

Supplemental Document for GRPE-84-06 and GRPE-84-07

** N : New requirement
C : Correction of error
R : make the text more Robust
U : Updated
E : Editorial improvement

✓	newly proposed
←	applicable, but no
	not applicable

The table below describes main items of Series of Amendment (02/03) to UN
Regulation No. 154 (Worldwide harmonized Light vehicles Test Procedures (WLTP))

Annex	paragraph	contents	brief explanation	**	initiated by	83rd GRPE session June 2021			Working Documents submitted on 20th August			84th GRPE session November 2021			
						GRPE-83-07		GRPE-83-08	ECE-TRANS-WP29- GRPE-2021-21a		ECE-TRANS-WP29- GRPE-2021-22e	GRPE-84-06		GRPE-84-07	
						02 series		03 series	02 series		03 series	02 series		03 series	
					Level 1A	Level 1B		Level 1A	Level 1B		Level 1A	Level 1B			
Main Body	1.2. (scope) 8.2.4.1 (run-in factor) Appendix 3 1.11. & 1.12	Introduce PN limit to Level 1B and 3-phase Level 2 Relevant sections associated PN introduction were also updated	in line with Japan regional requirement	N	JPN		✓			←			←		
B3	(fuel properties) Table A3/1, A3/3														
Main Body	6.3.10. Table 1B (limit) 6.7.2. Table 3b (assigned DF) B7 (post processing table) Table A7/1, A8/5						✓	✓							
Main Body	8.1.2. Table 8/1 Appendix 2 3.4.	Introduce OBFCM accuracy check to COP	applicable test for OVC-HEV both CD/CS → CS only criteria 1.05 →1.0526	N	EU				[✓]		[✓]	✓		✓	
						[✓]		[✓]	[✓]		[✓]	✓		✓	
Main	3.2.37	definition of reference mass	NEW←missing	R	OICA							✓	✓		
	6.1.10.	Division by zero	NEW←clear guidance	R	OICA				[✓]		[✓]	✓	✓		
	6.3.3.	Road load family	delete n/v ratio criteria due to no impact	R	OICA							✓	✓		
	6.3.11.	KCO2 correction factor family	current : Level 1A only apply also Level 1B for harmonization	N	JPN					[✓]	[✓]	✓ (as a result, both Level 1A/1B are applicable)	✓		
	6.8.2. Table 4B	OBD thresholds for Level 1	delete N2 category	C	JPN								✓	✓	
	8.1.5., 8.2.3.1., 8.3. Appendix 4 1.	Evaporative test for COP	allow full test sequence	R	OICA							✓	✓		
	11.	Introductory provisions	introduction of new series of amendment and ensuring Level 2 is always	U	OICA							✓			
	12.	Transitional provisions	PN introduction date for Level 1B	-	JPN					[✓]			deleted		
	Appendix 1 5.3.1.1.	EC_AD for COP	exclude from Level 1B	C	JPN								excluded		
	Appendix 3 1.1.	the test vehicle for run-in factor	clear description	R	JPN OICA				[✓]		[✓]	✓ (back to original series text)	✓ (back to 01 series text)		

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						GRPE-83-07	GRPE-83-08	ECE-TRANS- WP29- GRPE-2021-21a	ECE-TRANS-WP29- GRPE-2021-22e	GRPE-84-06	GRPE-84-07			
						02 series Level 1A Level 1B	03 series	02 series Level 1A Level 1B	03 series	02 series Level 1A Level 1B	03 series			
	Appendix 3 1.2.1.	Extension of run-in factor	allow extension with responsible authority approval (FE → ALL)	N	OICA					✓ (all)	✓ (all)			
A1		Engine and vehicle information	83rd GRPE : Battery configuration 84th GRPE : Battery	U	EU	✓	✓		←	✓	✓			
	Appendix 1	Test Report	distinguish 3 & 4 phases tes	R	EU					✓	✓			
	Appendix 1 2.1.1.3.1.	significant number of OBFCM	add footnote for 3 digit on-board data	R	JPN					✓	✓			
A2	2. Test results	Test results	distinguish 3 & 4 phases tes	R	EU						✓			
B1	8.	Cycle modification	apply downscale to NOVC-HEV with responsible authority approval	N	OICA			[✓]		[✓]	✓	✓		
B2	6.	Calculation tools	Updated	U	EU	✓	✓		←		←			
B3	5.1. Table A3/14	Fuel Properties for diesel	correction	C	JPN		✓		←		←			
	7. Table A3/19	Fuel Properties for Type 4				✓	✓		←		←			
	4.2.5. Table A3/13 6. Table A3/18	Hydrogen Fuel	delete the table and refer update based on ISO	U	OICA					✓	✓			
B4	4.3.2.5.3.	Aerodynamic drag modelling	4 term → 5 term	C	DC	✓	✓		←		←			
	6.8.2.	Determination of road load	avoid misinterpretation	C	DC			[✓]		[✓]	✓	✓		
B5	4.3.	PN measurement	incorporate PMP IWG outcome with slight modification	U	EU					[✓]	[✓]	✓	✓	
	5.7.	Calibration and validation of the particle sampling system						[✓]		[✓]				
B6	2.1.2.	The Type 1 test cycle	add table to make it clear which cycle shall be used for testing and data	R	EU OICA							✓		
	2.6.8.4. 2.6.8.5.	Alternator current measure OBFCM data recording	newly required per regional authority	N	EU					✓	✓	✓		
	Appendix 2 Table A6.App2/1	Energy content of fuel	CNG	C	EU	✓	✓		←		←			
	Appendix 2 3.4.1.	Calculation of the correction criterion c	deleted	U	JPN OICA	✓	✓		←		←			
B6a	1.2.	number of testing	allow maximum of 3 times	N	OICA					[✓]		[✓]	✓	✓
	2.1. (l)	Engine compartment	allow 10% tolerance											
B7	Table A7/1	Data processing table		C E R	EU JPN OICA						✓	✓		
	6.2.	The fuel efficiency values	correct the reference step	C	JPN						✓	✓		

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						02 series	03 series	02 series	03 series	02 series	03 series	
Level 1A	Level 1B	Level 1A	Level 1B	Level 1A	Level 1B	Level 1A	Level 1B					
B8	3.1.1.5. 3.1.1.6.	data analysis	clarify how to treat during ICE off phase/cycle	R	OICA					✓	✓	
	Table A8/5	Data processing table	correction	C	OICA					✓	✓	
	Table A8/7 Table A8/9a Table A8/9b	Data processing table for FCHV	correct significant number of fuel consumption exclude CO2	C	JPN OICA					✓	✓	
	4.2.2.	CD fuel efficiency for OVC-HEV	correct calculation formula	C	JPN						✓	✓
	4.2.2., 4.2.3. 4.3.1., 4.3.2. 4.4.6.1. Table A8/5, A8/9a, A8/9b	Fuel consumption for FCHV	no phase specific FC for FCHV is necessary	C	OICA					✓		✓
	4.4.4.1.	EAER	add calculation formula for Level 1B	C	JPN			✓	✓			←
	Appendix 3 Table A8 App3/1	Battery voltage measurement	CD/CS break-off shall be determined by using nominal voltage only	R	OICA					✓	✓	
	Appendix 8	Determination of EC values for COP	make the text simplified	R	JPN			[✓]	[✓]	✓	✓	
C3	4.2.3.4.	Calculations	editorial improvement	E	DC	✓	✓		←		←	
C4	3.1., 6.1., 6.3.1.1. Appendix 3b 1. Table C4/App3b.1.	durability cycle pattern for Level 1B		C	JPN		✓	✓		←	←	
C5	3.2.1.2.	Temporary disablement of the OBD system	harmonize with US reg.	U	OICA					✓	✓	
	6.5.1.2.	Diagnostic signals	improve the text	R	DC			[✓]	[✓]	✓	✓	
	6.5.3.2.	Standards used for the transmission	update the standard tool	U	OICA					✓	✓	
	Appendix 1 2.4.	testing for OVC-HEV	missing (CS condition only)	C	JPN	✓	✓		←		←	