

GRPE A-LCA IWG SG5(EoL) Meeting 026

6th Nov. 2025

GRPE A-LCA IWG SG5
Leader; Hiroyuki SUZUKI (JASIC/JAMA)
Co leader; Zhang Tongzhu (CATARC)

Agenda

1. SG5 025 minutes and 026 agenda confirmation
2. Oct. GRPE result sharing
3. SG7 Drafting status with SG5 meeting result
4. SG5 Drafting update
- (5. CFF parameters / EoL emission factors availability in each regions)
6. Next action

Minutes of GRPE A-LCA IWG SG5 meeting #25

Date and time: Wednesday, October 1, 2025, 12:00–13:00 (CET)

Location : Online (Teams)

Attendees : See attendee list

Agenda:

1. SG5 024 minutes and 025 agenda confirmation
2. Key topics of 27th session A-LCA IWG sharing
 - 1) A-LCA IWG milestone
 - 2) SG5 Drafting ver.10 submission
 - 3) SG2/3/5 Reporting finalization
 - 4) OICA Road testing related to SG5
 - 4-1) Availability of CFF/MBBM parameters
 - 4-2) Others
3. Next action

Notes:

1. SG5 024 minutes and 025 agenda confirmation

The minutes and agenda were approved unanimously.

2. Key topics of 27th session A-LCA IWG sharing

1) A-LCA IWG milestone

2) SG5 Drafting ver.10 submission

·Mr. Suzuki (JASIC) explained about above 1) and 2) topics.

-A-LCA IWG may withdraw the approval from Oct. GRPE and re-target Mar. GRPE. It will be decided in the IWG on 8th Oct.

-The document as "A-LCA-27-05r1e_GRPE-2025-17_SG2 and SG5_INPUT" confirmed in the IWG and would be submitted to SG7 by the IWG leading team.

3) SG2/3/5 Reporting finalization

- Mr. Yamamoto (JASIC) explained that SG2 Yamaguchi-san, SG3 Ansgar-san, Tina-san and SG5 Suzuki-san, Yamamoto had two times small meeting in the IWG meeting and eventually reached the agreement about Reporting structure and items related to SG2, SG3 and SG5.
- Mr. Yamamoto (JASIC) as SG5 LT proposed to add the equation for RCM result in Figure27 ($C_{EoL, RCM}$)
- Mr. Patrone (JRC) planned to submit JRC FB on this proposal later.
- Mr. Patrone (JRC) submitted following two FB on 2nd October.
 - The modification of the equation for RCM result in Figure27 ($C_{EoL, RCM}$) proposed. SG5 LT agreed to take the concept of JRC proposal and reflected them to SG5 Drafting ver.11.
 - The small wording modification about Reporting items of EoL part in line with adding $C_{EoL, RCM}$ equation proposed. SG5 LT agreed to take JRC proposal and requested SG1 to update the Reporting.
- SG5 Drafting ver.11 which included SG5 025 FB submitted to A-LCA IWG on 3rd October with SG5 member confirmation through e-mailing exchange.

4) OICA Road testing related to SG5

4-1) Availability of CFF/MBBM parameters

- Mr. Yamamoto (JASIC) explained about OICA Road testing on Availability of CFF/MBBM parameters and the discussion in the IWG.
 - OICA Tina-san presented the Availability of parameters as one topic of OICA Road testing
 - OICA proposed CPs would need to provide CFF parameters / emission factors for those materials or prioritized materials per manufacturing region which are then to be used in level 3 and 4.
 - The same content specified in SG5 level concept in level 3 and 4 confirmed in the IWG.
- Mr. Yamamoto (JASIC) presented previous SG5 study about the secondary data availability of each EoL process and CFF parameter in each region in 2024 Q2 and proposed to reconfirm and update CFF parameters/emission factors availability status and preparation plan in each region by CPs.
- SG5 member including JRC agreed with SG5 LT proposal. Mr. Yamamoto (JASIC) will request CATRAC and ANL to make the same study by e-mail.

4-2) Others

•Mr. Yamamoto (JASIC) explained about other SG5 related concern of OICA Road testing and SG5 member confirmed SG5 action/comment on each concern.

3. Next action

•The 26th SG5 meeting will be held on Thursday, November 6, from 12:00 to 13:00 CET.

Appendix 1: Attendee list

yamamoto-katsu@mail.nissan.co.jp

moosang.yu@gm.com;

tiago.valente@yazaki-europe.com

stetsuya@jari.or.jp

Gian-Luca.PATRONE@ec.europa.eu

elena.paffumi@ec.europa.e

Dominique.Martineau@vitesco.com

HS SUZUKI, HIROYUKI (未確認)

CD CANDELARESI Daniele (JRC-ISP... (外部)

Agenda

1. SG5 025 minutes and 026 agenda confirmation
- 2. Oct. GRPE result sharing**
3. SG7 Drafting status with SG5 meeting result
4. SG5 Drafting update
5. CFF parameters / EoL emission factors availability in each regions
6. Next action

Status Report of
the IWG on Automotive Life Cycle Assessment
(A-LCA)

prepared by
the A-LCA Informal Working Group

1. Notable Remarks (1)

- A-LCA IWG has made a decision **NOT to ask GRPE for their review and approval** on the Working Document **GRPE/2025/17** due to remaining open issues
- A-LCA IWG plans to finalise the Working Document within the mandate period (December 2025), then ask GRPE for their review and approval during 94th GRPE
- These modification is reflected to our ToR as GRPE-93-42e
- A-LCA IWG has published Informal Document GRPE-93-43e

	Before ToR update	After ToR Update
WP29 Approval	'26/3	'26/11
GRPE Approval	'25/10	'26/3
WD Submission	'25/10	'25/12

1. Notable Remarks (2)

List of Remaining Open Issues

issues	Discussion Points
Hotspots	✓ time shortage due to last minute proposal
Functional Unit	✓ concept was agreed but need to check the consistency within relevant section ✓ the last minutes proposal is under the consideration
Determination Process of the individual vehicle (Representative vehicle concept)	✓ not well understood within IWG ✓ group criteria needs further technical discussion
Data quality and Primary data share (PDS)	✓ improving the text more readable ✓ necessity and determination method of PDS
Electricity modelling	✓ New proposal presented after last IWG
Multi-output allocation	✓ ISO rule vs Automobile unique rule
Methodology to define “discrepancy” and “deterioration” factors	✓ time shortage for technical discussion

Agenda

1. SG5 025 minutes and 026 agenda confirmation
2. Oct. GRPE result sharing
- 3. SG7 Drafting status with SG5 meeting result**
4. SG5 Drafting update
5. CFF parameters / EoL emission factors availability in each regions
6. Next action

SG7 Drafting status with SG5 meeting on 29th Oct.

- No drafting concern in 7.18. Waste treatment, disposal & recycling and 8.4. EoL confirmed.
- [] in 8.4.7. Energy modelling will be removed by SG6.
- SG7 pointed out the lack of coherence about "Second life parts" treatment between SG4 and SG5. e.g. SG4; Out of scope, SG5; Included and specified recycling modelling for Second life parts
SG5 LT will discuss with SG4 LT in the SG7 draft session on coherency on 19th/20th Nov. or a small meeting towards IWG on 27th Nov.

SG5 status

	List of Topic	Status			Comment
		Concept	Methodology	Draft	
7.18	Waste treatment, disposal & recycling	CLOSED	CLOSED		
8.4	EoL	CLOSED	CLOSED		
8.4.7	Energy modelling	CLOSED	OPEN	OPEN	Depends on SG6 and should be updated, even if it is not in []

- 8.4.7. Energy modeling : Depends on SG6 and should be updated, even if it is not in []
- Suzuki-san email 15/10 : "However, I have found that some words and equations are not changed to the equation mode. As a reference, please find the attached file which have above word and equation in the equation mode with RED LETTER. This is just an editorial issue but reflecting it will save your future work to correct subscript letters after GRPE work." → do be done by SG7
- SG5 will Formula check (email from Niikuni-san & excel file) by the end of the next week (7th of November)
- OICA comments during Brussels meeting in september : it is unclear whether the formulas need to be applied per component or per material. → did you address it ? → no need, clearly specified in the unit and in Table 20

- Modelling for second life parts : reuse, repurpose, remanufacturing : → topic to address when dealing with coherency
 - SG4 : table 16 second life of components are excluded from the SG4 scope
 - SG5 : reuse, repurpose & remanufacturing are included in the EoL/2nd life modeling
 - In 7.6 system boundaries : there is no mention of 2nd life inclusion or exclusion
 - SG5 provides the tool for taking into account the 2nd parts, but system boundaries is not clear, it is up to the LCA practitioners ?
 - SG5 provided formula for reuse, repurpose, remanufacturing

- Update Table 1 in chapter 7 with good wording

SG4

Table 16↓
Processes and Data to be included in Use stage⁴

Processes ⁴	Activity data ⁴	GHG emissions Intensity Data ⁴
	(Primary Data basis) ⁴	(Secondary Data basis) ⁴
Driving ⁴	Certified Fuel consumption [l/100km] and/or electricity consumption [kWh/100km] ⁴	↔
	↔	Discrepancy factor RW data ⁴
	↔	Degradation factor ⁴
	Separate Certified fuel/electricity consumption for the charge-depleting (CD) and charge-sustaining (CS) modes for OVC-HEVs ⁴	↔
	Utility Factor definition for dual-mode powertrains (e.g. OVC-HEVs) ⁴ Certified charge-depleting (CD) range [km] for dual-mode powertrains (e.g. OVC-HEVs) ⁴	↔
	Average lifetime Battery SoH loss	
Leakages ⁴	Hydrogen, Methane ⁴	↔
Emitting Fluorocarbons ⁴	Out of scope ⁴	Out of scope ⁴
Maintenance and Consumables Production ⁴	List of maintenance parts and consumables ⁴	↔
	Frequency of replacement/service intervals ⁴	↔
Maintenance and Consumables Transportation ⁴	↔	GHG emission factor for producing maintenance parts, in line with Section 8.2.1 ⁴
	Transport Weight [kg] ⁴ Transport Distance [km] ⁴	↔
Maintenance and Consumables End-of-Life ⁴	To be evaluated in line with Section 0 ⁴	To be evaluated in line with Section 0 ⁴
Vehicle activity out of region of sales ⁴	Out of scope ⁴	Out of scope ⁴
Second life of components ⁴	Out of scope ⁴	Out of scope ⁴

SG5

8.4.4. Recycling modelling for second life parts⁴

The second life parts for Remanufacturing, Reuse or Repurposing shall be evaluated in all levels based on regulation or market observation, data availability for parameters and verification criteria. In any case the second life parts traceability shall be confirmed with following recommendation of recycling modelling. ⁴

Table 21↓
Recycling modelling recommendations for second life⁴

Second life application ⁴	Definition ⁴	Recycling modelling Recommendation ⁴
1. Remanufacturing ⁴	ELV parts recycling ⁴ to new vehicle parts ⁴	RCM ⁴
2. Reuse ⁴	ELV parts recycling ⁴ to repair vehicle ⁴	RCM ⁴
3. Repurposing ⁴	ELV parts recycling ⁴ to another function in other industries ⁴ e.g. Traction battery from EoL PEV repurposed to the stationary battery in a building ⁴	CFF ⁴

RCM formula for Remanufacturing or Reuse shall be referred to $CEF_{M,RCM}$ formula in 7.18.1. Material recycling modelling. CFF formula for Repurposing shall be referred to $CEF_{M,MBBM}$ formula in 7.18.1. Material recycling modelling and (f-2) Secondary use (Repurposing) of E2; (f) Traction battery in 8.4.8. GHG calculation for each process. The type of date for RCM or CFF parameter shall be confirmed according to the regulation or market observation. ⁴

Agenda

1. SG5 025 minutes and 026 agenda confirmation
2. Oct. GRPE result sharing
3. SG7 Drafting status with SG5 meeting result
- 4. SG5 Drafting update**
5. CFF parameters / EoL emission factors availability in each regions
6. Next action

Wording inconsistency between 7.1, and 8.4.

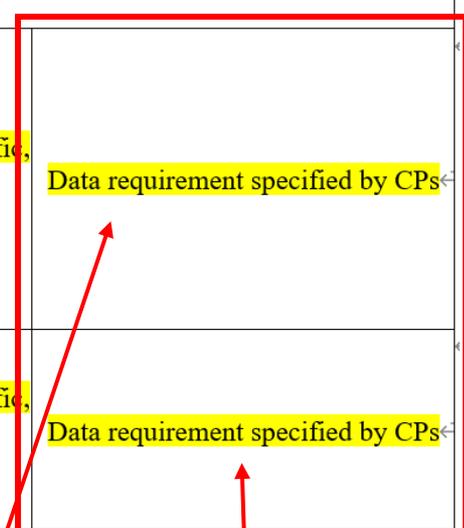
7.1. Level Concept

	Activity data of EoL processes (e.g., weight of vehicle, parts, materials, etc.)	Global secondary data	Primary data based on BoM and MDS
End-of-life stage (See 8.4)	Carbon intensity data of EoL processes (e.g., dismantling and shredding/sorting, ASR thermal recovery, materials recycling, etc.)	Global, regional, or country specific, primary or secondary data, depending on the study	Data requirement specified by CPs
	Recovered parts disposal and recycling process (e.g., tyre, lead battery, driving battery, etc.)	Global, regional, or country specific, primary or secondary data, depending on the study	Data requirement specified by CPs

8.4. EoL

	Level Concept of Disposal and Recycling stage		
	1. Activity data of each EoL processes <i>e.g. Weight of vehicle, parts, material etc</i>	2. Intensity data of each EoL processes <i>e.g. Dismantling and shredding/sorting, ASR thermal recovery, Materials. recycle etc</i>	3. Recovered parts disposal and recycling process <i>e.g. Tyre, SLI battery, Traction battery, etc</i>
Level 1	Global or Generic secondary data	Global or Region or Country primary data or secondary data can be chosen, depend on the study	Global or Region or Country process can be chosen, depend on the study
Level 2	Primary data		
Level 3	(BoM & MDS)	Global or Region or Country primary data or secondary data shall be specified by LCA owner (e.g. CPs)	Global or Region or Country process shall be specified by LCA owner (e.g. CPs)
Level 4			

Not aligned



Drafting update proposal

8.4. EoL

Level Concept of Disposal and Recycling stage [↵]			
↵	1. Activity data of each EoL processes [↵] e.g. Weight of vehicle, parts, material etc [↵]	2. Intensity data of each EoL processes [↵] e.g. Dismantling and shredding/sorting, ASR thermal recovery, Materials, recycle etc [↵]	3. Recovered parts disposal and recycling process [↵] e.g. Tyre, SLI battery, Traction battery, etc [↵]
Level 1 [↵]	Global or Generic secondary data [↵]	Global or Region or Country primary data or secondary data can be chosen, depend on the study [↵]	Global or Region or Country process can be chosen, depend on the study [↵]
Level 2 [↵]	↵		
Level 3 [↵]	Primary data↓ (BoM & MDS) [↵]	Global or Region or Country primary data or secondary data shall be specified by LCA owner (e.g. CPs) [↵]	Global or Region or Country process shall be specified by LCA owner (e.g. CPs) [↵]
Level 4 [↵]			

7.1. Level Concept

↵	Activity data of EoL processes (e.g., weight of vehicle, parts, materials, etc.) [↵]	Global secondary data [↵]	Primary data based on BoM and MDS [↵]
↵	Carbon intensity data of EoL processes (e.g., dismantling and shredding/sorting, ASR thermal recovery, materials recycling, etc.) [↵]	Global, regional, or country specific primary or secondary data, depending on the study [↵]	Data requirement specified by CPs [↵]
↵	Recovered parts disposal and recycling process (e.g., tyre, lead battery, driving battery, etc.) [↵]	Global, regional, or country specific primary or secondary data, depending on the study [↵]	Data requirement specified by CPs [↵]

Aligned with small modification

Global or Region or Country primary data or secondary data shall be specified and provided by CPs	Global or Region or Country process shall be specified and provided by CPs
---	--

Agenda

1. SG5 025 minutes and 026 agenda confirmation
2. Oct. GRPE result sharing
3. SG7 Drafting status with SG5 meeting result
4. SG5 Drafting update
- (5. CFF parameters / EoL emission factors availability in each regions)**
6. Next action

Reminder ; SG5 meeting #12 on 17th June 2024 and actions-

Topic	Option 1	Option 2	Option 3
0. Material/Parts recycling modeling	Recycled content method (Cutoff)	Closed Loop Approximation Method (CLAM)	Circular Footprint Formula (CFF)
1. Boundary conditions	Agree with LT proposal	-SG5 common position confirmed	
2. Secondary data	-EoL process modeling harmonization provisionally confirmed -Secondary data availability of each EoL process and CFF parameter in Japan, China, US and EU confirmed. It should be treated as "Reference"		
3. Second life parts	Include	-Almost SG5 common position confirmed -JRC; Neutral, FRA; t.b.c	
4. Log	【Action proposal from SG5 LT in SG5 025】		
5. ELV mana of sal	- SG5 studied secondary data availability of each EoL process and CFF parameter in each region in 2024 Q2.		
6. Rec	- Reconfirm and update CFF parameters/emission factors availability status and preparation plan in each regions by CPs		
7. Inc with energy recovery		thermal/electricity recovery by CFF	-SG5 common position confirmed

Agenda

1. SG5 025 minutes and 026 agenda confirmation
2. Oct. GRPE result sharing
3. SG7 Drafting status with SG5 meeting result
4. SG5 Drafting update
5. CFF parameters / EoL emission factors availability in each regions
6. Next action

- Next SG5 meeting proposal

1. Date ; 25th Nov. 12:00-13:00@CET
2. Venue; Online
3. Attendee; all SG5 member
4. Agenda;
 - Preparation for 31st IWG on 27th Nov.

<A-LCA IWG milestone>

- 27th Nov. ; 31st IWG
- 5th Dec. ; 32nd IWG
- 12th Dec. ; WD submission deadline for Mar. GRPE

SG7 individual session

