

Revision and amendment of international L-category vehicle approval in the area of environmental and propulsion performance requirements: Roadmap

	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	
Meetings	MCWG	GRPE		WP.29			GRPE & stakeholder consultation meeting WP.29			MCWG		WP.29	MCWG		GRPE	WP.29 Adoption of informal L-cat IEPPR working group			GRPE	WP.29				WP.29			GRPE
Documents		Roadmap (EC)					Roadmap				Exchange of views and information			Roadmap	Mid-term report				Roadmap		Draft final report – L-cat IEPPR by EC consultants					Roadmap	Final report, L-cat IEPPR by EC consultants
Categories	The categories are defined in UN RE3 There are a number of issues which can be addressed separately						Moped issue Maximum speed Km -> mile/h 45 -> 28 (EC) 48 -> 30 (UK) 50 -> 31 (US, EU, UN)		Quadricycle issue - Sub categories ATV, Sbs; Power, weight limits		Motorcycle issue Addition of Enduro and Trail variants of L3e-A1/2/3													Performance measure Issue Include kW in addition to capacity		Hybrid/electric Issue Include weight of the batteries	
Performance tests	Measurement of maximum torque and power for engines and motors Measurement of maximum speed for vehicles						Performance: Which regulation to use?						Issue Defined Speed and Power tests for all L-category vehicles		Issue Defined Power test for all drivetrains, inc' alternative drives				Definition of vehicle weight/mass needs to be chosen								
Tailpipe Emissions	Combination of a range of tests: Type I, II, III, VII, VIII Measure vehicle toxic and CO2 emissions. Fuel consumption and range, onboard diagnostic – environmental part						Issue Which UN agreement to use: for emission tests? 1958 or 1998		Perform Type VII test (CO2 etc) Consolidate with Type I and III				Issue Harmonising test methods Test chemicals, temperatures, tolerances, equipment				Issue Harmonising cycle between regions										
Durability							Evaporative emissions: Which requirements to use?						Issue Rectifying any issues with the specifics of the evaporative tests														
Evaporative							Durability: Which requirements to use?						Issue Harmonising specifics of durability tests														
OBD							OBD: Which requirements to use?		Signals to measure, connections to use, communication protocols				Issue Non-open standards						Issue Which categories to cover by OBD requirements								

L-category vehicle type approval of emissions						
Documents used for reference	<p>International harmonisation of L-category vehicle classification (Task 4.10)</p>	<p>Propulsion performance requirements (Task 4.9)</p>	<p>Test Type I, tailpipe emissions test after cold start; Test Type II, tailpipe emissions test at (increased) idle / free acceleration test; Test Type III, emission test of crankcase gases; Test Type VII, measurement of CO2 emissions, fuel consumption, electric energy consumption and electric range determination; (task 4.2, 4.3, 4.4, 4.7)</p>	<p>Test Type V, durability testing of pollution control devices (Task 4.6)</p>	<p>Test Type IV, evaporative emissions test (Task 4.5)</p>	<p>Test Type VIII, on-board diagnostics test (environmental part only of OBD) (Task 4.8)</p>
		<p>EU Codecision Act Annex I, REPPR UN RE3 EU Directive 2002/24/EC JPN and USA legislation Other regional legislation GTR No. 2 Output from WLTP informal groups</p>	<p>EU Codecision act EU Directive 95/1/EC UN R24, R68, R85</p>	<p>EU REPPR UN R40, R47, GTR No.2, R101, R83 EU Directive 97/24/EC</p>	<p>EU REPPR US CRF Title 40 part 86</p>	<p>EU REPPR US CRF Title 40 part 86</p>
Testing Process		<p>Test performance ICE, E, Hybrid</p> <p>Max power, max torque</p> <p>Max vehicle speed</p>	<p>Type I Emissions</p> <p>Type II Idle</p> <p>Type III Crankcase</p> <p>Type VI Cold Not performed as low occurrence</p> <p>Type VII: CO2, Fuel consumption, range</p> <p>CO2 Fuel consumption</p> <p>Range</p> <p>Measure Type I, III & VII in one test</p>	<p>Type V test</p> <p>Uses Type I emission test</p>	<p>Type IV</p>	<p>Type VIII (Environmental part/ emission test verification)</p> <p>Type VIII (emissions test)</p> <p>Uses Type I emission test</p>
Location for regulation and issues	<p>Update UN RE3 and S.R.1 Proposal to revise classification criteria</p> <p>Moped issue Maximum vehicle speed <i>Km -> mile/h</i> 45 -> 28 (EC) 48 -> 30 (UK) 50 -> 31 (US, UN, EU)</p> <p>Motorcycle issue Addition of: Enduro and Trail variants of L3e-A1/2/3</p> <p>Quadricycle issue Sub categories ATV, SbS Power, weight limits</p>	<p>New and consolidated Regulation 1958 Agreement Regulation and/or 1998 GTR? OR Update motorcycle power test OR Add to Type I test regulation (when that is chosen)</p> <p>Issue Not all vehicles covered</p> <p>Issue Alternative drives</p>	<p>Update R40 and/or R47 OR Update GTR No. 2 OR Extend scope of R101 OR New regulation to encompass all</p> <p>Issue <i>Harmonising test methods</i> Test chemicals, temperatures, tolerances, equipment</p> <p>Issue Harmonising cycle between regions</p> <p>Type VII issue Open scope of R101 or consolidate</p> <p>Issue Which UN agreement to use: 1958 or 1998?</p>	<p>US EPA AMA cycle EC SRC LeCV</p> <p>Transfer both into UN regulation</p> <p>Issue Harmonising specifics of the tests</p>	<p>US EPA permeation test US CARB SHED test</p> <p>Transfer both into UN regulation</p> <p>Issue Rectifying any issues with the specifics of the tests</p>	<p>Based on R83 PLUS Specifying additional parameters to monitor PLUS Standard communication protocol and socket</p> <p>Issue Non-open standards?</p> <p>Issue Categories to cover?</p> <p>Issue Separation of environmental and functional onboard diagnostics</p> <p>Issue Separation of OBD Stage I (similar to US comprehensive components) and Stage II, emission verification?</p>
Vehicle	<p>Propulsion performance performed on different engine(s)/motor(s) And vehicle</p>	<p>Test Types I, II, III, VII performed on the same vehicle(s)?</p>	<p>Test Types V, IV, and VIII performed on the same vehicle(s)?</p>			

Draft roadmap for tests Type I and II
Regarding changes to UN Regulation 40, 47, GTR No. 2

Complete and adopted REPPR

- Draft REPPR:
- 1) WMTC, stage 1: copy base gtr No. 2
 - 2) WMTC, stage 2: copy gtr No.2, amendment 1 & 2
 - 3) Revision 1 WMTC:
 - a) WMTC, stage 2 (L3e, L4e, L5Ae, L7Ae)
 - b) WMTC, stage 2, ph1 cold and ph1 warm (L1e, L2e, L5Be, L6Be, L7Be, L7Ce)

Start

Update categories (RE3 and SR1)

Proposal to GTR No. 2 (3rd Amendment)

Scope
Expand scope to L1 and L2 vehicles (and L6)

Limits

- 1) introduction of global L1 & L2 emission limits based on **TBD** limits (EU proposal L1 & L2 Euro 4 limits)
- 2) Replace current principal limit values of gtr No. 2 (including amendment 1 & 2) with Euro 5 (L3e) limits
- 3) Transfer current principle limit values to alternative limit values.

Euro 4 / 5

Propose changes to GTR No. 2

