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Committee D02 on PETROLEUM PRODUCTS AND LUBRICANTS

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November 18th, 2019

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ASTM D02.B0.03 L-42 Surveillance Panel
Members and Guests:

Attached for your review and comment are the unconfirmed minutes of the:

November 13, 2019 Surveillance Panel Meeting (SwRI – Ann Arbor, MI)

Please direct any corrections or comments to my attention.

Very Respectfully,

Matt Sangpeal, Chairman
L-42 Surveillance Panel

L-42 Surveillance Panel Meeting Minutes

SwRI –Ann Arbor, MI

November 13, 2019

Attendees: voting members in **bold**, * indicates called in via teleconference

R. Banas (Exxon)	P. Kanga (ExxonMobil)	E. Sattler (Army)
D. Beck (TMC)	B. Kearney (Afton)	D. Schwenk (Afton)
D. Bell (Afton)	A. Lange (Intertek)	R. Slocum (LZ)
M. Cabaj (Linamar)	J. LaBond (Meritor)	D. Smith (Intertek)
A. Comfort (Army)	C. Louis (SwRI)	W. Venhoff (LZ)
J. Clark (TMC)	D. Mosher (BASF)	R. Warden (SwRI)
K. Drlja (LZ)	T. Muransky (AAM)	A. Zyski (Dana)
A. Goyle (BASF)	D. Rabinowitz (Meritor)	
D. Horvath (Afton)	M. Sangpeal (Afton/C)	

Call to Order

Review of Agenda

The meeting agenda is attached.

Review of Membership

A motion was made by W. Venhoff to make the following membership changes:

- Replace M. Stevens (SwRI) with R. Warden (SwRI)

The motion was seconded by A Zyski. Unanimous approval, no abstentions.

Approval of Meeting Minutes

Meeting minutes for approval:

- "20190807_SP" → August 7, 2019 – Warrendale, PA

Motion to approve by W. Venhoff, second by D. Smith to approve meeting minutes as presented.

Unanimous approval, no abstentions.

L-42-1 Development

M.Sangpeal stated that Afton has not been able to perform more development due to rig availability. Once the test rig becomes available for more development, Afton will continue and share progress with the panel. No progress has been made by any other labs.

Drive-by-wire throttle

No progress has been made by any labs in this area.

TMC 113 Dropout / New Discrimination Oil Development

The SP discussed results from acceptance testing for TMC 119. Results for the second run are as follows:

- Lab D – EOT pinion scoring of 75, EOT ring scoring of 50
- Lab A – EOT pinion scoring of 68, EOT ring scoring of 59

The panel agreed to have lab G run one more test to complete the data set. Data will be reviewed at next SP meeting.

J. Clark (TMC) confirmed that there are 32 gallons of TMC 113 remaining.

New/Open Issues

No new issues were raised at this time.

Adjournment

Motion by W. Venhoff, second by D. Smith. All in favor, meeting adjourned.

Respectfully submitted,



Matt Sangpeal

L-42 Surveillance Panel Chairman



L-42 Surveillance Panel Meeting

SwRI










Ann Arbor, MI

November 13, 2019

1:30 pm - 2:00 pm EST

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Agenda

-  **Call to Order**
-  **Agenda**
-  **Membership Review & Update**
-  **Approval of Meeting Minutes**
-  **L-42-1 Development**
-  **Drive-by-Wire Throttle Update**
-  **New/Open Issues**
 -  TMC 113 dropout / New discrimination oil development
-  **Adjournment**

L-42 SP Voting Members

 Rob Banas:	ExxonMobil
 Dylan Beck:	TMC
 Mike Cabaj:	Linamar
 Allen Comfort:	US Army
 Arjun Goyal:	BASF
 Troy Muransky:	AAM
 Daniel Rabinowitz:	Meritor
 Matt Sangpeal:	Afton Chemical (Chair)
 Robert Slocum:	Lubrizol
 Dale Smith:	Intertek
 Mary Stevens:	SwRI
 Amy Zyski:	Dana

Approval of Meeting Minutes

SP Meeting Minutes

- ▲ “20190807_SP” → August 7, 2019 – PRI – Warrendale, PA

L-42-1 Development

Summary

- ▶ Electric T-rig (input and outputs)
- ▶ Dana 44 mounted without springs

Goal is to have the rig follow L-42 set points first then use mathematical model for set points

Development to date

- ▶ Data from L-42 run was used to create 100 Hz setpoints for initial L-42-1 testing
- ▶ Initial testing shows good progress, fine tuning still needed to hit exact set points consistently

On hold at Afton for the near future due to rig availability

Drive-by-Wire Throttle

- During the August 2017 meeting, the panel discussed options of a Drive-by-Wire throttle body to replace the current, old design using the Jordan.
- R. Slocum (Lz) found an off the shelf card that controls a drive-by-wire throttle body but no progress yet.
- Updates?

TMC 113 Dropout / New Discrimination Oil Development

From the August 2017 meeting:

- ▲ Additive dropout was found in latest QC testing
- ▲ Gear oil drums are mixed prior to shipment. Homogenization may be limiting the impact that this has on the performance of the oil.

From November 2017 meeting:

- ▲ Not possible to make new drum of TMC 113
 - 52 USG remaining – 104 tests worth
- ▲ Afton and Lubrizol to research possible new discrimination oils

From May 2018 meeting:

- ▲ Lubrizol has direction towards potential new discrimination oil
- ▲ The SP clarified that the new oil needs to consistently have double the scoring of the current passing oil

From August 2018 meeting:

- ▲ Lubrizol to blend 55 USG drum and send to TMC
- ▲ Each lab will run this oil on a currently referenced test stand and report results

From November 2018 meeting:

- ▲ A drum of oil was sent to the TMC the week of 11/5/18
- ▲ D. Beck will let E. Donovan know when the oil is ready to be shipped to labs

TMC 113 Dropout / New Discrimination Oil Development

From February 2019 meeting:

- ▲ Acceptance testing for TMC 119
 - 1 test on a currently referenced test stand per lab. Run as 2nd discrimination run in 4 test calibration sequence or any time during a reference period

From May 2019 meeting:

- ▲ Updates on TMC 119 runs from each lab
 - Afton – EOT pinion 95, EOT ring 77
 - Intertek – EOT pinion 48, EOT ring 43
 - Lubrizol – EOT pinion 38, EOT ring 25; EOT pinion 62, EOT ring 47
 - SwRI – EOT pinion 58, EOT ring 51
 - 35 USG of TMC 113 remain at the TMC

TMC 113 Dropout / New Discrimination Oil Development

From August 2019 meeting:

- ▲ Labs A, D, G agreed to run 1 more test with TMC 119

November 2019:

- ▲ Results of additional TMC 119 test:
 - Afton: EOT pinion 75, EOT ring 50
 - SwRI: EOT pinion 68, EOT ring 59
 - Intertek: ?

New/Open Issues

Thanks!



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