

Austausch zur neuen Europäischen Altfahrzeugverordnung

19. Dezember 2024
BMDV

CLASSIFICATION: INTERNAL

Mögliche Themenfelder für den Austausch

EU-Altfahrzeugverordnung

- ① Requirements for Type-approval Recyclability / UN R 133
- ② Minimum recycled content target for plastic (Art. 6)
- ③ Design for dismantling and removability (Art. 7)
- ④ Management of end-of-life vehicles (Chapter IV)
- ⑤ Heavy Duty



Requirements for Type-approval Recyclability / UN R 133

Requirements for Type-approval Recyclability / UN R 133

Commission Draft

Article 4 empowers the Commission to adopt implementing acts setting out the methodology for calculating and verifying these rates.

Article 8 sets out the manner in which the manufacturers must prove compliance of their vehicle types with the requirements laid down in this regulation during the type-approval process. ...For the purposes of type-approval of vehicles to which the requirements in **Articles 4, 5, 6 or 7** apply, the manufacturer shall provide the documentation showing compliance with those requirements....

Further new additional requirements for the type approval recyclability from **Articles 9, 10, 11 and 13**.

Analysis

The requirements for type-approval recyclability (Art. 4 - 11, 13) are not in line with the globally harmonised UN R133 regulation. This will lead to divergence from non-EU markets, leading to a loss of synergies and worldwide harmonised standards.

This calculation method is also used for other markets, such as South Korea and China.

VW Proposal

In order to maintain globally harmonised type-approval with regard to recyclability requirements, the ELV Regulation should continue to refer to UN R 133.

- As a globally operating company, it is important to have globally harmonised regulations to reduce bureaucratic burden.
- It is important that the European Commission does not act on its own here.

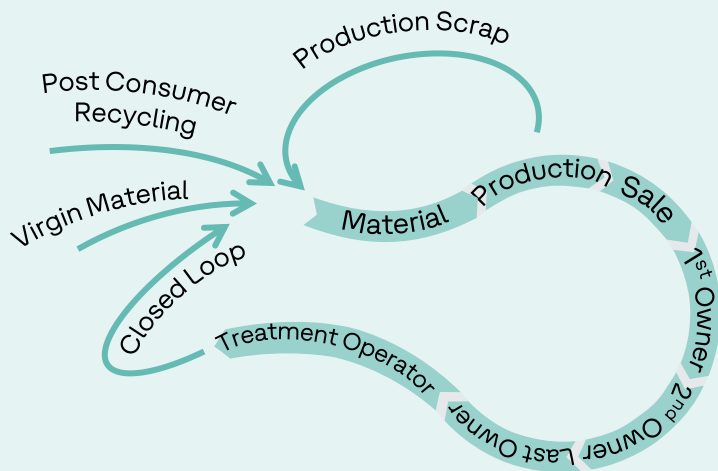


Minimum recycled content target for plastic (Art. 6)

Minimum recycled content target for plastic (Art. 6)

Commission Draft

- Art. 6 lays down a **minimum recycled content target for plastics of 25%** (post-consumer), where at least 25% of the 25% (6.25%) target shall be achieved by including plastics recycled from end-of-life vehicles.



Analysis

- **25% target has been defined without introduction of a methodology** (e.g. waste streams, processes).
- **No supply and demand study** was carried out, assessing:
 - a) Demands resulting from other sectoral regulations (e.g. packaging).
 - b) Automotive specific material demands (quality, quantity) over the production time of a vehicle model.
 - c) Impacts from upcoming regulations (e.g. PFAS restriction).

- **Closed-Loop-Target** does not reflect 15+ year lifespan of vehicles:
 - a) Handling of **legacy Substances of Concern** - challenge **"non-toxic environment" versus "circular economy"**.
 - b) Degradation of polymers (quality).
 - c) Verification management of recyclate sources, due to diverse shredder input.

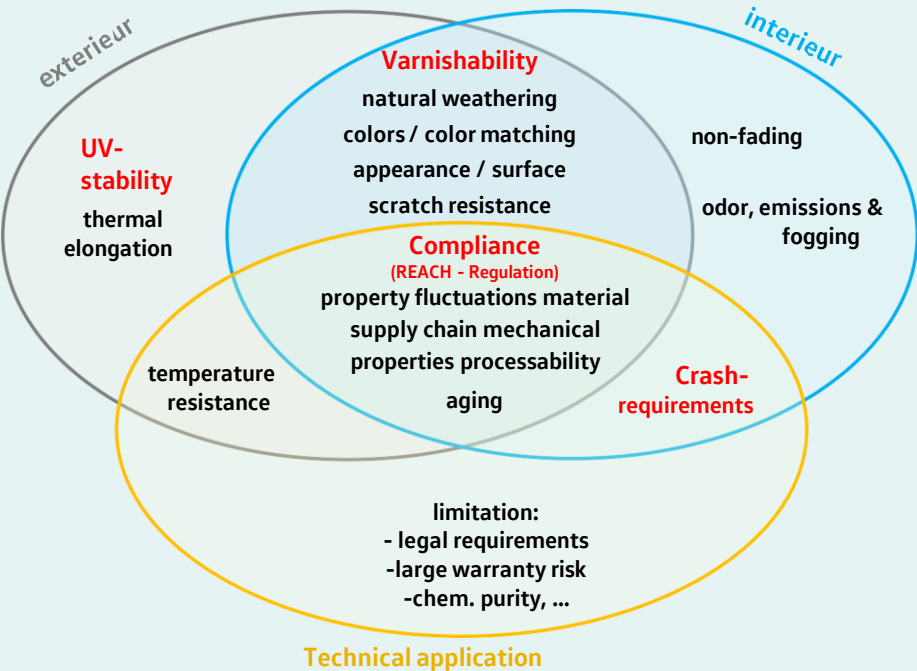
VW Proposal

- A detailed **calculation methodology** and certification process must be defined, at least 72 months before the requirements enter into force.
- **The overarching target should be reduced, in line with supply and technical feasibility.**
- **All sustainable materials should be considered**, such as pre-consumer (post-industrial) recyclates, material from chemical recycling and bio-based materials.
→ **Based on our calculation 15% could be appropriate.**
- Similar to, e.g. the Battery Regulation, an **exception and a review clause** should be introduced.

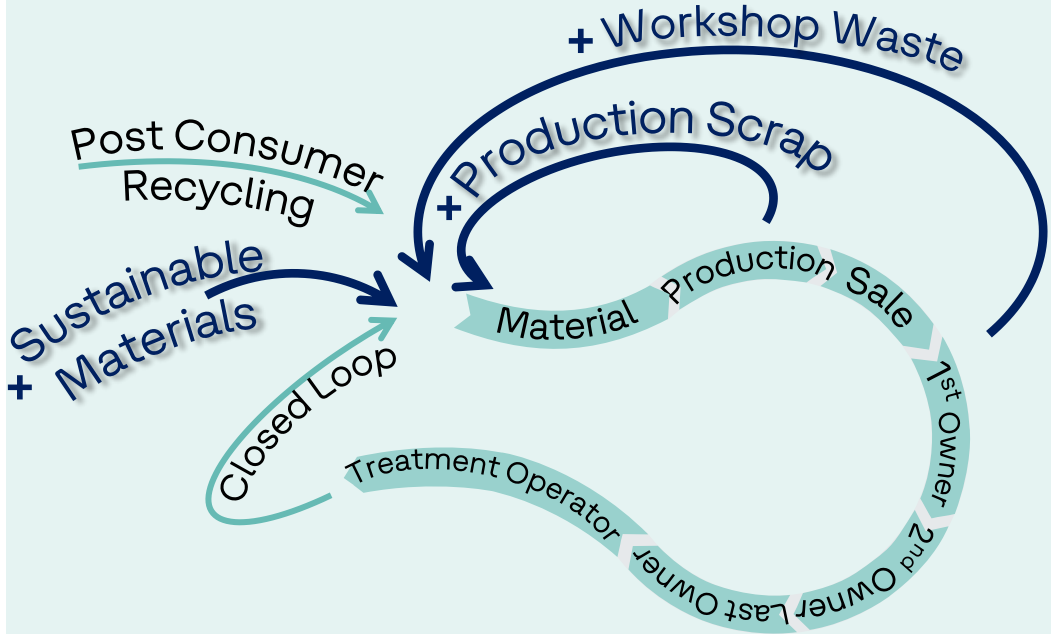
- The separate target for **closed-loop requirement should be deleted.** Since closed loop material from ELVs, workshop waste or vehicle production waste **will be used** if technically and economically feasible to fulfill the requirements.

Minimum recycled content target for plastic (Art. 6)

- Automotive specific material demands. (quality, quantity) over the production time of a vehicle model.
- Impacts from upcoming regulations (e.g. PFAS restriction).



- Methodology (e.g. waste streams, processes) as prerequisite to set targets
- Usage of all relevant resource streams





Design for dismantling and removability (Art. 7)

Design for dismantling and removability (Art. 7 & Annex VII Part C)

Commission Draft

- Art. 7, in connection with Annex VII Part C, lays down certain **design requirements for removal and replacement** of vehicle parts.

PART C	
MANDATORY REMOVAL OF PARTS AND COMPONENTS FROM END-OF-LIFE VEHICLES	
..	Electric vehicle batteries;
..	E-drive motors, including their casings and any associated control units, wiring, and other parts, components and materials;;
i.	SLI batteries as defined in Article 3, point (12), of Regulation (EU) 2023/****[on batteries and waste batteries];
k.	Engines;
i.	Catalytic converters;
i.	Gear boxes;
l.	Windshields, rear and side windows made of glass;
i.	Wheels;
l.	Tyres;
0.	Dashboards;
.1.	Directly accessible parts of the infotainment system, including sound, navigation, and multimedia controllers, including displays of a surface greater than 100 square centimetres;
.2.	Headlights, including their actuators;
.3.	Wire harnesses;
.4.	Bumpers;
.5.	Fluid containers;
.6.	Heat exchangers;
.7.	Any other mono-material metal components, heavier than 10 kg;
.8.	Any other mono-material plastic components, heavier than 10 kg;
.9.	Electrical and electronic components:
(a)	inverters of the electric vehicles;
(b)	printed circuit boards with a surface area, larger than 10 cm ² ;
(c)	photo-voltaic (PV) panels with a surface area, larger than 0.2 m ² ;
(d)	control modules and valve boxes for the automatic transmission.

*Obligations in Art.
7, 11, 27, 30, 31*

Analysis

- The meaning of “**does not hinder**” removability in Art. 7 1. is **not sufficiently defined**.
- For **some components in the (original) list, like the (whole) wire harness, heat exchangers dashboards, etc., there is no possibility for easy dismantling**.
- Differentiation of dismantling obligation for:
 - a) Recycling: For many components, the **use of modern, economically efficient and industrially applicable sorting technologies after shredding leads to comparable efficient separation results**.
 - b) Reuse: Dismantling for reuse **without demand** for such parts would not only be unreasonable but even contradictory to the overarching goal to improve the environmental and ecological footprint.

VW Proposal

- The subclause in Art. 7, 1. “**does not hinder**” should be rephrased so as **to be clearer and reasonably practicable**.
- **Removal obligations for components must always be technically feasible and should be reasonable and proportionate** (specific demand).
- **Removal in a non-destructive manner should not apply to removal for recycling** and only apply to removal for re-use, refurbishment or re-manufacture.
- **A requirement for mandatory manual dismantling** (Art. 30) is often counterproductive and **should only be specified if the desired goals cannot be achieved otherwise** (e.g. by post shredder technologies). In principle, the **best available technology** should be used for each recycling process.

Design for dismantling and removability (Art. 7 & Annex VII Part C)

Hungarian Presidency – final note

PART C MANDATORY REMOVAL OF PARTS AND COMPONENTS FROM END-OF-LIFE VEHICLES	
	Exempted under Article 30 point 2, if the conditions of Annex VII Part G apply
1.a. Electric vehicle batteries, as defined in Article 3 point (14) of Regulation (EU) 2023/1542, including their battery management systems, onboard chargers for EVs, casing or housing if present; 1.b. LMT batteries, as defined in Article 3 point (11) of Regulation (EU) 2023/1542, including their battery management systems, onboard chargers for EVs, casing or housing if present;	
2. SLI batteries as defined in Article 3, point (12), of Regulation (EU) 2023/1542 and other batteries as defined in Article 3, point (9) of Regulation (EU) 2023/1542 **** [on-batteries and waste batteries];	
23. E-drive motors, including their casings, generators, alternators and cooling fan motors if present, and any associated control units, wiring, and other parts, components and materials directly fastened or attached to E-drive motors;	X
4. Combustion engines blocks with generators, starters, alternators, turbochargers, radiator and cooling fan motors and associated devices;	X
5. Catalytic converters;	
6. Gear boxes, including control units;	X In case of exemption, No. 20 shall apply to the control unit
7. At least 70% of the total glass from windshields, rear and side windows made of glass, including rooftop glass installations;	
8. Wheels Rims;	
9. Rubber tyres;	
10. Dashboards;	
11. Directly accessible parts of the infotainment system, including sound, navigation, including radar or lidar	

ADDENDUM 1	
control units and sensors if present, and multimedia controllers, including displays of a surface greater than 100 square centimetres;	
12. Head- and taillights, including their actuators;	
13. Main wire harnesses, including internal and external charging cables if present;	X
14. Crash management system, including bumpers covers, beams and crash boxes;	X
15. Fluid containers: Plastic fuel tanks	
16. Heat exchangers;	
17. Any other mono-material-metal components, heavier than 10 kg;	
18. Any other mono-material-plastic components, heavier than 40 kg;	
19. Components of carbon fibre reinforced plastics	
19 20. Electrical and electronic components: (a) inverters and DC-DC converters with electric voltage above of atleast 24V or a weight above 1 kilogram of the electric vehicles; (b) printed circuit containing boards with a surface area, larger than 10 cm ² square centimetres particularly high precious metal content; (c) photo-voltaic (PV) panels with a surface area, larger than 0.2 m ² square metres; (d) control modules and valve boxes for the automatic transmission; (e) oxygen, radar and lidar sensors if present.	X
21. E-call system	

Several deletions and additions were proposed during council discussions

VW Position Annex VII Part C

- Deletion of the **Dashboard** and any **components > 10 kg** are welcome.
- **70% of glass:** ecological benefit unclear; dismantling not economical, risk of injuries high; documentation of "70%" difficult.
- **Main wire harness:** with exemption a possible compromise, but potential for reuse low; still high effort for dismantling.
- **Plastic fuel tanks:** highly contaminated, no established economic recycling industry.
- **Heat exchanger:** no reuse potential (corrosion and fatigue), high dismantling effort.
- **Oxygen, radar and lidar sensors:** very small sensors, high effort, little material weight/value
- Additional parts lists to entries might be incomplete; components attached to e.g. motors depend on requirements and construction concept; future innovation necessary.



Management of End-of-Life Vehicles (Chapter IV)

Management of ELVs (Chapter IV) 1/2

Certificate of Destruction (CoD) / Registration and De-registration / MOVE-HUB

Commission Draft

- Art. 25 and Art. 26: **electronic certificate of destruction (CoD) as a prerequisite for cancelling the registration** of a vehicle.
- Art. 45: **MOVE-HUB** electronic system: **real-time data exchange of national vehicle registers + national electronic systems on roadworthiness** (see also Recital 70)

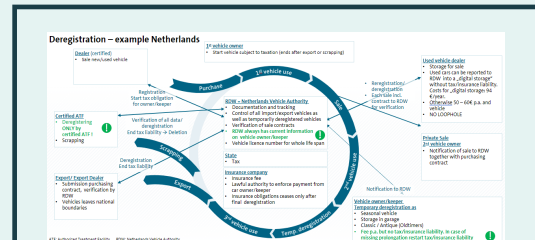
Analysis

- COM proposal are **important improvements**.
- **Still a risk of "missing ELVs"**: many Member States allow **preliminary de-registration for an unlimited period without any costs**, which **undermines the effectiveness** of a CoD - especially, in cases where Member States perform **"statistical" scrapping**.

VW Proposal

- A **proper national de-registration system** with enforcement is possible and much **more efficient for highly valuable goods like cars than financial incentives, e. g. deposit systems**.

Best practice Netherlands: Keys for success of the Dutch system



See also in annex

All relevant authorities connected via online platform, incl. insurance and enforcement

- Permanent registration of the vehicle.
- Used car trade: **"Digital storage"** with low costs and no loopholes.
- Permanent tax + insurance + technical inspection obligation until evidence for export or CoD is provided
⇒ **consequently, checked in register and enforced by fines.**
- Suspension from c. possible:
 - Online and for a fee (73 € in 2019).
 - **Max. 1 year extension possible, again, for a fee.**
 - At end of suspension: **automatic tax and insurance.**
- De-registration by ATF (not last owner).
- Strict enforcement and inspection.

Management of ELVs (Chapter IV) 2/2

Additional issues

Organisation of take back system / relationship between OEM and waste management operators

- Art. 16, 20 and 23: For an effective EPR legislation, the implementation of the **right of precedence for the producer to organise his waste is key** in order to steer it in the best performing channels.
- Art. 20 and 18: Any **approach contradicting free-market principles** by involving authorities in contract negotiations or **contradicting competition law needs to be avoided**.

Completeness of end-of-life vehicles at authorised treatment facilities (ATFs) and workshop disposal

- Art. 24: **High-voltage traction batteries should only be handled by trained personnel.**

- The new ELVR draft lays down several major adjustments in the chapter “Management of end-of-life vehicles”.
- We are open for a more detailed exchange with our experts, if requested.



Heavy Duty

Expansion of the scope to Heavy Duty Vehicles (HDV)

Commission Draft

- Art. 2 includes heavy duty vehicles but (2, b) explicitly puts bodywork of **multi-stage vehicles out of the regulation scope**

Analysis

- Multi-stage HDV make up **40 - 50%** of the total annual **registrations** and would normally arrive at ATFs **together with the base vehicle (and always, if it is a bus)**.
- Bodywork is **an essential part** of a multi-stage HDV (must be collected together with the base vehicle). If its treatment costs are not clearly assigned:
 - ATFs may start **refusing to accept such vehicles**, seriously undermining the environmental effect of the ELVR
 - ELV without a certificate of destruction issued by an ATF **cannot be de-registered** (Art. 25 ELVR)

VW Proposal

- Vehicle producers are ready to **provide for the collection of multi-stage vehicles** (lower the burden of smaller companies producing bodywork), given that bodywork producers become responsible for **treating their products** (& associated costs).
- **VW Proposal:** *Art. 2 (6) should be amended to include the bodywork of multi-stage vehicles into the scope of EPR with the same obligations as the base vehicle producers have.*

Source of parts for reuse & secondary raw materials

EPR: vehicle producer



Base vehicle (incomplete)



May be difficult to treat (e.g. cooling boxes)

EPR: no one

Bodywork



1 product, but only ½ responsibility

EPR: ?

Multi-stage vehicle (completed)



Summary

- 1** Type-approval Recyclability demands
⇒ Continuation of UN R133

- 2** The recycled content target for plastic (Art. 6)
⇒ Methodology first // Targets on basis of supply and demand analysis // No separate closed loop target

- 3** Design for dismantling and removability obligations (Art. 7)
⇒ Obligation need to be economically efficient and technically feasible // Alternative measures need to be included

- 4** Extended producer responsibilities of the vehicle producer (Chapter IV)
*⇒ Certificate of Destruction is the most important prerequisite for the success of ELVR as a whole
⇒ OEMs need to have right of precedence to organise their waste*

- 5** Expansion of the scope to HD-vehicles
⇒ Multistage to be considered

Certificate of Destruction (CoD)

Best Practice Netherlands

