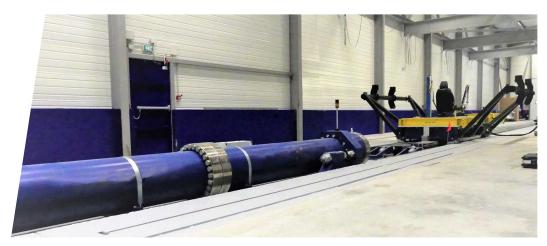
Informal Document GRBP-78-34 78<sup>th</sup> GRBP, 30 Aug – 01 Sept 2023 Agenda Item 3 Submitted by OICA



## **ASEP / RD-ASEP Study**

Interim Report to 78<sup>th</sup> GRBP September 2023









## **Study Outline**

- . UTAC was tasked by ACEA to perform a study on ASEP and RD-ASEP.
- . The study consists of two work packages:

### **Work Package 1**

Did the implementation of ASEP as it currently stands lead to any design changes?

### **Work Package 2**

Collect data from the RD-ASEP monitoring and provide a basic analysis as input to the IWG on RD-ASEP;

. Joint study of CPs and Automotive Industry

<sup>o</sup> France, Germany, Japan, The Netherlands, OICA (ACEA)



### Work Package 1 Description

- Main Question:
  - Did the introduction of ASEP initiated since July'2016 under UN R51.03 lead to changes in vehicle design?
- 。 Therefore,
  - A literature study shall be performed to get information about the awareness of the public on ASEP.
  - A questionnaire has been made for OEMs.
  - 。 A questionnaire for mainly GRBP CPs
    - → We need the support from CPs to learn their perspective on ASEP.
  - 。 A test program on vehicles will carried out in Autumn 2023

## Study on ASEP and RD-ASEP Monitoring

# UTAC

#### **QUESTIONS to OEMs**

- 1. In which region is your manufacturing company located?
- 2. Which vehicle segments do you specifically target?
- 3. What has been the average annual production volume of passenger vehicles (M1) over the last 5 years?
- 4. What has been the average annual production volume of commercial vehicles (N1) over the last 5 years?
- 5. Which specific vehicle categories (UN-ECE system) do you produce?
- 6. In relation to the vehicle category (PMR) you specified, how significant is the impact of ASEP on your vehicle design?
- 7. Which type of propulsion system is utilized in your vehicles?
- 8. Which specific vehicle classes do you manufacture?
- 9. In the case of your vehicles impacted by ASEP, which specific components underwent changes in their design targets?
- 10. How do you prove compliance with ASEP towards the TAA?
- 11. When you carry out ASEP tests, which test method do you use?
- 12. Which ASEP tests method is more favorable for your specific cars?
- 13. How do you deal with the Annex 7 mandatory Reference Sound Assessment (RSA)?
- 14. Do you follow although not mandatory the guidance of GRB68-03 (GRBP Document for Reference only) ?
- 15. How do you rate ASEP? Is it considered an important tool for single vehicle noise abatement?

#### **QUESTIONS** to CPs / Authorities

- 1. You are a representative for a Contracting Party from which region?
- 2. As in your function as representative for a Contracting Party, you are from ...
- 3. Do you (or your country, or your administration) accept SoC only, or do you request additional information?
- 4. Do you (or your country, or your administration) request application of GRB 68-03 (document for reference on ASEP interpretation) for approval in your country?
- 5. For EU vehicle registration, are you aware that under single vehicle approval according article 44 Regulation (EU) 858/2018, still the older vehicle regulation UN R51.02 is applicable (which means that ASEP is no mandated )
- 6. For EU members only, how many vehicles using the single vehicle approvals are registered per year in your country?
- 7. Do you carry out vehicle sound emission tests according UN R51 for market surveillance?
  - $\circ$   $\:$  If YES, do you check ASEP as well?
    - If YES, do you check extended ASEP according to paragraph 6.2.3 as well?
- 8. Have you (or your country which you represent) received explicit complains from citizens about noisy motor vehicles (not motorcycles) as single noise events?
- 9. If YES, how have the complains developed during the last 5 years (tendency: increase, stable, decrease)
- 10. Do you think or do you have evidence that ASEP has helped to make noisy single vehicles more quiet?
- 11. How do you rate ASEP? Is it an important tool for single vehicle noise abatement?



## WP 1 Test program:

- Tests according to UN R51.03 and RD-ASEP based on the test program outlined by the IWG RD-ASEP in 2017/2018.
- 。 8 vehicles targeted.
- If possible, twin pairs of vehicles shall be tested, one of it approved under UN R51.02 and then its successor under UN R51.03 (preferably stage 2).
- <sup>o</sup> Single vehicles might be tested as well, if they are interesting.
- Vehicles selection is based on press reports and outcome of questionnaires.



- $_{\circ}$  Literature study  $\rightarrow$  DONE
- Preparation of Questionnaires 
  DONE
- 。 Questionnaire Analysis by End September'2023
- Test program to be finished until End'2023
- Presentation of results for WP1 is planned for GRBP 79



### Work Package 2

- Monitoring data on RD-ASEP shall be collected. Data are expected in the mandatory RD-ASEP monitoring sheet.
- $_{\circ}$  UTAC to make a data-exchange platform  $\rightarrow$  see next slide
- Creation of a database for the RD-ASEP monitoring data
- Review the Questionnaire coming with the RD-ASEP monitoring sheet
- Provide a pre-analysis mainly statistical nature on
  - Number of datasets delivered
  - $_{\circ}$  % of ICE, HEV, EVs, …
  - Problems detected (wrong completion, problems with algorithm, ...)
- Provide thoughts and ideas by UTAC, where RD-ASEP might need improvement

### Study on ASEP and RD-ASEP Monitoring



	CE SUSTAINABLE GOALS	Advanced Search
About UNECE Our work	Themes     SDGs     Open UNECE     Events     Publications     Media	a
UNECE DOCUMENTS FOR R	FERENCE ONLY	
Vehicle Regulations	Documents for reference only	Here you find the RD-ASE
About us	GRBP-77-15-Rev.3 - RD-ASEP Monitoring Data Delivery Document	Monitoring Data Delivery
Meetings & Documents	English XLS	Document
World Forum for Harmonization of Vehicle Regulations	<b>GRBP-76-14</b> - (OICA) Comparison of EMISIA and ATEEL study on sound limit category M & N	
	– English PDF	
Pollution and Energy	GRBP-75-21-Rev.1 - (OICA) ACEA/ETRTO Tyre Performance Aggregation Stu	udy: presentation
Noise and Tyres	English PPT PDF	
GRBP meetings	GRBP-75-20 - (OICA) ACEA/ETRTO Tyre Performance Aggregation Study	
Informal Groups	English PDF	
Documents for reference only (GRB)	<b>GRBP-75-19-Rev.1-Add.1</b> - (OICA) ACEA Tyre Performance Study: presentation	tion (abstract)



#### The RD-ASEP Monitoring Data Delivery Document contains the link for data submission

Excel	GRBP-77-15	5-Rev.3-RD-A	SEP Monitoring Data Delivery Doc	ument OV1c1 - OPEN FOR DATA ENTRY - Gespeichert × Suche (Alt + M)				
Datei	Start	Einfügen	Zeichnen Seitenlayout	ormeln Daten Überprüfen Ansicht Hilfe	🔏 Anzeigen 🗸			
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	А		В	c	D E			
1 <b>D</b> C	cument Ver	sion						
2								
3		This	document serves to the RD-ASEP M	ponitoring as intoduced by Supplement 7 to UN R51.03. It is referenced in the Regulation under the footnote 4 introduced by Supplement 9	UN R51.03.			
			OFFICIAL VERSION 1 Release date: 01.06.2023	THIS IS THE OFFICIAL DATA DELIVERY SHEET. DO NOT USE ANY DRAFT VERSION. THIS DOCUMENT CAN BE DOWNLOADED FROM THE UN-ECE WEBITE USING THE LINK TO THE RIGHT	GRBP/documents-reference-only			
5			Neleuse unter 01.00.2025	=======================================				
6 Ba	ckground In	formation						
7	-							
		This document is the mandatory communication form for monitoring data during the RD-ASEP monitoring phase according to UN R51.03 Supplement 9.						
		Notwithstanding the specifications of the regulation, Type Approval Authorities, Technical Services, and vehicle manufacturers may use this format for additional RD-ASEP measurements of approved vehicles, provided that all data have been determined on a single vehicle. This is applicable but not limited to extensions of type approval, or vehicles not falling under the scope of RD-ASEP, or approvals not falling within the monitoring period. All						
8		tests for Annex 3 and for Annex 9 shall be carried out on the same test track and under similar environmental conditions.						
9								
10 <b>D</b> C	cument Rec	ceiver						
11								
		Acco	ording to the provisions of Suppleme	<sup>nt</sup> The completed file shall be uploaded to a dataserver under the link provided here	UPLOAD DATA TO SERVER			
12		y to U	N R51.03, the data shall be sent to tl	e =====>				

Here is the link to the UTAC server, where you can upload completed monitoring documents

### Study on ASEP and RD-ASEP Monitoring



<ul> <li>UTAC Website for d</li> <li>Link: <u>https://www</u></li> <li>→ Type Approval A</li> <li>→ Therefore, each <sup>-</sup></li> </ul>	l
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or	Manage Cookie Consent       X         experiences, we use technologies like cookies to store and/or access consenting to these technologies will allow us to process data such as an infeatures and functions.         Deny       View preferences

- ata submission
- utac.com/unece-rdasep-form/
- uthorities to submit data
- **FAA will need registration** data submission.



### **Work Package 2 timing**

- ₀ Data exchange platform by July'2023 → DONE
- Creation of database for Analysis of monitoring data → IN PROGRESS
- $_{\circ}$  Data collection  $\rightarrow$  IN PROGRESS
- Data analysis → WILL BE STARTED ONCE REASONABLE DATA AMOUNT HAS BEEN COLLECTED
- Interim reports are planned for GRBP 79 and 80,
- Final report is planned for GRBP 81



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