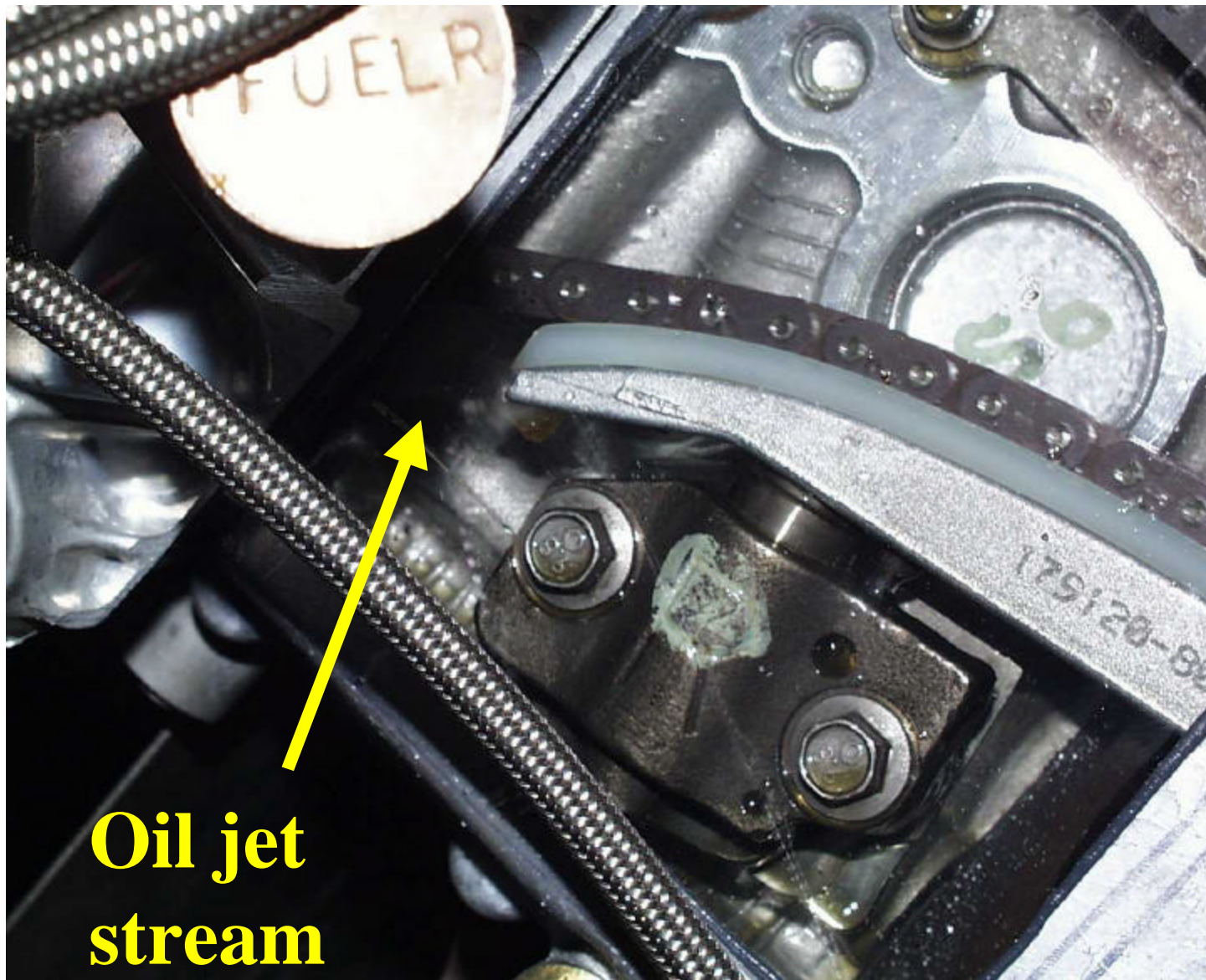
- Different nylon material
- Shortened the length of the stubs, which fit over the dowel
- Machined the inner surface of the hole, which fits over the dowel

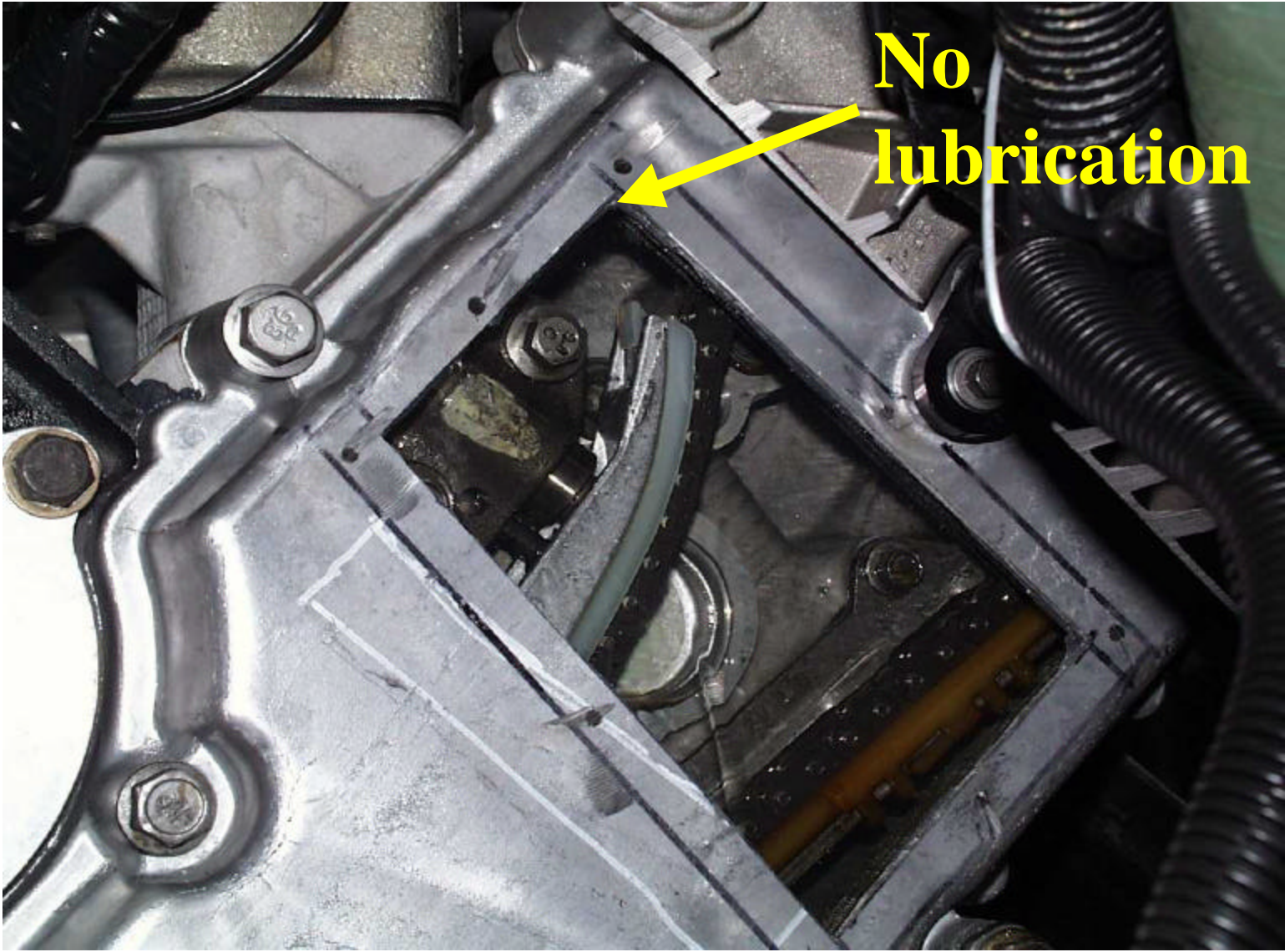


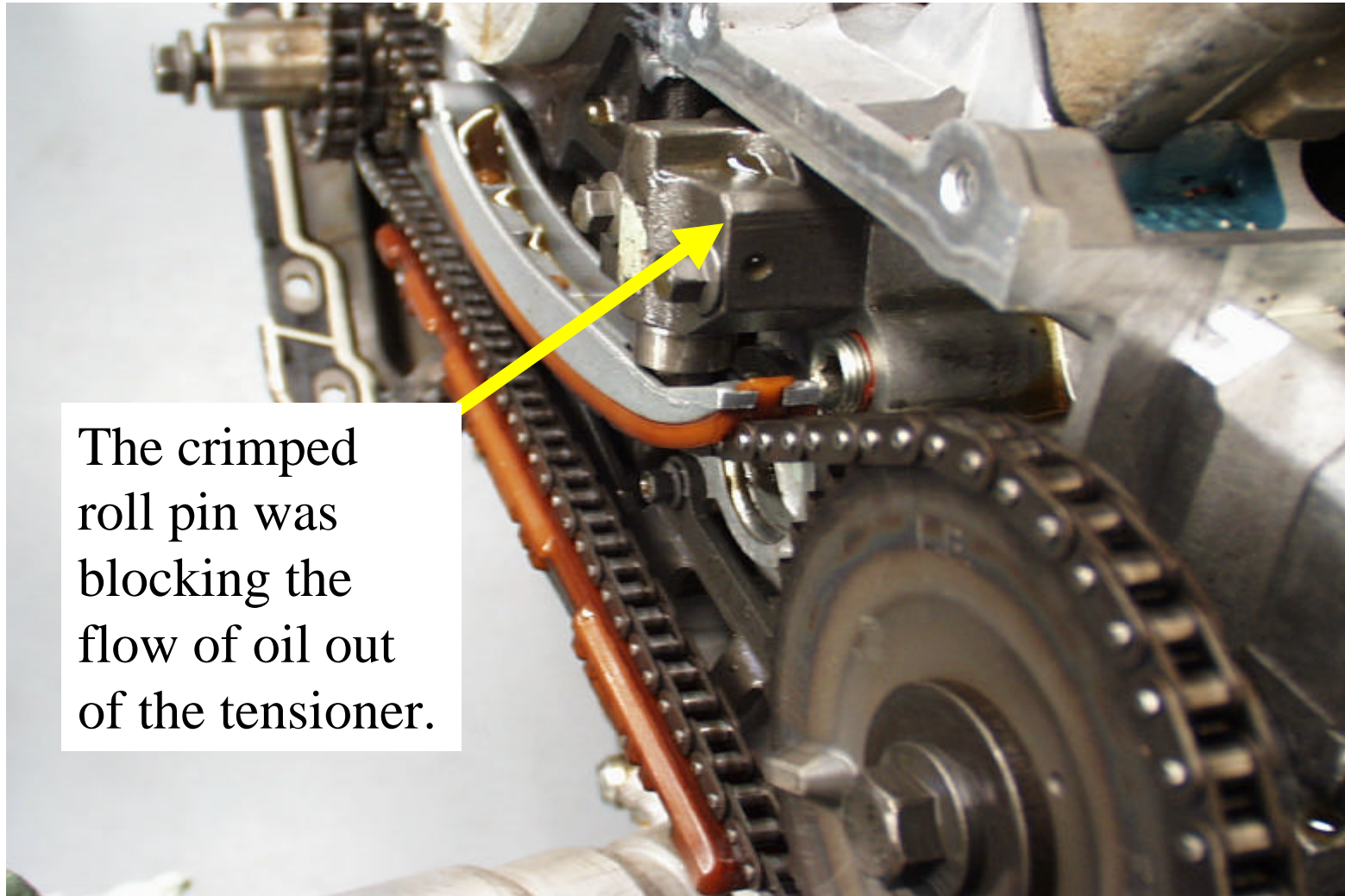


Machined inner surface
of the new parts









The crimped roll pin was blocking the flow of oil out of the tensioner.

Resolution

- Again, Ford has not attributed the failures to one specific source.
- ??????????
- ??????????

ASTM Sequence VIA / VIB Surveillance Panel

Scope and Objectives

Scope:

The Sequence VIA / VIB Surveillance Panel is responsible for the surveillance and continued improvement of the Sequence VIA test documented in ASTM Standard D6202 and of the Sequence VIB test as documented in Draft #5 as each is updated by the Information Letter System. Data on test precision and laboratory versus field correlation will be solicited and evaluated at least every six months. Improvements in test operation test monitoring and test validation will be accomplished through continual communication with the Test Sponsor, ASTM Test Monitoring Center, Central Parts Distributor, ASTM B.01, and the Passenger Car Engine Oil Classification Panel. Actions to improve the process will be recommended when deemed appropriate based on input from the aforementioned. The panel will review development and correlation of updated test procedures with previous test procedures. This process will provide the best possible test procedure for evaluating automotive lubricant performance with respect to the lubricant's ability to provide fuel economy benefits.

Objectives	Target Date
Establish SJ limits for VIB test	11/00
Define new hardware for future VIB testing (After current supply is exhausted)	
Identify 10W30 and 5W20 Reference oils	11/01
Incorporate 5W 20 into VIB LTMS	
Complete and approve Batch 5 BC & BCFHD	05/02
If available introduce GF-3 oil into VIB LTMS	05/02

Revised 11/06/01