HEAVY-DUTY ENGINE OIL CLASSIFICATION PANEL

OF

ASTM D02.B0.02

March 28, 2017

Hilton Rosemont Chicago O'Hare

Rosemont, IL, USA

ACTION ITEMS

MINUTES

1.0 Call to order

1.1 The Heavy Duty Engine Oil Classification Panel (HDEOCP) was called to order by Chairman Shawn Whitacre at 10:20 a.m. on Tuesday March 28, 2017, in the Lindbergh Room of the Hilton Rosemont Chicago O'Hare Hotel.

1.2 There were 12 members present and 26 guests present. The attendance list is included as Attachment **2.**

1.3 Chairman Whitacre reviewed the Antitrust statement and the membership. **Attachment 0.**

2.0 Agenda

2.1 The agenda circulated prior (included as Attachment **1**) was not changed.

3.0 Minutes

3.1 The minutes from the December 6, 2016 meeting were approved as written.

4.0 Membership

4.1 There was one membership change. Don Smolenski replaces David Gray of Evonik.

5.0 Existing tests/categories

5.1 Hind Abi-Akar of CAT provided an update on the COAT. **Attachment 3.** The test became unavailable due to new calibration procedure for Flow-Density Meter (FDM) and new oil filter. Goal for new improved FDM calibration process is to bring labs closer together. Sensors come calibrated from supplier but SP wanted to ensure that the calibration doesn't drift. The process is to calibrate the FDM to match the density of D4052. All labs will run references with the new procedure. Plan for introducing a new batch of oil filters with these calibration runs. Plan to be complete by end of April. The COAT test should be available again then.

5.2 Suzanne Neal of Daimler provided a DD13 Scuffing test update. **Attachment 4.** Test is available and parts are available. Introducing new top rings and pistons with references. New batch of liners coming.

5.3 Greg Shank of Volvo provided a Volvo T-13 update. **Attachment 5.** Similar report to December. Inlet Air Humidity control is fully implemented. Test Activity is now very low.
5.4 Already covered Ford in the DEOAP meeting.
5.5 No Cummins update.

6.0 Review of Engine Test Life

6.1 Showed the engine life presentation from December. **Attachment 6.**
6.2 Dennis Gaal gave a verbal update on CLOG and the IIIF/IIIG to IIIH correlation. Batch 4 pistons are at labs. SwRI working on calibrating their stand then will run the tests required.

7.0 T-12 Correction Factors

7.1 Frank Farber presented information on correction factors implemented in the T-12 test and existing guidelines on notifying the panel when changes occur. **Attachments 7, 8, 9.** A Top Ring change resulted in a large Correction Factor. Information Letter Task Force Guideline from 1993 provides instructions on the process. Need to remind the Surveillance Panels to notify the HDEOCP. Make the HDEOCP aware of the decision. What is the process? Some sort of email ballot. Include a summary of how much data was used for the statistical analysis and what the vote breakdown is.

8.0 TMC Reference Oil REO 1006 Oil Replacement

8.1 Frank Farber showed a letter to the industry explaining that the TMC has a clone of 1006 available for screener work. **Attachment 10.** The TMC is performing the legwork to have a replacement fluid ready. Still issues with lab repeatability. The Surveillance Panel is working on it and will have a workshop and lab visits. For this panel, it affects HD Elastomers.

9.0 The meeting was adjourned at 11:03 am.

D02.B0.02.1 HDEOCP

Shawn Whitacre
Chairman
Heavy-Duty Engine Oil Classification Panel

March 28, 2017
Rosemont, IL USA

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- **For a complete list of standards see** http://www.astm.org/COMMIT/SUBCOMMIT/D02B0.htm

ASTM-HDEOCP Membership

	Oil and Additive Companies		OEMs
1	Shawn Whitacre - Chevron	1	Greg Shank – Volvo Power Train
2	Mike Alessi- ExxonMobil	2	Ryan Denton - Cummins Inc.
3	Dan Arcy - Shell	3	Mesfin Belay - Detroit Diesel
4	Corey Taylor - BP Castrol	4	Hind Abi-Akar - Caterpillar Inc.
5	Josh Frederick - Valvoline	5	Heather DeBaun – Navistar
6	Mary Dery- BASF	6	Ken Chao - John Deere
7	Don Smolenski- Evonik	7	Eric Johnson- GM Powertrain
8	Cory Koglin – Afton	8	Jason Andersen- Paccar
9	Robert Stockwell - Oronite	9	Ron Romano - Ford
10	Gail Evans – Lubrizol*		
11	Robert Salgueiro - Infineum U.S.A.		
12	David Taber - Phillips 66 Lubricants		
13	Rodney Walker, Safety-Kleen		

** Represented today by Bill O'Ryan, Lubrizol*

HDEOCP MEETING AGENDA

March 28, 2017

8:00 AM – 10:00 AM – DEOAP Meeting
10:00 AM – 12:15 PM – HDEOCP Meeting
Meeting Room: Lindbergh Room
March 28, 2017

Hilton Rosemont Chicago O'Hare
5550 North River Road
Rosemont, IL 60018

	HDEOCP MEETING	
10:15 AM to 10:30 AM	Sign-In • Introductions • Membership • ASTM Antitrust Reminder	Shawn Whitacre
10:30 AM to 11:15 AM	Engine Test Development Updates • Caterpillar Aeration Test status/review • DD13 Scuffing Test status/review • Volvo T13 Oxidation Test status/review • Ford 6.7L Wear Test • Cummins ISM/ISB replacement	HDEOCP
11:15 AM to 11:30 AM	Review of HD Engine Test Availability and Life	
11:30 AM to 11:45 AM	Engine Tests to Support Older Categories (existing test with different limits) • Update on Seq. IIIF/G to Seq. IIIH	API
11:45 AM to 12:00 PM	TMC Reference Oil REO1006 Oil Replacement	
12:00 PM to 12:15 PM	Future Meeting Schedule • June 27 – Boston • December 5 – Houston	

Note: Agenda Times and Order are for reference only and subject to change. They are not reliable indicators of when topics will be discussed and should not be used to schedule times to attend the meeting.

HDEOCP Attendance: March 28, 2017

LastName	FirstName	MiddleName	Company	Business Phone	E-mail Address
Abi-Akar	Hind		Caterpillar Inc.	309-578-9553	abi-akar_hind@cat.com
Alessi	Michael	L.	ExxonMobil R&E	856-224-2309	michael.l.alessi@exxonmobil.com
Arcy	Dan		Shell Global Solutions	281-544-6586	dan.arcy@shell.com
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Bennett	Elizabeth		ExxonMobil	703-937-7719	elizabeth.m.bennett@exxonmobil.com
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Dery	Mary		BASF	914-785-2061	mary.dery@basf.com
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Gault	Roger		EMA	312-929-1974	rgault@emamail.org
Girard	Luc		Sanjuro Consulting	647-648-9704	lgirard@sanjuroconsulting.com
Goodrich	Barb		John Deere	319-292-8007	GoodrichBarbaraE@JohnDeere.com
Hopp	Meryn		General Motors	248-318-7303	meryn.hopp@gm.com
Humphrey	Brian		PetroCanada	440-537-2851	brian.humphrey@petrocanadalsp.com

HDEOCP Attendance: March 28, 2017

LastName	FirstName	MiddleName	Company	Business Phone	E-mail Address
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Kozub	Daniel		Detroit Diesel Corp.	313-592-7589	daniel.kozub@daimler.com
Kunselman	Michael		Center for Quality Assurance	248-234-3697	mkunselman@centerforqa.com
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Linden	Jim		Total Lubricants, USA	248-321-5343	lindenjim@jlindenconsulting.com
Loop	John		The Lubrizol Corporation	440-347-5365	john.loop@lubrizol.com
Manthena	Pavan		CNH Industrial	630-481-1853	pavan.manthena@cnhind.com
McCord	James		Southwest Research Institute	210-522-3439	jmccord@swri.org
Moritz	Jim		Intertek Automotive Research	210-523-4601	jim.moritz@intertek.com
Neal	Suzanne		Detroit Diesel Corp.	313-592-7130	suzanne.neal@daimler.com
O'Ryan	Bill		The Lubrizol Corporation	440-347-4545	william.oryan@lubrizol.com
Raley	Greg		Motiva Enterprises, LLC	713-427-3417	gregory.raley@motivaent.com
Romano	Ron		Ford Motor Co.	313-845-4068	rromano@ford.com
Salguerio	Robert		Infineum	908-474-2492	bob.salguerio@infineum.com
Shank	Greg	L.	Volvo Groups Technology	301-790-5817	greg.shank@volvo.com
Smolenski	Don	J.	Evonik Oil Additives	313-806-7072	donald.smolenski@evonik.com
Stockwell	Robert	T.	Chevron Oronite	210-232-3188	robert.stockwell@chevron.com
Sutherland	Mark		TEI	210-867-8397	msutherland@tei-net.com

HDEOCP Attendance: March 28, 2017

LastName	FirstName	MiddleName	Company	Business Phone	E-mail Address
Walker	Rodney		Safety-Kleen	281-245-7204	rodney.walker@safety-kleen.com
Whitacre	Shawn		Chevron Lubricants	510-242-3557	shawnwhitacre@chevron.com

Caterpillar C13 Oil Aeration Test Updates

Hind Abi-Akar, Caterpillar Inc

HDEOCP meeting, Chicago, IL

March 28, 2017

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COAT Became Unavailable

- The CAT Surveillance Panel notified ASTM that the COAT was unavailable for testing
  - Due to differences in reference test results across the labs which appeared to be driven by variations in the Aeration Sensor units and set-ups used by the 3 labs
  - Compounded by a running change made to the Caterpillar 1R-1808 oil filter used for the COAT
- A work group was formed within the CAT SP to address this

Work Group Activities

1. Develop a calibration procedure and schedule for the Aeration Sensor (Flow Meter, Micromotion)
2. Develop a plan to introduce new batch of oil filters

Frequent Work Group meetings to develop and implement plans and review results

Calibration Procedure

Goals:

1. Develop a common calibration procedure for all the labs to ensure that the Aeration Sensor hardware and electronics, data collection, setups, and density measurements are common and data offsets for each lab documented.
2. Develop a schedule for calibrating the Sensor

New Calibration Procedure Developed

- Calibrate test stands' Aeration Sensor to match the ASTM D4052 density of current COAT reference oils.
  - Compare the D4052 densities to those measured with the sensor at similar temperatures.
  - Determine slope and intercept and record in the LTMS system at TMC.

Additional Harmonization and Improvements:

- Sensors (2013 or newer), transmitters and the processors, will be documented for each test stand
- The following will be collected from all tests going forward:
  - D4052 measured Density at 50, 60, 70, 80 and 90 C
  - Sensor temperatures: inlet, outlet and internal
  - Sensor measured density at 50, 60, 70, 80 and 90 C

Required redesign of the sensor insulation box and additional heaters and fans to achieve the higher temperatures with higher stability

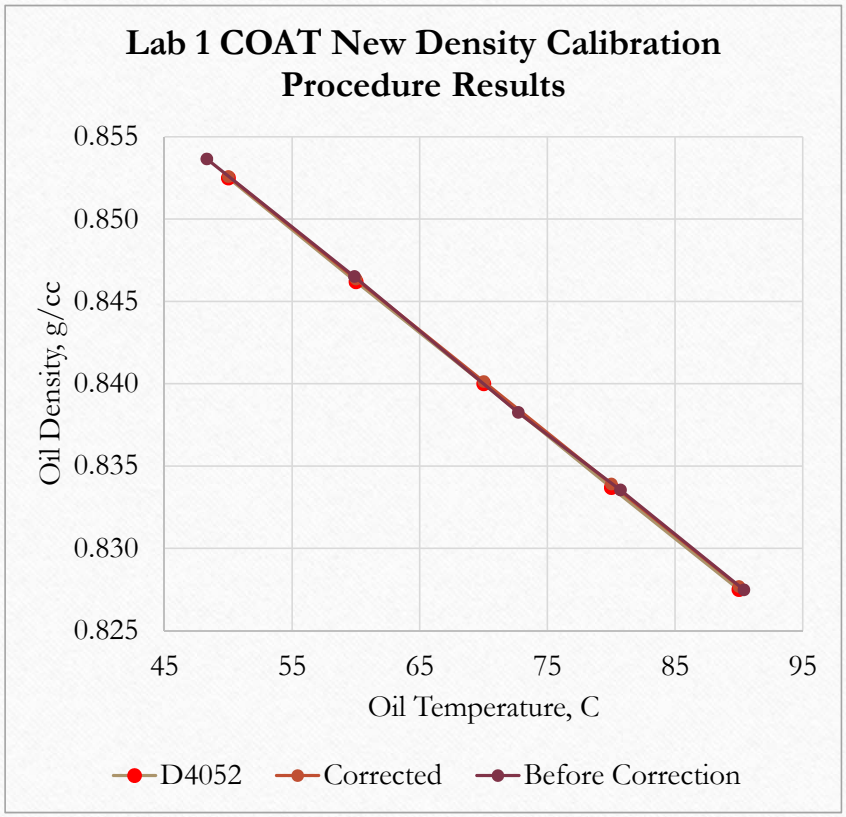
Developed Sensor Calibration Schedule

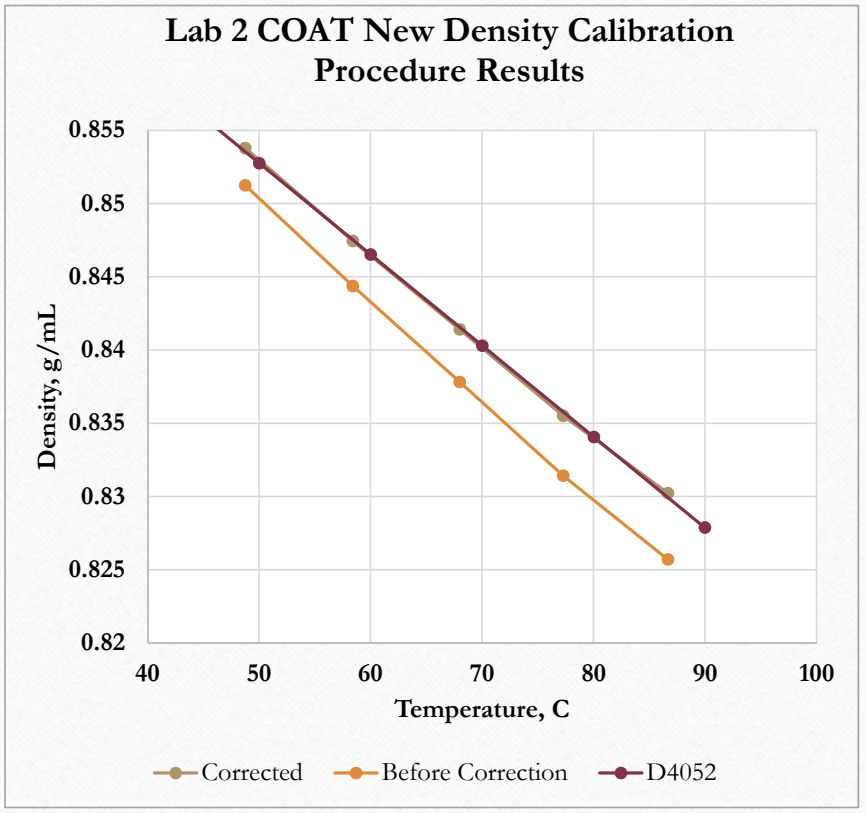
A Sensor calibration must be run during each Reference Test

- Only a change in measured density of 1.0% or greater at the max temperature measured will require change of the DAQ's slope and intercept.
- The slope and intercept will be recorded in the LTMS for each Reference event.
- Criteria for alarms and repairs were defined.

Results of Work Group Activities

- New sensor setups are now common across test stands
- The labs have implemented the new calibration procedure
- Reduced lab to lab variability is anticipated, based on the following results





After correction, all labs are now measuring the same Sensor density as D4052 for a given oil.

Going Forward

- At the March 22 Surveillance Panel meeting, a motion passed unanimously to accept the calibration procedure as provided with the understanding that ASTM editorial changes will be implemented prior to the Information Letter.

- Next, all labs will run the calibration procedure on a reference oil and finalize their Slope and Intercept parameters

COAT: Plan for Introducing New Filters

- A batch of the new filters (Batch A) was procured and quarantined at TEI
  - Filters made in single batch from same filter media for consistency
- At the March 22 Surveillance Panel meeting, a motion passed unanimously to proceed with reference oil testing as described below:
  - Run two tests at each laboratory, once on each reference oil
  - Lab runs a third test if **second** test result triggers a Level 2 alarm
  - Industry Correction Factor will be implemented if all three labs have Level 2 alarms in the same direction

	Lab		
Run #	A	B	G
1	833	832	832
2	832	833	833
3	832	833	833

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Timeline of Next Steps

- Finalizing the calibration procedure on reference oil: expected by March 31
- Complete reference testing with Batch A oil filters and analyze data:
  - Expected to be done by **mid-April**
- Work group meetings and SP meetings will continue throughout this effort.

COAT should become available during April

Thank You!

DAIMLER

DD13 Scuffing Test Update

Suzanne Neal & Patrick Joyce

27MAR2017

Daimler Trucks

FREIGHTLINER

FUSO

WESTERN STAR

Thomas BUILT BUSES

BHARATBENZ

Daimler Surveillance Panel

Daimler Surveillance Panel	
Initiated	ASTM June 2016
Chairman	Patrick Joyce – Lubrizol Corporation
Secretary	Jose Starling – Southwest Research Institute
OEM Representative	Suzanne Neal – Daimler
TMC Representative	Sean Moyer

Overview

- **DD13 Scuffing Test ASTM Number:**
  - ASTM 8074 number was defined Q4 2016
- **Specifications that use DD13 Scuffing Test:**
  - DFS 93K222
  - DFS 93K223
  - MB 228.31/.5/.51/.61
- **Reference Oil:**
  - TMC 864-1
- **Next Surveillance Panel Meeting:**
  - Wednesday March 29th, 2017
  - 10:00 AM Eastern Time Zone

Test Status & Parts Availability

- **Status of the Test**
  - Available
- **Parts Availability**
  - Referencing new batch of top rings
    - ~ 2200
    - ~ 366 Engine Builds (6 Top Rings per engine)
  - Referencing new batch of Pistons
    - ~ 1600 Pistons
    - ~ 266 Engine Builds (6 Pistons per engine)
  - In Progress - Batched liners to TEI
    - ~ Planned order quantity 2000 Liners
    - ~ 333 Engine Builds (6 Liners per engine)

T13 Mack Surveillance Panel Update

March 28 2017

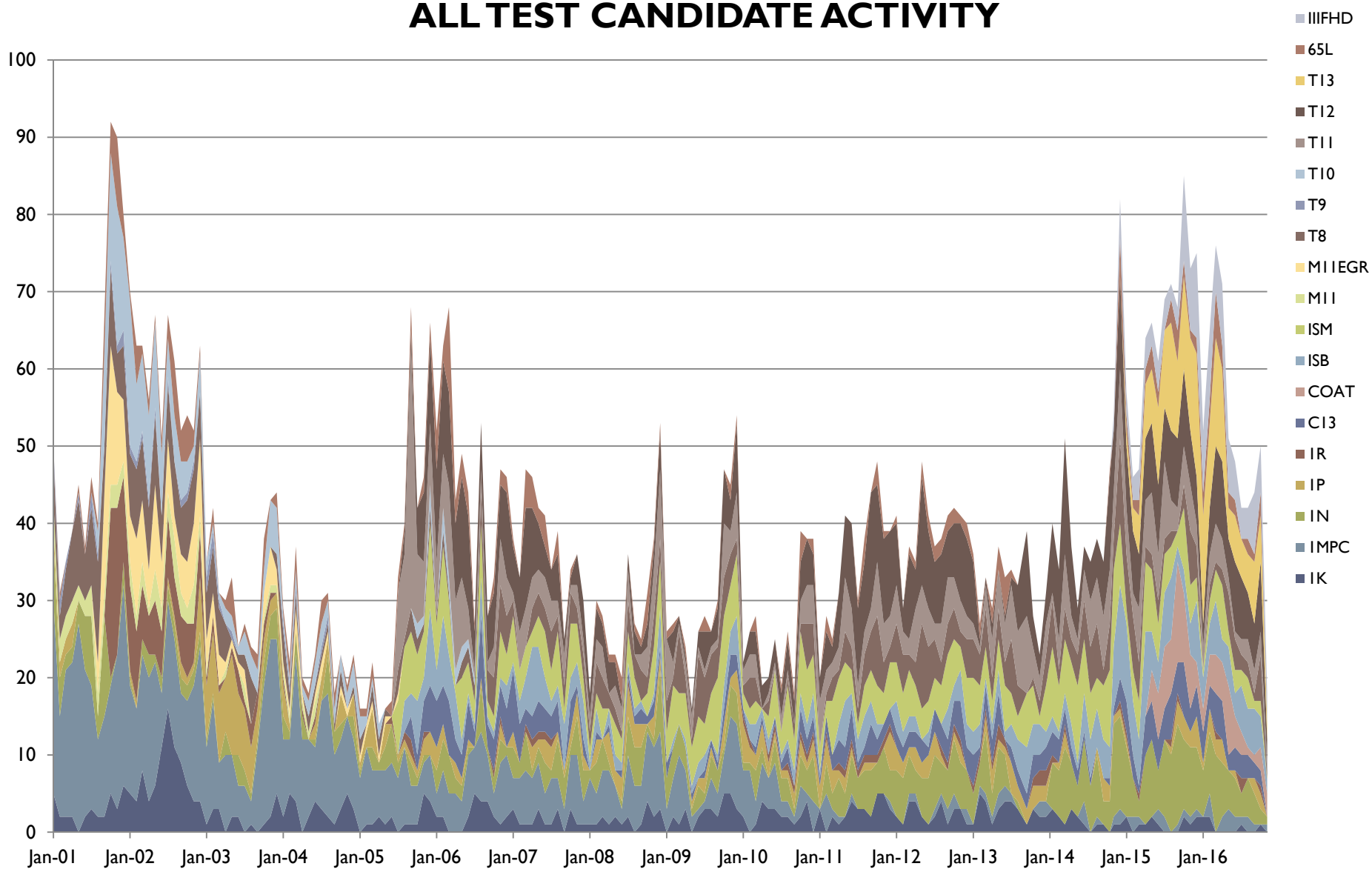
T13 Update

- Face to Face Meetings & Teleconferences on a Regular basis.
- Test data was presented by ExxonMobil & Lubrizol that showed severity differences on controlled versus non controlled humidity
- Panel decided to control humidity on T13 test.
- A 16C dew point was discussed since that is Passenger Car tests target.
- A target a moisture content of 11.4 g/kg was agreed upon - Dew point of 16.1C = 11.4g/kg moisture content
- Qi limit of +/-1 g/kg for moisture content was approved
- T-13 Humidity Control Put in Place In July
- Reference testing completed

D02.B0.02 Maintenance Report

December 2016

ALL TEST CANDIDATE ACTIVITY



Calibrated Labs and Stands*

Test	Labs	Stands
1K	1	1
1N	4	5
1M-PC	1	1
1P	3	3
1R	1	1
C13	3	3
ISB	3	5
ISM	4	4
EOAT	0	0
RFWT	2	2
T-8/E	2	3
T-11	4	5
T-12/T-12A	4	7
T-13	5	10
COAT	3	3
DD13	3	5

*As of 09/30/2016

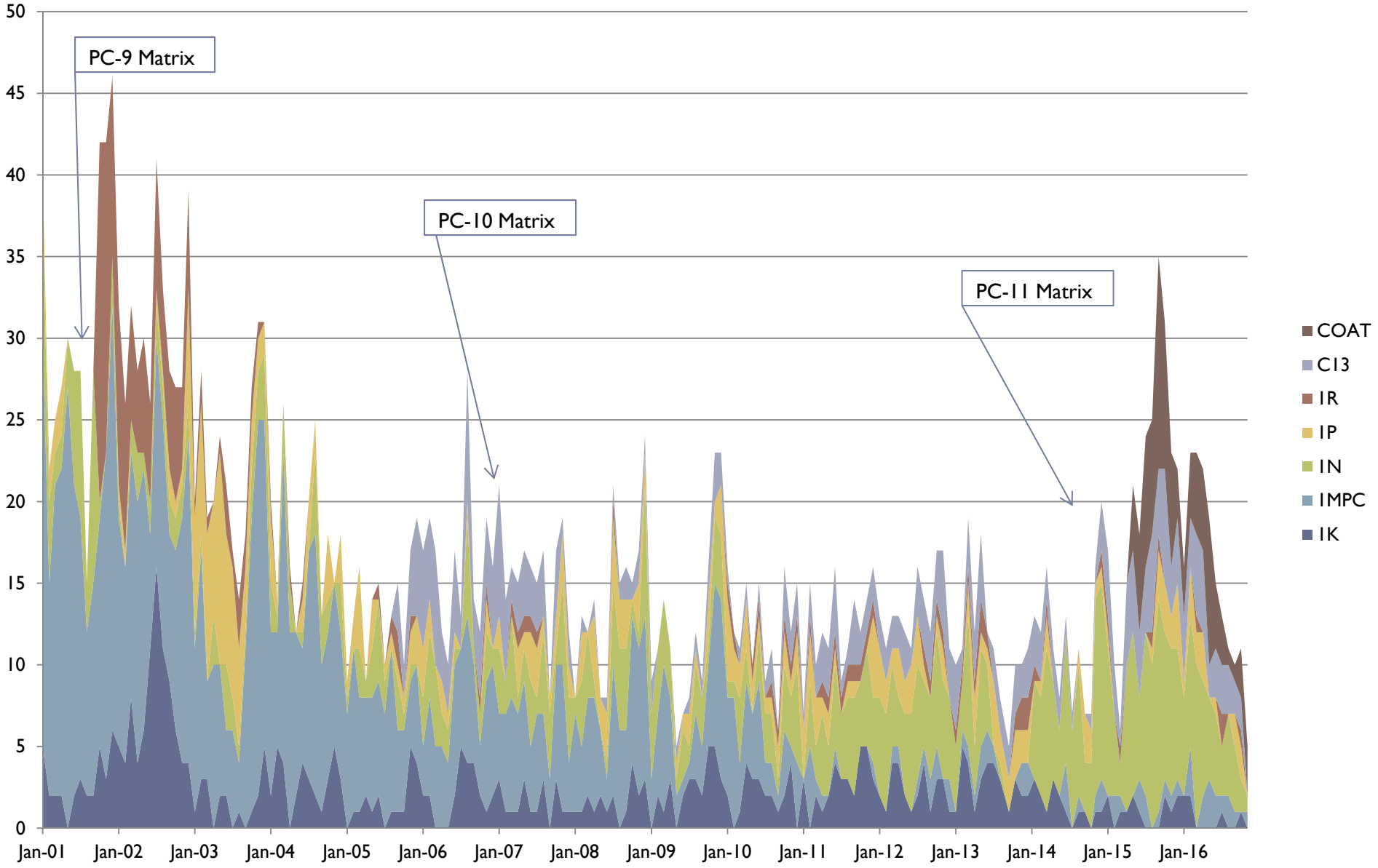
Availability of API CH-4 through CJ-4 Tests for PC-11

Test	Hardware Issues	Availability Through 2020	Notes
Cat 1K/1N	Auxiliary components	Likely	1980's vintage engine. Ongoing resolution of issues with auxiliary stand and miscellaneous components.
Cat 1P/1R	Crankshaft	Likely	1990's vintage engine. Crankshaft supplier has been identified by Caterpillar.
Cat C13	New liners – references anticipated Oct 2016 – Not yet run.	Likely	Engine block, injectors, turbos only available through reman. Liners with new material and processing but same specs will be introduced mid-2017. New batch of current liners produced.

Additional Caterpillar Test Issues

- **Caterpillar Oil Aeration Test**
  - Surveillance panel working with micro-motion manufacturer on instrument software and calibration standardization across labs.

CATERPILLAR CANDIDATE ACTIVITY



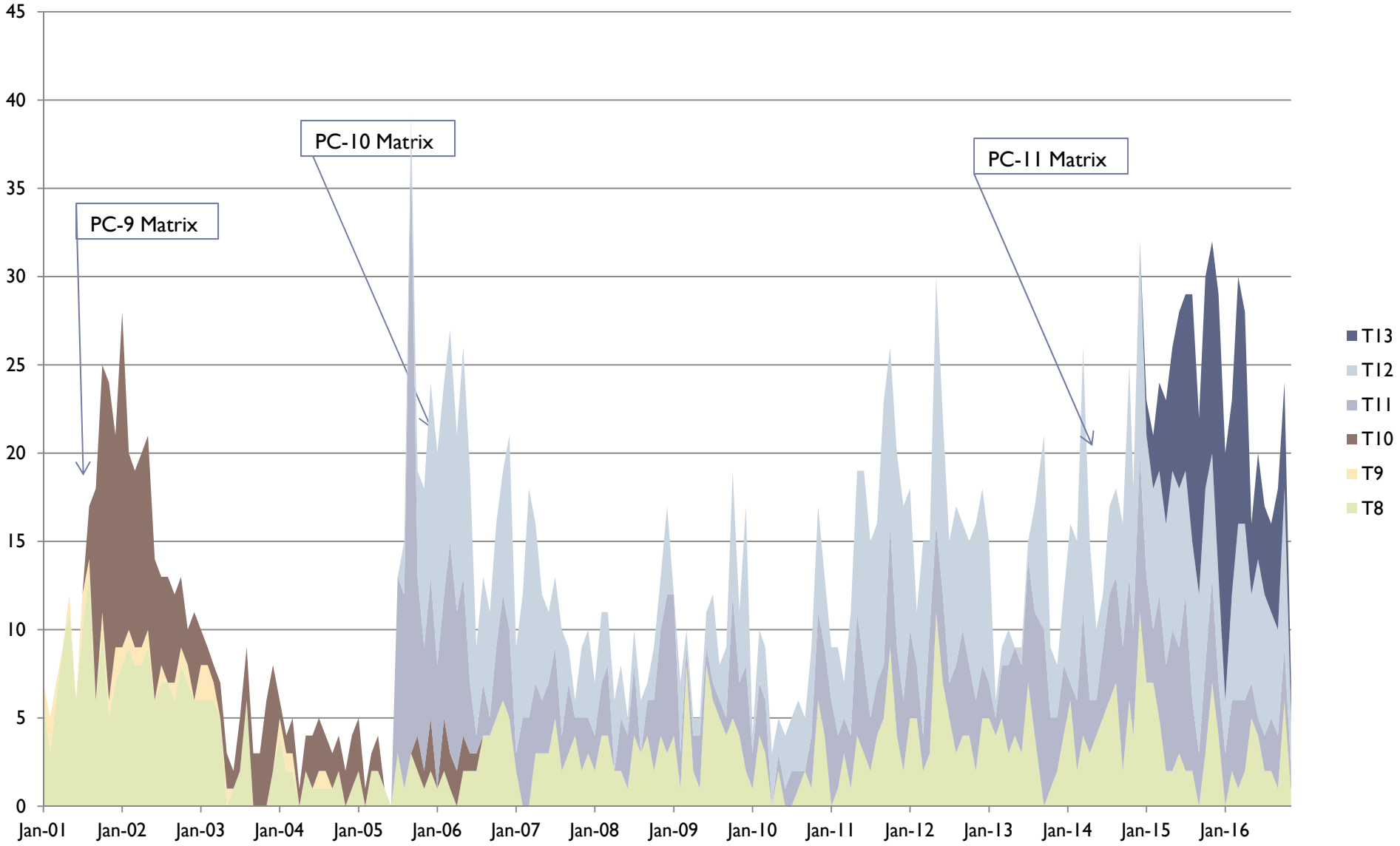
Availability of API CH-4 through CJ-4 Tests for PC-11

Test	Hardware Issues	Availability Through 2020	Notes
Mack T-11	Oil Consumption	Likely	Engine production ended 2006. Finite number of engine blocks. Engine build life issues with oil consumption.
Mack T-12	Oil Consumption, head gasket	Likely	Engine production ended 2006. Next ring batch available January 2017. Severity to be determined with coordinated references, plus correction factor updates.

Additional Mack Test Issues

- **T-12**
  - Procurement of new top ring batch and coordinated references expected January 2017.

MACK CANDIDATE ACTIVITY



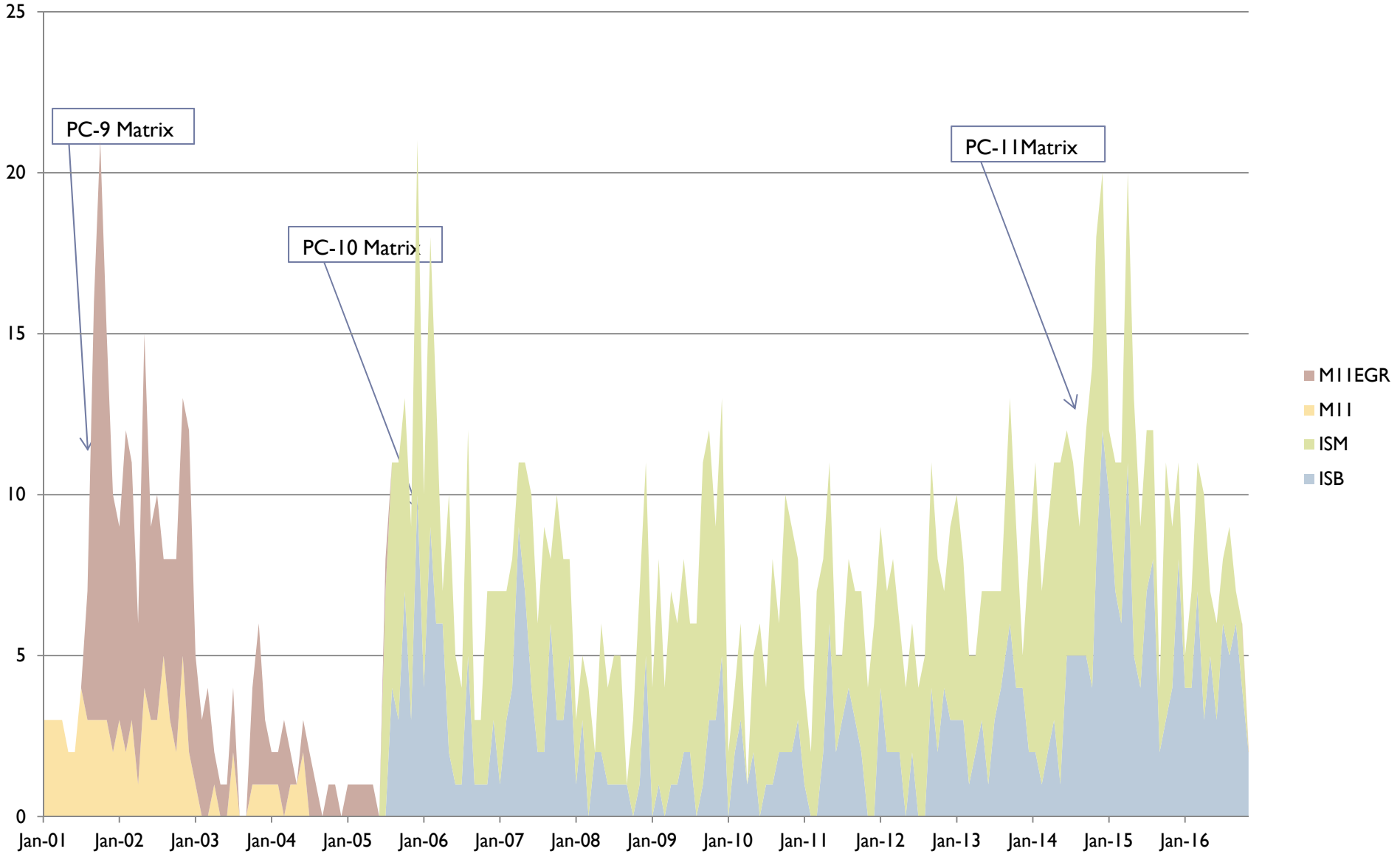
Availability of API CH-4 through CJ-4 Tests for PC-11

Test	Hardware Issues	Availability Through 2020	Notes
Cummins ISM	**No current issues**	**Likely**	**Cummins is looking at backwards-compatible development using ISX.**
Cummins ISB	**No current issues**	**Likely**	**No current issues.**

Cummins Test Surveillance Panel

- ISM
  - Cummins looking at possibility of developing backwards-compatible ISX test.
- ISB
  - No current test issues.

CUMMINS CANDIDATE ACTIVITY



Availability of API CH-4 through CJ-4 Tests for PC-11

Test	Hardware Issues	Availability Through 2020	Notes
RFWT	Engine configuration	Likely	Long term supply of test parts at CPD. 6.5 L engine no longer in production at AM General, but available through supply network. Injection pump still available.
Seq IIIF/IIIG	Hardware depletion Dec 2016	No	Hardware depletion projected 1Q 2017. Projected 1Q2017 IIIH to IIIF and IIIH to IIIG correlations.
EOAT	Using last known hardware	No	Oil temperature control issues with last known EOAT engine. Test uses controlled coolant temperature but not controlled oil temperature. Lab determining cause. Unavailable?

Engine Oil Aeration Test Surveillance Panel

- No reference tests in last 6 months
- Additional engines are now impossible to source.
  - Last remaining engine is currently in use.
  - Test could be declared unavailable at any point.
- EOAT Panel transferred to CAT panel and correlation work is ongoing.

Roller Follower Wear Test Surveillance Panel

- One reference tests in last 6 months.
- Test is in control and at historical levels.
- No issues to report. Hardware supply available at CPD.

B2 Action Items

- **No Action Items**
- **Comments**

T-12 Correction Factors

HDEOCP March

Items

- T-12 VXYPD Hardware Correction Factors
- Information Letter Task Force Notification Guideline

T-12 Historic Correction Factors

Effective		Condition	Description
From	To		
***	***	All tests using batch R piston ring & cylinder liner hardware	Multiply Average Cylinder Liner Wear by 0.58
***	May 18, 2011	All Tests SWTN Hardware	Multiply Average Top Ring Weight Loss by 0.95
			Multiply Average Cylinder Liner Wear by 0.86
			$\Delta Lead_{Final}$ = exp[(ln(ΔLead) x 0.95)]
			$\Delta Lead\ (250\text{-}300)_{Final}$ = exp[(ln(ΔLead 250-300) x 1.03)]
May 19, 2011	June 4, 2012	All tests using SWTN Hardware	Multiply Average Top Ring Weight Loss by 0.92
			Multiply Average Cylinder Liner Wear by 0.83
			$\Delta Lead_{Final}$ = exp[(ln(ΔLead) x 0.92)]
			$\Delta Lead\ (250\text{-}300)_{Final}$ = exp[(ln(ΔLead 250-300) x 0.93)]
			OC = exp[(ln($OC_{100\text{-}300}$) x 0.95)]
			Multiply Average Top Ring Weight Loss by 0.92
June 5, 2012	***	All tests using SWTN Hardware	Multiply Average Top Ring Weight Loss by 0.705
			Multiply Average Cylinder Liner Wear by 0.946
			$\Delta Lead_{Final}$ = exp[(ln(ΔLead) x 0.923)]
			$\Delta Lead\ (250\text{-}300)_{Final}$ = exp[(ln(ΔLead 250-300) x 0.956)]
			OC = exp[(ln($OC_{100\text{-}300}$) x 0.961)]

T-12 Historic Correction Factors

Effective		Condition	Description
From	To		
***	***	All tests using UUXO Hardware	Multiply Average Top Ring Weight Loss by 0.849
			Multiply Average Cylinder Liner Wear by 0.566
			$\Delta Lead_{Final}$ = exp[(ln(ΔLead) x 0.797)]
			$\Delta Lead\ (250\text{-}300)_{Final}$ = exp[(ln(ΔLead 250-300) x 0.700)]
			OC = exp[(ln($OC_{100\text{-}300}$) x 0.916)]
*	August 26, 2014	All tests using VUXO Hardware	Multiply Average Top Ring Weight Loss by 0.849
			Multiply Average Cylinder Liner Wear by 0.566
			$\Delta Lead_{Final}$ = exp[(ln(ΔLead) x 0.797)]
			$\Delta Lead\ (250\text{-}300)_{Final}$ = exp[(ln(ΔLead 250-300) x 0.700)]
			OC = exp[(ln($OC_{100\text{-}300}$) x 0.916)]
August 26, 2014	***	All tests using VUXO Hardware	Multiply Average Top Ring Weight Loss by 0.719
			Multiply Average Cylinder Liner Wear by 0.818
			$\Delta Lead_{Final}$ = exp[(ln(ΔLead) x 0.813)]
			$\Delta Lead\ (250\text{-}300)_{Final}$ = exp[(ln(ΔLead 250-300) x 0.710)]
			OC = exp[(ln($OC_{100\text{-}300}$) x 0.913)]
August 4, 2015	***	All test using VUXOA or VUXOB Hardware	Multiply Average Top Ring Weight Loss by 0.912
			Multiply Average Cylinder Liner Wear by 0.953
			$\Delta Lead\ (250\text{-}300)_{Final}$ = exp[(ln(ΔLead 250-300) x 0.895)]
			$\Delta Lead_{Final}$ = exp[(ln(ΔLead) x 0.954)]
			OC = exp[(ln($OC_{100\text{-}300}$) x 0.942)]
February 25, 2016	***	All test using VUYPx	Multiply Average Top Ring Weight Loss by 0.912
			Multiply Average Cylinder Liner Wear by 0.970
			If $OC_{100\text{-}300}$ > 65.0 $\Delta Lead(250\text{-}300)_{Final}$ = exp[(ln(ΔLead(250-300) + (65.0 - $OC_{100\text{-}300}$) x 0.04021)] If $OC_{100\text{-}300}$ ≤ 65.0 $\Delta Lead(250\text{-}300)_{Final}$ = ΔLead(250-300)
			If $OC_{100\text{-}300}$ > 65.0 $\Delta Lead_{Final}$ = exp[(ln(ΔLead) + (65.0 - $OC_{100\text{-}300}$) x 0.03088] If $OC_{100\text{-}300}$ ≤ 65.0 $\Delta Lead_{Final}$ = ΔLead OC = exp[(ln($OC_{100\text{-}300}$) x 0.940)]

T-12 Historic Correction Factors

Condition	Description
All tests using UUXO Hardware	Multiply Average Top Ring Weight Loss by 0.849
	Multiply Average Cylinder Liner Wear by 0.566
	$\Delta Lead_{Final}$ = exp[(ln(ΔLead) x 0.797)]
	$\Delta Lead\ (250\text{-}300)_{Final}$ = exp[(ln(ΔLead 250-300) x 0.700)]
	OC = exp[(ln($OC_{100\text{-}300}$) x 0.916)]
All tests using VXYPD Hardware Top Ring Change Transformation On Liner CF	Multiply Average Top Ring Weight Loss by 0.846
	ALW_{Final} = exp[(ln(ALW) x 0.743)]
	If $OC_{100\text{-}300} > 65.0$ $\Delta Lead_{Final}$ = exp[(ln(ΔLead) + (65.0 - $OC_{100\text{-}300}$) x 0.03234] If $OC_{100\text{-}300} \leq 65.0$ $\Delta Lead_{Final}$ = ΔLead
	If $OC_{100\text{-}300} > 65.0$ $\Delta Lead(250\text{-}300)_{Final}$ = exp[ln(ΔLead(250-300) + (65.0 - $OC_{100\text{-}300}$) x 0.04089] If $OC_{100\text{-}300} \leq 65.0$ $\Delta Lead(250\text{-}300)_{Final}$ = ΔLead(250-300)
	OC = exp[(ln($OC_{100\text{-}300}$) x 0.926)]

Information Letter Task Force Guideline

- Guidelines from 1993

2. That a role for the classification panel(s) be established in the Information Letter process. Specifically, the role of the Classification Panel is to review, for endorsement, those Information Letters which directly affect pass/fail limits. A response to a request for review should be given within two weeks.

Mack T-12 Cylinder Liner Wear Correction Factor History

HDEOCP

March 28, 2017

REPORT OF THE INFORMATION LETTER TASK FORCE TO SUBCOMMITTEE B

December 9, 1993

BACKGROUND:

This task force was formed, at the direction of Chairman Duffey, to respond to concerns raised, at the July 1, 1993 meeting, regarding the application of the Information Letter system to Subcommittee B engine tests.

TASK FORCE MEMBERSHIP

Tom Franklin, Ch. D02.B0.01
Greg Guinther, Ch. D02.B0.01.03
Lee Scheimann, Ch. D02.B0.03
Johnny Kitchens, Ch. D02.B0.05
Rick Johnson, Member at Large
John Zalar, Administrator ASTM TMC

Advisor:
Earl Sullivan, ASTM Staff

ACTIVITY

The task force met once, October 20, 1993, with all members present or represented and one guest. Earl Sullivan provided background on, and some interpretation of, the Information Letter system and the task force prepared the following recommendations:

RECOMMENDATIONS:

1. That some education be given to Subcommittee B and the appropriate surveillance panels regarding the background and application of the Information Letter system. That education is documented as an attachment to this report.

2. That a role for the classification panel(s) be established in the Information Letter process. Specifically, the role of the Classification Panel is to review, for endorsement, those Information Letters which directly affect pass/fail limits. A response to a request for review should be given within two weeks.

3. That "controversial" Information Letters be classified as those which have a reasonable probability of drawing a **PERSUASIVE** negative within

Mack T-12 Correction Factor Background

- Oct 2008 - first correction factor applied – liner wear correction factor for Batch R rings
- Apr 2011 - added correction factors for top ring weight loss and both Pb pass/fail parameters
- May 2011 - added oil consumption correction factor
- Mar 2016 - both lead correction factors now based on oil consumption level
- Feb 2017 - liner wear correction factor natural log based, instead of multiplicative
- Mack T-12 correction factors implemented fairly quickly after non-controversial balloting within the Mack Surveillance Panel

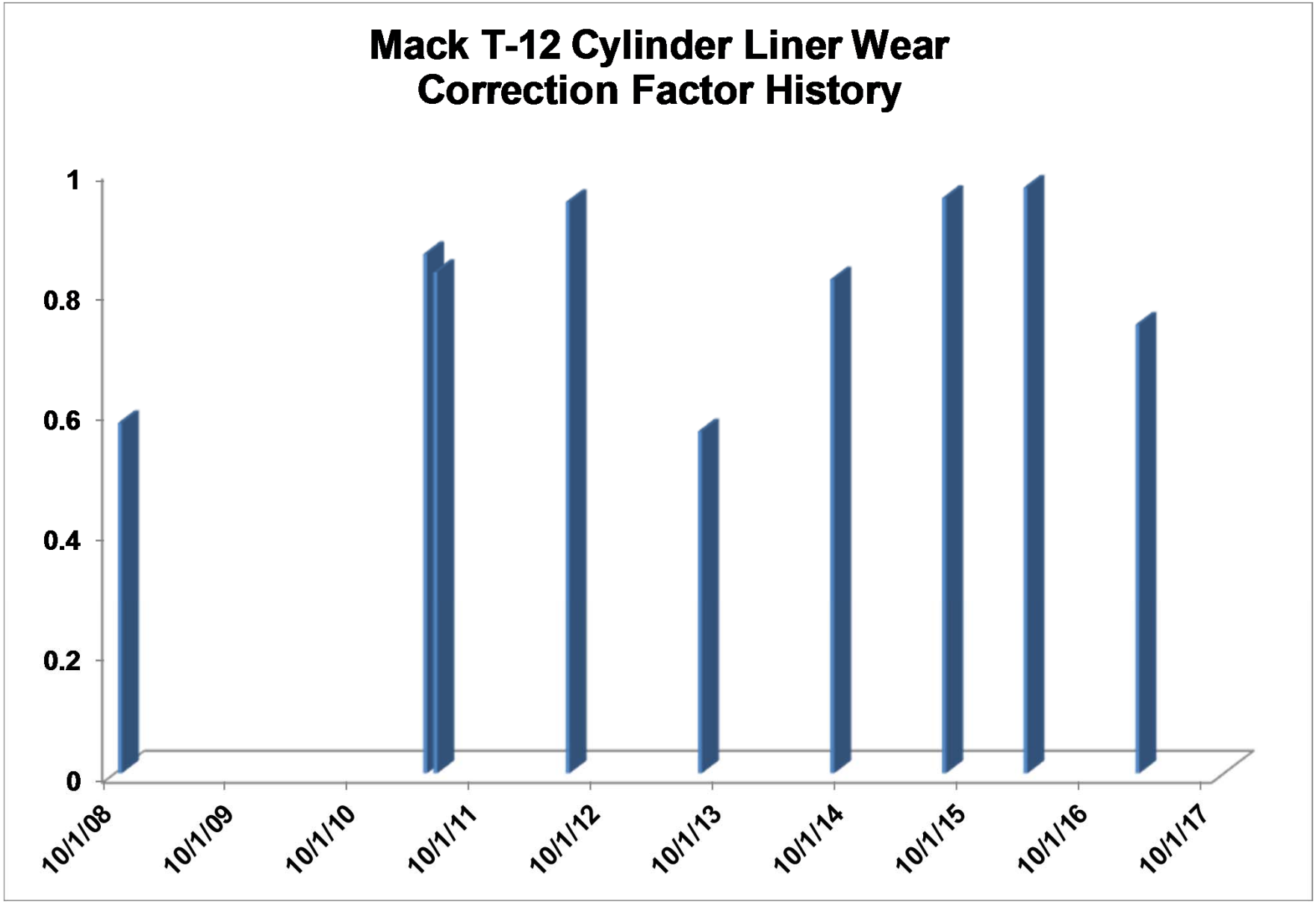
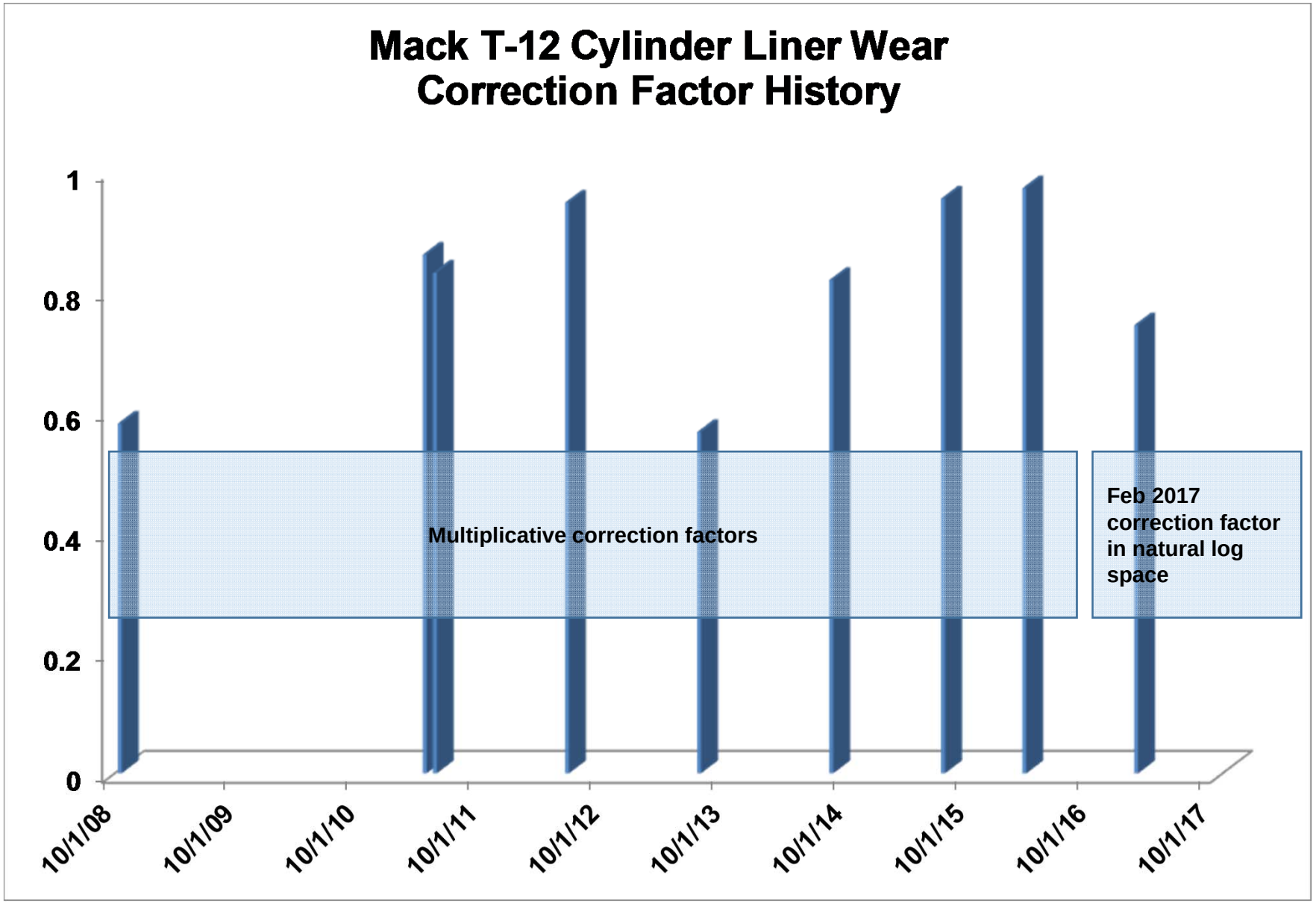


Chart shows magnitude and update frequency of T-12 liner wear correction factors. CF's applied to all P/F parameters beginning May 2011.


Mack T-12 Cylinder Liner Wear
Correction Factor History
1
0.8
0.6
0.4
0.2
0
Multiplicative correction factors
Feb 2017
correction factor
in natural log
space
10/1/08
10/1/09
10/1/10
10/1/11
10/1/12
10/1/13
10/1/14
10/1/15
10/1/16
10/1/17

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Subcommittee B. Further, that the Test Monitoring System, give due consideration to balloting controversial Information Letters within SC-B prior to the effective date of the letter.

4. That Subcommittee B establish, as policy, that SURVEILLANCE PANEL MEMBERS:

   - Attend meetings on a regular basis
   - Maintain a technical understanding of the test
   - Be given, by their sponsoring companies, the authority to make technical judgments.

5. That effective dates for Information Letters be determined by the Test Monitoring System, but should not be earlier than the date of the decision to promulgate the letter. **(NO RETROACTIVITY!)**

6. That the timing of the Subcommittee B ballot be coordinated with the effective date of the Information Letter, such that, if the Information Letter effective date is contingent upon the specific approval of SC-B the ballot be initiated within two weeks of the decision to promulgate the letter. All other Information Letters to be balloted in the semi-annual block. In any case, all "controversial" Information Letter topics should be balloted separately.

by:

T. M. Franklin,
for the task force

ATTACHMENT

BACKGROUND OF THE INFORMATION LETTER SYSTEM

- Early on in the promulgation of engine test methods by Subcommittee B within ASTM, these methods were published as STPs (Special Technical Publications). This method of publication was adopted as it allowed timely updates and did not require the long, downstream voting process as is required for the publication of standards. As ASTM is a voluntary standards organization, concerns were raised with the use of STPs in commerce without the benefit of their having achieved an appropriate level of review and consensus within the society.

- In the mid 1970s an ASTM Program, The Test Monitoring System, was conceived by Subcommittee B and agreed by ASTM management. A document entitled, "REGULATIONS GOVERNING THE ASTM TEST MONITORING SYSTEM" was adopted after the operation of the TMC actually began and is in force today.

- In order to encourage Subcommittee B to advance their engine test methods to the status of an ASTM Standard Test Method, authority for the issuance of Information Letters was given by the Committee on Technical Committee Operations in 1984, as follows:

  > "COTCO recognizes that D-2 has a unique and complex situation. The use of Information Letters is approved providing each letter contains a disclaimer to the effect that such has not obtained ASTM consensus. These Information letters should be moved to such consensus as rapidly as possible."

  This authority establishes a practical process for keeping those standards evergreen by the use of Information Letters. These would be validated for initiation by the Test Monitoring System and balloted, by Subcommittee B, for inclusion in a future revision of the pertinent standard. At the time of the standard revision, Committee D02 and Society ballots would also be required to validate the revision; however, once published and before becoming a part of a revision of the standard, the Information letters could be used in commerce, as though a part of the standard, with the agreement of the parties concerned.

- Key points:

1. The need for, and the technical validity of, Information Letters is established by the Test Monitoring System, according to its regulations. This has been established as a necessary condition for the successful operation of this ASTM Program.

2. Information Letters are to be balloted in Subcommittee B as a necessary step for their inclusion in a future revision of the applicable standard. This balloting process should not affect either the need for, or technical validity of, an Information Letter prior to the conclusion of the ballot process.

THE BALLOTING PROCESS

- Within a surveillance panel

The surveillance panel has the stature of a "task group" within the ASTM Regulations. As such, it is free to determine its own rules for operation and voting. As most of the surveillance panels operate according to an abbreviated version of Robert's Rules of Order, a simple plurality can be enough to move an issue forward. This plurality can be achieved by voice vote, hand count or, if demanded by a voting member, by roll call vote ("vote of record"). On issues which must also receive the balloted support of the section or subcommittee, however, most of the surveillance panel chairpersons have insisted upon unanimous, or nearly unanimous, agreement within the surveillance panel.

- Within Subcommittee B

As a balanced membership unit in the ASTM standards balloting process, SC-B operates under certain regulations for its balloting process. These are highlighted as follows:

1. A valid letter ballot is one which receives a return from 60%, minimum, of its voting members. All APPROVE, DISAPPROVE or ABSTAIN returns count toward the 60%

2. A positive letter ballot is one which receives an APPROVE count which is at least 2/3 of the total of APPROVE plus DISAPPROVE returns.

3. On a positive letter ballot which receives one or more DISAPPROVE returns, all DISAPPROVE ballots must be reviewed and acted upon:

- The respondent is convinced to change his response to APPROVE or ABSTAIN.

- The subcommittee, by a 2/3 majority, declares the DISAPPROVE ballot response to be non-persuasive. This action can be taken with a hand count vote at a meeting of the subcommittee or through a letter ballot process. In either case the reason for the non-persuasive decision is to be documented.

4. Timing:

   - Voting members are to be given 30 days in which to act upon their ballot, i.e. 30 days from ballot mailing to closure date

   - Ballot closure occurs on the stated closing date or when a 60% return is achieved, whichever occurs last.

   - A ballot is considered approved

     a) Upon closure if there are no DISAPPROVE ballots at that time.

     b) Upon review and action on all of the DISAPPROVE ballots, either by withdrawal or by being declared non-persuasive.

Points from

REGULATIONS GOVERNING THE ASTM TEST MONITORING SYSTEM

(dated 2-14-86)

ARTICLE 2 - PURPOSE

2.1 The purpose of the System is to establish, maintain and operate an independent referencing system to assure that all tests performed using the lubricant test procedures published by ASTM and which are under the jurisdiction of ASTM Subcommittee D02.B0 are conducted in a valid manner so that they can be interpreted properly. The System shall be restricted to monitoring only tests assigned to it by ASTM Subcommittee D02.B0.

ARTICLE 6 - ADMINISTRATOR

6.3 The Administrator shall operate a Test Monitoring Center which shall:

6.3.9 In cooperation with the Test Developers and Surveillance Panels maintain a system for disseminating new information concerning the test procedures referenced in Paragraph 2.1.

A Program of ASTM International

Test Monitoring Center

@ Carnegie Mellon University
6555 Penn Avenue, Pittsburgh, PA 15206, USA

http://astmtmc.cmu.edu
412-365-1000

MEMORANDUM: 17-002

DATE: February 24, 2017

TO: Industry at Large

FROM: Frank Farber

SUBJECT: Service Fluid 105 Replacement Oil Pilot Blend Availability

Reference Oil 1006/ Service Fluid 105 currently used in Sequence IVA, VG, VIII and elastomer testing cannot be re-blended due to base oil and component obsolescence. A task force has been formed under Subcommittee B to develop a suitable replacement. With help from the current supplier, preliminary testing has identified a suitable replacement formulation. Before a large blend is obtained a pilot blend has been made and is available for additional testing. This fluid has been designated 'SFPILOT' by the TMC and can be obtained by contacting Amanda Darcy at 412-365-1022 or ahd@astmtmc.cmu.edu.

FMF/fmf/mem17-002.fmf.docx

cc: Amanda Darcy
Don Lind
Jeff Clark

Distribution: email