

**MEETING MINUTES OF
D02.B0.07 ON BENCH TEST MONITORING
June 18th, 2020**

WebEx

1. CALL TO ORDER

Dennis Gaal called the meeting to order at 11:03 AM EDT. The ASTM Antitrust Statement and electronic recording of ASTM meetings is prohibited were shown.

2. AGENDA

The agenda was approved as posted.

3. MEETING MINUTES

The December 9th, 2019 meeting minutes were approved as posted on the ASTM website for D02.B0. 07.

4. OVERVIEW OF BENCH TESTS UNDER B.07 JURISDICTION

Dennis Gaal reviewed a slide of bench test methods which included reapproval dates and the present operating status.

5. SURVILANCE PANEL REPORTS

a. Mike Faile with TEOST 33C and MHT-4 (ASTM D6335 & D7097)

D6335

- TMC memo was issued January 14th, 2020 for updated test method
- All tests this period used Rod Batch M
- Oil 75 is depleted at TMC, there is still assignment from lab inventories until consumed
- Oil 75-1 (replacement oil for Oil 75) is approved with temporary limits set April 4th, 2019
- Precision improved from last period at 6.08 but is slightly less then target of 5.73
- Test ran at slight severe bias (0.28 s) for performance this period
- This period had zero failed calibrations

D7097

- TMC memo was issued January 14th, 2020 for updated test method
- TMC memo 19-060 was issued November 26th, 2019 for updated reference oil targets
- Multiple catalyst batches are in use (15AA, 18AB, and 19BA)

- Replacement oil 434-3 had temporary limits approved on November 21st, 2019
- Precision was worse than previous period at 7.02 and is less than target of 5.63
- There has been increasingly poor precision for each period since 2017
- Performance was on target (-0.02 s) this period and both oils were on target
- This period had 7 failed calibrations

b. Matt Schlaff with High Temp FOAM (ASTM D6082)

- There was a pass rate of 100% among 7 labs
- Precision this period was 10 which is less than pooled target of 19.28
- Performance this period was -0.23 s
- There was no Non-zero foam stability
- No technical update this period
- TMC oils FOAMB18 contains 90.4 gallon in inventory and oil 66 contains 76.1 gallons in inventory

c. Matt Schlaff with Sulfated Ash (ASTM D874)

- There was a pass rate of 100% among 4 labs
- Precision this period was 0.04 versus the pooled target of 0.07
- Performance this period was -0.71 s
- Oil 820-2 had a severity of -1.38 s and oil 91 was at -1.00 s for this period
- Calibration requirements will be adopted into LTMS document and be effective June 23rd, 2020

d. Matt Schlaff with Scanning Brookfield (ASTM D5133)

- There was a pass rate of 88% among 10 labs
- The precision for this period was 2.45 versus the target of 2.86
- Severity for this period was -0.24 s
- Oil 1009 had a severity performance of -1.98 s
- Calibration requirements will be adopted into LTMS document and be effective August 19th, 2020
- Round Robin for new additional reference oil will be conducted Q3 2020

e. Jessica Villarreal with Ball Rust Test (ASTM D6557)

- There was a total of 182 accepted calibrations and 10 failed calibrations
- This period contained 3 invalid runs caused by air flow problems, run time length, and variance from method.
- AGV severity as measured by CUSUM is on target
- Performance this period was 12.78 which is slightly worse than previous period
- No information letters were issued this period

**f. Mike Burke with Elastomers EOEC and LDEOC (ASTM D7216)
EOEC**

- There were 307 tests ran for this period with a fail rate of 1%

- ACM Batch 28 round robin completed (+0.19 volume change determined due to change in processing aid from prior batches)
- Memo 20-001 information letter was released January 9th, 2020 for performance targets on Oil SL107
- IL 20-1, Seq.11 contains Heavy Duty Polyacrylate Elastomer Correction Factor-volume change
- EOEC-20200324 Report Package Revision Notice is effective April 29th, 2020

LDEOC

- 456 tests were performed this period with a 2.5 % failure rate
- Oil SL107 currently contains 3532 gallons at TMC with a +5-year estimated life

g. Amy Ross with Volatility (ASTM D6417 & D5800)

D6417

- CUSUM plot shows over all slight severe performance (0.09 s) with leveling to nearly on target for the last two periods
- Less precise than previous period
- There was 17 accepted calibrations and a 0% fail rate
- All oils have slightly severe performance but better than last two previous periods

D5800

- All values for precision and severity are calculated in a natural log scale
- Precision of 0.0503 for this period which was less precise than target 0.0465
- There was a performance of 0.54 s this period which is less severe than the previous period
- No procedure C instruments were referenced this period
- There was a fail rate of 4% and 6 OC on five rigs at four labs
- All oils (VOLC12, D12, and E12) were more severe than their target mean
- Transition to Natural Log scale became effective February 2nd, 2020
- Reference Oil references updated to NCO-12, updated and approved May 1st, 2020

h. Justin Mills with ROBO (ASTM D7528)

- API applied provisional licensing on April 1st, 2020 for ROBO in response to backlog at independent test labs
- Limits were finalized for TMC 438-2 and internal limits were set for TMC 434-3 for previous semester
- ROBO testing is currently available at 2 independent labs as well as 3+ dependent labs
- Precision is on target but test is running mild (-0.58)

i. Young-Li Mc Farland with EOFT and EOWTT (ASTM D6795 & D6794)

D6795

- 148 tests were accepted for calibration this period
- There was an improved fail rate of 1.97% vs the past period
- CUSUM plotting shows severity is on target
- Precision has worsened to 8.49 in comparison to previous period of 5.56

-Test is currently in maintenance mode

D6794

- There was a total of 962 accepted calibrations for this period
- The fail rate worsened by 1.66% of operational valid tests vs the prior period
- Severity by CUSUM plotting was severe for all treat rates
- Precision was slightly worse than previous period
- Test is currently in maintenance mode
- TMC effort to add EOWTT & EOFT to LTMS is planned for the upcoming period

j. Mike Lopez with CBT and HTCBT (ASTM D5968 & D6594)

D5968

- Currently testing on Bath N coupons
- There were no failed or lost tests for this period
- Cu and Pb concentrations are trending mild
- There is no precision estimate available due to low activity (one accepted calibration)
- Information letter was sent out October 9th, 2019 to authorize the use of coupon hangers and standardization of test results calculation

D6594

- Cu and Pb concentrations are trending severe
- Copper pooled s is at 0.21 which is better than previous period
- Lead pooled s is at 7.47 which is better than previous period
- There were 247 tests which were accepted for calibration
- 15 runs were failed calibration tests(OC) and 8 tests were operationally invalid by lab (LC)
- HTCBT lost test causes included heater malfunction, airflow control problems, water contamination, and wrong oil used

All presentations have been combined into Attachment 1

6. OLD BUSINESS

The ballot for ASTM D3525 received some negative votes that have been withdrawn after discussion with the voters, so the publication will proceed in the coming period. Based on the negative votes the reproducibility had to be recalculated with some data points being removed.

During the meeting we discussed the need to approve D3524 which is past its reapproval date of 20149. While there is a longer-term goal to modernize this method similar to D3525, the review timing will require a simple reapproval to be done in the coming period.

7. NEW BUSINESS

Young-Li McFarland wanted to present slides on the aqueous definition for ASTM D7563 but was unable to do so due to time constraints. Specifically, the concern is an aqueous "blob" at the bottom of the cylinder that develops and appears transparent but not well defined.

It was agreed that the chair would send out a request for volunteers to form a TG with Young-Li to work on this issue and report back at the next meeting.

8. NEXT MEETING

D02.B0.07 next scheduled surveillance panel meeting will be held on December 6th, 2020 – JW Marriott Austin, Austin TX (hopefully).

9. ADJOURNMENT

The meeting was adjourned at 12:00 PM EDT.

Respectfully,

Jessica Villarreal



Read Antitrust Statement

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Reminder: Electronic recording of ASTM meetings is prohibited.

AGENDA: D02.B0.07 Bench Test Surveillance
Thursday, June 18, 2020 – 11:00-12:00 EDT
WebEx – see details below

Chairperson's Comments

ASTM Anti-Trust Statement
ASTM Electronic Recording Policy

Approval of Agenda

Approval of Meeting Minutes – Jessica Villarreal

Overview of Bench Tests under B.07 Jurisdiction – Dennis Gaal

TMC Reports

Tom Schofield
Brittany Pfleegor

Surveillance Panel Reports

TEOST (ASTM D6335 & D7097) – Mike Faile
Foam (ASTM D6082) - Matt Schlaff
Sulfated Ash (ASTM D874) - Matt Schlaff
Scanning Brookfield (ASTM D5133) - Matt Schlaff
Ball Rust Test (ASTM D6557) – Jessica Villareal
Elastomers (ASTM D7216) - Mike Birke
Volatility (ASTM D6417 & D5800) – Amy Ross
ROBO (ASTM D7528) – Justin Mills
EOFT and EOWT (ASTM D6794 & D6795) - Yong-Li McFarland
Corrosion (ASTM D5968 & D6594) – Mike Lopez

Old Business

Update on WK59475 (ILS 1491) – ASTM D3525 – Vince Donndelinger
Reapproval for ASTM D3524

New Business

Discussion on aqueous definition for ASTM D7563 – Yong-Li McFarland

Next Meeting

December 6, 2020 – JW Marriott Austin, Austin, TX (hopefully)

Adjournment

WebEx information

Host: Alyson Fick (afick@astm.org)

Event number (access code): 132 407 4530

Thursday, June 18, 2020 11:00 am, Eastern Daylight Time (New York)

Event address for attendees:

<https://astm.webex.com/astm/onstage/g.php?MTID=ee95e2f8fab4b0ce8a088e706cedb0a9d>

Audio conference information

To receive a call back, provide your phone number when you join the event, or call the number below and enter the access code.

1-408-792-6300 Call-in toll number (US/Canada)

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D02.B0.07 Bench Test Surveillance Panels - Status June 2020

Surveillance Panel	Chairperson	Test Method	Reapproval Date	Jurisdiction
TEOST (33C)	Mike Faile	D6335	2024	D02.09.0G.2
TEOST (MHT)	Mike Faile	D7097	2024	D02.09.0G.2
Elastomer Compatibility (EOEC)	Mike Birke	D7216	2024	D02.B0.07
EO Water Tolerance (EOWT)	Yong-Li McFarland	D6794	2025	D02.B0
EO Filterability Test (EOFT)	Yong-Li McFarland	D6795	2024	D02.B0
Corrosion (CBT)	Mike Lopez	D5968	2024	D02.B0.02
Corrosion (HTCBT)	Mike Lopez	D6594	2025	D02.B0.02
Volatility by GC	Amy Ross	D6417	2024	D02.04.0H
Volatility by Noack	Amy Ross	D5800	2024	D02.06
High Temperature Foam	Matt Schlaff	D6082	2022	D02.06
Scanning Brookfield	Matt Schlaff	D5133	2024	D02.07
Sulfated Ash	Matt Schlaff	D874	2023	D02.03
Ball Rust Test	Jessica Villarreal	D6557	2023	D02.B0.01
ROBO	Justin Mills	D7528	2022	D02.B0.07
Homogeneity and Miscibility	Standing Item in B07	D6922	2023	D02.B0
Emulsion Test	Standing Item in B07	D7563	2021	D02.B0.07
Diesel Fuel Dilution by GC	Standing Item in B07	D3524	2019	D02.B0
Gasoline Fuel Dilution by GC	Standing Item in B07	D3525	2021	D02.B0
Miscibility of Two-Stroke Lubricants	Standing Item in B07	D4682	2023	D02.B0.07

Surveillance Panel	Need	TMC Monitored?	Reference Oils	Present Operating Status
TEOST (33C)	PCEO Class. Panel	Yes	435-2, 75-1	Maintenance
TEOST (MHT)	PCEO Class. Panel	Yes	432, 434 , 434-3	Maintenance
Elastomer Compatibility (EOEC)	HDEO/PCEO Class. Panel	Yes	SL107	Information letter in balloting
EO Water Tolerance (EOWT)	PCEO Class. Panel	Yes	77-3, 79	Maintenance
EO Filterability Test (EOFT)	PCEO Class. Panel	Yes	79	Maintenance
Corrosion (CBT)	HDEO Class. Panel	Yes	43	Maintenance
Corrosion (HTCBT)	HDEO Class. Panel	Yes	1005-5, 44-4	Maintenance
Volatility by GC	HDEO/PCEO Class. Panel	Yes	52, 55, 58	Maintenance
Volatility by Noack	HDEO/PCEO Class. Panel	Yes	VOLC12, VOLD12, VOLE12	Maintenance
High Temperature Foam	HDEO/PCEO Class. Panel	Yes	FOAMB18, 66	WK61119
Scanning Brookfield	PCEO Class. Panel	Yes	58, GIA17, 1009	Maintenance
Sulfated Ash	HDEO Class. Panel	Yes	90, 91, 820-2	Maintenance
Ball Rust Test	PCEO Class. Panel	Yes	82-1, 86, 87, 1006	Maintenance
ROBO	PCEO Class. Panel	Yes	434-3, 435-1, 438-2	Maintenance
Homogeneity and Miscibility	PCEO Class. Panel	No	HMA-HMF	Maintenance
Emulsion Test	PCEO Class. Panel	No	EM2, EM2-1, EM5, EM5-1	Maintenance
Diesel Fuel Dilution by GC	HDEO Class. Panel	No	None	Need for reapproval
Gasoline Fuel Dilution by GC	PCMO Class. Panel	No	None	In progress
Miscibility of Two-Stroke Lubricants	2T Engine Oils	No	None	Maintenance

Bold = low volume



TEOST Surveillance Panel Report






D02.B0.07 Bench Tests Surveillance: WebEx Meeting

Mike Faile, Chair

Thursday, June 18, 2020

ASTM D6335: TEOST-33C






Summary for D02.B0.07

Status	Test Aspect	Comments
	Method	Test method is in good standing <ul style="list-style-type: none">▪ ASTM D6335-19 was published in January 2020▪ TMC Memo 20-002 issued January 14, 2020 regarding the updated test method▪ Monitored by D02.09 and the TMC
	Parts Availability	All TEOST-33C hardware and test materials are available <ul style="list-style-type: none">▪ All tests in period used Rod Batch M
	Reference Oils	435-2 and 75-1 reference oils in good supply at TMC <ul style="list-style-type: none">▪ Oil 75 is depleted at TMC – still assigning out of lab inventories until gone▪ Severe replacement oil 75-1 – approved with temporary limits on 20190404▪ Permanent limits will be set after 30+ data points are obtained (25 total so far as of 6/16/20)
	Test Availability	TEOST-33C test is available at 8+ labs – combination of independent and dependent labs
	Severity and Precision	<ul style="list-style-type: none">▪ Precision improved since last period (6.08 vs 7.35); however, slightly less than target (5.73)▪ Test ran with slight severe bias (0.28 s) for performance this period▪ Period had ZERO failed calibrations – remarkable improvement vs poor prior two periods' fail rates of 20% and 23%



ASTM D7097: TEOST-MHT

Summary for D02.B0.07

Status	Test Aspect	Comments
	Method	<p>Test method is in good standing</p> <ul style="list-style-type: none"> ASTM D7097-19 was published in January 2020 TMC Memo 20-003 issued January 14, 2020 regarding the updated test method TMC Memo 19-060 issued November 26, 2019 regarding updated reference oil targets Monitored by D02.09 and the TMC
	Parts Availability	<p>All TEOST-MHT hardware and test materials are available</p> <ul style="list-style-type: none"> All tests in period used Rod Batch M Multiple catalyst batches are in use – 15AA (n=2), 18AB (n=51) and 19BA (n=48)
	Reference Oils	<p>432 and 434-3 reference oils in good supply at TMC</p> <ul style="list-style-type: none"> Oil 434 has 52 samples remaining in inventory – will use until inventory is gone Replacement oil 434-3 – approved with temporary limits on 20191121 Permanent limits will be set after 20+ data points are obtained (none run since approval)
	Test Availability	<p>TEOST-MHT test is available at 11 labs – combination of independent and dependent labs</p>
	Severity and Precision	<ul style="list-style-type: none"> Precision worse than last period (7.02 vs 6.40) and less than target (5.63) – there has been increasingly poor precision each period since 2017 Performance was on target (-0.02 s) this period and both oils were also on target Period had 7 failed calibrations – fail rate of 7% - all 7 were severe – not oil or lab specific Severity on catalyst batch 19BA (n=51) is -0.20 s mild – comparably mild on both reference oils and compares similar to batch 18AB (n=242)

D02.0B.07 D6082 HT FOAM SUMMARY



Performance				
Pass Rate	# Labs	Mean Δ/s	Pooled s	Pooled s Target
100	7	-0.23	10	19.28

- No significant lab or oil bias
- All 6 discrimination runs were successful
- No Non-zero foam stability
- No technical updates this period

Oil	Year Rec'd by TMC	Tests	TMC Inventory, gallons	Gallons Shipped last 12 months
FOAMB18	2018	D6082	90.4	5.4
66	2002	D6082	76.1	1.5

D02.0B.07 D874 SULFATED ASH SUMMARY



Performance				
Pass Rate	# Labs	Mean Δ/s	Pooled s	Pooled s Target
100	4	-0.71	0.04	0.07

- Lab B at -1.49 Mean Δ/s
- Oil 820-2 at -1.38 Mean Δ/s
- Oil 91 at -1.00 Mean Δ/s
- Calibration Requirements adopted into LTMS document; Effective Date: 6/23/2020

Oil	Year Rec'd by TMC	Tests	TMC Inventory, gallons	Gallons Shipped last 12 months
820-2	2001	D874	8.9	0.1
90B	2005	D874/D874QC	16.1	3
91	2006	D874	3.6	0.1

D02.0B.07 D5133 GELATION INDEX SUMMARY



Performance				
Pass Rate	# Labs	Mean Δ/s	Pooled s	Pooled s Target
88	10	-0.24	2.45	2.86

- Lab AY at 1.46 Mean Δ/s (n=2)
- Oil 1009 at -1.98 Mean Δ/s (n=1)
- Calibration Requirements adopted into LTMS document; Effective Date: 8/19/2020
- Round Robin for potential new reference oil to be conducted Q3 – addition not replacement

Oil	Year Rec'd by TMC	Tests	TMC Inventory, gallons	Gallons Shipped last 12 months
58	1998	D6417, GI	115.1	0.3
GIA17	2017	GI	9.8	0.1
1009	2002	GI	37.8	0.1

BRT SURVEILLANCE PANEL

ASTM D02.B0.7

June, 2020





BRT TEST ACTIVITY

*October 1, 2019- March 31, 2020

Test Status	Validity Code	Validity
Accepted Calibrations	AC	182
Failed Calibrations	OC	10
Operationally Invalid, by lab	LC	2
Operationally Invalid, by TMC	RC	1
Acceptable Shakedown Run	NN	6
Invalid Shakedown Run	LN	1
Total		202



BRT LOST TESTS

- Causes of lost tests include air flow control problem, run time length, and variance from ASTM method.

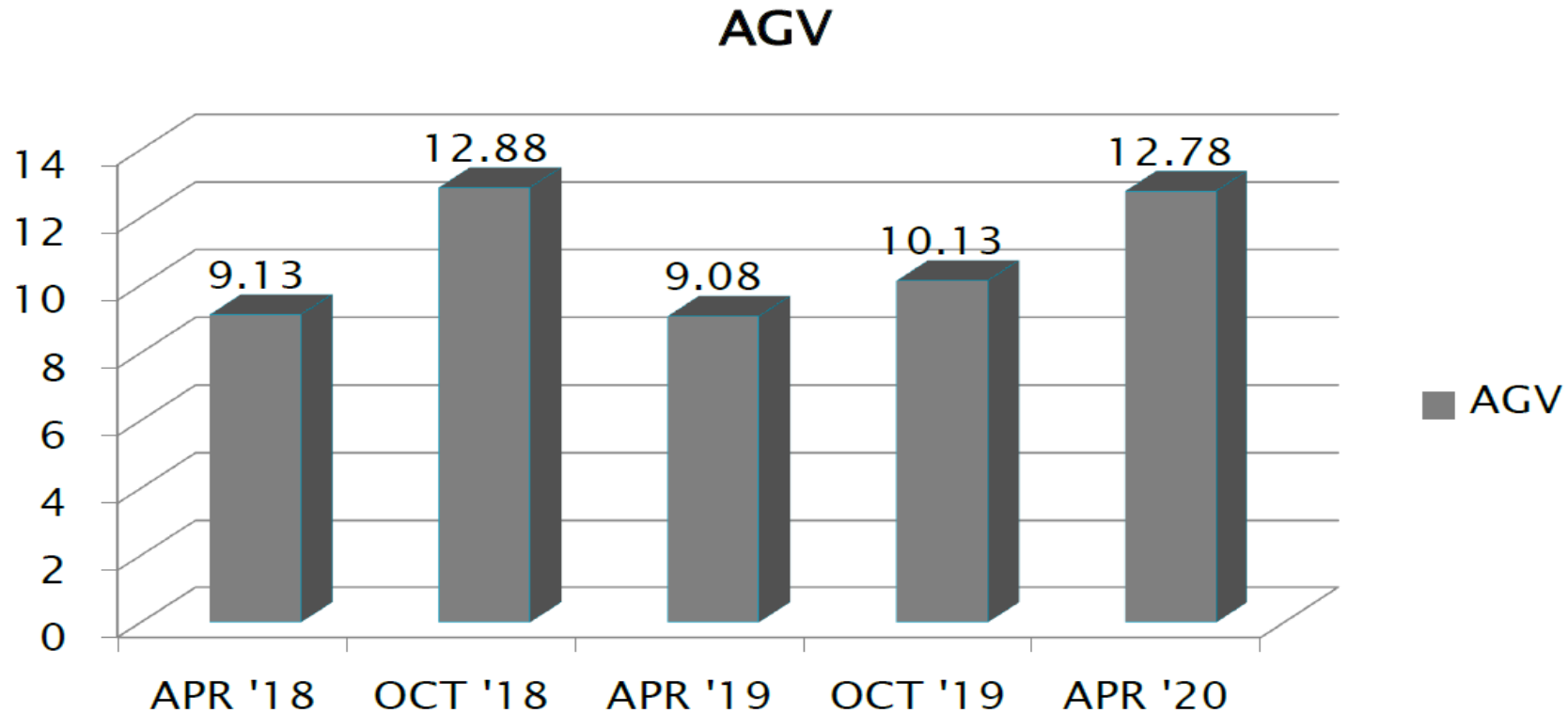
Status	Cause	#
Invalid	Air Flow Control Problem	1
Invalid	Run Time Length	1
Invalid	Variance from ASTM Method	1
Total	3	

* Invalid and aborted calibration tests

SEVERITY AND PRECISION



- Over the course of this report, AGV severity as measured by CUSUM, is on target
- Pooled s for this period is 12.78, slightly worse than previous period.





REFERENCE OIL SUPPLY

Oil	TMC Inventory (gallons)	Quantity Shipped in last 6 months	Lab Inventory (samples)	Estimated Life
1006	32.1	0.5	59	5+ years
82-1	4.5	0.5	58	4 years
86	51.8	0.5	60	5+ years
87	95.6	0.5	60	5+ years

STATUS

- No information letters were issued this period

D7216 Elastomers

EOEC

- 307 tests, approximately 1% Failure rate
- ACM Batch 28 round robin complete. + 0.19 volume change

Information Letters

20200109 – Mem 20-001 Replacement Reference Oil SL107 Performance Targets

20200330 – IL 20-1, Seq.11 Heavy Duty Polyacrylate Elastomer Correction Factor – Volume Change

20200413 – EOEC-20200324 Report Package Revision Notice (Effective 20200429)

LDEOC

- 456 Tests, approximately 2.5% failure rate

Information Letters

20200109 – Mem 20-001 Replacement Reference Oil SL107 Performance Targets

Oil Inventory

SL107 – 3532 gallons at TMC. Estimated Life of 5 + years



B07 Volatility Surveillance Panel Update

ASTM June 18 2020









Amy Ross

Members List









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Volatility Surveillance Panel Summary – D6417

Precision and Severity	  	<ul style="list-style-type: none">• more precise than target• Less precise than last period• CUSUM plot shows overall slight severe performance (0.09 s) with leveling to nearly on-target for last two periods
Test Status		<ul style="list-style-type: none">• 0% fail rate (17AC); 7 labs
Lab/Apparatus		<ul style="list-style-type: none">• Rigs AU and G severe, and furthest from on-target in comparison to rest of population
Calibration Oils	  	<ul style="list-style-type: none">• Oils 52, 55, and 58 all on target for mean value and precision; oil 55 much better precision than target for this period and last• All oils slightly severe performance but better than last two periods• Healthy supply of all fluids






Volatility Surveillance Panel Summary – D5800

Precision and Severity	  	<p><i>All values now calculated in natural log scale</i></p> <ul style="list-style-type: none">• Less precise than updated target (0.0503 vs. 0.0465 target)• when compared on same scale, precision is better than last term• Performance is 0.54 s severe this period; less severe than last period but continued overall trend
Precision and Severity by Procedure	    	<ul style="list-style-type: none">• No Procedure C data this period; 1 NCK2; same number of NCK25G and NS2 rigs (24 and 7, respectively)• Proc B precision better than target (0.04)• Proc D precision worse than target (0.05)• Performance of Procedure B continues to be severe• Procedure D continues to be mild

Volatility Surveillance Panel Summary – D5800

Test Status	 	<ul style="list-style-type: none">• Fail rate 4%, compared to 10% last term; 6 OC on five rigs at four labs• Four tests held out of stats (new rigs failed to demonstrate passing initial calibration, MC; Lab J)
Lab/Apparatus		<ul style="list-style-type: none">• Rig G8 exceeded 3s target range on 2 tests (+3.4 and +3.0 s); Two results on two rigs for VOLC12 (+3.4s on G8 and -2.9s ON D6) could be influential wrt precision worse than target

Volatility Surveillance Panel Summary – D5800

Calibration Oils	    	<ul style="list-style-type: none"> • All oils (VOLC12, D12 and E12) exceeded target mean; *rig G8 contributed two +3s results; all oils greater than mean for the last two terms • Oils VOLC12 and D12 exceeded precision target • Oil E12 was more precise than target • VOLE12 performance is much less severe than last term (0.82 to 0.51) • Supply is good for VOL C12, D12, E12 and D18; VOLD14 is diminishing (2.3 gallons) as it heads toward obsolescence
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	VOLC12	VOLC12	VOLE12
Target Mean	2.6523	2.5264	2.8175
<i>This period</i>	2.6794	2.5511	2.8411

Volatility Surveillance Panel Summary – D5800

Method and LTMS Updates

- Transition to Natural Log scale effective 20200207; report packet revision notice D5800-20191112; all results now reported in natural log transformed units
- D5800-20 standard update approved 20200501; Reference Oil references updated to NCO-12, diagram update and editorial changes






ASTM D7528: ROBO

Summary for D02.B0.07

Justin Mills | June 2020

ASTM D7528: ROBO

Summary for D02.B0.07

Status	Test Aspect	Comments
	Method	Test method is in good standing <ul style="list-style-type: none">ASTM D7528-17a was published in October 2017. Revision planned for 2020.Monitored by the TMC
	Parts Availability	All ROBO hardware and test materials are available <ul style="list-style-type: none">Nitrogen dioxide, the primary catalyst for ROBO, is available from multiple suppliers<ul style="list-style-type: none">Alternative with dilute nitrogen dioxide expected to be approved in 2020 as well.
	Reference Oils	All current reference oils are in good supply at TMC: <ul style="list-style-type: none">In last semester, limits were finalized for TMC 438-2 and interim limits were set for TMC 434-3
	Test Availability	In response to long backlogs at independent test labs, API invoked provisional licensing on April 1, 2020 for ROBO. <ul style="list-style-type: none">Queue is a result of high utilizationROBO test is available at 2 independent labs and 3+ dependent labs
	Severity and Precision	<ul style="list-style-type: none">In last semester (Oct 2019 – Mar 2020) precision was slightly worse than target and test ran with a slight mild bias (-0.10)In current semester (n=41) precision is on target, but test is running mild (-0.58).

ASTM D6795
Engine Oil Filterability Test (EOFT)
and
ASTM D6794
Engine Oil Water Tolerance Test (EOWTT)

June 18, 2020

Yong-Li McFarland
Chair



Surveillance Panel Membership

16 members

Ernest Morel, Afton Chemical

Man Hon Tsang, Chevron Oronite

Dennis Gaal, Exxonmobil

Joe Franklin, Intertek

Udo Boecker, ISP

Michael Johnscher, ISP

Jeff Winfield, Lubrizol

Litchi Xie, Lubrizol Additive (Zhuhai) Co., Ltd.

Michael Faile, Lubrizol

Jason Bowden, OH Technologies Inc

Greg Miiller, Savant Inc.

Becky Grinfield, SwRI

Yong-Li McFarland*, SwRI

Brittany Pfleeger, TMC

Frank Farber, TMC

Hap Thompson

*Chair

Scope and Objective

It is the responsibility of this panel to provide surveillance over Test Methods D6794 and D6795 bench tests used in the ILSAC and API passenger car oil categories. The surveillance panel will review data semi-annually supporting the precision for each bench test and when necessary, conduct workshops to bring the bench tests within accepted limits. The surveillance panel will function with the support of the ASTM Test Monitoring Center (TMC) in an effort to monitor the bench tests and maintain appropriate and adequate supplies of reference oils for the monitoring process. The panel will maintain a liaison with the “expert groups” in ASTM, which may help in the maintenance and improvement of the bench test methods used in support of the current ILSAC and API categories. The surveillance panel will make recommendations for appropriate action through Subcommittee D02.B, Section 7.



ASTM D6795 Engine Oil Filterability Test (EOFT)

Title: Standard Test Method For Measuring The Effect On Filterability Of Engine Oils After Treatment With Water And Dry Ice And A Short (30 min) Heating Time

Current Business

- 6 labs calibrated
- Improved 1.97% fail rate of operational valid tests
- CIFA Severity, by CUSUM plotting, is on target
- Precision, by pooled standard deviation, has worsened to 8.49 from 5.56 (last period)
- 1 reference oil, Oil 79, a reblend of oil 78-2
- **Test in maintenance mode**

Test Distribution	Oil 79
Accepted for Calibration (AC)	148
Failed Acceptance Criteria (OC)	3
Operationally Invalid, by Lab (LC)	1
Operationally Invalid, by TMC (RC)	1
Aborted Calibration Test (XC)	1
Total	154 (162*)

* Previous period total

Reference Oil Supply	Oil 79
Samples at Labs	247
Gallons shipped in last 6 months	66.5
Gallons at TMC	468.9

Period: October 1, 2019 to March 31, 2020




ASTM D6794 Engine Oil Water Tolerance Test (EOWTT)

Title: Standard Test Method For Measuring The Effect On Filterability Of Engine Oils After Treatment With Various Amounts Of Water And A Long (6 H) Heating Time

Current Business

- 5 labs calibrated
- Worsened 1.66% fail rate of operational valid tests
- CIFA Severity, by CUSUM plotting, was severe for all treat rates
- Precision, by pooled standard deviation, is slightly worse than previous periods, but comparable to historical values
- 2 reference oils, Oil 79 and Oil 77-3
- **Test in maintenance mode**

Test Distribution	Oil 77-3	Oil 79	Total
Accepted for Calibration (AC)	480	482	962
Failed Acceptance Criteria (OC)	7	9	16
Aborted (XC)	0	0	0
Acceptable Shakedown (NN)	0	0	0
Unacceptable Shakedown (MN)	0	0	0
Total	487	491	978 (972*)

* Previous period total 

Reference Oil Supply	Oil 77-3	Oil 79	Total
Samples at Labs	234	231	465
Gallons shipped in last 6 months	47	67	114
Gallons at TMC	625	468	1093

Period: October 1, 2019 to March 31, 2020



Old EOFT & EOWTT Business

TMC effort to add EOWTT & EOFT to LTMS in near future

New EOFT & EOWTT Business

None

Thanks to TMC and Brittany Pfleegor!





CBT/HTCBT Surveillance Panel Report ***June 2020***

Web addition

D02.B0.07

Mike Lopez presenting

CBT/ HTCBT Surveillance Panel Membership:

- Infineum
- Chevron
- Savant
- OH Tech
- TMC
- ISP Institute
- SwRI
- Afton Chemical
- Lubrizol
- Intertek
- TEI



CBT (D5968)

Current Status

- Currently testing on Batch N coupons
- 2 labs calibrated
- Test period Oct 1, 2019 – March 31, 2020
- No failed or lost test this period
- Copper concentration trending mild
- Lead Concentration trending mild
- No precision estimate available due to low activity
- One information letter sent out Oct 9, 2019 authorizing the use of coupon hangers and standardization of test results calculation precision and reporting

Test Status	Number of Tests
Acceptable Calibration Test (AC)	1
Failed Shakedown Run (MN)	2
Total	3

Oil	TMC Inventory (gal)	Lab Inventory (samples)	Estimated Life
43	32.1	35	5+ years

HTCBT(D6594)



Current Status

- Currently testing on Batch N coupons
- Test period Oct 1, 2019 – March 31, 2020
- Copper concentration trending severe
- Lead concentration trending severe
- Copper pooled s is at 0.21 for the period which is better than the previous period
- Lead pooled s is at 7.47 for the period which is better than the previous period
- There was one information letter on Oct 2019 Clarification of Test Result Calculation Precision and Reporting

Failed Parameter	Number of Tests
SevereLead Concentration	9
Severe Copper Concentration	2
Severe Copper & Lead Concentration	2
Mild Copper Concentration	2
Total	15

Test Status	Number of Tests
Acceptable Calibration Test (AC)	247
Failed Calibration Test (OC)	15
OperationallyInvalid, by lab(LC)	8
Acceptable ShakedownRun (NN)	10
UnacceptableShakedown Run (MN)	17
Total	297

HTCBT Lost Test		
Status	Cause	#
Invalid	Heater Malfunction	2
Invalid	Airflow Control Problems	4
Invalid	Water Contamination	1
Invalid	Wrong oil used	1
Total		8

Oil	TMC Inventory (gal)	Lab Inventory (samples)	Estimated Life
44-4	19.1	135	2.5 years
1005-5	37.5	245	3 years

Event Name	Event Start Date	Event Start Time	Event End Time	FirstName	LastName	Email
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Luc	Girard	lgirard@sanjuroconsulting.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Raymond	Dalley	rdalley@tricocorp.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Justin	Kontra	justin.kontra@evonik.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Sarah	Nuss-Warren	snuss-warren@savantgroup.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Becky	Grinfield	becky.grinfield@swri.org
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Amy	Ross	amy_ross@valvoline.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Kenneth	Henderson	kenohenderson@mceinriassociates.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Justin	Mills	justin.mills@evonik.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Stephen	Lazzara	sfazzara@valvoline.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Indresh	Mathur	imathur@haltermann.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Mike	Jennings	mike.jennings@aftonchemical.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Bill	O'Ryan	william.oryan@lubrizol.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Rich	Baker	rich@tribotonic.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Joe	Franklin	joe.franklin@intertek.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Matthew	Schlaff	matt.schlaff@intertek.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Dennis	Gaal	dennis.a.gaal@exxonmobil.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Vince	Donndelinger	vince.donndelinger@lubrizol.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Jason	Bowden	jhbowden@ohotech.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Scott	Fenwick	sfenwick@biodiesel.org
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Mike	Birke	mbirke@swri.org
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Andrew	Hutchinson	andrew.hutchinson@pcs-instruments.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Nikolaus	Turrini	nikolaus.turrini@anton-paar.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Jessica	Villarreal	jessica.villarreal@intertek.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Lori	Taylor	lori.taylor@dla.mil
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	carman	robles-feeney	caop@lubrizol.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Richard	Knapp	richard.knapp@dla.mil
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Kim	Tutin	kim@eastpointtower.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Bartek	Szalda	bartek.szalda@corelab.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Dzmitry	Kupchyn	dzmitry.kupchyn@chevron.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Jim	Barker	jim.barker@innospecinc.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Jeremy	Styer	jstyer@vanderbiltchemicals.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Brittany	Pfleegor	bjp@astmtmc.cmu.edu
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Lisa	Drennen	ldrennen@astm.org
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	John	Loop	john.loop@lubrizol.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Meghan	Easterday	meghan.easterday@aftonchemical.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Megan	Browning	megan.browning@lubrizol.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Yongli	McFarland	ymcfarland@swri.org
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Mike	Lopez	mike.lopez@intertek.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Peter	Leitner	peter.leitner@aftonchemical.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Thomas	Jebens	thomas@pizzatonno.de
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Thomas	Jebens	thomas@pizzatonno.de
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Thomas	Schofield	tms@astmtmc.cmu.edu
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Michael	Faile	michael.faile@lubrizol.com
D02.B0.07 Bench Test Surveillance	June 18, 2020 New York Time	11:00 am New York Time	12:00 pm New York Time	Bart	Zegers	bzegers@zematra.com