

Annex 3

Document structure

The proposal for a new draft regulation should be structured in the same way as a typical UNECE regulation (e.g. UNECE 13H):

1. Scope

New Type Approval of a vehicle with regard to a Tyre Pressure Monitoring.

M1

No limit of load.

No limit of number of wheels

No trailers (O category)

[GRRF to confirm need for pressure limit, exclusion of special purpose vehicles.]

2. Definitions

Tyre Pressure Monitoring System (TPMS) means a system fitted on a vehicle, able to [evaluate/monitor] the inflation pressure of the tyres or the variation of this inflation pressure over time and to transmit corresponding information to the user while the vehicle is running.

Cold tyre inflation pressure means the tyre pressure at ambient temperature, in absence of any pressure build-up due to tyre usage.

[Minimum cold tyre inflation pressure] means the minimum cold tyre inflation pressure, specified by the tyre standardization bodies for given service conditions.] **to be decided according to necessity in the regulation.**

Recommended cold inflation pressure means the pressure recommended for each tyre position by the vehicle manufacturer, for the intended service conditions of the given vehicle, [as defined on the vehicle placard and/or the vehicle owner's manual]. **To be decided later – OICA to give a position**

[Tyre Pressure Loss Reminder System (TPRS)] is any system fitted on a vehicle, **as part of a TPMS of category A or B**, able to give a reminder message periodically to the driver to check and re-adjust the tyre pressure.

Category A TPMS means a system and process for detecting that the inflation pressure of one of the tyres in service has significantly changed in comparison to the others and to the initial state, requiring a corrective action.

Category B TPMS means a system and process for detecting that the inflation pressure of one **or more** of the tyres in service has significantly changed to the initial state, requiring a corrective action.] **categorization challenged by ETRTO**

Category B TPMS means a system that detects when one or more of a vehicle's tyre is significantly under-inflated and illuminates a low tire pressure warning tell-tale.]

Cat B: system and process of measuring the tyre inflation pressure and eventually internal temperature, or (a) parameter(s) that directly correlate(s) to the pressure and delivering an information to the driver that a tyre has reached a level of inflation pressure that requires a corrective action]

3. Application for approval

4. Approval

5. General Requirements

Option 1: TPMS of category B for Safety + CO2 (all wheels) based on FMVSS138 (with updated test procedure)

Option 2: TPMS of category A for Safety (at least one wheel underinflated related to the others) with TPRS for CO2 (all wheels)

Note in the report: Schrader, Beru and ETRTO challenge the CO2 benefits of a time based warning system.

Thresholds:

	Cat A	Cat B	TPRS
P CO2	-	[Prec - 25% (FMVSS value)**] [ETRTO: 20 kPa] [Schrader & Conti & Beru: 30 kPa]	[according to 30 kPa*]
P Safety (cold)	[Prec - 25% (FMVSS value)**] [Prec – 40 kPa] (tb confirmed by ETRTO)		-
Time CO2	-	[20 min (FMVSS)] [Conti: 10 weeks] [Schrader & Beru: 2 weeks] [ETRTO: 5 min] [For test speed see safety]	[10 weeks*]
Time Safety at test condition speed.	[20 min (FMVSS value) at test speed of 50 to 100 km/h] [5 min (ETRTO) at test speed of 25 to 130 km/h]***		-
Time for malfunction detection	[20 min (FMVSS value)] [10 min + extension for external influence (ISO value)]**** For test speed see safety		
HMI CO2			
HMI Safety			

*footnote: based on general permeation rate of maximum 30 kPa/10weeks

**footnote acceptable to ETRTO if test procedures are improved

***footnote: Schrader asks for a max test speed of 160 km/h

**** footnote: Dunlop Tech challenges the 10 min delay

6. Tests (could be in an annex)

7. Modification of vehicle type or XXX system and extension of approval

8. Conformity of production

9. Penalties for non-conformity of production

10. Production definitely discontinued

11. Names and addresses of Technical Services responsible for conducting approval tests, and of Administrative Departments

12. Transitional provisions

ANNEXES

Annex 1: Communication

Annex 2: Type approval certificate

Annex 3: Arrangements of approval marks