

Report of Meeting
L-37-1 Surveillance Panel Conference Call
July 12, 2019

Attendees:

SwRI -	Stevens
Lubrizol -	Venhoff, Slocum
Afton -	Donovan
Intertek -	Smith, Lange
TMC -	Beck
ExxonMobil -	Kanga
BASF -	Goyal, Mosher
Dana -	Zyski
Gleason -	Art Reardon

Voting Members in **BOLD**

The meeting was called to order at 10:00am EST.

1.0 Gleason Hardware Next Steps

- Adhesive wear is still present in the experimental hardware
- Art Reardon from Gleason discussed on possible next steps
 - Superfinishing but SP not interested because fear of not being able to discriminate reference oils
 - Shot Peening with a smaller diameter shot
 - Lapping the gears
- Art had a couple concerns
 - Lapping of current hardware may shift gear patterns
 - Gears will now need to be ran in match sets
- SP was still in favor of trying smaller shot peen and the lapping process

ACTION: LZ will contact Gleason to sort out the details. (Timing, costs, grit size, etc.)

2.0 2014 Gleason Lubrited Matrix

- Lab D generated a portion of their runs and results are falling in line
- Lab D to run a Canadian as well
- Lab G to run a different heat treat batch on 134-1

3.0 2018 Gleason Non Lubrited Standard Matrix

- Lab D generated a portion of their runs and results are falling in line
- Lab B and G ran Canadian with 152-2 and had comparable results

Motion #1 → D. Smith 1st /2nd M. Stevens to approve the 2018 Gleason Non Lubrited Batch (06-2018). Will be effective if and only if voting members vote via email in favor of the proposed targets presented by the TMC. Motion passed unanimously, 7-0-0 (Yes-No-Abstain).

4.0 Dana Lubrified Electric Stand Data

- Both Lab B and D ran 2 runs each of Dana Lubrified V1L528/P4T883A using 134-1 and 152-2 in their electric motor L37-1 test rigs.
- Results from both labs were favorable

Motion #2 → W. Venhoff 1st /2nd E. Donovan to allow any approved Dana Hardware to be ran in an electric motor stand. Motion will become effective as of July 15th, 2019. Motion passed unanimously, 7-0-0 (Yes-No-Abstain).

5.0 Adjournment

Meeting Adjourned at 11:00am EST

Motion #3 → R. Slocum 1st /2nd W. Venhoff to adjourn. Motion passed unanimously, 7-0-0 (Yes-No-Abstain).

Respectfully submitted,

Robert Slocum
L-37-1 Surveillance Panel Chairman



D02.B0.03

L-37-1 Surveillance Panel Conference Call

07/12/2019

10:00 am – 11:00 am

Robert Slocum/Wes Venhoff



D02.B0.03

Agenda

- Gleason Hardware Next Steps
- 2014 Gleason Lubrited Matrix
- 2018 Gleason Non Lubrited Matrix
- Dana Lubrited Results
- L33 T1XX axle Comments?



2014 Gleason Lubrited Standard Matrix

*Canadian

LTMSLA	IND	VAL	PINBA	RINGB	WEAR	RIDG	RIPP	SPIT	WEAR	RIDG	RIPPF	SPITF
A	134	NI	2135610	2135607	6	4	9	9.6	6	5	9	9.6
B	134	NI	2115428	2115429	6	4	7	9.9	8	7	10	9.9
G	134	NI	2144989	2144988	7	4	6	9.9	7	7	9	9.9
A	134	NI	2135609	2135606	7	9	7	9.9	8	10	10	9.9
B	134	NI	2115428	2115429	7	5	7	9.9	9	10	10	9.9
G	134-1	NI	2144989	2144988	8	10	9	9.9	8	10	9	9.9
G	134-1	NI	2144989	2144988	8	9	9	9.9	8	9	10	9.9
G	134-1	NI	2144989	2144988	8	9	9	9.9	9	9	9	9.9
B	134-1	NI	2144993	2144992	7	5	5	9.9	8	6	10	9.9
A	152-2	NI	2315610	2135607	8	10	9	9.9	8	10	10	9.9
B	152-2	NI	2115428	2115429	9	10	10	8	9	10	10	9.9
B	152-2	NI	2115438	2115429	9	10	10	9.9	9	10	10	9.9
G	152-2	NI	2144989	2144988	8	10	9	9.9	9	10	9	9.9
A	152-2	NI	2135609	2135606	8	10	9	9.9	8	10	9	9.9
G	152-2	NI	2144989	214988	8	9	9	9.9	8	9	9	9.9
B	152-2	NI	2144993	2144992	9	10	10	9.9	9	10	10	9.9
B	152-2	NI	2144993	2144992	8	9	10	9.9	9	10	10	9.9
B	152-2	NI	2144993	2144992	8	9	10	9.9	9	9	10	9.9
A	152-2	NI	2144993	2144992	7	8	9	9.9	8	9	9	9.9
A	155-1	NI	2135609	2135606	8	10	9	9.9	8	10	9	9.9
A	155-1	NI	213609	2135606	8	10	9	9.9	8	10	9	9.9
B	155-1	NI	2115428	2115429	9	9	9	9.9	9	10	10	9.9
B	155-1	NI	2116441	2116444	8	10	7	9.9	9	10	10	9.9
G	155-1	NI	2144989	2144989	8	7	9	9.9	8	8	9	9.9
G	155-1	NI	2144989	2116446	8	9	9	7	8	9	9	9.9
G	155-1	NI	2144989	2144988	7	10	9	9.9	8	10	10	9.9
B	155-1	NI	2144993	2144992	9	10	8	9.9	9	10	10	9.9

LTMSLAB	IND	PINBAT	RINGBAT	WEAR	RIDG	RIPP	SPIT	WEARR	RIDGR	RIPPR	SPITR	Column1
D	134-1	2144989	2144988	7	7	5	9.9	7	9	7	9.9	
D	152-2	2144989	2144988	7	9	9	9.9	8	9	9	9.9	
D	155-1	2144989	2144988	7	9	9	9.9	8	9	9	9.9	
D	134-1	2144989	2144988	7	8	4	9.9*	7	8	5	9.9	Shutdown at 22 hrs, 4 broken ring teeth
D	152-2	2144989	2144988	7	9	9	9.9	8	10	9	9.9	



2018 Gleason Non Lubrited Standard Matrix

LTMSLA	IND	VAL	PINBA	RINGBA	COM3	WEAR	RIDG	RIPP	SPIT	WEAR	RIDG	RIPPF	SPITF
G	134-1	NI	2122701	2722705	HARDWAR	5	4	8	9.7	5	4	9	9.8
B	134-1	NI	2722703	2722704	RIPPS	6	4	4	9.8	6	4	10	9.9
A	134-1	NI	2722679	2722704		4	3	8	8	4	3	9	9.8
G	152-2	NI	2722701	2722705	HARDWAR	8	9	9	9.9	9	10	10	9.9
B	152-2	MI	2722679	2722707	GALLING	8	10	9	9.9	9	10	10	9.9
A	152-2	NI	2722701	2722705		7	10	8	9.9	8	10	9	9.9
G	155-1	NI	2722703	2722704	HARDWAR	8	10	9	9.9	9	10	9	9.9
B	155-1	NI	2722701	2722705		9	10	10	9.9	9	10	10	9.9
A	155-1	NI	2722700	2722706		7	9	9	9.9	8	10	9	9.9
A	155-1	NI	2722701	2722705		7	10	8	9.9	8	10	9	9.9

LTMSLAB	IND	PINBAT	RINGBAT	WEAR	RIDG	RIPP	SPIT	WEARR	RIDGR	RIPPR	SPITR
D	134-1	2722701	2722706	6	8	5	5	7	9	6	9.9
D	152-2	2722701	2722705	8	9	9	9.9	8	10	10	9.9
D	155-1	2722700	2722706	7	8	9	9.9	9	9	9	9.9

LTMSLAB	IND	VAL	PINBAT	RINGBAT	COM3	WEAR	RIDG	RIPP	SPIT	WEARR	RIDGR	RIPPR	SPITR	SCORR	TVERSION
B	152-2	NI	2722703	2722704		8	9	10	9.9	9	9	10	9.9	10	CANADIAN
G	152-2	NI	2722679	2722703		8	9	9	9.9	8	9	10	9.9	10	CANADIAN



Dana Lubrited Results

LTMSLAB	RUN	CMIR	IND	GEAR	GEAR TYP	GEAR BATCH	WEAR	RIDG	RIPP	SPIT	WEARR	RIDGR	RIPPR	SPITR	Column1
D	4-18	112520	134	Dana	Lubrited	V1L528	6	8	5	9.9	6	9	6	9.9	
D	4-19	144501	152-2	Dana	Lubrited	V1L528	6	8	7	9.9	7	9	8	9.9	

LTMSLA	IND	PINBA	RINGBA	LTMSDA	WEAR	RIDG	RIPP	SPIT	WEAR	RIDG	RIPP	SPIT
B	134-1	V1L528	P4T883A	20190501	7	6	8	9.7	8	7	10	9.9
B	152-2	V1L528	P4T883A	20190502	7	7	8	9.4	7	8	10	9.9