Discuss for limit values of ECE R51 – 03 series

CHINA AUTOMOTIVE TECHNOLOGY AND RESEARCH CENTER

German position on limit values, category and transitional provisions for ECE R51.03, new vehicle types						
		Stage 1	**Stage 2**		**Stage 3**	
		2 years after entry into force of ECE R51.03 Limit [dB(A)]	**4 years after stage 1** Limit [dB(A)]	**6 years after stage 1** Limit [dB(A)]	**4 years after stage 2** Limit [dB(A)]	**6 years after stage 2** Limit [dB(A)]
M1	PMR ≤ 120 kW/t	**72**	**70**	**-**	**68**	**-**
	120 < PMR ≤ 160 kW/t	**73**	**-**	**71**	**70**	**-**
	PMR > 160 kW/t	**75**	**74**	**-**	**73**	**-**
M2	GVW ≤ 2.5 to	**72**	**70**	**-**	**69**	**-**
	2.5 to < GVW ≤ 3.5 to	**74**	**72**	**-**	**71**	**-**
	GVW > 3.5 to GVW	**75**	**-**	**73**	**-**	**71**
M3	P ≤ 180 kW	**76**	**-**	**74**	**-**	**73**
	180 < P ≤ 250 kW	**78**	**-**	**78**	**-**	**76**
	P > 250 kW	**80**	**-**	**78**	**-**	**76**
N1	GVW ≤ 2.5 to	**72**	**70**	**-**	**68**	**-**
	2.5 to < GVW ≤ 3.5 to	**74**	**72**	**-**	**71**	**-**
N2	P ≤ 150 kW	**77**	**-**	**75**	**-**	**72**
	P > 150 kW	**78**	**-**	**77**	**-**	**75**
N3	P ≤ 250 kW	**81**	**-**	**79**	**-**	**77**
	P > 250 kW	**82**	**-**	**81**	**-**	**79**

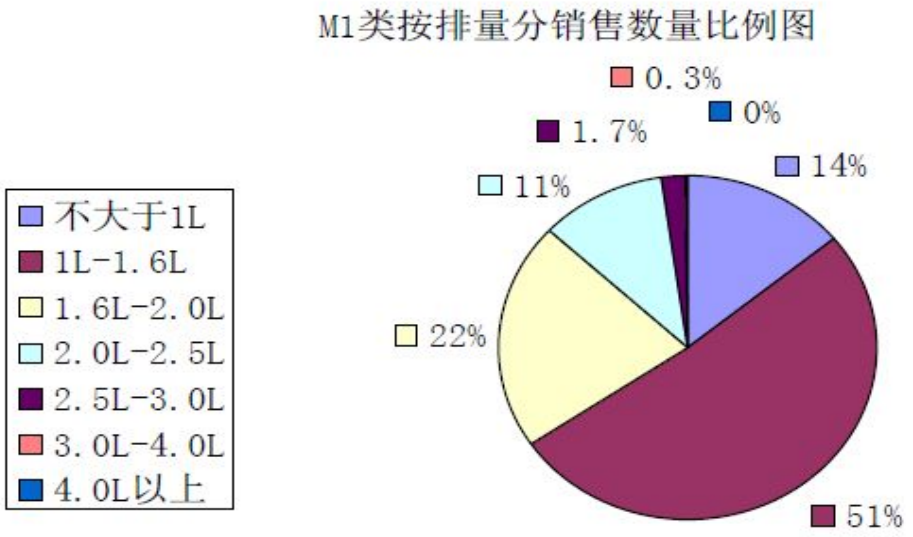
Japanese position on limit values, sub-categories and transitional provisions for ECE R51.03, new vehicle types						
		Stage 1	Stage 2		Stage 3[2]	
		2 years after entry into force of ECE R51.03	4 years after stage 1	6 years after stage 1	[4] years after stage 2	[6] years after stage 2
		Limit [dB(A)]	Limit [dB(A)]	Limit [dB(A)]	Limit [dB(A)]	Limit [dB(A)]
M1	PMR ≤ 120 kW/t	72	70	-	[68]	-
	120 < PMR ≤ 160 kW/t	73	71	-	[69]	-
	PMR > 160 kW/t	75	73	-	[71]	-
M2	GVW ≤ 3.5 ton	74	72	-	[70]	-
	3.5 ton < GVW	75	-	73	-	[71]
M3	P ≤ 125 kW	76	-	74	-	[72]
	125 < P ≤ 250 kW	79	-	78	-	[76]
	P > 250 kW	80	-	78	-	[76]
N1	GVW ≤ 2.5 ton and PMR(GVW)[1] ≤ 35kW/t	74	-	72	-	[70]
	GVW ≤ 2.5 ton and 35kW/t < PMR(GVW)[1]	72	70	-	[68]	-
	2.5 to < GVW ≤ 3.5 to	74	72	-	[70]	-
N2	P ≤ 125 kW	78	-	76	-	[74]
	P > 125 kW	79	-	77	-	[75]
N3	P ≤ 250 kW	80	-	78	-	[76]
	P > 250 kW	81	-	79	-	[77]

Conditions of China-M1 category

- China almost has not manufactured M1 category vehicles with the PMR values higher than 120. such as:
- Audi A6L 3.0 FSI quattro PMR≈117;
- BMW 535 Li PMR≈112;
- Buick Royal 2.0L with Turbo ≈93.1
- TOYOTA Prado 4.0L V6 ≈84.7

M1 category sold in China (2000-May. 2010)

不大于 1L	1L-1.6L	1.6L-2.0L	2.0L-2.5L	2.5L-3.0L	3.0L-4.0L	4.0L 以上
5408968	19609967	8219513	4159844	670706	117224	23333



Chinese style M1 categories

Caravelle 3.2 4M

Light bus, between M1 and M2 category. (market in China ≈ 300,000 vehicles sold per year)

Chinese style M1 categories

Chinese style M1 categories

Mini bus, between M1 and N1 category. (market in China $\approx$ 2, 500,000 vehicles sold per year, and the SHANGHAI-GM-WULING sells more than 1,000,000 vehicles per year)

Chinese conclusion for limit value of M1 category

- The sub-class for M1 category submitted by Germany and Japan is not fit for China. And China will develop more clean energy and low fuel consumption passenger cars.
- The limit value of M1 category should consider the limit value of M2 category and N1 category.

For M2 / M3 category

- China has not finished the proof test for M2 / M3 categories.
- Require for 1 dB (A) loosen for M2 category with the GVM ＞3.5t (76 dB (A))
- Should we consider the dB (A) values per passengers comparing with the seats of M1 category when we set the limit value for in the future? such as: 72 for vehicles with 5 passengers and 75 for vehicle with 10 passengers. And then set a maximum value for all vehicles. Maybe we should consider more about the purpose of vehicles but not the power of vehicles.

For M2 / M3 category

- The engines china now uses for M3 category have a lower power than Europe and Japan.
- Our suggestion for dividing the sub-class of M3 category is (engine power≤125kW，125kW ＜engine power ≤175kW， engine power ＞ 175kW)

For N1 category

- Our suggestion is the mini-truck（similar to the K-car of Japan） should not been treated as the normal N1 category.

For N2 / N3 category

- China has not finished the proof test for N2 / N3 categories.
- The limit value submitted by Germany are more reasonable than the ECE R51 – 02 series, but China also has a long way for developing.
- The engines China now uses for N2 / N3 category have a lower power than Europe and Japan.
- Our suggestion for dividing the sub-class of N2 and N3 will also be lower than 150kW and 250kW. We will take our suggestions to GENEVA next time.

The market of the world (2011)

2011年全球汽车市场20强排名						
名次	市场	2011销量(辆)	NCPT	增长率(%)	2010销量(辆)	2010排名
1	中国	18,505,100	14	2	18,061,900	1
2	美国	12,778,171	41	10	11,588,783	2
3	日本	4,416,077	35	-14	5,138,218	3
4	巴西	3,425,596	18	3	3,328,950	4
5	德国	3,173,634	39	9	2,916,260	5
6	俄罗斯	2,653,408	19	39	1,912,794	10
7	印度	2,309,874	2	12	2,062,000	7
8	法国	2,204,065	34	-2	2,251,736	6
9	英国	1,941,253	31	-4	2,030,846	8
10	意大利	1,757,649	29	-11	1,974,026	9
11	韩国	1,589,119	33	-1	1,600,000	11
12	加拿大	1,581,733	46	2	1,554,700	12
13	伊朗	1,414,000	19	6	1,331,000	13
14	澳大利亚	1,008,437	44	-3	1,035,574	14
15	墨西哥	905,888	8	10	820,406	16
16	印度尼西亚	894,180	4	17	764,710	18
17	阿根廷	857,983	21	29	662,591	19
18	西班牙	809,948	18	-18	982,015	15
19	泰国	805,000	12	1	800,000	17
20	比利时	572,211	53	5	547,347	20
注：部分数据为估计值，统计机构不同也将带来数据差距						Kevin Lee

We still have a long way to go. Thank you!