

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

**Attendees:**

SwRI -	<b>Stevens</b>
Lubrizol -	Venhoff, Drlja, <b>Slocum</b>
Afton -	<b>Donovan</b> , Kearney
Intertek -	<b>Smith</b> , Lange
TMC -	Clark, <b>Beck</b>
ExxonMobil -	<b>Banas</b> , Kanga
BASF -	<b>Goyal</b> , Tisha
Dana -	<b>Zyski</b>

Voting Members in **BOLD**

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

**1.0 2014 Gleason Lubrited Matrix (04-2014)**

- Lab B will schedule a conference call for July 12<sup>th</sup>
- Lab D hopes to generate some data for conference call
  - TMC134-1,152-2, and 155-1 (6 runs)
- SP hopes to approve 2014 Lubrited hardware sooner than later
  - Both Standard and Canadian
- Labs A and B have run Canadian
  - Are 2 labs ok or do we need a 3<sup>rd</sup>?

**2.0 2018 Gleason Non Lubrited (06-2018)**

- Lab D hopes to generate some data for conference call
  - TMC134-1,152-2, and 155-1 (3 runs)
- Spot Check Canadian with 2 or 3 labs
  - Lab B volunteered to run 152-2
  - Lab A checking to see if they are able as well
- Question concerning targets of 2014 and 2018 batches
  - Should they be combined or Separate?
  - TMC will put the data together both combined and separate
  - Up to the Surveillance Panel to decide

**3.0 2018 Gleason Experimental (10-2018)**

- Experimental hardware is still showing adhesive wear on all 3 process iterations
- Not worthwhile to run anymore experimental gear sets
- Strong consensus for next step is to lapped gear sets
- Lab B will contact Gleason to see what it will take to get gear sets lapped
  - Possibly use left over experimental gear sets from other labs and/or sets from 2018 Non Lubrited batch (06-2018)

#### **4.0 L-37-1 Proposed Reference Oil Targets**

- TMC provided a proposed target presentation
- SP was in favor of proposed targets

**Motion #1** → W. Venhoff 1<sup>st</sup> /2<sup>nd</sup> D. Smith to accept proposed L-37-1 reference oil targets that will become effective as of July 1<sup>st</sup>, 2019. Motion passed unanimously, 8-0-0 (Yes-No-Abstain).

#### **5.0 Adjournment**

Meeting Adjourned at 10:50am EST

**Motion #2** → W. Venhoff 1<sup>st</sup> /2<sup>nd</sup> D. Smith to adjourn. Motion passed unanimously, 8-0-0 (Yes-No-Abstain).

Respectfully submitted,

Robert Slocum  
L-37-1 Surveillance Panel Chairman



D02.B0.03

# L-37-1 Surveillance Panel Conference Call

06/12/2019

10:00 am – 11:00 am

Robert Slocum/Wes Venhoff

# 2014 Gleason Lubrited Standard Matrix

LTMSLA	IND	VAL	PINBA	RINGB	WEAR	RIDG	RIPP	SPIT	WEAR	RIDG	RIPP	SPIT
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>B</b>	152-2	NI	2144993	2144992	8	9	10	9.9	9	10	10	9.9
<b>B</b>	152-2	NI	2144993	2144992	8	9	10	9.9	9	9	10	9.9
<b>A</b>	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

\*Canadian



# 2018 Gleason Non Lubrited Standard Matrix

LTMSLA	IND	VAL	PINBA	RINGBA	COM	WEAR	RIDG	RIPP	SPIT	WEAR	RIDG	RIPP	SPIT
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



# 2018 Gleason Exp

LTMSLA	IND	VAL	PINBA	RINGB	COM1	COM2	WEAR	RIDG	RIPP	SPIT	WEAR	RIDG	RIPP	SPIT
B	152-2	MI	2736809	2736812	INFO RUN	GALLING	8	9	10	9.9	9	9	10	9.9
B	152-2	MI	2736803	2736806	INFO RUN	GALLING	8	9	10	9.9	9	9	10	9.9
B	152-2	MI	2736815	2736846	INFO RUN	GALLING	8	9	10	9.9	9	9	10	9.9
A	152-2	MI	2731181	2731183	GALLING		7	8	8	9.9	7	8	9	9.9
B	152-2	MI	2736809	2736812	INFO RUN	GALLING	8	8	9	9.9	9	9	10	9.9
A	152-2	MI	2731176	2731177	GALLING		7	8	9	9.9	8	9	10	9.9
A	152-2	NI	2731178	2731180		INFO RUN	7	8	9	9.9	7	9	9	9.9
B	152-2	MI	2736803	2736806	INFO RUN	SHUTDOWN	8	10	10	9.9	8	10	10	9.9
B	152-2	NI	2736815	2736846	INFO RUN		9	10	10	9.9	9	9	10	9.9



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# ***Test Monitoring Center***

<http://astmtmc.cmu.edu>

## **LRI 193 Surveillance Panel Meetings**

May 8, 2019

# L-371 SP Meeting



Reference Oil Target Update

*Test Monitoring Center*

<http://astmtmc.cmu.edu>



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# Reference Oils For L-371 are ready for update

## Current Targets:

## Proposed New Targets:

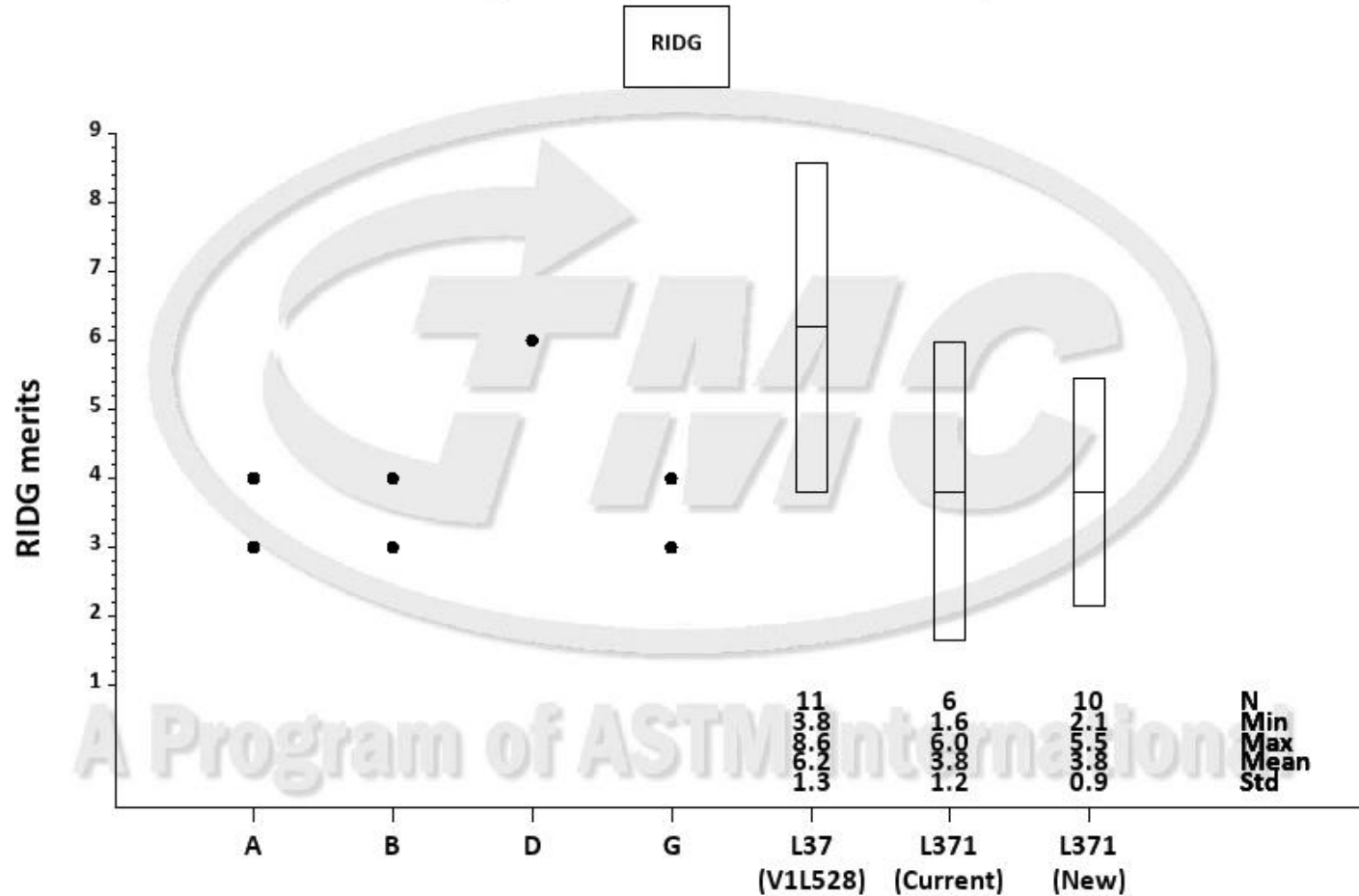
TMC IND	Parameter	Mean	Std.
134	RIDG	3.8	1.2
	RIPP	7.8	1.2
	WEAR	4.8	1.2
	SPIT	7.7	1.9
152-2	RIDG	9.3	0.7
	RIPP	8.9	1.6
	WEAR	7.8	0.9
	SPIT	9.9	0.0
155-1	RIDG	9.6	0.5
	RIPP	9.6	0.5
	WEAR	7.9	0.7
	SPIT	9.9	0.0

TMC IND	Parameter	N Size	Mean	Std.
134/134-1	RIDG	10	3.8	0.9
	RIPP	10	7.2	1.3
	WEAR	10	5.1	1.0
	SPIT	10	7.9	1.5
152-2	RIDG	11	9.3	0.6
	RIPP	11	8.7	1.4
	WEAR	11	7.5	0.8
	SPIT	11	9.9	0.1
155-1	RIDG	11	9.6	0.5
	RIPP	11	8.7	1.3
	WEAR	11	7.5	0.7
	SPIT	11	9.9	0.0

N sizes for current targets: oil 134 n=6 , 152-2 n=8, 155-1 n =7

# Reference Oils For L-371 are ready for update

L-37-1 NONLUBRITED Hardware  
Oil 134 Test Target Data Set and Shewart Severity Limits



11:17:24 23MAY2019

Test Monitoring Center

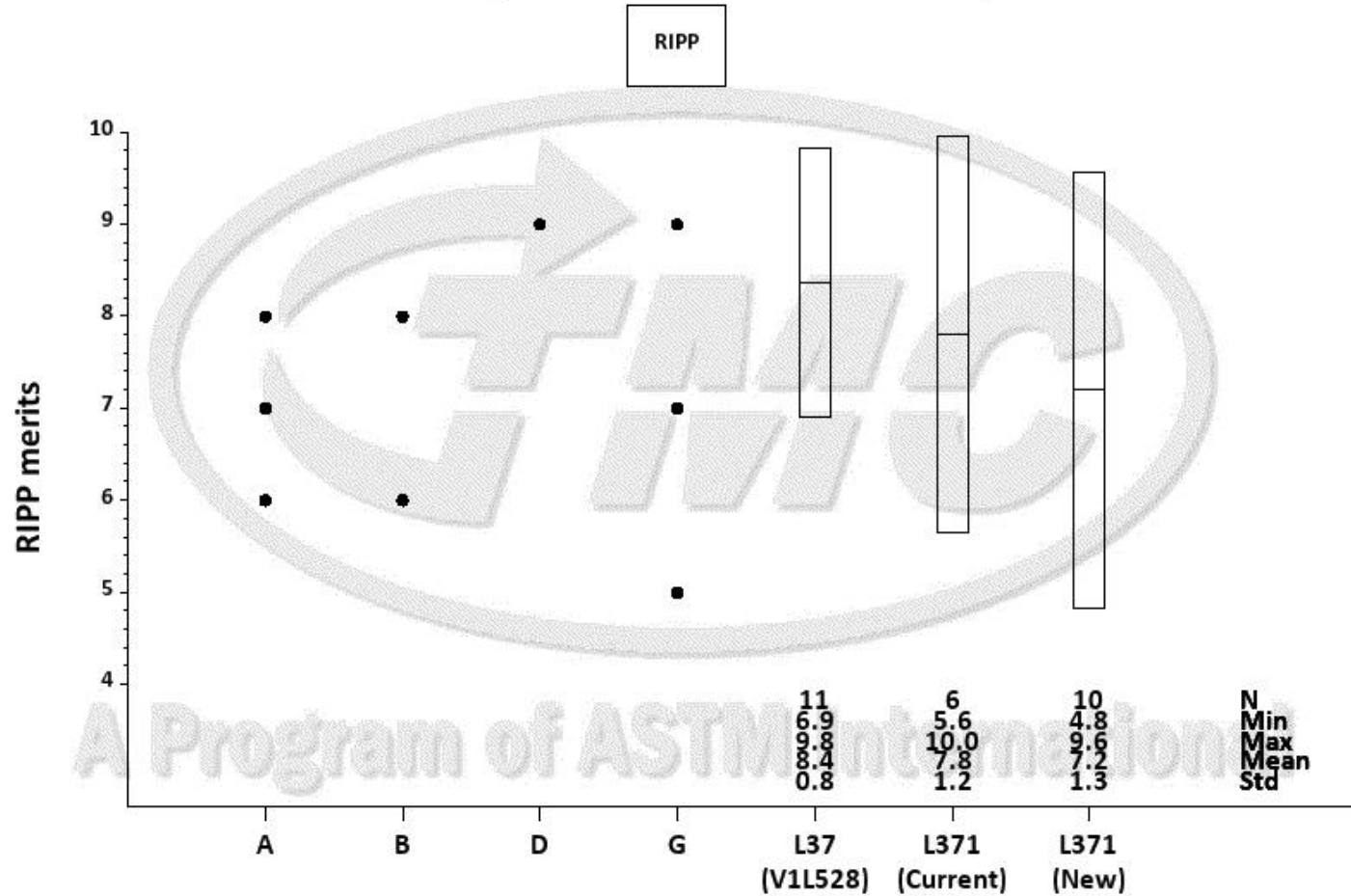
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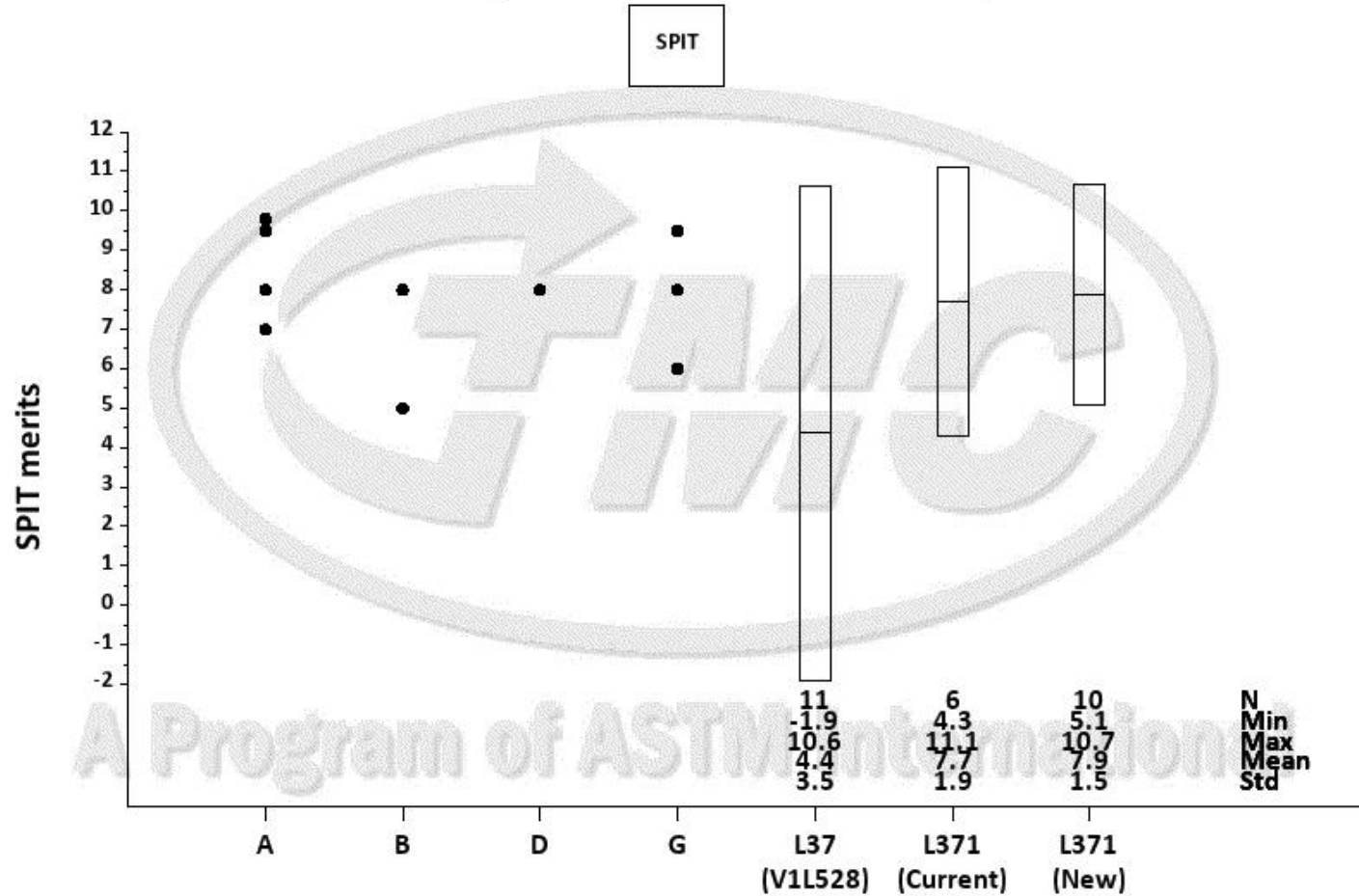
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Oil 134 Test Target Data Set and Shewart Severity Limits



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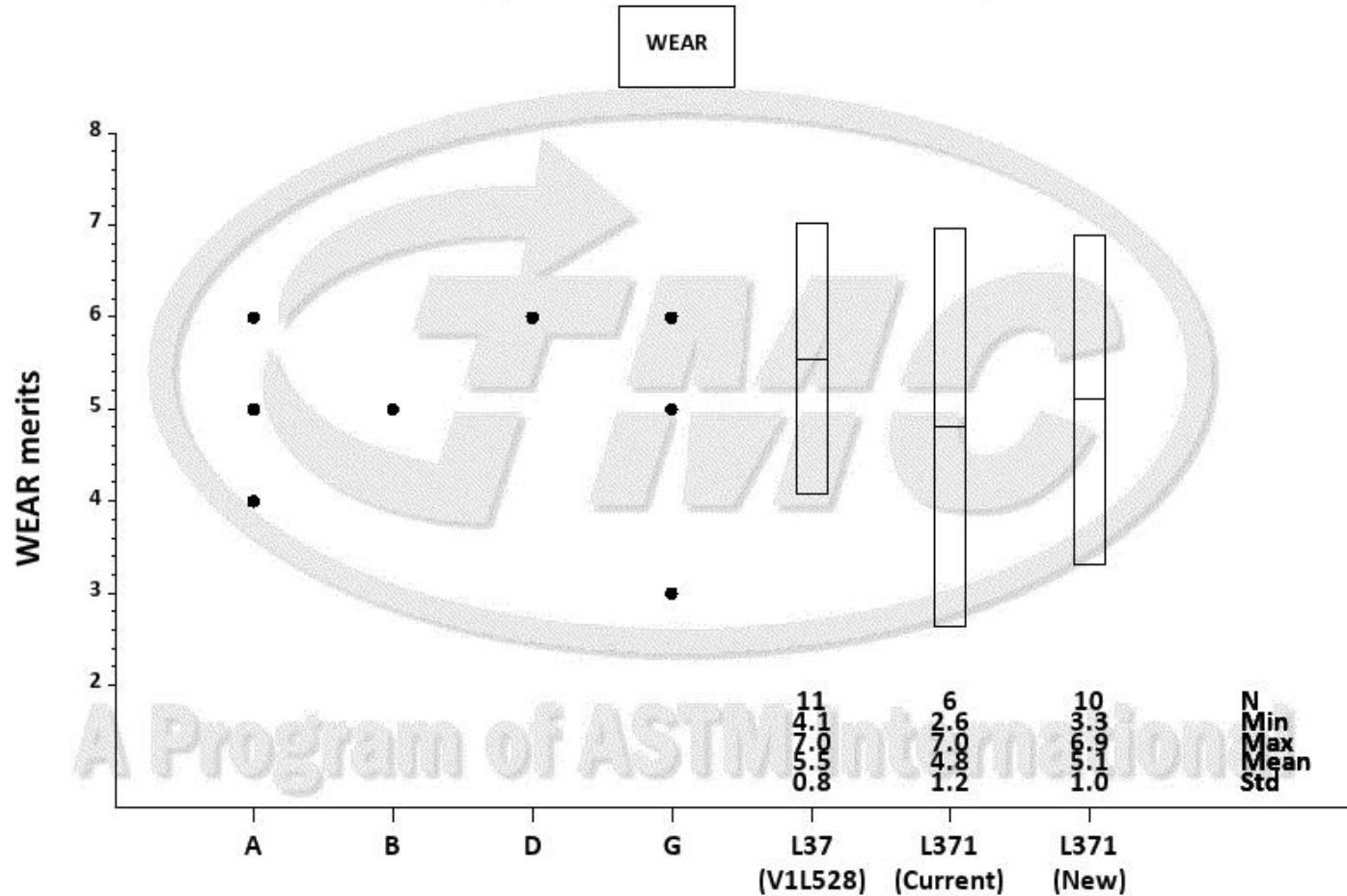
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Oil 134 Test Target Data Set and Shewart Severity Limits



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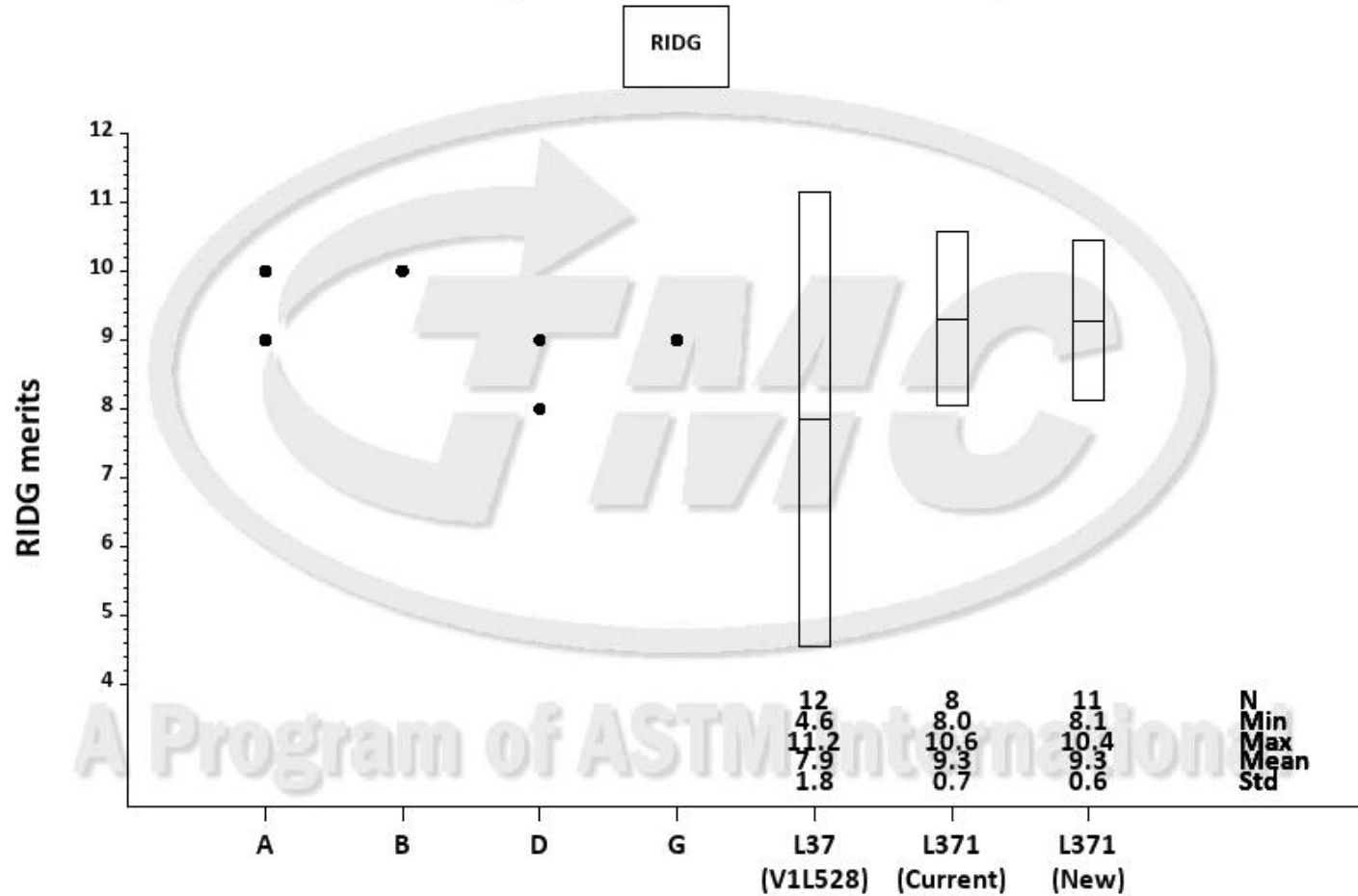
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# Reference Oils For L-371 are ready for update

L-37-1 NONLUBRITED Hardware  
Oil 152-2 Test Target Data Set and Shewart Severity Limits



11:16:08 23MAY2019

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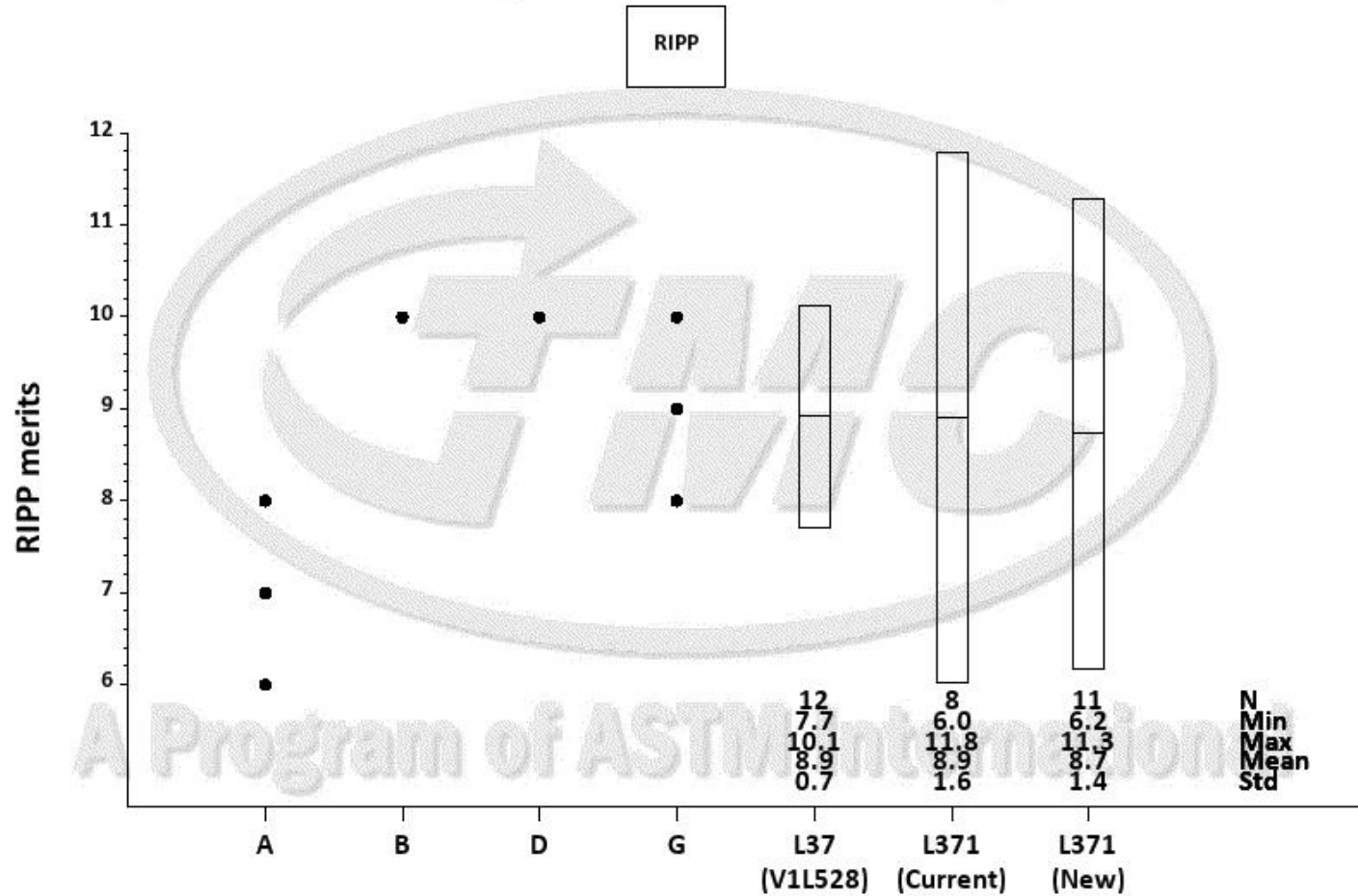
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Test Monitoring Center

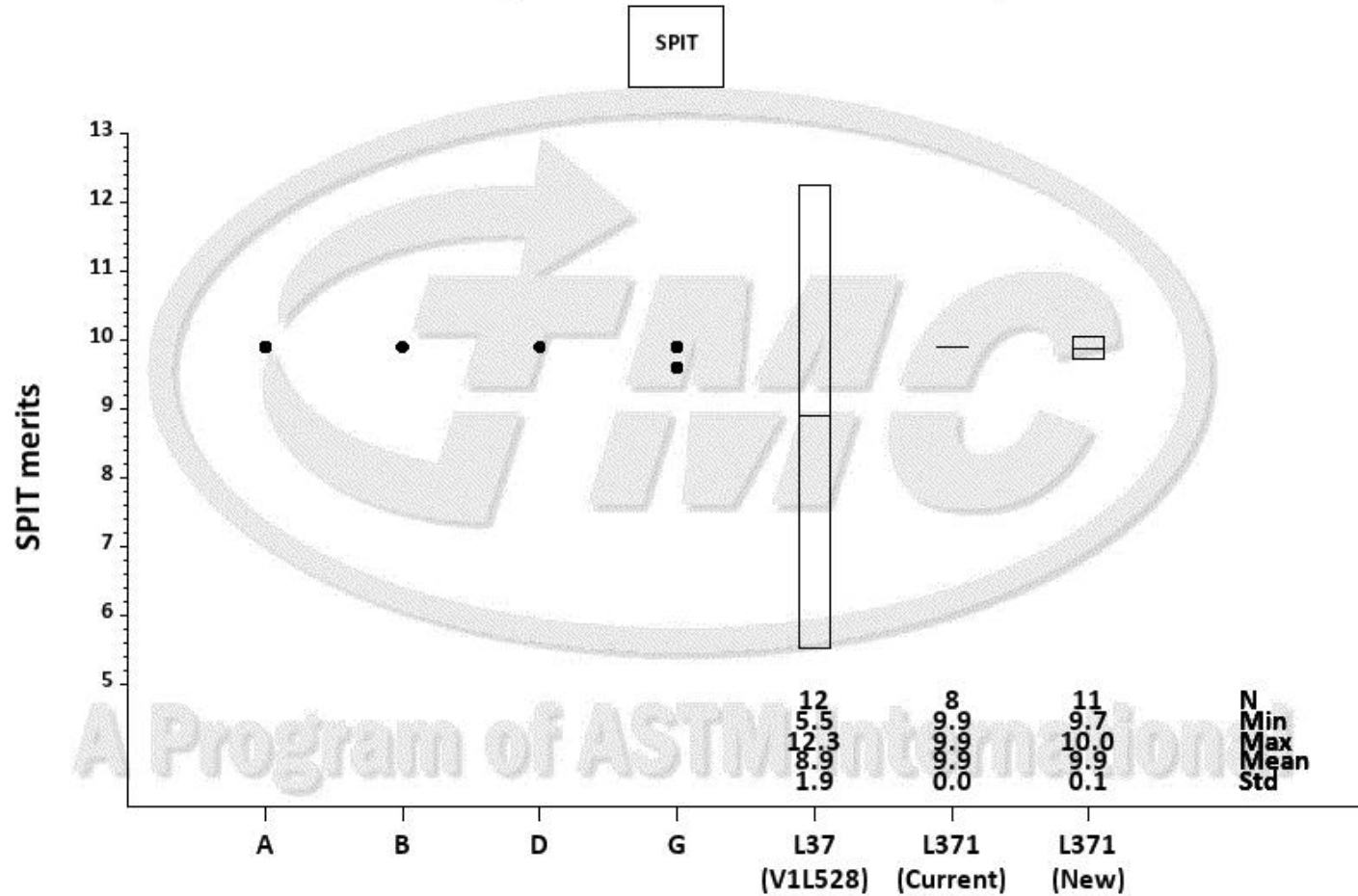
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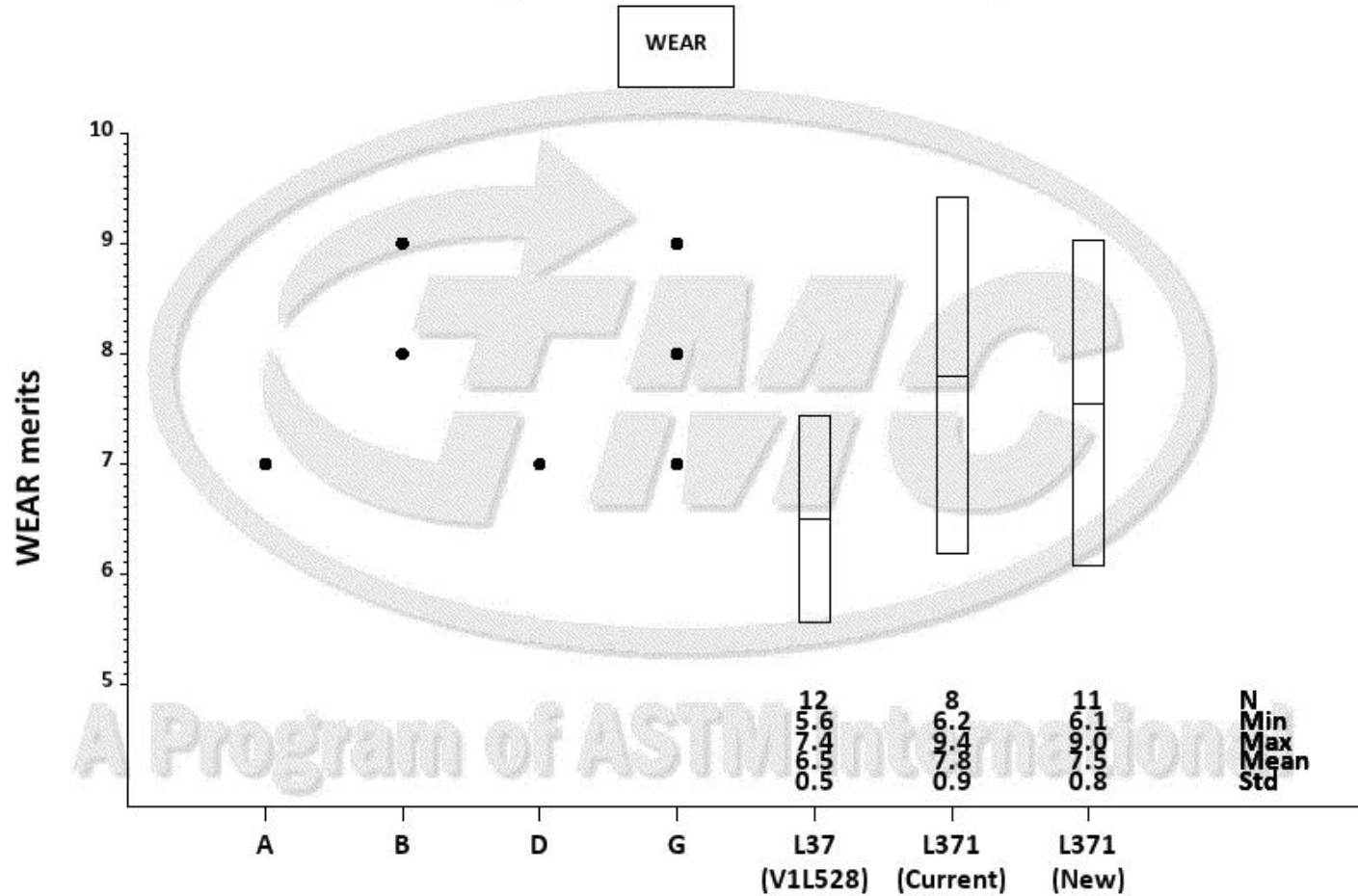


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Oil 152-2 Test Target Data Set and Shewart Severity Limits



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Test Monitoring Center

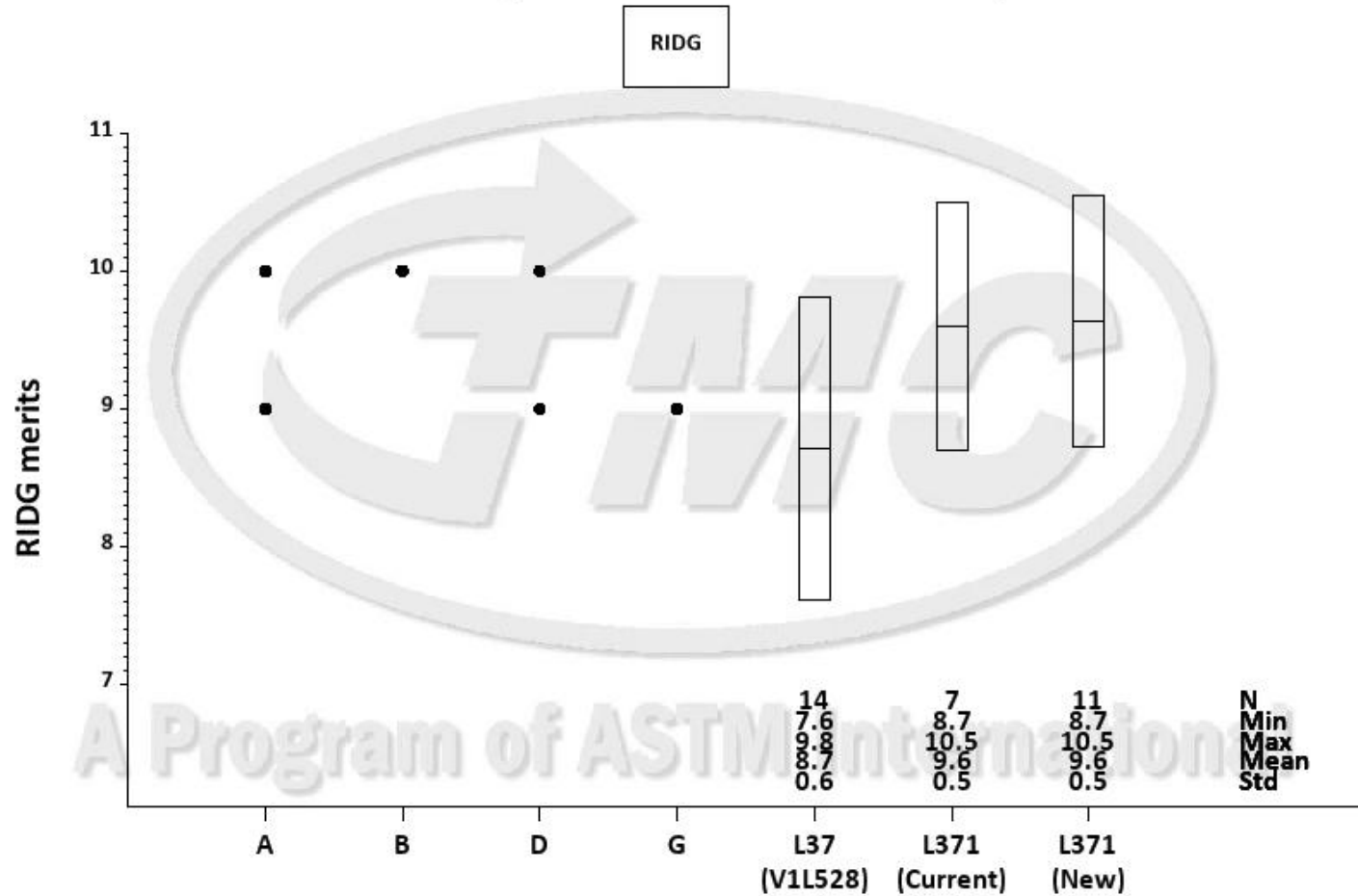
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# Reference Oils For L-371 are ready for update

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Oil 155-1 Test Target Data Set and Shewart Severity Limits



11:23:55 23MAY2019

Test Monitoring Center

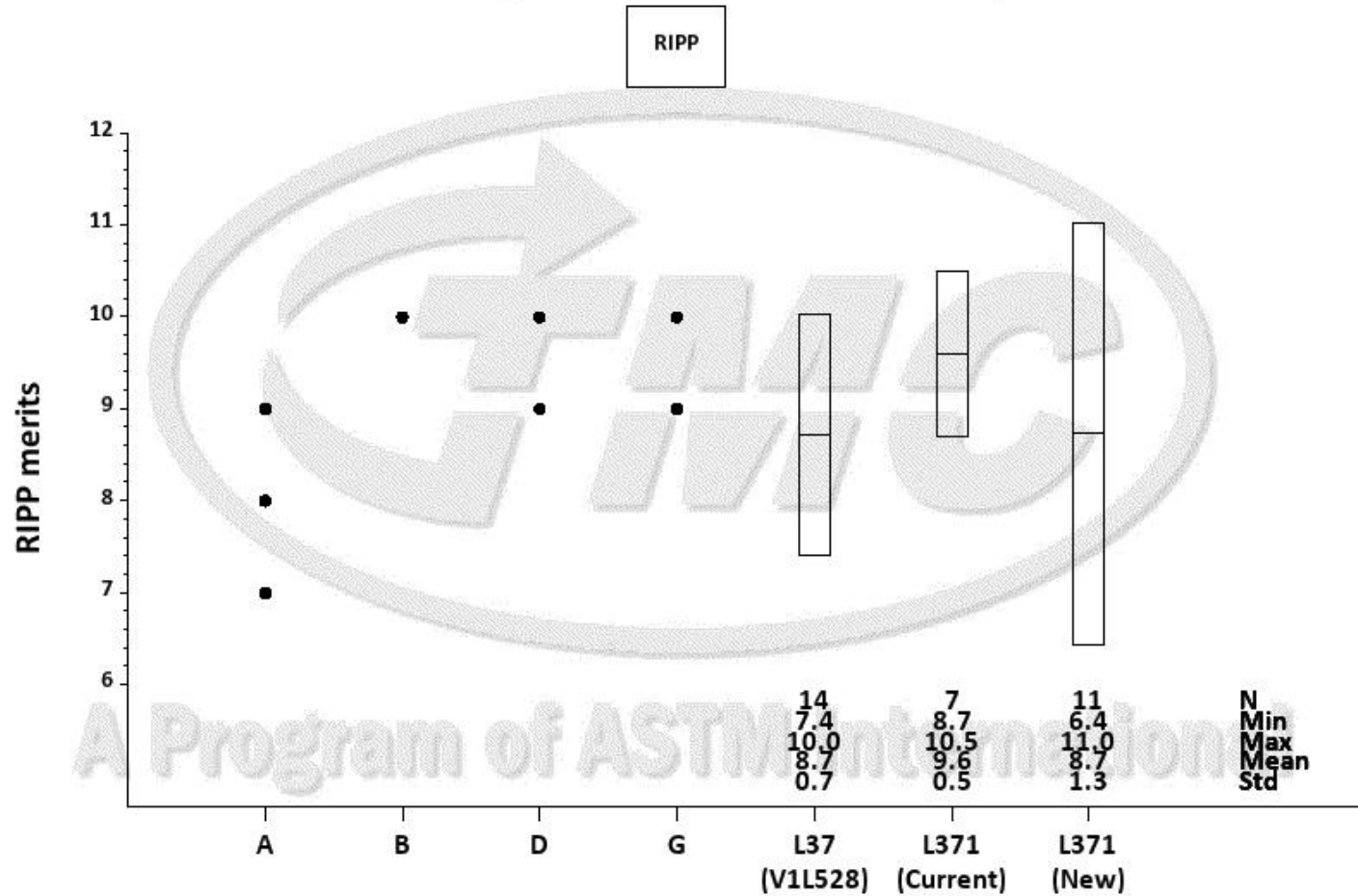
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# Reference Oils For L-371 are ready for update

L-37-1 NONLUBRITED Hardware  
Oil 155-1 Test Target Data Set and Shewart Severity Limits



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Test Monitoring Center

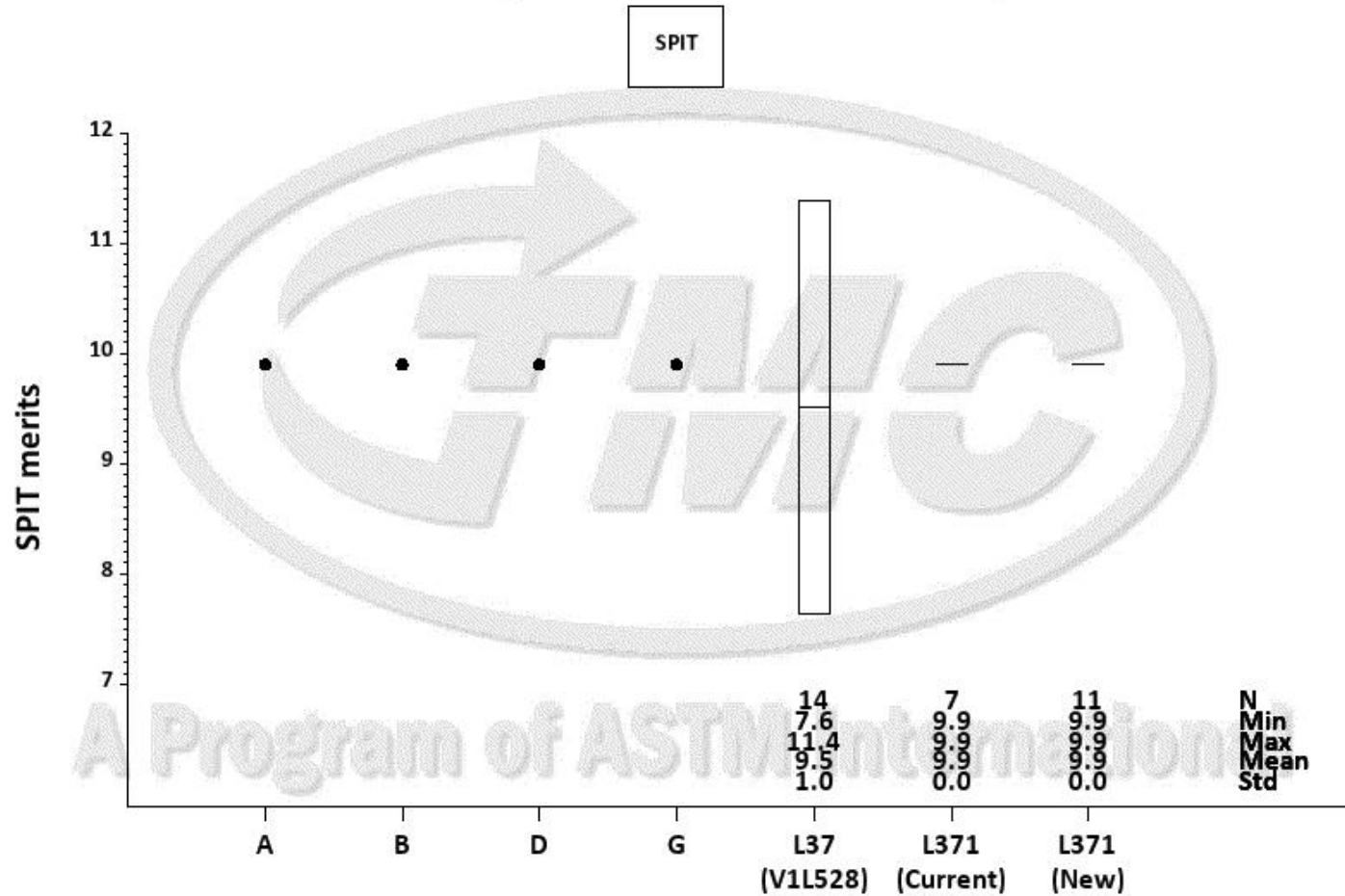
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L-37-1 NONLUBRITED Hardware  
Oil 155-1 Test Target Data Set and Shewart Severity Limits



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Test Monitoring Center

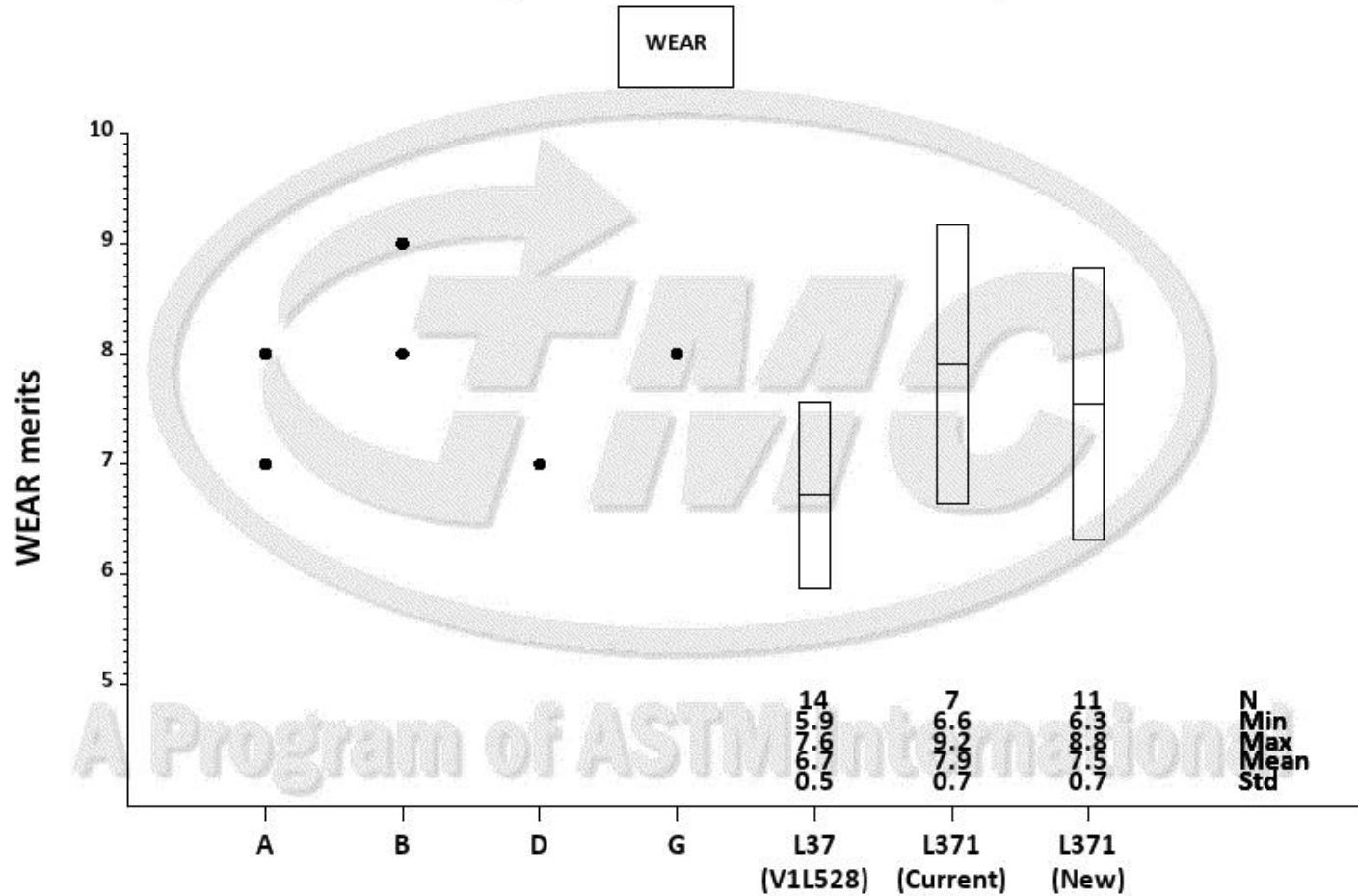
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L-37-1 NONLUBRITED Hardware  
Oil 155-1 Test Target Data Set and Shewart Severity Limits



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# Reference Oils For L-371 are ready for update

- Tests used to generate targets:

IND	TESTKEY	LTMSDATE	LTMSLAB	RIDG	RIPP	WEAR	SPIT	
134	90169-L371	20150107	A		3	6	6	9.5
134	99160-L371	20150217	D		6	9	6	8
134	106145-L371	20150227	A		3	8	5	8
134	106146-L371	20150307	A		4	7	4	9.8
134	107311-L371	20150510	B		4	8	5	5
134	107190-L371	20150721	G		3	9	3	6
134	114306-L371	20190419	B		3	6	5	8
134-1	131457-L371	20180126	A		4	7	6	7
134-1	133020-L371	20181106	G		4	5	5	8
134-1	138437-L371	20190330	G		4	7	6	9.5
152-2	107271-L371	20150305	A		10	7	7	9.9
152-2	107272-L371	20150312	A		9	6	7	9.9
152-2	99162-L371	20150319	D		9	10	7	9.9
152-2	99163-L371	20150321	D		8	10	7	9.9
152-2	99172-L371	20150503	B		10	10	9	9.9
152-2	99173-L371	20150507	B		10	10	8	9.9
152-2	107194-L371	20150805	G		9	8	9	9.9
152-2	107195-L371	20150808	G		9	10	8	9.9
152-2	129775-L371	20180222	A		9	8	7	9.9
152-2	129777-L371	20180712	A		10	8	7	9.9
152-2	129856-L371	20190327	G		9	9	7	9.6
155-1	106798-L371	20150213	D		9	9	7	9.9
155-1	106973-L371	20150225	A		10	9	8	9.9
155-1	106960-L371	20150325	D		10	10	7	9.9
155-1	106968-L371	20150430	B		10	10	8	9.9
155-1	106969-L371	20150502	B		10	10	9	9.9
155-1	106964-L371	20150724	G		9	10	8	9.9
155-1	106965-L371	20150730	G		9	9	8	9.9
155-1	115159-L371	20180626	A		10	7	7	9.9
155-1	115160-L371	20180704	A		10	8	7	9.9
155-1	131461-L371	20190131	A		9	7	7	9.9
155-1	142303-L371	20190228	A		10	7	7	9.9

# L-371 Procedure Update

- *Time window addition to tests required to reference a new stand.*
- Current Procedure Wording:
  - 9.3.1.2 Submit results to the Surveillance Panel demonstrating that the following four reference oil tests meet the criteria stated in the current LTMS requirements: two reference tests with TMC134 reference oil (or subsequently approved reblends) and two reference tests with TMC152 reference oil (or subsequently approved reblends).

# L-371 Procedure Update

- *Time window addition to tests required to reference a new stand.*
- Proposed Procedure Wording:
  - 9.3.1.2 Submit results to the Surveillance Panel demonstrating that the following four reference oil tests meet the criteria stated in the current LTMS requirements: two reference tests with TMC134 reference oil (or subsequently approved reblends) and two reference tests with TMC152 reference oil (or subsequently approved reblends). **All required reference tests must be conducted within 6 months of the completion of the first required passing reference test.**