

December 7, 2017

Meeting Minutes: Surveillance Panel Meeting November 8, 2017, 9:30 am –10:00 am EST

See attendance sheet for members in attendance.

- The L33-1 committee membership was reviewed
 - Eaton – no replacement has been identified yet
- Meeting minutes from May 2017 ASTM meeting were reviewed. Motion was made by Wes Venhoff to approve. Motion was seconded by Arjun Goyal. Motion carried unanimously by 9 voting members present.
- The TMC presented updated targets for both reference fluids. Motion was made by Rebecca Warden to accept the new reference oil targets. Motion was seconded by Wes Venhoff and carried unanimously by 9 voting members.
- The AAM hardware performs more severely than the Dana hardware. Because of this, the S.P. chose to apply a 0.6 correction factor on candidate tests to adjust for hardware severity. Because of this, you can have a test that corrects to a passing final rust rating (>9.0) but has more than more areas rated as an 8 than is acceptable by LRI (as described in PD4000). The group discussed reference oil data at length. The decision was made to address the LRI committee during the open meeting and ask for them to reconsider the limitation of no more than three 8s allowed.
- Based on current hardware supplies in each of the labs, a hardware re-order will not be considered until 2Q - 2018.
- Motion was made to adjourn the meeting by Rebecca Warden and seconded by Wes Venhoff and carried unanimously.

Respectfully

Angela Trader
Senior Project Engineer



L33-1 SURVEILLANCE PANEL MEETING

Automation Alley - Troy, MI

Angela Trader – Senior Project Engineer
November 9, 2017 9:30 am – 10:30 am EST



AGENDA

01 Call to Order

02 Membership Review

03 Approval of Meeting Minutes

04 Reference Oil Targets Update

05 K2XX Severity Shift

06 Hardware Status

07 New/Open issues

08 Adjournment



MEMBERSHIP REVIEW

Voting Members:

- Greg Shank – Mack
- Allen Comfort – US Army
- John Dharte – AAM
- Eric Donovan – Afton
- Rob Banas – ExxonMobil
- ?? – Eaton
- Jule Rucker – Meritor
- Scott Parke – TMC
- Angela Trader – Intertek
- Kristijan Drlja – Lubrizol
- Chintan Ved – Ford
- Rebecca Warden – SwRI
- Khaled Zreik - GM



APPROVAL OF MEETING MINUTES

Surveillance Panel Meeting Minutes

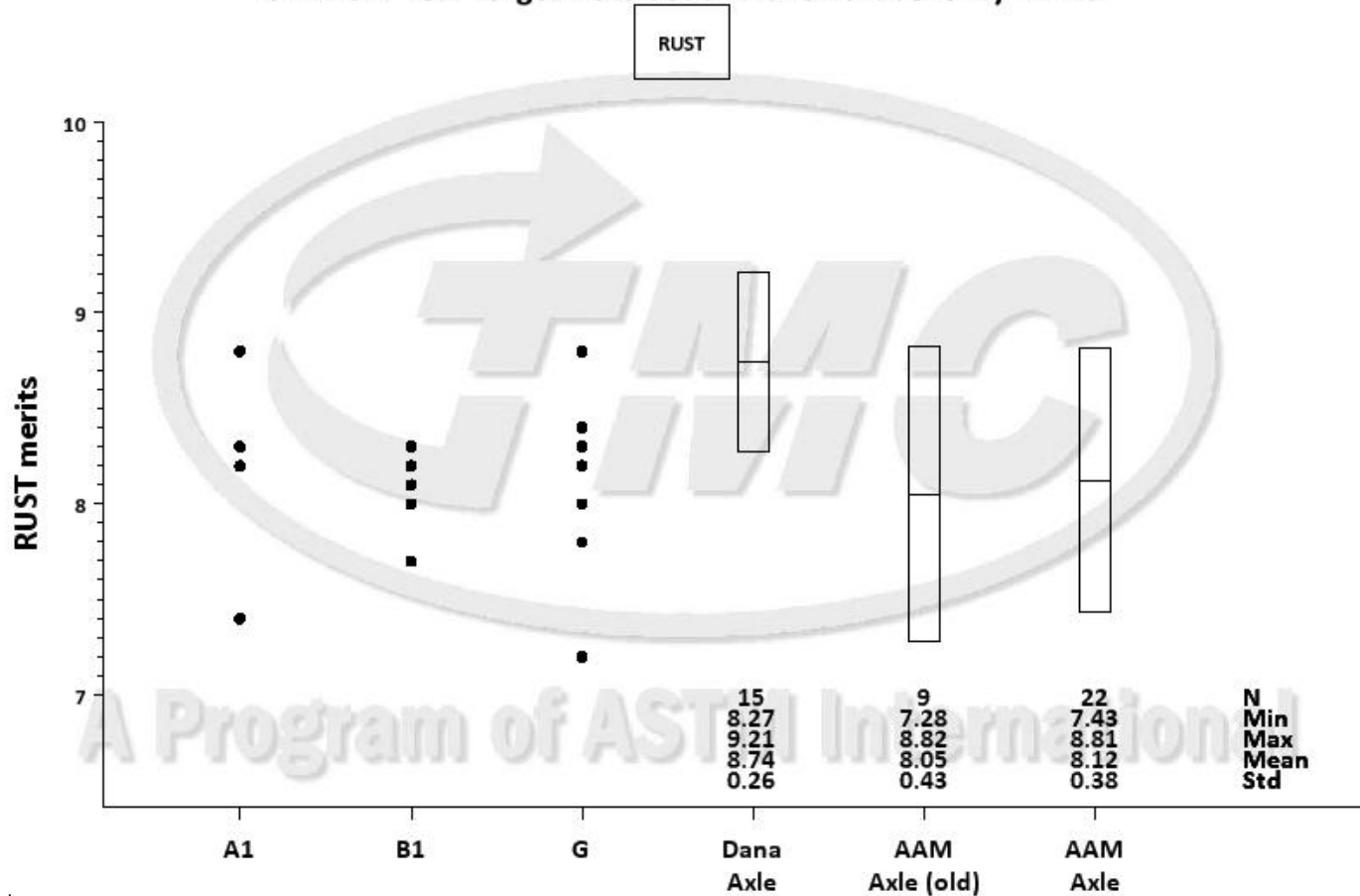
- SP Meeting 09MAY2017
 - (20170509 SP.pdf)



TMC 123-2 TARGET UPDATE



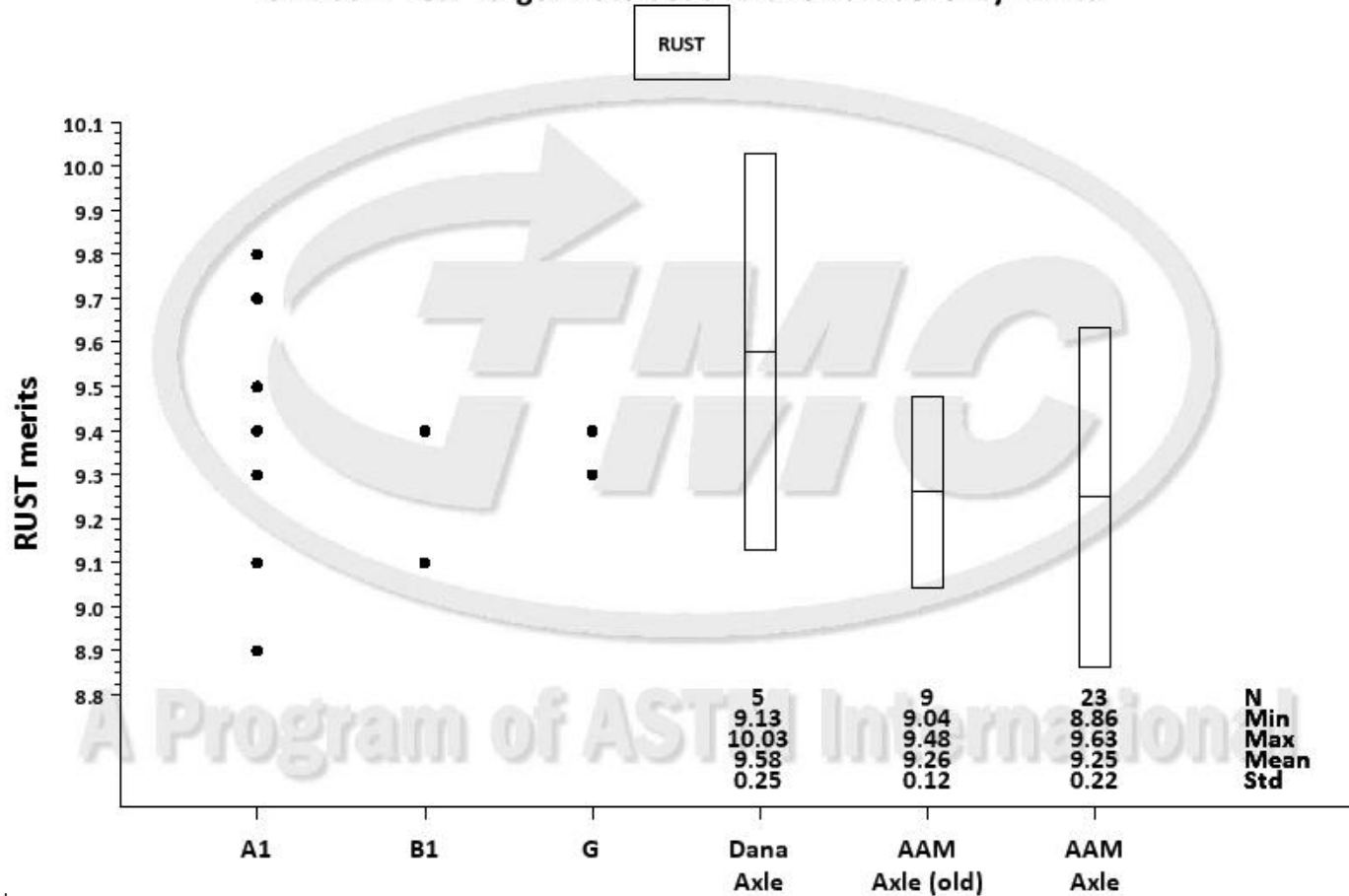
L-33-1 AAM K2XX Hardware Oil 123-2 Test Target Data Set and Shewart Severity Limits



TMC 155-1 TARGET UPDATE



L-33-1 AAM K2XX Hardware Oil 155-1 Test Target Data Set and Shewart Severity Limits



K2XX VS. DANA HARDWARE RUST RATING FOR 123-2 OIL



Hardware	Rating	Rating Area									
		1	2	3	4	5	6	7	8	9	10
Dana	10	46.8%	1.3%	4.6%	27.3%	32.5%	23.4%	29%	30%	8.4%	3%
AAM	10	54.6%	0%	0%	0%	0%	0%	18%	23%	0%	0%
Dana	9	35.1%	13.6%	23.4%	34.4%	33.8%	26%	39%	32%	25.3%	19%
AAM	9	13.6%	4.6%	0%	4.5%	9.1%	4.6%	9%	41%	13.6%	18%
Dana	8	18.2%	82.5%	69.5%	38.3%	33.8%	50.6%	32%	38%	66.2%	77%
AAM	8	27.3%	77.3%	90.9%	95.5%	90.9%	95.4%	73%	36%	86.4%	82%
Dana	5	0%	2.6%	2.6%	0%	0%	0%	0%	0%	0%	0%
AAM	5	4.6%	18.2%	9.1%	0%	0%	0%	0%	0%	0%	0%

Dana: n = 154

AAM: n = 22

K2XX VS. DANA HARDWARE RUST RATING FOR 155-1 OIL



Hardware	Rating	Rating Area									
		1	2	3	4	5	6	7	8	9	10
Dana	10	80.8%	32.1%	34.6%	29.5%	94.9%	94.9%	90%	88%	94.9%	91%
AAM	10	95.6%	21.7%	8.7%	13%	87%	82.6%	100%	100%	95.6%	100%
Dana	9	14.1%	24.4%	20.5%	41%	5.1%	5.1%	9%	10%	5.1%	8%
AAM	9	0%	0%	13%	17.4%	13%	17.4%	0%	0%	4.4%	0%
Dana	8	15.3%	43.6%	44.9%	29.5%	0%	0%	1%	1%	0%	1%
AAM	8	4.4%	78.3%	78.3%	69.6%	0%	0%	0%	0%	0%	0%
Dana	5	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AAM	5	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Dana: n = 78

AAM: n = 23



FILL PLUG MAGNET REMOVAL

From Information Letter 16-3:

Replace section 9.2.1.1 with the following:

9.2.1.1 Disassembly—Disassemble the differential housing assembly leaving the pinion inner and outer races in place. **Remove and discard the oil drain plug magnet (if present).** Remove all parts from the differential case. Disassemble all bearings from their mating parts. Maintain right differential case shim for axle assembly.

(1) Be aware that the bolts attaching the ring gear to the carrier are left-hand thread.



HARDWARE STATUS

- Current hardware batch was to the labs mid 2015
- The hardware was approved in May 2016 and procedure revised (info letter) June 30, 2016
- Labs currently have the following amount of hardware left:
 - Intertek – ~3 years
 - SwRI – ~1.5 years
 - Lubrizol – ~3 years
 - Afton – ~? Years
- Based on the above there is no need to order another batch of hardware at this time.
- We will re-evaluate the hardware situation in 4Q 2018.

NEW/OPEN ISSUES



Any new business?

ANGELA TRADER



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intertek

Total Quality. Assured.

TESTKEY	LTMSLAB	LTMSAPP	VAL	IND	CHART	LTMSDATE	LTMSTIME	SPECIAL	RUST	RUSTyi	RUSTzi	RUSTqi
119047-L3:	A1		15 AC	155-1	Y	20160805	10:27	K2XX	9.1	-1.3333	.	.
119048-L3:	A1		14 AC	155-1	Y	20160810	09:52	K2XX	9.1	-1.3333	.	.
119642-L3:	A1	14A	AC	155-1	Y	20170117	12:09	K2XX	9.1	-1.3333	.	.
123084-L3:	A1	14A	AC	155-1	Y	20170126	10:03	K2XX	9.1	-1.3333	.	.
108361-L3:	G		1 AC	155-1	Y	20170317	08:53	K2XX	9.3	0.3333	.	.
112370-L3:	B1	3A	AC	155-1	Y	20170502	07:14	K2XX	9.1	-1.3333	.	.
123085-L3:	A1	15A	AC	155-1	Y	20170627	09:28	K2XX	9.1	-1.3333	.	.
123087-L3:	A1	15A	AC	155-1	Y	20171013	09:53	K2XX	9.1	-0.7368	.	.
122898-L3:	B1	2A	AC	155-1	Y	20171031	08:18	K2XX	9.5	1.3684	.	.

TESTKEY	LTMSLAB	LTMSAPP	VAL	IND	CHART	LTMSDATE	LTMSTIME	SPECIAL	RUST	RUSTyi	RUSTzi	RUSTqi
87357-L33:	G		2 AC	155-1	Y	20120404	01:55	V01.1	9.3	-1.12	.	.
87358-L33:	G		2 AC	155-1	Y	20120420	01:30	V01.1	9.5	-0.32	.	.
87801-L33:	G		1 AC	155-1	Y	20120905	09:55	V01.1	9.4	-0.72	.	.
84748-L33:	B1		3 AC	155-1	Y	20130110	09:11	V01.1	9.7	0.48	.	.
89623-L33:	G		2 AC	155-1	Y	20130214	11:13	V01.1	9.3	-1.12	.	.
84749-L33:	B1		2 AC	155-1	Y	20130423	09:59	V01.1	9.4	-0.72	.	.
84750-L33:	B1		3 AC	155-1	Y	20130819	10:02	V01.1	9.4	-0.72	.	.
92773-L33:	G		1 AC	155-1	Y	20131104	09:01	V01.1	9.8	0.88	.	.
90500-L33:	A1		15 AC	155-1	Y	20131216	10:35	V01.1	9.6	0.08	.	.
89964-L33:	B1		3 AC	155-1	Y	20140107	08:53	V01.1	9.5	-0.32	.	.
92774-L33:	G		1 AC	155-1	Y	20140307	11:43	V01.1	9.5	-0.32	.	.
97706-L33:	B1		2 AC	155-1	Y	20140528	09:42	V01.1	9.7	0.48	.	.
90501-L33:	A1		14 AC	155-1	Y	20140610	10:32	V01.1	9.3	-1.12	.	.
98038-L33:	A1		14 AC	155-1	Y	20140619	10:19	V01.1	9.7	0.48	.	.
101906-L3:	A1		15 AC	155-1	Y	20140915	10:52	V01.1	9.3	-1.12	.	.
98305-L33:	G		2 AC	155-1	Y	20140919	10:29	V01.1	9.6	0.08	.	.
98306-L33:	G		1 AC	155-1	Y	20141001	10:19	V01.1	9.6	0.08	.	.
101102-L3:	G		1 AC	155-1	Y	20150420	10:29	V01.1	9.4	-0.72	.	.




RCDCPIN	RCDCDFGC	RCDCDFGS	RCDCAXHC	RCDCDGR	RCDCDPIN	RCBDPNR	RCBDPNC	RCBDFCR	RCBDFCC	IND_SORT	WUTIMEST	WUTIMEFN
10	8	8	8	10	10	10	10	10	10	tmc-155-1	10:41	11:25
10	8	8	8	10	10	10	10	10	10	tmc-155-1	10:01	10:32
10	8	8	8	10	10	10	10	10	10	tmc-155-1	12:29	13:06
10	8	8	8	10	10	10	10	10	10	tmc-155-1	10:12	10:56
10	8	8	9	10	10	10	10	10	10	tmc-155-1	8:33	9:07
10	8	8	8	10	10	10	10	10	10	tmc-155-1	08:02	08:33
10	8	8	8	10	10	10	10	10	10	tmc-155-1	09:47	10:29
10	8	8	8	10	10	10	10	10	10	tmc-155-1	10:00	10:47
10	9	10	8	10	10	10	10	10	10	tmc-155-1	08:59	09:30

RCDCPIN	RCDCDFGC	RCDCDFGS	RCDCAXHC	RCDCDGR	RCDCDPIN	RCBDPNR	RCBDPNC	RCBDFCR	RCBDFCC	IND_SORT	WUTIMEST	WUTIMEFN
9	9	9	10	9	10	9	9	10	9	tmc-155-1	10:29	10:57
8	10	9	10	10	9	8	9	10	10	tmc-155-1	10:14	10:44
10	9	8	9	10	10	9	10	10	10	tmc-155-1	10:24	10:57
10	10	10	8	10	10	10	10	10	10	tmc-155-1	09:47	10:17
8	9	10	9	10	10	10	10	9	9	tmc-155-1	11:48	12:15
10	8	8	10	10	10	10	10	10	10	tmc-155-1	10:28	11:02
10	8	10	9	10	10	10	10	10	10	tmc-155-1	10:40	11:09
9	10	10	10	10	9	10	10	10	10	tmc-155-1	10:32	11:04
10	9	10	9	10	10	10	10	10	10	tmc-155-1	11:00	11:28
10	9	9	9	10	10	10	10	10	10	tmc-155-1	09:31	10:03
10	9	9	9	10	10	10	10	10	10	tmc-155-1	12:11	12:40
10	10	9	9	10	10	10	10	10	10	tmc-155-1	09:58	10:35
10	8	8	9	10	10	10	10	10	10	tmc-155-1	10:46	11:17
10	10	10	8	10	10	10	10	10	10	tmc-155-1	10:20	11:02
10	8	8	9	10	10	10	10	10	10	tmc-155-1	11:06	11:44
10	8	10	10	10	10	10	10	10	10	tmc-155-1	10:41	11:32
10	9	10	9	10	10	10	10	10	10	tmc-155-1	10:25	10:54
10	8	8	10	10	10	10	10	10	10	tmc-155-1	11:01	11:33





gearver	RINIT1	# of 8s
K2XX	AS	3
K2XX	BT	3
K2XX	AS	3
K2XX	AS	3
K2XX	NPA	2
K2XX	BJF	3
K2XX	BT	3
K2XX	AS	3
K2XX	VAD	1
		<hr/> 2.666667

gearver	RINIT1	# of 8s
V01.1	TCB	0
V01.1	TCB	2
V01.1	TCB	1
V01.1	PDR	1
V01.1	NPA	1
V01.1	BJF	2
V01.1	CL	1
V01.1	NPA	0
V01.1	AS	0
V01.1	CL	0
V01.1	NPA	0
V01.1	BJF	0
V01.1	AS	2
V01.1	AS	1
V01.1	AS	2
V01.1	NPA	1
V01.1	NPA	0
V01.1	NPA	2
		<hr/> 0.888889




ASTM D 7038 L-33-1 SURVEILLANCE PANEL PARTICIPANTS LIST
November 9, 2017

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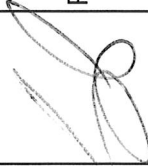


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