

## **N1 Vehicles and ASEP: State of the discussion**

### **Introductory remarks:**

During the work of the ASEP working group there was a plea of some members to disburden some N1 vehicles from the ASEP requirements (Japan, France, Germany and OICA). The group showed general support for a more thorough evaluation of the specific aspects of this category of vehicles. This document is meant to be a starting point for a discussion of this subject.

In the course of the last meeting of the Informal Group the basic criteria for the exclusion of N1 vehicles were discussed and rough proposals were made based on a mix of ideas. Unfortunately there was no time left to discuss it fundamentally and come forward with a straight proposal. This document lists all proposals and aspects in a clearly represented format that GRB might want to consider when leading the discussion about the boundary conditions for the exclusion of certain N1 vehicles.

Today the individual N1 vehicle typically has a higher noise emission than a typical M1 vehicle and is therefore of high relevance in urban traffic noise. This has to be addressed with the limitation setting of Annex 3. R51 with ASEP is completely new. Therefore whatever definition is chosen for exemptions, it is proposed to initially restrict it to a five years period, following the entry into force of the respective Regulation. Reconsideration prior to the end of that period shall decide upon its continuation.

### **Background:**

Vehicles from the category in question, namely N1 vehicles engineered for the transport of goods, are designed to operate in a highly competitive, non-emotional market segment where sound quality is of no importance. Other than with passenger cars, this type of vehicle is acquired by purchase departments under economical aspects while the later driver has no influence on the choice.

The number of variants and versions per commercial N1 model typically is more than a decimal power above the corresponding number per passenger car model, leading to a distinct increase of workload when verifying the conformity with ASEP requirements for each version. In turn, this increase in costs has to be compensated by a lower number of sold vehicles.

### **Criteria for definitions for exclusion under discussion**

- a statement by the manufacturer
- physical dimensions of the vehicle
- characteristics of the vehicle
- performance criteria
- a general exception
- conditions from Annex 3 test

**Based on these criteria, several proposals were made for a definition of N1 vehicles to be excluded from ASEP requirements:**

- **Based on a statement by the manufacturer**

This means one declaration for all his N1 vehicles in stead of a specific declaration for every vehicle type. The statement does not refer to the ASEP test itself, but only to the behaviour of the manufacturer's products.

- **Based on characteristics of the vehicle**

- Proposal from Germany:

Vehicles of category N1 with a GVW > 2.5t where the driver position 'R-point' is either forward of the front axle or longitudinally rearwards of the front axle transverse centreline by a maximum of 1050 mm\*.

\*vehicle types typically known as 'light duty trucks' or 'flat front vehicles' in accordance with Draft ECE Regulation for Pedestrian Safety ECE/TRANS/WP.29/GRSP/2009/10 and EC regulation 78/2009. "R point" or "seating reference point" means a design point defined by the vehicle manufacturer for each seating position. It is an integral basic constructive parameter of each vehicle type.

- Proposal from OICA

Vehicles of category N1 with a payload  $\geq 850$  kg and PMR  $\leq 40$

- Proposal from Japan

Vehicles of category N1 with a GVW  $\leq 2.5$ t with an engine capacity up to 660 ccm and a PMR  $\leq 35$

- **Based on a proposal by the chairman of the ad hoc working group.**

There is a general concern with high powered N1 vehicles with spark ignition. This proposal for exclusion shall ensure that these vehicles prove the fulfillment of the ASEP requirements

N1 vehicles

- with a compression-ignition engine

- with spark ignition

- with a PMR < 40

or

- of which the highest reported engine speed in Annex 3 is  $\geq 90\%$  of control range as defined in the control range of Annex 10

- **Based on conditions during Annex 3 test**

Vehicles where the highest reported engine speed in Annex 3 is  $\geq 90\%$  of control range as defined in the control range of Annex 10

- **Based on a mix of characteristics**

The preliminary outcome of the ad hoc group is an example of such a mix.

## Appendix 1:

Result out of the group, meeting 16 Paris, edited by UK Mr. Falk

It is not applicable to:

- a. Vehicles of category N1 with a GVW > 2.5t

where the driver position 'R-point' is either forward of the front axle or longitudinally rearwards of the front axle transverse centreline by a maximum of [1150] mm

and

the highest reported engine speed in the Annex 3 test is  $\geq$  [90]% of S

- b. Vehicles of category N1 with a GVW  $\leq$  2.5t with

payload  $\geq$  850 kg and  
PMR  $\leq$  40 kW/t

or

an engine capacity up to 660 ccm and a PMR  $\leq$  35 kW/t

or

where the highest reported engine speed in the Annex 3 is  $\geq$  90% of the [maximum] speed control range as defined in the control range of Annex 10

(Questions:

1. Do we need a payload & PMR requirement together with an engine speed requirement? UK answer is 'no'
2. One requirement is percentage of 'S' and the other one is a percentage of the speed as defined in the control range Annex 10; why is this logic?)

Vehicles with a hybrid drive train which have an internal combustion engine with no mechanical coupling to the power train are excluded from ASEP for a period of 5 years after entering into force of this Regulation.

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