

**EU-Commission**

**JRC Contribution to EVE IWG:**

*In-vehicle battery durability e-HDVs MPRs Overview*

74<sup>th</sup> meeting of the GRPE Informal Working Group  
Electric Vehicles and the Environment (EVE)

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Tokyo, Japan, September 18<sup>th</sup>-19<sup>th</sup>,  
2024

# HDVs vehicle categories: what about the different regions?

GWV lbs	GWV kg	USA vehicle class	USA weight class	GWV tonnes	EU vehicle VECTO group	GWV tonnes	JPN Truck group	JPN Tractor group	JPN Route Bus group	JPN Bus group
6000	2,722	1								
				3.5						
8500	3,856	2		3.8		3.5-7.5	T1/T2/T3/T4	TT1		B1
10000	4,536	3	Light HDV	5	0					
14000	6,350	4	Light HDV	7	0					
16000	7,257	5		7.4	1s			BR1	B2	
19500	8,845	6	Medium HDV	10	2	8	T5		BR1	B2
26000	11,793	7		10	2	10	T6		BR2	B3
33000	14,969	8	Heavy HDV	12	3	12	T7		BR3	B4
				14		14	T8		BR4	B5
				16		16	T9		BR4	B5
60000	27,216	8	Heavy HDV	>16	4,5,9,10,11,12,16	20	T10		BR5	B7
				20<		20<	T11	TT2		BR5



vehicle category N	UN categories	MPR	vehicle category M	UN categories	MPR
N1 < 3.5t	Category 2 not exceeding 3.855 tonnes	MPR UN GTR 22	M1 and M2 < 3.5t	Category 1-1 and Category 1-2 not exceeding 3.855 tonnes	MPR UN GTR 22 (M2 all covered by HDV GTR)
3.5t < N2 < 12t	Category 2 vehicles not exceeding 16 tonnes	MPR1	3.5t < M2 < 5t	Category 1-2 vehicle not exceeding 5 tonnes	MPR3
			5t < M3 < 7.5t	Category 1-2 vehicle exceeding 5 tonnes but not exceeding 7.5 tonnes	MPR4
12t < N3 < 16t			M3 > 7.5t	Category 1-2 vehicle exceeding 7.5 tonnes	MPR5
N3 > 16t	Category 2 vehicles exceeding 16 tonnes	MPR2			

# MPR Metric proposal: optional annex & different metrics (years, km, En- th in monitoring)

<b>MPRs Metrics</b> Years, km whichever comes first En-throughput in monitoring	
<b>Category 2</b> vehicles not exceeding 16 tonnes (GVW)	
6y, 150 000km	
<b>8y, 300 000km</b>	
8y, 400 000km	
<b>10y, 375 000km</b>	

<b>MPRs Metrics</b> Years, km whichever comes first En-throughput in monitoring	
<b>Category 2</b> vehicles exceeding 16 tonnes (GVW)	
6y, 150 000km	
8y, 600 000 km	
<b>12y, 700 000km</b>	
<b>15y, 875 000km</b>	

# MPR Metric proposal: optional annex & different metrics (years, km, En-th in monitoring)

<b>MPRs Metrics</b> Years, km whichever comes first En-throughput in monitoring	
<b>Category 1-2</b> vehicle not exceeding 5 tonnes	
6y, 150 000km	
<b>8y, 160 000km</b>	
8y, 300 000km	
<b>10y, 200 000km</b>	

<b>MPRs Metrics</b> Years, km whichever comes first En-throughput in monitoring	
<b>Category 1-2</b> vehicle exceeding 5 tonnes but not exceeding 7.5 tonnes	
6y, 150 000km	
<b>8y, 300 000km</b>	
8y, 500 000km	
<b>10y, 375 000km</b>	

<b>MPRs Metrics</b> Years, km whichever comes first En-throughput in monitoring	
<b>Category 1-2</b> vehicle exceeding 7.5 tonnes	
6y, 150 000km	
8y, 600 000 km	
<b>12y, 700 000km</b>	
<b>15y, 875 000km</b>	

# MPRs Metric proposal: optional annex & different metrics (years, km, En-th in monitoring)

<b>MPRs Metrics</b> Years, km whichever comes first En-throughput in monitoring	
<b>Category 2 vehicles not exceeding 16 tonnes (GVW)</b>	
	Proposal
6y, 150 000km	70%
<b>8y<sup>(75%)</sup>, 300 000km<sup>(80%)</sup></b>	70%
8y, 400 000km	70%
<b>10y<sup>(70%)</sup>, 375 000km<sup>(75%)</sup></b>	65%

<b>MPRs Metrics</b> Years, km whichever comes first En-throughput in monitoring	
<b>Category 2 vehicles exceeding 16 tonnes (GVW)</b>	
	Proposal
6y, 150 000km	70%
8y, 600 000km	70%
<b>12y<sup>(60%)</sup>, 700 000km<sup>(70%)</sup></b>	55%
<b>15y<sup>(55%)</sup>, 875 000km<sup>(65%)</sup></b>	50%

# MPRs Metric proposal: optional annex & different metrics (years, km, En-th in monitoring) : **work in progress**

<b>MPRs Metrics</b> Years, km whichever comes first En-throughput in monitoring	
<b>Category 1-2</b> vehicle not exceeding 5 tonnes	
	Proposal
6y, 150 000km	70%
<b>8y, 160 000km</b>	
8y, 300 000km	70%
<b>10y, 200 000km</b>	

<b>MPRs Metrics</b> Years, km whichever comes first En-throughput in monitoring	
<b>Category 1-2</b> vehicle exceeding 5 tonnes but not exceeding 7.5 tonnes	
	Proposal
6y, 150 000km	70%
<b>8y, 300 000km</b>	
8y, 500 000km	70%
<b>10y, 375 000km</b>	

<b>MPRs Metrics</b> Years, km whichever comes first En-throughput in monitoring	
<b>Category 1-2</b> vehicle exceeding 7.5 tonnes	
	Proposal
6y, 150 000km	70%
8y, 600 000 km	70%
<b>12y, 700 000km</b>	
<b>15y, 875 000km</b>	

## ANNEX IV LIFETIME REQUIREMENTS

Table 1: Lifetime of vehicles, engines and pollution control systems

Lifetime of vehicles, engines and replacement pollution control devices	M <sub>1</sub> , N <sub>1</sub> and M <sub>2</sub>	N <sub>2</sub> , N <sub>3</sub> <16t, M <sub>3</sub> <7.5t:	N <sub>3</sub> >16t, M <sub>3</sub> >7.5t
Main lifetime	Up to 160 000 km or 8 years, whichever comes first	300 000 km or 8 years, whichever comes first	700 000 km or <b>12</b> years, whichever comes first
Additional lifetime	After main lifetime and up to 200 000 km or 10 years, whichever comes first	After main lifetime and up to 375 000 km <b>or 10 years, whichever comes first</b>	After main lifetime and up to 875 000 km <b>or 15 years, whichever comes first</b>

# Thank you

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