

IWG RD-ASEP

TF Data Analysis Group #1

Points in the monitoring data
that seems to require additional cleaning

2025/9/22



JAPAN AUTOMOBILE STANDARDS INTERNATIONALIZATION CENTER

- Japan focuses on vehicles with measured values that exceed L_{exp} in the monitoring data, estimating the factors that caused the excess.
The aim is to establish whether the vehicle exceeded L_{exp} due to its own characteristics or whether the sound model formula requires adjustment.
- Approximately 270 points were identified during the analysis where the database provided by UTAC should consider to be cleaned further.
As Japan has not checked all vehicles, this number may increase in future.
- Additionally, there are items within the Excel file for monitoring data input that we consider require amendment.
- Japan has conducted data analysis after implementing these modifications.
- Other CPs or NGOs should also make these necessary amendments and proceed with their analyses using the same database.

Examples for additional data cleaning



Here are some examples of when additional cleaning may be required:

Cat	ID	Sheet	Cell	Parameter	Before	After	Explanation
M1	21	(C) ANNEX9_SETUP_DATA_M1	AE22	nBB of aMAX_REF	1696	4494	Since the entered nBB=1696 was incorrect, nBB was calculated from $nPP/vPP \cdot vBB$ (Since the gear ratio was entered as an integer, the calculated nBB was used)
M1	22	(C) ANNEX9_SETUP_DATA_M1	AE23	nBB of aMAX_REF	1696	4410	Since the entered nBB=1696 was incorrect, nBB was calculated from $nPP/vPP \cdot vBB$ (Since the gear ratio was entered as an integer, the calculated nBB was used)
M1	23	(C) ANNEX9_SETUP_DATA_M1	AE24	nBB of aMAX_REF	1696	4529	Since the entered nBB=1696 was incorrect, nBB was calculated from $nPP/vPP \cdot vBB$ (Since the gear ratio was entered as an integer, the calculated nBB was used)

Exactly same nBB for different run

M1	29	(C) ANNEX9_SETUP_DATA_M1	AE30	nBB of aMAX_REF	Not Filled	4840	Since nBB was not entered, nBB was calculated from $nPP/vPP \cdot vBB$ (Since the gear ratio was entered as an integer, the calculated nBB was used)
M1	30	(C) ANNEX9_SETUP_DATA_M1	AE31	nBB of aMAX_REF	Not Filled	4288	Since nBB was not entered, nBB was calculated from $nPP/vPP \cdot vBB$ (Since the gear ratio was entered as an integer, the calculated nBB was used)
M1	31	(C) ANNEX9_SETUP_DATA_M1	AE32	nBB of aMAX_REF	Not Filled	5012	Since nBB was not entered, nBB was calculated from $nPP/vPP \cdot vBB$ (Since the gear ratio was entered as an integer, the calculated nBB was used)

nBB is not filled

M1	109	(C) ANNEX9_SETUP_DATA_M1	X109	aMAX_REF	2.9	2.01	Since all data related to aMAX_REF were not entered, the data of Annex 3 were entered as a temporary
M1	109	(C) ANNEX9_SETUP_DATA_M1	Y109	Gear of aMAX_REF	D (EV)	4	Since all data related to aMAX_REF were not entered, the data of Annex 3 were entered as a temporary
M1	109	(C) ANNEX9_SETUP_DATA_M1	AB109	vBB of aMAX_REF	Not Filled	57.3	Since all data related to aMAX_REF were not entered, the data of Annex 3 were entered as a temporary
M1	109	(C) ANNEX9_SETUP_DATA_M1	AE109	nBB of aMAX_REF	Not Filled	2227	Since all data related to aMAX_REF were not entered, the data of Annex 3 were entered as a temporary
M1	110	(C) ANNEX9_SETUP_DATA_M1	X110	aMAX_REF	3.5	1.65	Since all data related to aMAX_REF were not entered, the data of Annex 3 were entered as a temporary
M1	110	(C) ANNEX9_SETUP_DATA_M1	Y110	Gear of aMAX_REF	D (EV)	4	Since all data related to aMAX_REF were not entered, the data of Annex 3 were entered as a temporary
M1	110	(C) ANNEX9_SETUP_DATA_M1	AB110	vBB of aMAX_REF	Not Filled	56.5	Since all data related to aMAX_REF were not entered, the data of Annex 3 were entered as a temporary
M1	110	(C) ANNEX9_SETUP_DATA_M1	AE110	nBB of aMAX_REF	Not Filled	1849	Since all data related to aMAX_REF were not entered, the data of Annex 3 were entered as a temporary

aMAX_REF is not filled. Annex3 data were entered as a temporary

For all points, please refer to Excel.

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OPEN FOR DATA ENTRY.xlsx

(3) Annex 9 - Setup Data

Cell **B26** of **Assign minimum dynamic**

ID=159

=IF(**AND**(B24<1.1,B25="SET 10 dB"),"Y","N")

“**AND**” should be corrected to “**OR**”.

B24 (<1.1) and B25 (SET 10 dB) are not ‘AND’ conditions.

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(3) Annex 9 - Setup Data

For CASE 3 of Parallel Hybrid
Cell **J5** of L_{ACC_ANCHOR}

This is based on the same understanding
as the Serial Hybrid on the next slide

$$=(' (2) \text{ Annex 3 - Data'!C5} - ' (2) \text{ Annex 3 - Data'!C10} * ' (2) \text{ Annex 3 - Data'!C33}) / (1 - ' (2) \text{ Annex 3 - Data'!C10})$$

“(2) Annex 3 - Data’!C33” should be corrected to “(3) Annex 9 - Setup Data’!J7”.

L_{CRS_TEST}

L_{CRS_ANCHOR} of CASE 3

For CASE 4 of Parallel Hybrid
Cell **K5** of L_{ACC_ANCHOR}

This is based on the same understanding
as the Serial Hybrid on the next slide

=J5

“**J5**” should be corrected to “(‘ (2) Annex 3 - Data’!C5 - ‘ (2) Annex 3 - Data’!C10 * ‘ (3) Annex 9 - Setup Data’!K7) / (1 - ‘ (2) Annex 3 - Data’!C10)”.

‘ (3) Annex 9 - Setup Data’!K7 = L_{CRS_ANCHOR} ’ of CASE 4

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(3) Annex 9 - Setup Data

For CASE 3 of Serial Hybrid
Cell **J13** of L_{ACC_ANCHOR}

ID=324 (CASE 3)

$$=(' (2) \text{ Annex 3 - Data!C5} - ' (2) \text{ Annex 3 - Data!C10} * ' (2) \text{ Annex 3 - Data!C33}) / (1 - ' (2) \text{ Annex 3 - Data!C10})$$

“(2) Annex 3 - Data!C33” should be corrected to “(3) Annex 9 - Setup Data!J15”.

L_{CRS_TEST}

L_{CRS_ANCHOR} of CASE 3

For CASE 4 of Serial Hybrid
Cell **K13** of L_{ACC_ANCHOR}

ID=325 (CASE 4)

$$=(' (2) \text{ Annex 3 - Data!C5} - ' (2) \text{ Annex 3 - Data!C10} * ' (2) \text{ Annex 3 - Data!C33}) / (1 - ' (2) \text{ Annex 3 - Data!C10})$$

“(2) Annex 3 - Data!C33” should be corrected to “(3) Annex 9 - Setup Data!K15”.

L_{CRS_TEST}

L_{CRS_ANCHOR} of CASE 4

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OPEN FOR DATA ENTRY.xlsx

(3) Annex 9 - Setup Data sheet

Cell **B41** for n_{BB} of a_{MAX_REF}

In the previous version of “GRBP-77-15-Rev.4”, row 41 was hidden, and cell B41 was entered “1696” instead of a blank.

Row 41 has been shown in the current version of “Rev.5”, but in some data sent in previous version, it appears that “1696” remains entered.

In this case, n_{BB} was calculated from $n_{PP}/V_{PP} * V_{BB}$.

GRBP-77-15-Rev.5-RD-ASEP Monitoring Data Delivery Document OV3 - OPEN FOR DATA ENTRY.xlsx

(4) A9 - Test Report Sheet

Cell **M5** of ΔL_{DYN}

ID=324 (CASE 3), 325 (CASE 4)

=IF('(3) Annex 9 - Setup Data'!B26="Y",10,10*LOG(10^('(2) Annex 3 - Data'!C22/10)-10^((C7*LOG('(2) Annex 3 - Data'!C25/C5)+C4)/10)-10^((H7*LOG((M6+H9)/(H6+H9))+H4)/10))-M4)

“(2) Annex 3 - Data'!C22” should be corrected to “(3) Annex 9 - Setup Data'!B18”.

L_{WOT_TEST}

L_{WOT_ANCHOR}

Cell **H4** of $L_{REF,PT}$

ID=323 (CASE 2), 325 (CASE 4)

=10*LOG(10^('(2) Annex 3 - Data'!C33/10)-10^(C4/10))

“(2) Annex 3 - Data'!C33” should be corrected to “(3) Annex 9 - Setup Data'!B20”.

L_{CRS_TEST}

L_{CRS_ANCHOR}

R51-03 document

For “Adjustment of sound pressure level” of HEV CASE 2 and CASE 4

Annex 9 – Appendix 4

ID=323 (CASE 2), 325 (CASE 4)

Formula 2.5

$$L_{REF_PT} = 10 \times \lg((1 - x) \times 10^{0.1 \times L_{CRS_ANCHOR}})$$

Formula 2.5 should be corrected to:

$$L_{REF_PT} = 10 \times \lg(10^{0.1 \times L_{CRS_ANCHOR}} - 10^{0.1 \times L_{REF_TR}})$$