

DAIMLER

Scuff Determination Flowchart

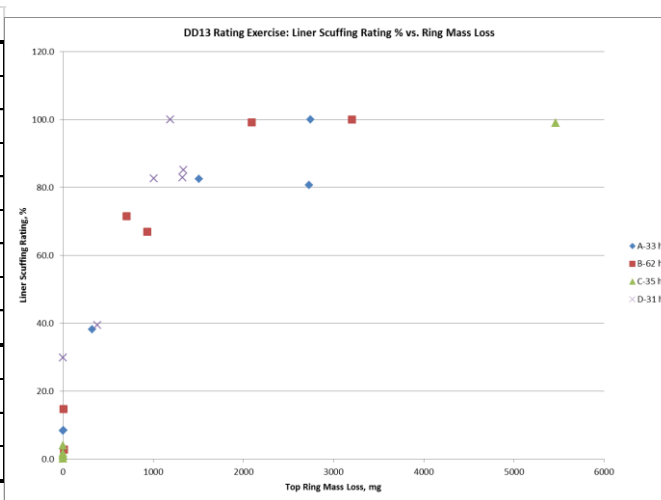
Daimler Trucks



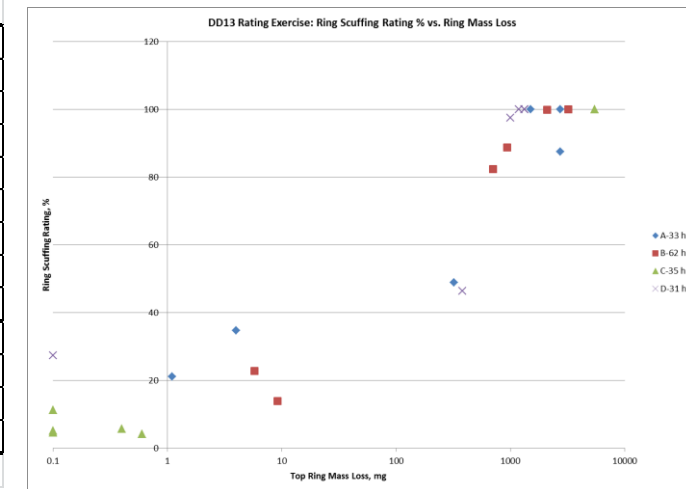
Rating Workshop Outcomes

- Most critical part of liner rating is at the low end, i.e. the threshold of scuffed or not scuffed
- With new rating scale, raters had a worst case 3 σ tolerance at the low end of 16% for liners
- Top ring ratings have a similar tolerance, but overall top ring ratings look slightly more severe than liners due to much smaller surface area

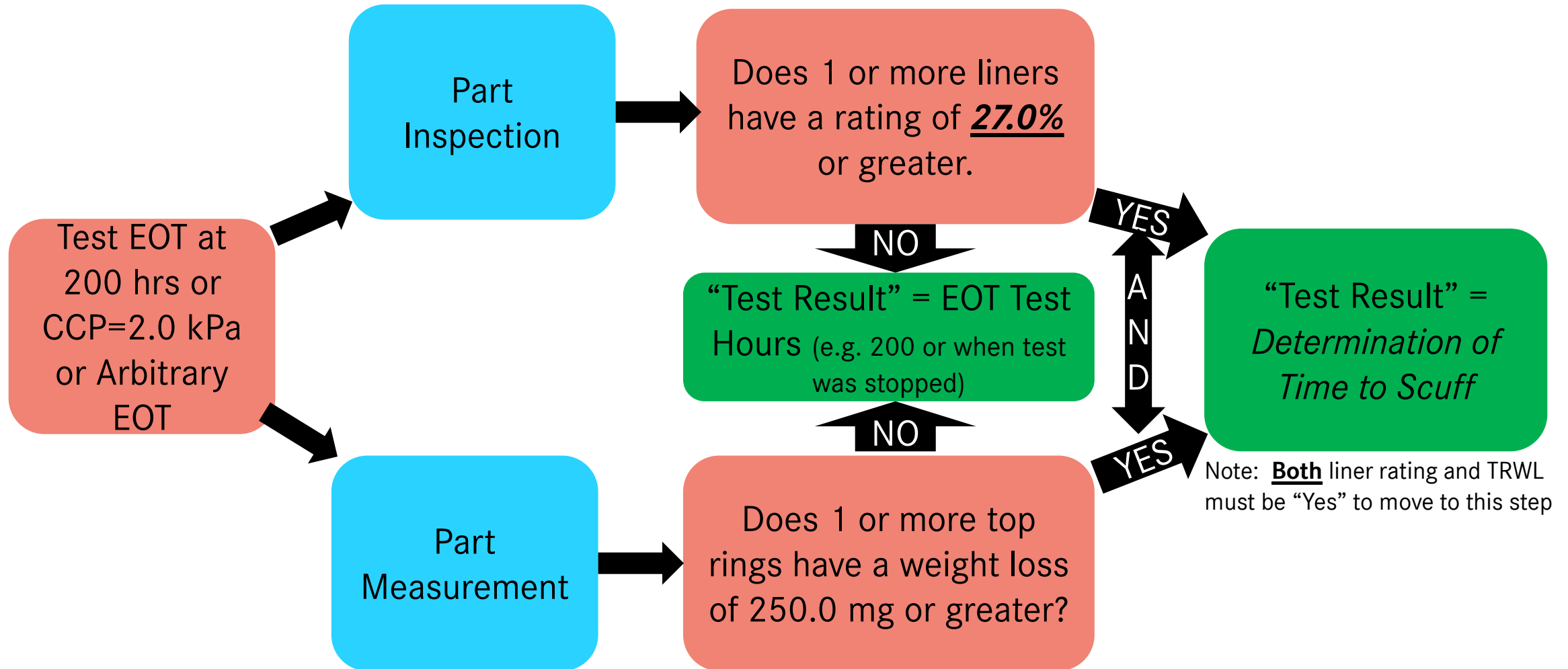
LINER Re-rate of high variability liners					
Rater	1, C-4	2, A-6	3, D-5	4, A-5	5, B-5
1	2.5	5.5	22.5	6	15
2	3.5	8	24	7	7.5
3	3	2.5	22	2	5.5
4	1.5	4	20	5.5	8
5	1.5	3.5	16	6	4.5
6	1.5	6.5	21	6	11.5
7					
8	2.5	4	8.5	4	3.5
MAX	3.5	8	24	7	15
MIN	1.5	2.5	8.5	2	3.5
AVG	2.29	4.86	19.14	5.21	7.93
STD	0.81	1.91	5.33	1.68	4.09
COV	0.35	0.39	0.28	0.32	0.52

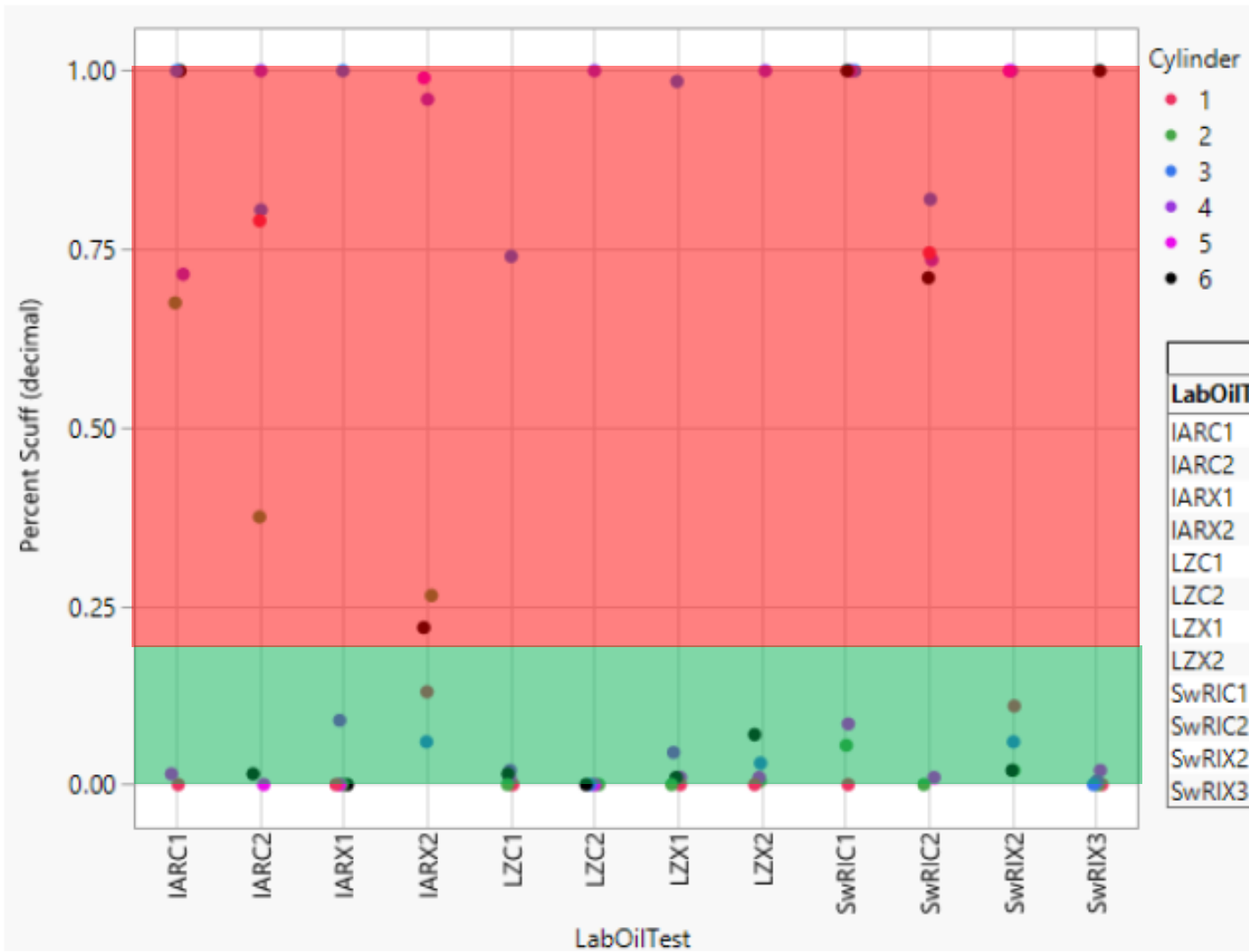


TOP RING				
Rater	C-4	D-5	A-5	B-5
1	6	20	19	21.5
2	6	29	13.5	25
3	5	37	28.5	28.5
4	4.5	23	15.5	22
5	5	28	27.5	18
6	2.5	20.5	9	15.5
7				
8	7	34.5	35	29
MAX	7	37	35	29
MIN	2.5	20	9	15.5
AVG	5.14	27.43	21.14	22.79
STD	1.44	6.67	9.39	5.07
COV	0.28	0.24	0.44	0.22



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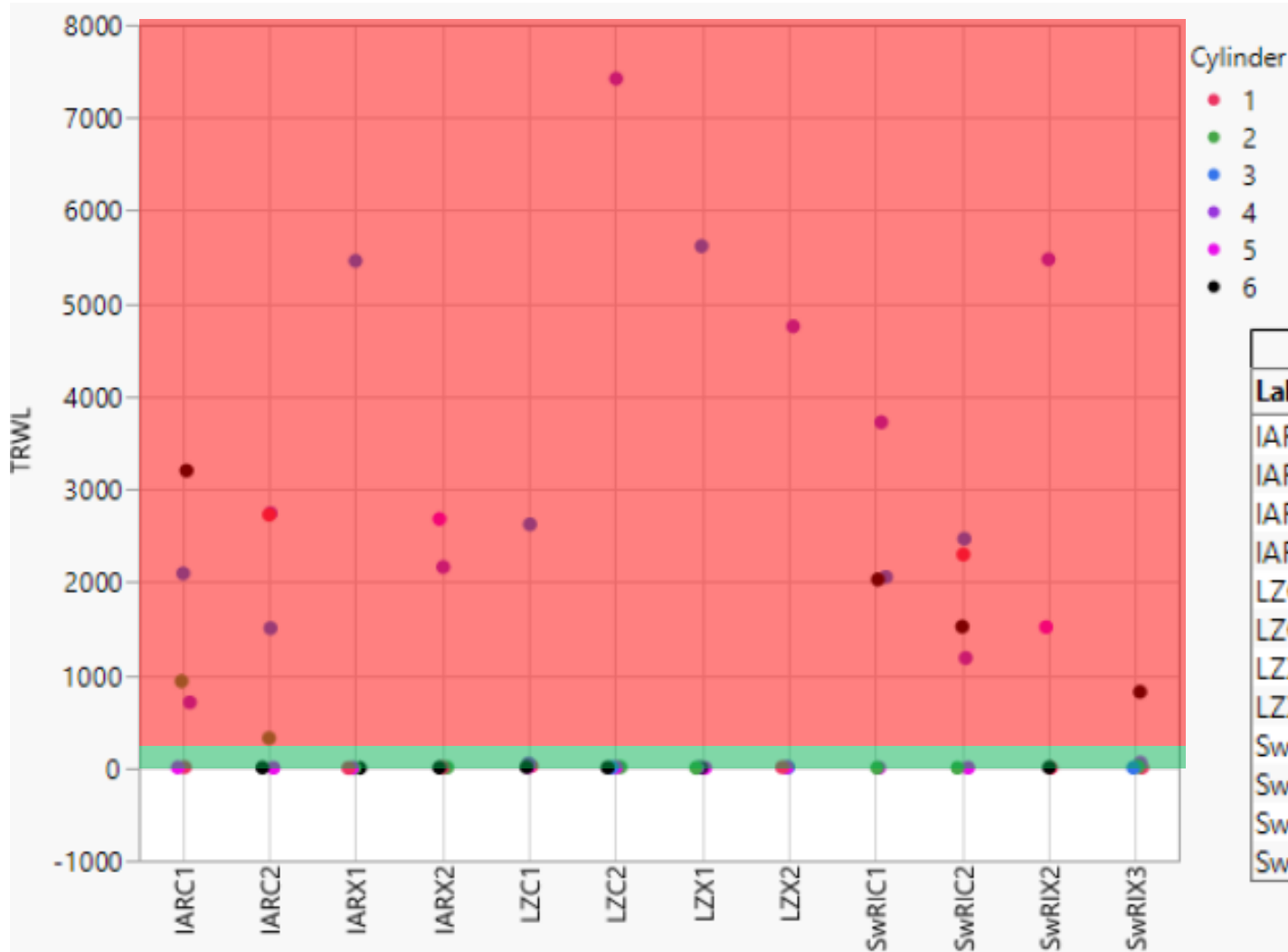




Cylinder

- 1
- 2
- 3
- 4
- 5
- 6

	Percent Scuff (decimal)
LabOilTest	Mean
IARC1	0.5675
IARC2	0.4975
IARX1	0.1816666667
IARX2	0.4375
LZC1	0.1308333333
LZC2	0.1666666667
LZX1	0.175
LZX2	0.1858333333
SwRIC1	0.5233333333
SwRIC2	0.5033333333
SwRIX2	0.3683333333
SwRIX3	0.1708333333



Cylinder

- 1
- 2
- 3
- 4
- 5
- 6

	TRWL
LabOilTest	Mean
IARC1	1158.6666667
IARC2	1216.68333333
IARX1	910
IARX2	811.2
LZC1	453.56666667
LZC2	1242.7666667
LZX1	937.85
LZX2	799.983333333
SwRIC1	1302.3166667
SwRIC2	1245.9666667
SwRIX2	1169.03333333
SwRIX3	149.683333333