

Report of Meeting
L-37-1 Surveillance Panel Conference Call
November 8th, 2023

Attendees:

| | |
|-------------------|---|
| SwRI - | Mueller , Charron |
| Lubrizol - | Schaup , Ariemma, Drlja, Gingerich, Mlachak, Venhoff |
| Afton - | Sangpeal , Bell, Horvath |
| Intertek - | Lange , Smith, Portell |
| TMC - | Beck , |
| BASF - | Goyal , Mosher |
| Dana - | Zyski |
| Cummins-Meritor - | Carowick |
| Army - | Sattler, Comfort |
| AAM - | Muransky |
| Navistar - | Morris |
| Fuchs - | Bender, |
| Oronite- | Warden , Jackson |
| Shell- | Banas , Jordan, Schweitzer |

Voting Members in **BOLD**

1.0 Membership Review

No change

2.0 Meeting minutes Approval

– November 8th, 2024, ASTM Meeting #211

Motion #1 → Nick Schaup 1st /2nd Anthony Lange to approve the meeting minutes from the November 8th, 2023, ASTM Meeting. Motion passed unanimously, 11-0-0 (Yes-No-Abstain).

3.0 L-37-1 MnP Coated traditional target setting

- Stats group is involved but needs more time to provide a recommendation

4.0 Replacement of 155-1 with 155-2

- LZ to run 155-2 after receipt of hardware from Intertek

5.0 Rating machine presented by Fuchs

- Fuchs presented on automated rating machines that could be developed. .ppt to be distributed once a non confidential copy can be made.

6.0 Old Business

7.0 New Business

- Motion #1: Removed typo from Procedure referring to manual 241, replaced it with manual 24
1st Nick Schaup 2nd Rebecca Warden
- Motion #2: Removed requirement from procedure that Canadian references are required to run
Canadian tests. Pulled language from L-37 procedure and placed it in L-37-1 procedure.
1st Nick Schaup 2nd Rebecca Warden
- Round robin to occur with Gleason hardware, raters to be asked to rate as a whole number and a
decimal. Data to be reviewed as part of new Task force around L-37-1 rating.
- Nick Schaup to gauge interest in L-37-1 automated rating rig

8.0 Adjourn

**Motion #3 → Nick Schaup 1st / 2nd Arjun Goyal to adjourn. Motion passed unanimously, 10-0-1 (Yes-
No-Abstain). (T.Muranksy Absent)**

Respectfully submitted,

Nick Schaup
L-37-1 Surveillance Panel Chairman



D02.B0.03

L-37-1 Surveillance Panel Meeting

2/7/2024

15:00 pm – 16:30 pm

Nick Schaup

- Call to Order/Agenda review
- Meeting Minute Approvals
- November 8th, 2023, ASTM Meeting
- Membership Review
- Stats group update 155 new hardware
- Automated Rating update
- Discussion from Rating Workshop
- Housekeeping
- Old Business
- New business
- Adjournment

Meeting Minutes Approval

- November 8th , 2023, ASTM Meeting

Membership Review

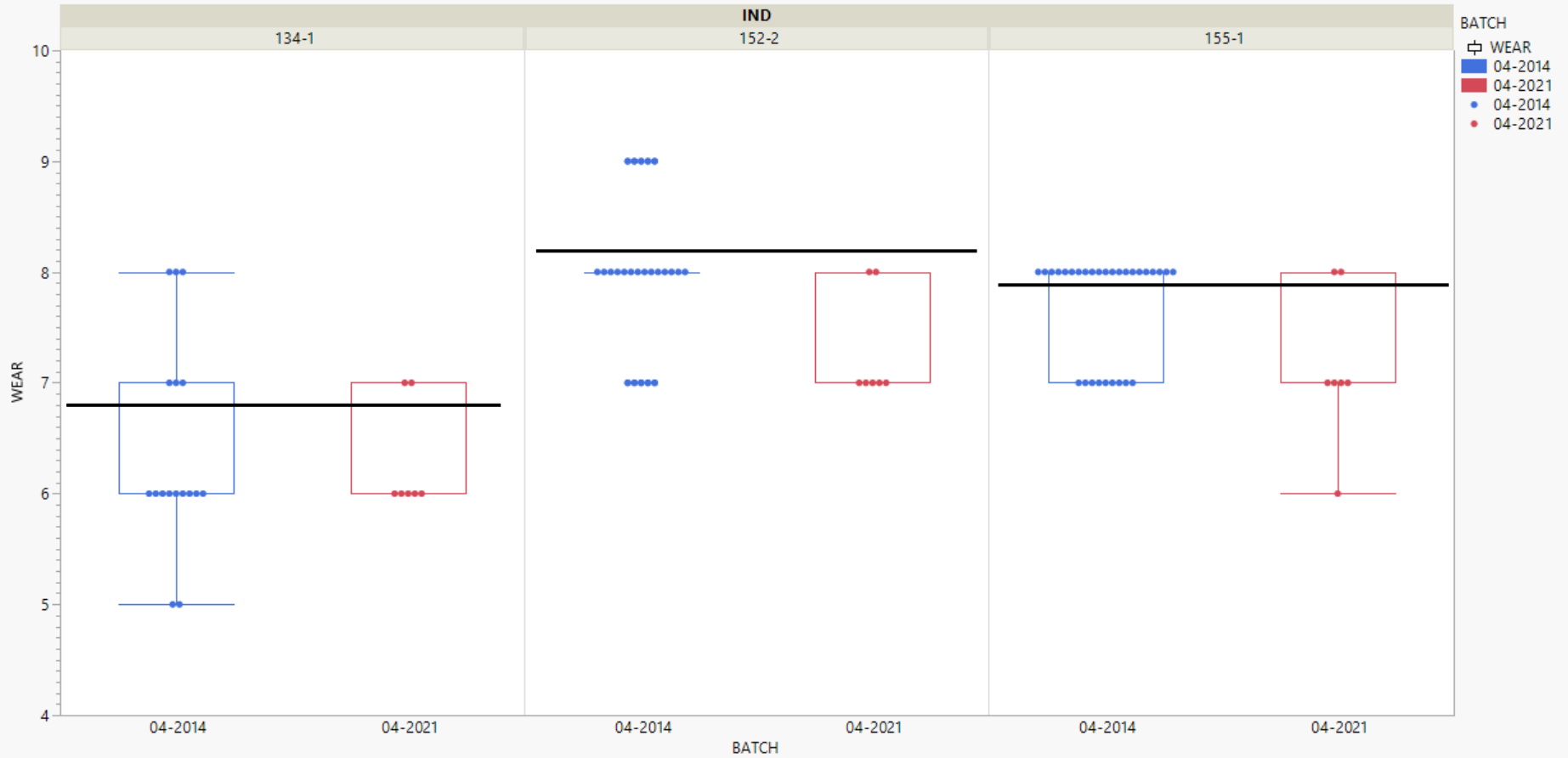
| | |
|------------------|-------------------|
| Rob Banas | ExxonMobil |
| Allen Comfort | US Army |
| Troy Muransky | AAM |
| Matt Sangpeal | Afton |
| Arjun Goyal | BASF |
| Amy Zyski | Dana |
| Dylan Beck | TMC |
| Jessica Carowick | Cummins - Meritor |
| Anthony Lange | Intertek |
| Nick Schaup | Lubrizol |
| Caroline Mueller | SwRI |
| Rebecca Warden | Oronite |

Total Voting Members = 12

L-37-1 Coated Hardware after Rater Calibration

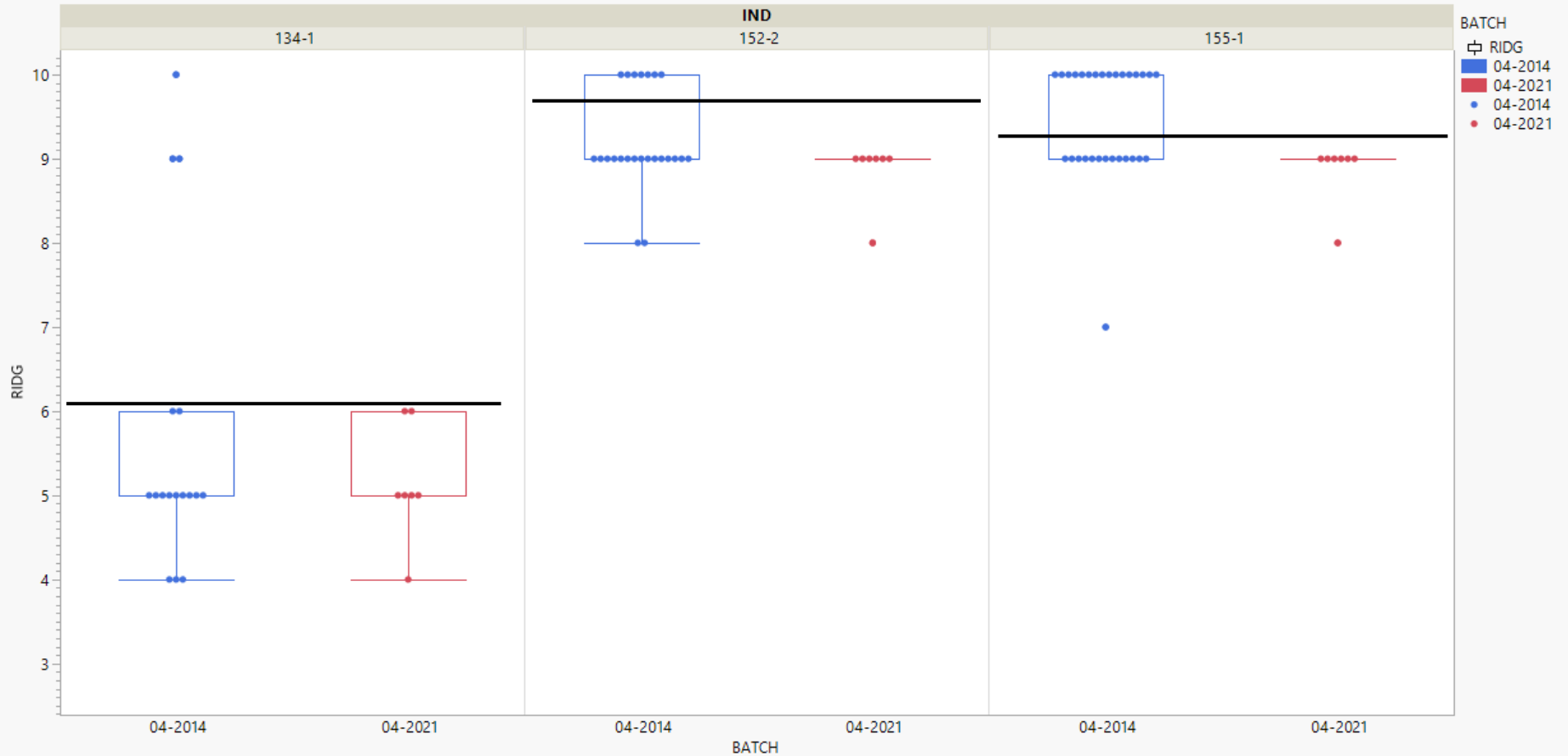
February 6, 2024

WEAR vs. BATCH



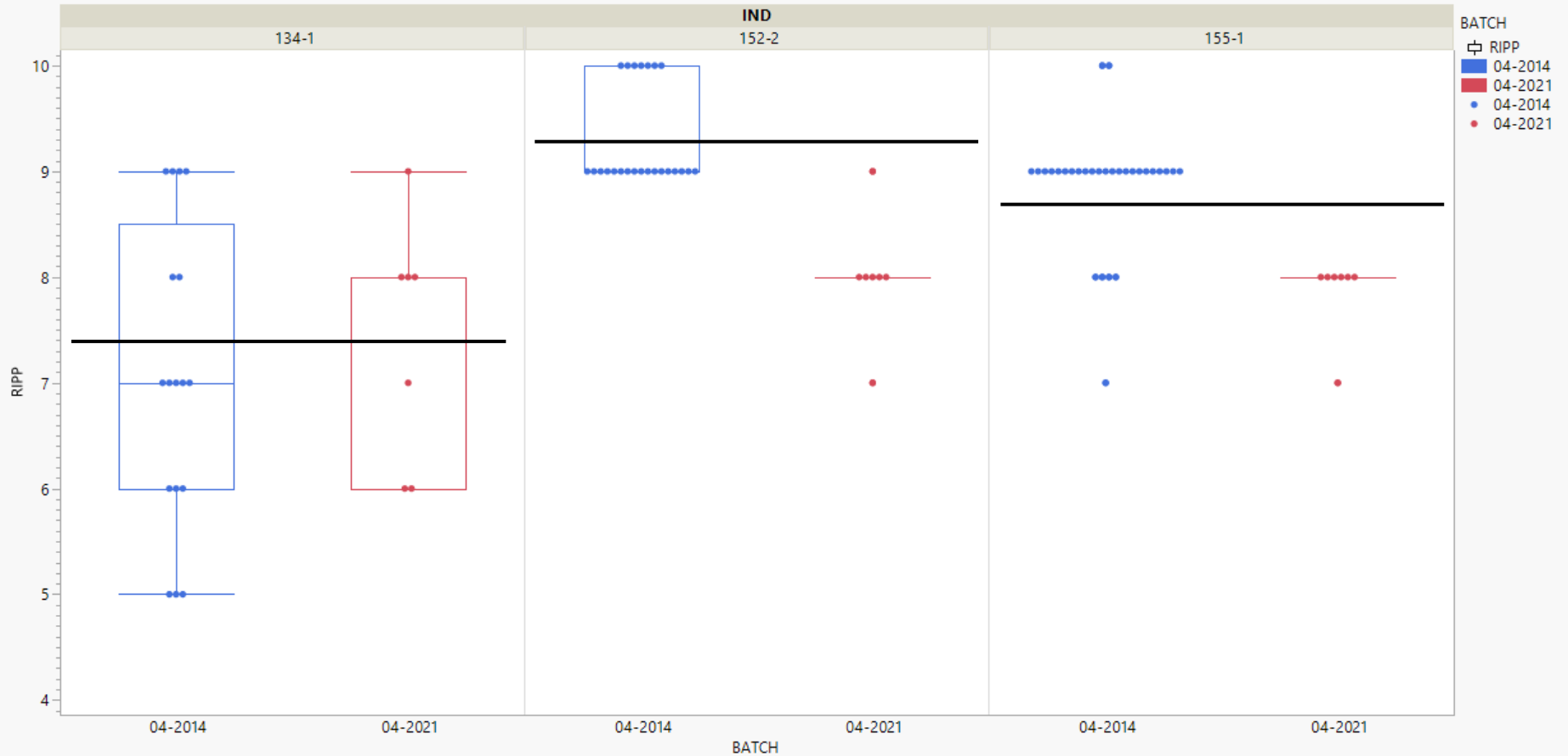
Where(16 rows excluded)

RIDG vs. BATCH



Where(16 rows excluded)

RIPP vs. BATCH



Where(16 rows excluded)

Fuchs guest rating presentation

- Dr. Mahdi to present on automated rating



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Test Monitoring Center

<http://astmtmc.cmu.edu>

Gear Task Force Meeting- January 2024 Rating Workshop

January 16, 2024

Reference Photography of Gear Distress
(Rippling)



New
10



Trace
9



Trace/Light
8



Light
7



School of thought #1:

Rater looks at the tooth and thinks it most closely matches the photo example of an 8. Even if it appears slightly worse than the photo, it looks closer to the 8 photo than the 7 photo.

So it is rated as an 8.

Reference Photography of Gear Distress
(Rippling)



New
10



Trace
9



Trace/Light
8



Light
7



School of thought #2

Rater looks at the tooth and thinks it looks closest to the photo example of an 8, but the distress is slightly worse than the 8 photo.

Since the manual states to rate the worst distress the rater rates down to a 7.

L-37-1 Distress Discussion



Example:

The worst distress on the tooth doesn't perfectly match the 8 photo. If it could be rated to a decimal point it would be a 7.8.

Two differing schools of thought:

Rate the worst distress on the tooth. Since it is more severe than an 8, it is rated as a 7.

7.0 – 7.9 = 7 Rating

If you could rate to a decimal point it would be a 7.8. since it is closer to the example of an 8 in the rating aid, it is rated as an 8.

7.0 – 7.5 = 7 Rating, 7.5-7.9 = 8 Rating

Housekeeping

- Typo – rating manual
- Canadian reference removal
- Numerical to Integer

Typo – Should be manual 21

12.2 *Gear Rating:*

12.2.1 Examine the tooth surfaces on the drive side of the pinion and ring gear for the following distresses in accordance with ASTM Distress Rating Manual 214 and Annex A10: burnishing, wear, pitting/spalling, ridging, rippling, scoring, discoloration, corrosion, and deposits. Rate the distress types of wear, rippling, and ridging using the ASTM Photographs for Gear Distress. The photographs are available as an ASTM item TMCGEARDISTRESS2010PR and shall have been issued on or after November 9, 2010.²¹

Canadian reference removal

9.3.6 Within a reference period, alternate testing using different gear batches, or dynamometer torque conditions, or test temperatures does not necessitate recalibration. However, calibrate the test stand for both the standard and Canadian tests independently in order for results at either condition to be valid.

A9.3 *L-37 Canadian Version Test Requirements:*

A9.3.1 *Calibration Test Acceptance (see Section 9):*

A9.3.1.1 Calibration status of the L-37 Canadian Version test is determined by successfully calibrating a test stand according to the L-37 Standard Version test requirements detailed in Section 9. In other words, a stand that is calibrated for the L-37 Standard Version test is automatically calibrated for the L-37 Canadian Version test.

Numerical to Integer

12.2.2 **Rate** each distress by identifying its level of distress in accordance with **Table A10.1**. Four distress types (ridging, rippling, scoring, and wear) are assigned a **numerical value** between 0 and 10 corresponding to the **rated** level of distress, as shown in **Table A10.1**. The pitting/spalling distress type is assigned numerical values also shown in **Table A10.1**. Record the results.



D02.B0.03

Old Business

New Business

Adjournment

Motion to amend typo in L-37-1 procedure where reference was made to rating manual 241, this was replaced with rating manual 21.

Motion Passed unanimously (10/0/1) Troy Muransky was absent

Motion to remove requirement for Canadian reference in current I-37-1 procedure with previous language in I-37 procedure. As shown below: Top photo will become bottom photo.

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Motion Passed unanimously (10/0/1) Troy Muransky was absent