



# **Task Force Sound Limits (Phase 3)**

## **General ideas about the work of the TF**

# Current situation with regards to introduction of phase 3

(new types: 7/2024; EZ: 7/2026)

**Vehicles are often perceived as too loud due to:**

- 1. manipulation(s) by the owner of the vehicle,**
- 2. the exploitation of grey areas within existing regulations (“Flexibilities”),**
- 3. and the driving behaviour of the driver.**

**On the other hand, non-manipulated standard vehicles without “flexibilities in the silencer area” are not perceived by the majority of the population as annoyingly loud.**

# Regarding the frequency of a.m. reasons 1 (Manipulations) and 2 (Grey Zones), a distinction should be made between:

## A. Budget cars (M1A, ICE without flexibilities in the silencer area),

Category	Manipulation(s)	Grey Zones
A1: Pure ICE	YES	NO
A2: HEV	So far not known	So far not known
A3: PHEV	So far not known	So far not known
A4: BEV	So far not known	So far not known

## B. High powered "budget cars" (M1A, M1B, ICE inclusive flexibilities)

Category	Manipulation(s)	Grey Zones
B1: Pure ICE	YES	YES
B2: HEV	So far not known	So far not known
B3: PHEV	So far not known	So far not known
B4: BEV	So far not known	So far not known

## C. Sports cars (M1B, M1C, ICE inclusive flexibilities)

Category	Manipulation(s)	Grey Zones
C1: Pure ICE	YES	YES
C2: HEV	YES	YES
C3: PHEV	YES	YES
C4: BEV	So far not known	So far not known

## D. Hyper sports cars (M1D, ICE inclusive flexibilities)

Category	Manipulation(s)	Grey Zones
D1: Pure ICE	YES	YES
D2: HEV	YES	YES
D3: PHEV	YES	YES
D4: BEV	So far not known	So far not known

**Major question regarding the limit value determinations of phase 3 is, if a vehicle in its type approved configuration without „flexibilities“ is not perceived by the majority of the population as annoyingly loud:**

**What is the relevance of limit value reductions alone with regard to the reasons mentioned for "manipulations" or "grey zones" in real noise emissions?**

**Relevance Levels: HIGH, MEDIUM, LOW, WITHOUT**

**A. Budget cars (M1A, ICE without flexibilities in the silencer area),**

<b>Category</b>	<b>Not manipulated Vehicle</b>	<b>Manipulated Vehicle</b>
<b>A1: Pure ICE</b>	HIGH	WITHOUT
<b>A2: HEV</b>	MEDIUM*	WITHOUT
<b>A3: PHEV</b>	MEDIUM*	WITHOUT
<b>A4: BEV</b>	WITHOUT	WITHOUT

**\*) Influence of „EV engine Boost-function“ can make it easier to pass the limit values**

**The chance of the survival of "A1 Pure ICE" is considered very low in relation to the date of phase 3 and the CO2 fleet targets to be met in Europe!**

**CONCLUSION Group A:**

**Limit value reductions alone lead at most MEDIUM effects on the real driving noise of not manipulated vehicles and NO effects of manipulated vehicles.**

**B. High powered "budget cars" (M1A, M1B, ICE incl. flexibilities),**

<b>Category</b>	<b>Not manipulated Vehicle</b>	<b>Manipulated Vehicle</b>
<b>B1: Pure ICE</b>	LOW	WITHOUT
<b>B2: HEV</b>	LOW	WITHOUT
<b>B3: PHEV</b>	LOW	WITHOUT
<b>B4: BEV</b>	WITHOUT	WITHOUT

**The chance of survival of the "B1 Pure ICE" is considered very low in relation to the date of phase 3 and the CO2 fleet targets to be met in Europe!**

**CONCLUSION Group B:**

**Limit value reductions alone lead at most to LOW effects on the real driving noise of standard vehicles and to NO effects of manipulated vehicles.**

**C. Sports cars (M1B, M1C, ICE incl. flexibilities) &  
D. Hyper sports cars (M1D, ICE incl. flexibilities)**

**Identical to effects of Group B.**

**The chance of survival of the "C1/D1 Pure ICE" is considered very low in relation to the date of phase 3 and the CO2 fleet targets to be met in Europe for mass-production-vehicles!**

### **CONCLUSION Group C and D:**

**Limit value reductions alone lead at most to LOW effects on the real driving noise of not manipulated vehicles and to NO effects of manipulated vehicles.**

### **GENERAL CONCLUSION:**

- (1) Limit value reductions alone only lead to marginal reductions in real driving noise emissions in the standard vehicle fleet due to the large proportion of vehicles with the possibility of complete flexibility in noise emissions (flap silencers, sound generators and hybrid drive boost).**
- (2) The reductions in limit values have no influence on manipulated vehicles or a negative influence, if the tendency to manipulate increases due to low limit values.**

## **Useful alternatives or additions to Phase 3 limit reduction of M1 vehicles:**

- 1. Introduction of RD-ASEP into UN-R 51 and Regulation (EU) No. 540/2014 (asap).**
- 2. Adaptation of the interpretation of paragraph 6.2.3 (GRB-68-03) to RD-ASEP.**
- 3. Creation of an EU-wide database on type-approval data (EU/UNECE) including sound emissions (vehicles & NORESS) to support PTI and road side checks.**
- 4. Extending market surveillance activities with minimum measurement requirements of motor vehicles & NORESS with regard to their sound emissions.**
- 5. Reduction of Sound emission limits in a moderate way, provided that the above four points should find support from the EU MS and the UNECE CP.**

**From the point of view of Germany the work of the TF Sound Limits should be approached under the above five points.**



**The Presentation only handles with M1 vehicles and the problems in Germany.**

**Detail views are needed for all R 51 classes with their engines, areas & tires etc.**

**For each vehicle class, engine, areas etc. the influence of limit value has to clear.**

**If there are better solutions to solve specific problems, these has to be worked out !**

**Example: Reasons of annoyance N1 < 3.500 kg (engine, tires, brakes etc.)**

	Urban area	Around urban areas	Rural Areas
Pure ICE Diesel			
Pure ICE Petrol			
PHEV			
BEV			
F-Cell			

**What is the relevance of limit value reductions alone? (High, Low, ...)**

	Urban area	Around urban areas	Rural Areas
Pure ICE Diesel			
Pure ICE Petrol			
PHEV			
BEV			
F-Cell			

**Are there alternatives with better relevance to real driving emissions ?**

# Thank you for your attention!