ASTM D7038 (L-33-1) MOISTURE CORROSION TEST
SURVEILANCE PANEL MEETING
December 05, 2025

Meeting Minutes

I. Attendees

Allen Comfort
Anthony Lange
Brad Transue
Charron, Michael T.
Dylan Beck
Jonathan Westmoreland
Matt-Afton
Micheal Portell
Nathan Knotts
Nathan Knotts
Nick Schaup
Reagan Murray
Rebecca Warden
Wes Venhoff
Wright, Payton B.

II. Business

a. New batch overheating during motoring phase
   i. All labs in the industry have seen the new 31XX gear batch overheating during the motoring phase. The specification is 180 ± 1˚F and the axles are occasionally overheating by ~5˚F.
   ii. The 3 labs currently running this test believe that using a higher flow rate fan will allow them to maintain temperature.

b. 31XX Batch approval run data review
   i. The TMC presented slides showing the current test runs using approved reference oils on the new 31XX gear batch.
   ii. 1 of the labs had overheating during the motoring phase but the other 2 labs did not. The new 126 reference oil data generated by the 3 labs are all within the limits for this reference oil. (see graph below)

   iii. The concern was brought up that the original runs on the 126 reference oil had a mild result outside the allowed limits. Due to this it was requested that the data be sent to the Stats group for review before the axles are approved for use. The chairman reminded the panel that all 3 labs are very low on hardware and with the holidays coming up the Stats group may not be able to meet and give a recommendation before the end of the year. The panel requested to send the data to the Stats group.

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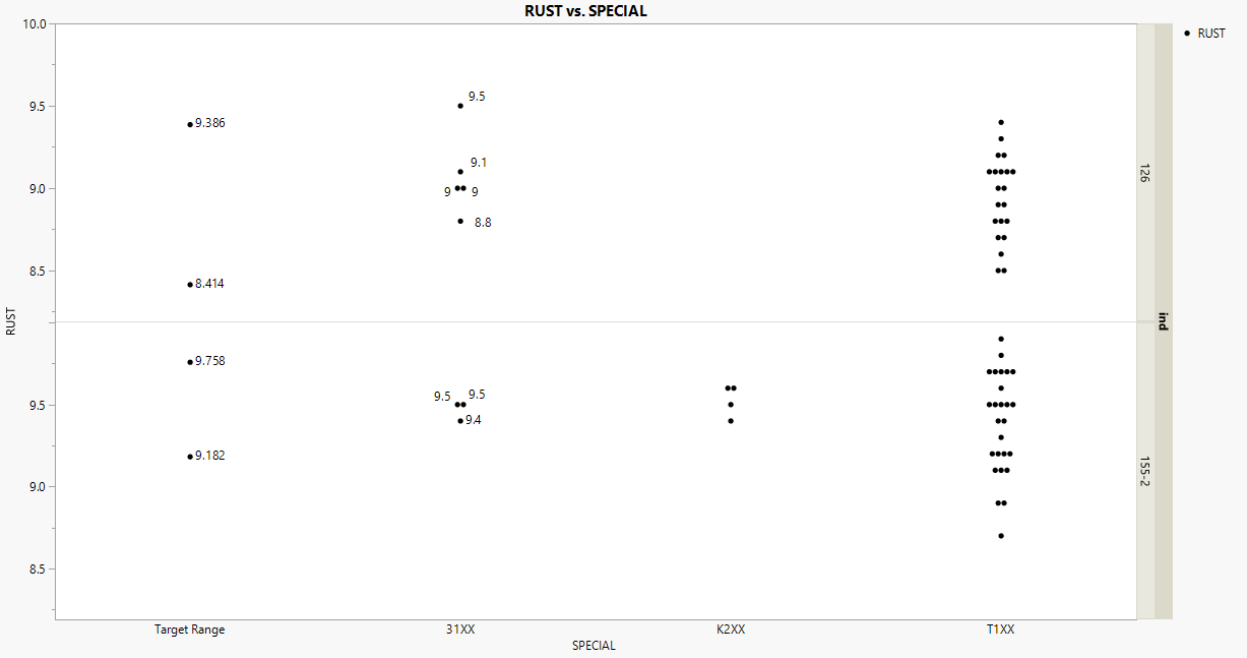
iv. Note: Since the data is being sent to the Stats group for review, the labs may run out of approved hardware before the new batch is approved for use.



III. Additional Discussion / Business?
   a. None

IV. Summary of Action Items
   a. The chairman will reach out to the Stats group to have them review the data generated on the new 31XX axle.

V. Adjournment

Thank you,
Anthony Lange
ASTM D7038 Chairman

L-33-1Meeting
AAM 31XX Hardware Matrix

December 5 2025 Update

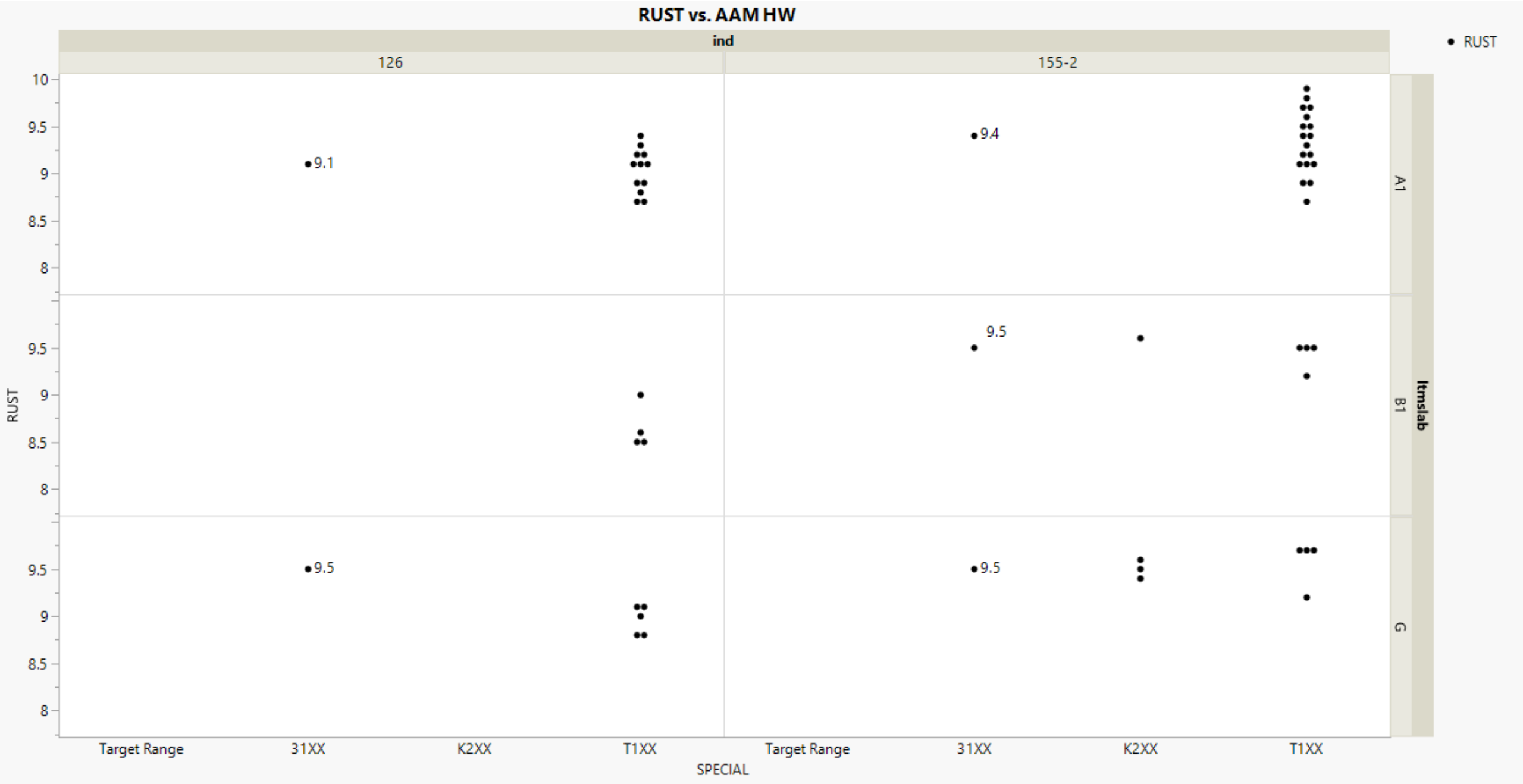
Summary

- Lab ran approval runs and data was presented at the November in-person meeting
  - Results for reference oil 126 were mild and there were concerns that the 31XX data did not show enough discrimination between the two reference oils.

- Labs agreed to each run an additional run on reference oil 126.

(When we last looked at this)


RUST vs. SPECIAL
RUST
10
9.5
9
8.5
8
9.386
8.414
9.5
9.1
9.758
9.182
9.5
9.5
9.4
126
155-2
ind
RUST
Target Range
31XX
K2XX
T1XX
SPECIAL


RUST vs. AAM HW
ind
126
155-2
RUST
Itmslab
A1
B1
G
RUST
10
9.5
9
8.5
8
9.1
9.4
9.5
9.5
9.5
Target Range
31XX
K2XX
T1XX
Target Range
31XX
K2XX
T1XX
SPECIAL

UPDATED 31XX APPROVAL MATRIX

Excluded due to being operationally invalid (oil temp out of spec)

Excluded due to being operationally invalid (break & turn out of spec)

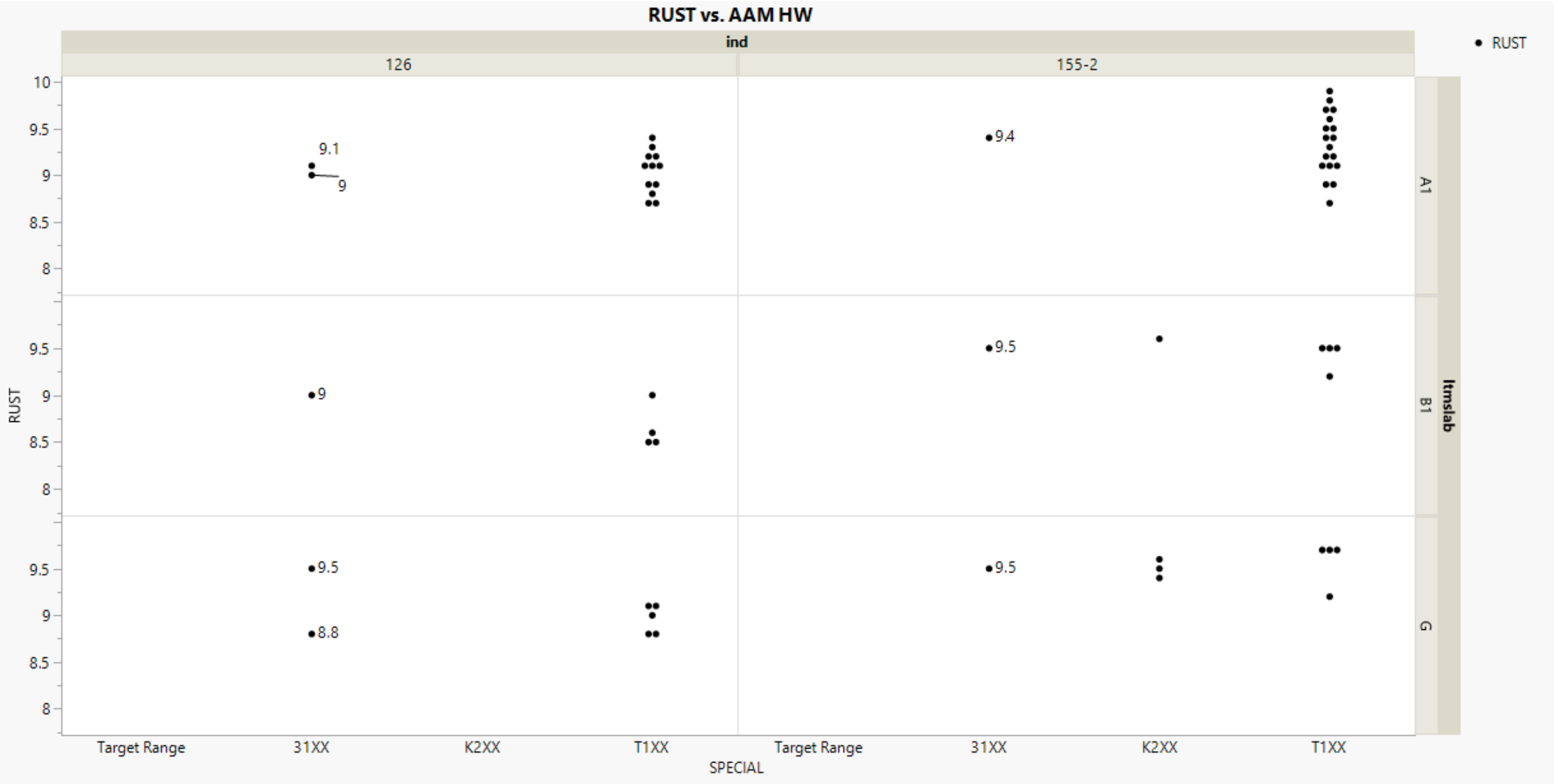
Three new approval runs on ref oil 126 added (shown in green)

testkey	ltmslab	val	ind	ltmsdate	RUST	SPECIAL
195286-L331	A1	NI	126	20250728	9.1	31XX
~~195290-L331~~	~~A1~~	~~MI~~	~~155-2~~	~~20250804~~	~~9.4~~	~~31XX~~
199845-L331	G	NI	126	20250805	9.5	31XX
193939-L331	G	NI	155-2	20250815	9.5	31XX
195291-L331	A1	NI	155-2	20251007	9.4	31XX
201514-L331	B1	RI	155-2	20251029	9.6	31XX
202622-L331	B1	NI	155-2	20251105	9.5	31XX
199847-L331	G	NI	126	20251203	8.8	T1XX
201513-L331	B1	MI	126	20251202	9	
201832-L331	A1	NI	126	20251125	9	T1XX

operationally invalid (Motoring temp out of spec)
INCLUDED IN DATA FOR THIS REVIEW

What the plots look like now with the three additional 126 data points


RUST vs. SPECIAL
RUST
10.0
9.5
9.0
8.5
9.386
8.414
9.758
9.182
9.5
9.1
9
9
8.8
9.5
9.5
9.4
126
155-2
ind
RUST
Target Range
31XX
K2XX
T1XX
SPECIAL


RUST vs. AAM HW
ind
126
155-2
RUST
Itmslab
A1
B1
G
RUST
10
9.5
9
8.5
8
9.1
9
9.4
9.5
9
9.5
8.8
Target Range
31XX
K2XX
T1XX
SPECIAL

Next Steps?

- Labs are near or completely out of currently approved AAM hardware

- HW Approval Proposal: Approve 31XX Hardware with previous T1XX targets. Review data again in February to determine if targets need updated.
  - Effective Date?

- Other options: continue to investigate the 31XX hardware differences and run more approval runs?

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