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#### **COVER NOTE**

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Subject:	ANNEXES to the Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on circularity requirements for vehicle design and on management of end-of-life vehicles, amending Regulations (EU) 2018/858 and 2019/1020 and repealing Directives 2000/53/EC and 2005/64/EC

Delegations will find attached document COM(2023) 451 final.

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EUROPEAN  
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Brussels, 13.7.2023  
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ANNEXES 1 to 11

## **ANNEXES**

**to the Proposal for a**

**REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**on circularity requirements for vehicle design and on management of end-of-life  
vehicles, amending Regulations (EU) 2018/858 and 2019/1020 and repealing Directives  
2000/53/EC and 2005/64/EC**

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{SWD(2023) 257 final}

**ANNEX I**  
**CRITERIA FOR DETERMINATION WHETHER A USED VEHICLE IS AN END-  
OF-LIFE VEHICLE**

**PART A**

**CRITERIA FOR ASSESSMENT OF REPARABILITY OF VEHICLES**

1. A vehicle is technically irreparable if it meets one or more of the following criteria:
  - (a) it has been cut into pieces or stripped;
  - (b) it has been welded up or closed by insulating foam;
  - (c) it has been completely burnt to the point where the engine compartment or passenger compartment is destroyed;
  - (d) it has been submerged in water to a level above the dashboard;
  - (e) one or several of the following components of the vehicle cannot be repaired or replaced:
    - (i) ground coupling components (such as tyres and wheels), suspension, steering, braking, and their control components;
    - (ii) seat fixings and joints;
    - (iii) airbags, pre-tensioners, safety belts, and their peripheral operating components;
    - (iv) the vehicle's hull and chassis;
  - (f) its structural and safety components have technical defects that are irreversible and turn them non-replaceable, such as metal aging, multiple breaks in primers, or excessive perforating corrosion;
  - (g) its repair requires the replacement of the engine, gearbox, shell, or chassis assembly, resulting in the loss of the vehicle's original identity.
2. The vehicle is economically irreparable if its market value is lower than the cost of the necessary repairs needed to restore it in the Union to a technical condition that would be sufficient to obtain a roadworthiness certificate in the Member State where the vehicle was registered before repair.
3. A vehicle may be considered technically irreparable when:
  - (a) it has been submerged in water to a level below the dashboard, and damaged the engine or electrical system;
  - (b) its doors are not attached to it;
  - (c) its fuel or fuel vapours are discharged posing a risk of fire and explosion;
  - (d) gas has leaked from its liquid gas system posing a risk of fire and explosion;
  - (e) its operating liquids (fuel, brake fluid, anti-freeze liquid, battery acid, coolant liquid) have been discharged posing a risk of water pollution; or
  - (f) its brakes and steering components are excessively worn.

If one of those conditions is met, an individual technical assessment shall be carried out in order to assess if the technical status of a vehicle would be sufficient to obtain a roadworthiness certificate in the Member State where the vehicle was registered before repair.

## **PART B**

### **INDICATIVE LIST OF CRITERIA FOR END-OF-LIFE VEHICLES**

The following criteria may also be used as additional justification to determine if a used vehicle is an end-of-life vehicle:

- (a) absence of means allowing to identify a vehicle, in particular the Vehicle Identification Number;
- (b) its owner is unknown;
- (c) it has not had its required national technical roadworthiness test for more than two years from the date when this was last required;
- (d) it is not appropriately protected against damage during storage, transportation, loading and unloading; or
- (e) it was handed over for treatment to an authorised collection point or an authorised waste treatment facility.

**ANNEX II**  
**CALCULATION OF THE RATES OF REUSABILITY, RECYCLABILITY AND RECOVERABILITY**

For the purposes of this Annex, 'reference vehicle' means the version within a vehicle type, which is identified by the approval authority, in consultation with the manufacturer and in accordance with the criteria laid down in Annex II Part A, as being the most problematic in terms of reusability, recyclability and recoverability.

**PART A**

1. The materials present in the vehicle and their respective shares and locations shall be specified, together with any relevant information necessary to correctly calculate the rates of recyclability and recoverability.
2. Masses shall be expressed in kg with one decimal place. The rates shall be calculated in percent with one decimal place, then rounded as follows:
  - (a) if the figure following the decimal point is between 0 and 4, the total is rounded down;
  - (b) if the figure following the decimal point is between 5 and 9, the total is rounded up.
3. For the purposes of the selection of the reference vehicles, account shall be taken of the following criteria:
  - (a) the type of bodywork;
  - (b) the available trim levels;
  - (c) the available optional equipment which can be fitted under the manufacturer's responsibility.
4. Should the type-approval authority and the manufacturer fail jointly to identify the most problematic version within a type of vehicle, in terms of reusability, recyclability and recoverability, one reference vehicle shall be selected, within:
  - (a) each 'type of bodywork', as defined in point 2 of part C of Annex I to Regulation (EU) 2018/858 in the case of M<sub>1</sub> vehicles;
  - (b) each 'type of bodywork', i.e., van, chassis-cab, pick-up, etc., in the case of N<sub>1</sub> vehicles.
5. For the purposes of checks of the materials and masses of component parts, the manufacturer shall make available vehicles and component parts as deemed necessary by the type-approval authority.

## **PART B**

1. In order to be counted as reusable, components or parts shall be removable in a readily and non-destructive manner.
2. The total mass of reusable parts, components and materials shall be considered as 100 % reusable, recyclable and recoverable.
3. Parts and components listed in Part B, points 1 and 2, of Annex VII shall be considered as 0 % reusable and 100 % recyclable and recoverable. Parts and components listed in Part E of Annex VII shall be considered as 0 % reusable and 100 % recyclable and recoverable. The methodology shall ensure, that in case of amending Annex VII results in the extending the list of parts and components listed in Part E of that Annex, these newly added parts and components shall be considered as 0 % reusable and 100 % recyclable and recoverable.
4. The calculation of the rates of reusability, recyclability and recoverability shall be coherent with the circularity strategy, reflecting technological progress in end-of-life treatment technologies.

### **ANNEX III**

#### **CONDITIONS AND MAXIMUM CONCENTRATION VALUES FOR THE PRESENCE OF LEAD, MERCURY, CADMIUM AND HEXAVALENT CHROMIUM IN MATERIALS, PARTS AND COMPONENTS**

A maximum concentration value of substances up to 0,1 % by weight in homogeneous material for lead, hexavalent chromium and mercury and up to 0,01 % by weight in homogeneous material for cadmium shall be tolerated.

Spare parts put on the market after 1 July 2003 which are used for vehicles put on the market before 1 July 2003, except for wheel balance weights, carbon brushes for electric motors and brake linings, shall be exempted from Article 5(2) of Regulation.

Homogenous materials, parts and components	Scope and expiry date of the exemption	To be labelled or made identifiable in accordance with Article 5(4), point (d)
<i>Lead as an alloying element</i>		
1(a). Steel for machining purposes and batch hot dip galvanised steel components containing up to 0,35 % lead by weight		
1(b). Continuously galvanised steel sheet containing up to 0,35 % lead by weight	Vehicles type approved before 1 January 2016 and spare parts for such vehicles	
2(a). Aluminium for machining purposes with a lead content up to 2 % by weight	As spare parts for vehicles placed on the market before 1 July 2005	
2(b). Aluminium with a lead content up to 1,5 % by weight	As spare parts for vehicles placed on the market before 1 July 2008	
2(c)(i). Aluminium alloys for machining purposes with a lead content up to 0,4 % by weight	Vehicles type-approved before 1 January 2028 and spare parts for such vehicles	
2(c)(ii). Aluminium alloys not included in entry 2(c)(i) with a lead content up to 0,4 %	(1)	

by weight (2)		
3. Copper alloys containing up to 4 % lead by weight	(3)	
4(a). Bearing shells and bushes	As spare parts for vehicles placed on the market before 1 July 2008	
4(b). Bearing shells and bushes in engines, transmissions and air conditioning compressors	As spare parts for vehicles placed on the market before 1 July 2011	
<i>Lead and lead compounds in components</i>		
5(a). Lead in batteries used in high-voltage systems (4) that are used only for propulsion in M1 and N1 vehicles	Vehicles type approved before 1 January 2019 and spare parts for such vehicles	X
5(b)(i). Lead in batteries: (1) used in 12 V applications (2) used in 24 V applications in special purpose vehicles as defined in Article 3 of Regulation (EU) 2018/858	(3)	X
5(b)(ii). Lead in batteries used in applications not included in entry 5(a) or entry 5(b)(i)	Vehicles type approved before 1 January 2024 and spare parts for such vehicles	X
6. Vibration dampers	Vehicles type approved before 1 January 2016 and spare parts for such vehicles	X
7(a). Vulcanising agents and stabilisers for elastomers in brake hoses, fuel hoses, air ventilation hoses, elastomer/metal parts in the chassis applications, and engine mountings	As spare parts for vehicles placed on the market before 1 July 2005	
7(b). Vulcanising agents and stabilisers for elastomers in brake hoses, fuel hoses, air ventilation hoses, elastomer/metal parts in the chassis applications, and engine	As spare parts for vehicles placed on the market before 1	



mountings containing up to 0,5 % lead by weight	July 2006	
7(c). Bonding agents for elastomers in powertrain applications containing up to 0,5 % lead by weight	As spare parts for vehicles placed on the market before 1 July 2009	
8(a). Lead in solders to attach electrical and electronic components to electronic circuit boards and lead in finishes on terminations of components other than electrolyte aluminium capacitors, on component pins and on electronic circuit boards	Vehicles type approved before 1 January 2016 and spare parts for such vehicles	X(5)
8(b). Lead in solders in electrical applications other than soldering on electronic circuit boards or on glass	Vehicles type approved before 1 January 2011 and spare parts for such vehicles	X(5)
8(c). Lead in finishes on terminals of electrolyte aluminium capacitors	Vehicles type approved before 1 January 2013 and spare parts for such vehicles	X(5)
8(d). Lead used in soldering on glass in mass airflow sensors	Vehicles type approved before 1 January 2015 and spare parts of such vehicles	X(5)
8(e). Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)	(1)	X(5)
8(f)(i). Lead in compliant pin connector systems	Vehicles type approved before 1 January 2017 and spare parts for such vehicles	X(5)
8(f)(ii). Lead in compliant pin connector systems other than the mating area of vehicle harness connectors	Vehicles type approved before 1 January 2024 and spare parts for such vehicles	X(5)

8(g)(i). Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	Vehicles type approved before 1 October 2022 and spare parts for such vehicles	X(5)
8(g)(ii). Lead in solders to complete a viable electrical connection between the semiconductor die and the carrier within integrated circuit flip chip packages where that electrical connection consists of any of the following: (1) a semiconductor technology node of 90 nm or larger; (2) a single die of 300 mm <sup>2</sup> or larger in any semiconductor technology node; (3) stacked die packages with dies of 300 mm <sup>2</sup> or larger, or silicon interposers of 300mm <sup>2</sup> or larger.	(1) Vehicles type-approved from 1 October 2022 and spare parts for such vehicles	X(5)
8(h). Lead in solder to attach heat spreaders to the heat sink in power semiconductor assemblies with a chip size of at least 1 cm <sup>2</sup> of projection area and a nominal current density of at least 1 A/mm <sup>2</sup> of silicon chip area	Vehicles type approved before 1 January 2016 and spare parts for such vehicles	X(5)
8(i). Lead in solders in electrical glazing applications on glass except for soldering in laminated glazing	Vehicles type approved before 1 January 2016 and spare parts for such vehicles	X(5)
8(j). Lead in solders for soldering of laminated glazing	Vehicles type approved before 1 January 2020 and spare parts for such vehicles	X(5)
8(k). Soldering of heating applications with 0,5A or more of heat current per related solder joint to single panes of laminated glazings not exceeding wall thickness of 2,1 mm. This exemption does not cover soldering to contacts embedded in the intermediate polymer.	Vehicles type approved before 1 January 2024 and spare parts for such vehicles	X(5)
9. Valve seats	As spare parts for engine types developed before 1 July 2003	

<p>10(a). Electrical and electronic components, which contain lead in a glass or ceramic, in a glass or ceramic matrix compound, in a glass-ceramic material, or in a glass-ceramic matrix compound.</p> <p>This exemption does not cover the use of lead in:</p> <ul style="list-style-type: none"> <li>(i) glass in bulbs and glaze of spark plugs,</li> <li>(ii) dielectric ceramic materials of components listed under 10(b), 10(c) and 10(d).</li> </ul>		X(6) (for components other than piezo in engines)
10(b). Lead in PZT based dielectric ceramic materials of capacitors being part of integrated circuits or discrete semiconductors		
10(c). Lead in dielectric ceramic materials of capacitors with a rated voltage of less than 125 V AC or 250 V DC	Vehicles type approved before 1 January 2016 and spare parts for such vehicles	
10(d). Lead in the dielectric ceramic materials of capacitors compensating the temperature-related deviations of sensors in ultrasonic sonar systems	Vehicles type approved before 1 January 2017 and spare parts for such vehicles	
11. Pyrotechnic initiators	Vehicles type approved before 1 July 2006 and spare parts for such vehicles	
12. Lead-containing thermoelectric materials in automotive electrical applications to reduce CO <sub>2</sub> emissions by recuperation of exhaust heat	Vehicles type approved before 1 January 2019 and spare parts for such vehicles	X
<i>Hexavalent chromium</i>		
13(a). Corrosion preventive coatings	As spare parts for vehicles placed on the market before 1 July 2007	

13(b). Corrosion preventive coatings related to bolt and nut assemblies for chassis applications	As spare parts for vehicles placed on the market before 1 July 2008	
14. Hexavalent chromium as an anti-corrosion agent of the carbon steel cooling system in absorption refrigerators up to 0,75 % by weight in the cooling solution: (a) designed to operate fully or partly with electrical heater, having an average utilised electrical power input < 75W at constant running conditions; (b) designed to operate fully or partly with electrical heater, having an average utilised electrical power input ≥ 75W at constant running conditions; (c) designed to fully operate with non-electrical heater.	For (a): Vehicles type approved before 1 January 2020 and spare parts for such vehicles For (b): Vehicles type approved before 1 January 2026 and spare parts for such vehicles	X
<i>Mercury</i>		
15(a). Discharge lamps for headlight application	Vehicles type approved before 1 July 2012 and spare parts for such vehicles	X
15(b). Fluorescent tubes used in instrument panel displays	Vehicles type approved before 1 July 2012 and spare parts for such vehicles	X
<i>Cadmium</i>		
16. Batteries for electric vehicles	As spare parts for vehicles placed on the market before 31 December 2008	

Notes to the table:

1. This exemption shall be reviewed in 2024.
2. Applies to aluminium alloys where lead is not intentionally introduced, but is present due to the use of recycled aluminium.
3. This exemption shall be reviewed in 2025.

4. Systems that have a voltage of  $> 75$  V DC as provided for in Article 1 of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits (OJ L 96, 29.3.2014, p. 357).

5. Dismantling if, in correlation with entry 10(a), an average threshold of 60 grams per vehicle is exceeded. For the purposes of this note, electronic devices not installed by the manufacturer on the production line shall not be taken into account.

6. Dismantling if, in correlation with entries 8(a) to 8(k), an average threshold of 60 grams per vehicle is exceeded. For the purposes of this note, electronic devices not installed by the manufacturer on the production line shall not be taken into account.

**ANNEX IV**  
**CIRCULARITY STRATEGY**  
**PART A**

**ELEMENTS OF THE CIRCULARITY STRATEGY**

1. A non-technical description of the actions planned to ensure that the vehicles belonging to the vehicle type continue to meet the legal requirements referred to in Articles 4 to 7 throughout their production.
2. A non-technical description of procedures implemented by the manufacturer to:
  - (a) collect the relevant data through the full supply chain;
  - (b) check and verify the information received from suppliers;
  - (c) react adequately where the data received from the suppliers indicate a risk of non-compliance with the requirements under Article 4, 5 or 6.
3. Information on the assumptions on end-of-life treatment technologies in place, relevant technological progress in end-of-life treatment technologies and capacity investment in such technologies, as of submitting the application for type-approval, that the manufacturer used in order to calculate the reusability, recyclability and recoverability in accordance with Article 4 of the vehicle type.
4. Information on the share of recycled content in vehicles as referred to in Articles 6 and 10.
5. A list of actions that the manufacturer commits to carry out in order to ensure that the treatment of end-of-life vehicles of the type concerned is carried out in accordance with this Regulation, with a particular focus on:
  - (a) measures designed to facilitate removal of parts indicated in Annex VII Part C;
  - (b) measures contributing to the development of recycling technologies for materials used in vehicles, for which such technologies are not widely available at commercial scale at the moment of submission of application for type-approval;
  - (c) the monitoring on how parts, components and materials contained in vehicles belonging to the vehicle type are reused, recycled and recovered in practice;
  - (d) measures to address the challenges posed by the use of materials and techniques which hamper easy dismantling or make recycling very challenging, for example adhesives or fibre-reinforced materials;
  - (e) measures to promote the reuse of parts and components.
6. A description of the nature and form of the actions referred to in point 5, for example investments in research and development, investments in the development of recycling technologies or infrastructure, and how it has been cooperating with waste management operators involved in reuse, recycling and recovery of vehicles and removal of their parts.
7. A description of the manner in which the effectiveness of the actions referred to in point 6 will be assessed.

Before Articles 4 to 7 become applicable, the circularity strategy shall explain how the manufacturer complies with circularity requirements laid down in Directive 2005/64/EC verified during the type-approval process, in particular Article 5 of that Directive, and the requirements laid down in Directive 2000/53/EC, in particular Article 4(2) of that Directive.

## **PART B**

### **FOLLOW-UP AND UPDATE OF THE CIRCULARITY STRATEGY**

1. The manufacturers shall provide an update of the circularity strategy at least every 5 years.
2. The updated circularity strategy shall include the following:
  - (a) a description of how the actions referred to in point 6 of Part A have been undertaken and, in the case that one or more actions indicated in the strategy has not been conducted, an explanation of the reasons for this;
  - (b) an assessment of the effectiveness of the actions referred to in point 6 of Part A;
  - (c) a description of how the actions referred to in point 6 of Part A have been or will be taken into account in the design of new vehicle types.
3. In case of significant changes in the design and production of the vehicle type, the updated circularity strategy shall have a particular focus on the following:
  - (a) changes in the use of parts and components in new vehicles which are easy to dismantle for reuse or for high quality recycling;
  - (b) changes in the use of materials in new vehicles which are easy to recycle;
  - (c) the adoption of design features to address the challenges posed by the use of materials and techniques which hamper easy removal or make recycling very challenging, for example adhesives, composite plastics or fibre-reinforced materials;
  - (d) changes in the use of recycled materials in new vehicles, remanufactured or refurbished parts and components in vehicles and of compatibility of parts and components from other types of vehicles; and
  - (e) changes in the use of substances referred to in Article 5 in new vehicles.

**ANNEX V**  
**INFORMATION REQUIREMENTS ON REMOVAL AND REPLACEMENT**

1. Electric vehicle batteries incorporated in the vehicle:
  - (a) number;
  - (b) location;
  - (c) weight;
  - (d) type of battery chemistry;
  - (e) instructions for safe discharging of the battery;
  - (f) technical instructions on removal and replacement, including the sequence of all steps and types of joining, fastening, sealing techniques;
  - (g) tools or technologies required for the access, removal and replacement of the electric vehicle batteries.
2. E-drive motors incorporated in the vehicle:
  - (a) number;
  - (b) location;
  - (c) weight;
  - (d) types of permanent magnets present in e-drive motors, if they belong to the following types:
    - (i) Neodymium-Iron-Boron;
    - (ii) Samarium-Cobalt;
    - (iii) Aluminium-Nickel-Cobalt;
    - (iv) Ferrite.
  - (e) technical instructions on removal and replacement, including the sequence of all steps and types of joining, fastening, sealing techniques;
  - (f) tools or technologies required for the access, removal and replacement of the e-drive motors.
3. Components, parts and materials listed in Part B of Annex VII:
  - (a) presence of the substances listed in Article 5(2), which need to be labelled as referred to in Annex III in a vehicle;
  - (b) number;
  - (c) location;
  - (d) weight;
  - (e) technical instructions on removal, including the sequence of all steps;
  - (f) availability of best treatment techniques.
4. Components, parts and materials listed in Part C of Annex VII:
  - (a) number;



- (b) location;
  - (c) technical instructions on removal and replacement, including the sequence of all steps.
5. Digitally coded components and parts in a vehicle:
- (a) Number;
  - (b) Location;
  - (c) technical instructions on access, removal and replacement, including - coding and software necessary to activate spare parts and components to function in another vehicle;
  - (d) description on functionality, interchangeability and compatibility with specific parts and components of other makes and models;
  - (e) contact point of the manufacturer for technical assistance.

**ANNEX VI**  
**LABELLING REQUIREMENTS**

1. Vehicle plastic parts, components and materials having a weight of more than 100 grams:
  - (a) ISO 1043-1 Plastics - symbols and abbreviated terms. Part 1: Basic polymers and their special characteristics;
  - (b) ISO 1043-2 Plastics - symbols and abbreviated terms. Part 2: Fillers and reinforcing materials;
  - (c) ISO 11469 Plastics - Generic identification and marking of plastic products.
2. Vehicle elastomer parts, components and materials having a weight of more than 200 grams, except tyres: ISO 1629 Rubbers and latices - Nomenclature.
3. The symbols "<" or ">" used in the ISO standards, can be substituted by brackets.
4. Information on the label of e-drive motors containing permanent magnet materials:
  - (a) an indication that those products incorporate one or more permanent magnets;
  - (b) an indication whether those magnets belong to any of the following types:
    - (i) Neodymium-Iron-Boron;
    - (ii) Samarium-Cobalt;
    - (iii) Aluminium-Nickel-Cobalt;
    - (iv) Ferrite;
  - (c) for permanent magnets of the types referred in point 3 (b)(i) and (ii), a data carrier linked to a unique product identifier that provides access to the following:
    - (i) the name, registered trade name or registered trademark and the postal address of the responsible natural or legal person and, where available, electronic means of communication where they can be contacted;
    - (ii) information on the weight, location and type of all individual permanent magnets included in the product and on the presence and type of magnet coatings, glues and any additives used;
    - (iii) information enabling access and removal of all permanent magnets incorporated in the product, at least including the sequence of all removal steps, tools or technologies required for the access and removal of the permanent magnet, without prejudice to Article 15(1) of Directive 2012/19/EU.

**ANNEX VII**  
**TREATMENT REQUIREMENTS**

**PART A**  
**MINIMUM REQUIREMENTS FOR STORAGE SITES AND TREATMENT SITES**

1. Storage sites, including storage sites in the collection points, for the storage of end-of-life vehicles, prior to their treatment, and of their components, parts and materials, shall:
  - (a) have impermeable surfaces with spillage collection facilities, decanters and cleanser-degreasers;
  - (b) be equipped for the treatment of water, including rainwater, in compliance with health and environmental requirements.
2. Storage shall be organised so as to avoid damage to:
  - (a) components and parts containing the liquids and fluids listed in points 1 and 2 of Part B of this Annex VII;
  - (b) components, parts and materials listed in Part C of this Annex VII.
3. The sites where end-of-life vehicles and their components, parts and materials are treated shall have:
  - (a) impermeable surfaces for appropriate areas with the provision of spillage collection facilities, decanters and cleanser-degreasers;
  - (b) appropriate storage for parts, components and materials that have been removed from the end-of-life vehicle, including impermeable storage for oil-contaminated parts, components and materials;
  - (c) appropriate containers for storage of batteries (with electrolyte neutralisation on site or elsewhere), filters and PCB/PCT-containing condensers;
  - (d) appropriate separate storage tanks for the segregated storage of end-of-life vehicle fluids: fuel, motor oil, gearbox oil, transmission oil, hydraulic oil, cooling liquids, antifreeze, brake fluids, battery acids, air-conditioning system fluids and any other fluid contained in the end-of-life vehicle,
  - (e) equipment for the treatment of water, including rainwater, in compliance with health and environmental regulations;
  - (f) appropriate storage for used tyres, taking into account the need to prevent fire hazards and excessive stockpiling.
4. Authorised treatment facilities that are permitted to treat electric vehicles shall comply with the requirements set out in Annex XII of Regulation 2023/ [Batteries and Waste Batteries.

**PART B**  
**MINIMUM REQUIREMENTS FOR DEPOLLUTION**

1. The following fluids and liquids shall be removed from the end-of-life vehicle, unless they are necessary for the re-use of the parts concerned:
  - (a) fuel;

- (b) motor oil;
- (c) transmission oil;
- (d) gearbox oil;
- (e) hydraulic oil;
- (f) cooling liquids;
- (g) antifreeze;
- (h) brake fluids;
- (i) air-conditioning system fluids; and
- (j) any other fluid contained in the end-of-life vehicle.

The collection containers shall be labelled to indicate the type of liquid that is contained within them and stored separately from each other in a secure location, compliant with the Part A of this Annex, to prevent accidental spillage, leakage or unauthorised access to it.

2. The following components, parts and materials shall be removed from end-of-life vehicles:

- (a) airbags, liquefied petroleum gas (LPG) tanks, compressed natural gas (CNG) tanks, hydrogen tanks and any other potentially explosive parts and components shall be neutralised;
- (b) air conditionings systems and refrigerants shall be treated in accordance with Regulation (EU) No 517/2014;
- (c) components identified as containing mercury, shall be separated during treatment into an identifiable stream, which shall be safely immobilised and disposed in accordance with Article 17 of Directive 2008/98/EC;
- (d) materials containing substances referred to in Article 5(2), which need to be labelled as laid down in Annex III, shall be separated during treatment into an identifiable stream, which shall be safely immobilised and disposed in accordance with Article 17 of Directive 2008/98/EC.

All parts, components and materials collected during the depollution shall be stored in designated containers. The collection containers shall be labelled to indicate the components, parts and materials that are contained within them and stored in a secure location in compliance with Part A, in order to prevent accidental spillage, leakage or unauthorised access to it.

3. The following information on the depollution of the end-of-life vehicles shall be recorded:

- (a) date and time of depollution operations;
- (b) type of depollution operations carried out;
- (c) quantity and nature of depolluted waste, including materials and pollutants removed or neutralized;
- (d) name and contact details of the waste transporter, if applicable;
- (e) contact information of the final disposal site for the waste collected during the depollution process.

## **PART C**

### **MANDATORY REMOVAL OF PARTS AND COMPONENTS FROM END-OF-LIFE VEHICLES**

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

## **PART D**

### **REUSE, REMANUFACTURING AND REFURBISHMENT OF PARTS AND COMPONENTS**

1. Technical evaluation of the removed parts and components:

- (a) For reuse:
    - (i) the part or component is functional;
    - (ii) it is fit to be used, in a readily manner, for its primary purpose it was conceived for.
  - (b) For remanufacturing or refurbishment:
    - (i) the part or component is complete;
    - (ii) an assessment of damage, reduced functionality or performance and repairs needed for restoring the part or component to a state where it is fit to be used;
    - (iii) there is no heavy corrosion.
2. Minimum information to be provided in the labelling of the parts and components:
- (a) name of the component or part;
  - (b) reference to the vehicle identification number (VIN) of the vehicle from which the component or part has been removed; and
  - (c) name, the postal address, indicating a single contact point and e-mail address, a web-address, if applicable, identifying the operator that removed the component or part.

## **PART E**

### **COMPONENTS AND PARTS NOT TO BE REUSED**

1. All airbags including cushions, pyrotechnic actuators, electronic control units and sensors.
2. Emission after-treatment systems (e.g. catalytic converters, particulate filters).
3. Exhaust silencers.
4. Automatic or non-automatic seat belt assemblies, including webbing, buckles, retractors, pyrotechnic actuators.
5. Seats in cases where they incorporate safety belt anchorages and/or airbags.
6. Steering lock assemblies acting on the steering column.
7. Immobilisers, including transponders and electronic control units.

## **PART F**

### **SPECIFIC TREATMENT REQUIREMENTS OF THE REMOVED PARTS, COMPONENTS AND MATERIALS**

1. SLI Batteries shall be treated in accordance with Article 70 of the Regulation (EU) 2023/\*\*\*\*[on batteries and waste batteries].

2. Electric vehicle batteries shall be treated in accordance with Article 70 of the Regulation (EU) 2023/\*\*\*\*[on batteries and waste batteries].
3. Permanent magnet materials containing neodymium, dysprosium or praseodymium as defined (Neodymium-Iron-Boron (NdFeB), as defined in Article 27 Regulation [proposal for Regulation on CRMs], copper from e-drive motors that are not suitable for reuse, remanufacturing or refurbishment, shall be removed where the process for removal is feasible to be performed by authorised treatment facilities without excessive cost. In case of lack of technical progress to recycle NdFeB permanent magnet materials, the e-drive motors or its permanent magnet material containing parts shall be stock-piled and labelled in accordance with Article 27(1), point (b), of Regulation [proposal for Regulation on CRMs].
4. Removed electronic components and parts, which are not subject for reuse, remanufacturing or refurbishment and non-ferrous fractions, including shredded printed circuit boards, shall be treated by treatment operators as specified in Article 8(3) of Directive 2012/19/EU.
5. Removed glass from the end-of-life vehicle, as a minimum, shall be recycled into container glass, fibre glass, or equivalent quality.

## **PART G**

### **INFORMATION TO BE PROVIDED FOR EXEMPTIONS FROM THE OBLIGATION TO REMOVE OF PARTS, COMPONENTS AND MATERIALS FROM END-OF-LIFE VEHICLES**

1. A copy of the written contract between the authorised treatment facility and the facility which performs the shredding operations and uses post-shredding technologies, including the specifications on the quality of the secondary materials and the technical specification followed in processing treatment fractions from end-of-life vehicles.
2. A report of the sample analysis on the quality and quantity of the treatment fractions (output) for a representative treatment configuration provided by an independent body.
3. Any other type of documentation demonstrating that the quality and quantity of the materials from the end-of-life vehicles is not lower compared to the quality and quantity of components and parts that were separately removed prior-shredding in accordance with the requirements laid down in Part C.

## **ANNEX VIII**

### **INFORMATION FOR REGISTRATION IN THE REGISTER OF PRODUCERS**

1. Information to be submitted by the producer or its appointed representative for extended producer responsibility:
  - (a) name, and brand names if available, under which the producer operates in the Member State and address of the producer, including postal code and place, street and number, country, telephone number, if any, web address and e-mail address, indicating a single contact point;
  - (b) national identification code of the producer, including its trade register number or equivalent official registration number and the European or national tax identification number;
  - (c) categories of vehicles that the producer intends to make available on the market for the first time within the territory of a Member State;
  - (d) information on how the producer meets its responsibilities laid down in Article 16, including information in written form on the following:
    - (i) the measures put in place by the producer to fulfil the producer responsibility obligations laid down in Articles 16 and 20;
    - (ii) the measures put in place to fulfil the collection obligation laid down in Article 23 with regard to the amount of vehicles the producer makes available on the market in the Member State; and
    - (iii) the system to ensure that the data reported to the competent authorities are reliable;
  - (e) a statement by the producer or, where applicable, producer's appointed representative for the extended producer responsibility or producer responsibility organisation, stating that the information provided is true.
2. Information to be provided, in addition to the information listed in point 1, where a producer responsibility organisation is appointed to carry out the extended producer responsibility obligations:
  - (a) the name and contact details, including postal code and place, street and number, country, telephone number, web and e-mail address and the national identification code of the producer responsibility organisation;
  - (b) the trade register number or an equivalent official registration number and the European or national tax identification number of the producer responsibility organisation; and
  - (c) the represented producer's mandate.
3. Information to be provided, in addition to the information listed in point 1 by the producer responsibility organisation in the case of an authorisation in accordance with Article 18(1):
  - (a) the names and contact details, including postal codes and places, streets and numbers, countries, telephone numbers, web addresses and e-mail addresses of the producers represented;
  - (b) the mandate of each represented producer, where applicable;



- (c) where the producer responsibility organisation represents more than one producer, it shall indicate separately how each one of the represented producers meets the responsibilities set out in Article 16.
- 4. Where obligations under Article 16 are fulfilled on a producer's behalf by an appointed representative for the extended producer responsibility that represents more than one producer, that representative shall, in addition to the information listed in point 1, provide the name and the contact details for each of the represented producers separately.

## **ANNEX IX**

### **INFORMATION TO BE INCLUDED IN THE CERTIFICATE OF DESTRUCTION**

1. Name, address, and registration or identification number of the establishment or undertaking issuing the certificate, where such number is provided in the national registration or identification system.
2. Name and address of competent authority which has issued a permit (in accordance with Article 14 of the Regulation) for the establishment or undertaking issuing the certificate of destruction.
3. Date of issue of the certificate of destruction.
4. Vehicle nationality mark and registration number (registration document, where such document exists on paper, or statement by the authorised treatment facility issuing the certificate that the registration document has been destroyed<sup>(2)</sup> to be attached to the certificate).
5. Class of vehicle, brand and model.
6. Vehicle identification number (chassis).
7. Name, address, nationality of the holder or owner of the vehicle delivered.

## **ANNEX X**

### **AMENDMENTS TO REGULATION (EU) 2018/858**

8. Annex II to Regulation (EU) 2018/858 shall be amended as follows:

(1) In Part I, entry G13 is replaced by the following:

G13	Circularity	Regulation [PO enter the number of this Regulation]	X		X									
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(2) Appendix 1 is amended as follows:

(a) in table 1, entry G13 is replaced by the following:

G13	Circularity	Regulation [PO enter the number of this Regulation]	n/a However, Annex VII Part E on prohibition of reuse of the specified component parts shall apply.
-----	-------------	---	--

(b) in table 2, entry G13 is replaced by the following:

G13	Circularity	Regulation [PO enter the number of this Regulation]	n/a However, Annex VII Part E on prohibition of reuse of the specified component parts shall apply.
-----	-------------	---	--

(3) in Appendix 2, point 4 is amended as follows:

(a) in the table ‘Part I: Vehicles belonging to category M1’, entry 59 is replaced by the following:

59	Regulation [PO enter the number of this Regulation] (Circularity)	The requirements of that Regulation shall not apply.
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(b) in the table ‘Part II: Vehicles belonging to category N1’, entry 59 is replaced by the following:

59	Regulation [PO enter the number of this Regulation] (Circularity)	The requirements of that Regulation shall not apply.
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’;

(4) Part III is amended as follows:

(a) In Appendix 1, entry 59 is replaced by the following:

‘;

59	Circularity	Regulation [PO enter the number of this Regulation]	N/A	N/A		
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’;

(b) in Appendix 2, entry 59 is replaced by the following:

‘;

59	Circularity	Regulation [PO enter the number of this Regulation]	N/A				N/A					
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’;

(c) in Appendix 3, entry 59 is replaced by the following:

‘

59	Circularity	Regulation [PO enter the number of this Regulation]	N/A
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’;

(d) in Appendix 4, entry 59 is replaced by the following:

‘

59	Circularity	Regulation [PO enter the number of this Regulation]	N/A				N/A					
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’.

**ANNEX XI**  
**CORRELATION TABLE**

1. Directive 2000/53/EC

<i>Directive 2000/53/EC</i>	<i>This Regulation</i>
Article 1	Article 1
Article 2(1)	Article 3(1) point (1)
Article 2(2)	Article 3(1) point (2)
Article 2(3)	Article 3(1) point (22)
Article 2(4)	Article 3(2) point (a)
Article 2(5)	Article 3(1) point (16)
Article 2(6)	Article 3(1) point (5)
Article 2(7)	Article 3(2) point (a)
Article 2(8)	Article 3(2) point (a)
Article 2(9)	Article 3(2) point (a)
Article 2(10)	Article 3(1) point (35)
Article 2(11)	-
Article 2(11) point (a)	-
Article 2(11) point (b)	-
Article 2(11) point (c)	-
Article 2(11) point (d)	-
Article 2(12)	-
Article 2(13)	-
Article 3(1)	Article 2(1) point (a)
Article 3(2)	-
Article 3(3)	-
Article 3(4)	Article 2(2) point (a) and paragraph (5)
Article 3(5)	Article 2(1) point (c) and paragraph (5) and

<i>Directive 2000/53/EC</i>	<i>This Regulation</i>
	(6)
Article 4(1) point (a)	Article 5(1)
Article 4(1) point (b)	Article 7(1)
Article 4(1) point (c)	Article 6
Article 4(2) point (a)	Article 5(2) and (3)
Article 4(2) point (b)(i)	Article 5(4)(a)
Article 4(2) point (b)(ii)	Article 5(4)(b)
Article 4(2) point (b)(iii)	Article 5(4)(c)
Article 4(2) point (b)(iv)	Article 5(4)(d)
Article 4(2) point (c)	--
Article 5(1), first tiret	Article 23(1) and (2) point (c)
Article 5(1), second tiret	Article 23(2) point (b)
Article 5(2)	Article 23(4) sub-paragraphs 1 and 2 point (c)
Article 5(3), first subparagraph	Article 25
Article 5(3), second subparagraph	--
Article 5(3), third subparagraph	--
Article 5(4), first subparagraph	Article 24(2)
Article 5(4), second subparagraph	Article 16 and 20(1)(a)
Article 5(4), third subparagraph	Article 24(2)
Article 5(4), fourth subparagraph	--
Article 5(5), first subparagraph	Article 25(1) and Annex IX
Article 5(5), second subparagraph	Article 25(5)
Article 6(1)	Article 27 (1) and (3)
Article 6(2), first subparagraph	Article 15(1)
Article 6(2), second subparagraph	--

<i>Directive 2000/53/EC</i>	<i>This Regulation</i>
Article 6(3), first subparagraph	Article 30(1) and Annex VII Part C
Article 6(3), second subparagraph	Article 29(1)
Article 6(4)	Article 15(2)
Article 6(5)	Article 27(5)
Article 6(6)	Article 27(4)
Article 7(1)	Article 33(1)
Article 7(2) point (a)	--
Article 7(2) point (b)	Article 34(1) points (a) and (b)
Article 7(2), second subparagraph	--
Article 7(2), third subparagraph	Article 49(5)
Article 7(3)	--
Article 7(4)	--
Article 7(5)	--
Article 8(1)	Article 12(1)
Article 8(2)	Article 12(3)
Article 8(3)	Article 11(1)
Article 8(4)	Article 11(1) and (2)
Article 9(1a), first subparagraph	Article 49(1) point (j)
Article 9(1a), second subparagraph	Article 49(1) second sub-paragraph
Article 9(1a), third subparagraph	Article 49(1) third sub-paragraph
Article 9(1b)	Article 49(2)
Article 9(1c)	--
Article 9(1d)	Article 49(5)
Article 9(2)	Article 9
Article 9a(1)	Article 50(1)

<i>Directive 2000/53/EC</i>	<i>This Regulation</i>
Article 9a(2)	Article 50(2)
Article 9a(3)	Article 50(3)
Article 9a(4)	Article 50(4)
Article 9a(5)	Article 50(5)
Article 9a(6)	Article 50(6)
Article 10(1)	--
Article 10(2)	--
Article 10(3)	--
Article 10a	Article 55
Article 11(1)	Article 51(1)
Article 11(2)	Article 51(2)
Article 12(1)	Article 57(1)
Article 12(2)	Article 57(2)
Article 12(3)	--
Article 13	--
Annex I	Annex VII
Annex II	Annex III



## 2. Directive 2005/64/EC

<i>Directive 2005/64/EC</i>	<i>This Regulation</i>
Article 1, first subparagraph	Article 1
Article 1, second subparagraph	--
Article 2	Article 2(1) point (a)
Article 3 point (a)	Article 2(2) point (a)
Article 3 point (b)	Article 2(2) point (b)
Article 3 point (c)	Article 2(2) point (c)
Article 4(1)	Article 3(1) point (1)
Article 4(2)	Article 3(2) point (b)
Article 4(3)	Article 3(1) point (3)
Article 4(4)	Article 3(1) point (2)
Article 4(5)	Annex II
Article 4(6)	Article 3(2) point (b) in combination with Article 3(1) point (1)
Article 4(7)	Article 3(2) point (b)
Article 4(8)	Article 3(2) point (b)
Article 4(9)	Article 3(1) point (5)
Article 4(10)	Article 3(2) point (a)
Article 4(11)	--
Article 4(12)	Article 3(2) point (a)
Article 4(13)	Article 3(1) point (4)
Article 4(14)	Article 3(1) point (6)
Article 4(15)	Article 3(1) point (7)
Article 4(16)	--
Article 4(17)	--

Article 4(18)	Article 9
Article 4(19)	--
Article 4(20)	--
Article 5(1)	--
Article 5(2)	Article 8(1) second sentence
Article 5(3)	Article 8(4)
Article 5(4)	Article 24
Article 6(1)	Article 4(2)
Article 6(2), second subparagraph	Article 5(8)
Article 6(3)	Article 11
Article 6(4)	--
Article 6(5)	--
Article 6(6)	--
Article 6(7)	--
Article 6(8)	--
Article 7 point (a)	Annex VII Part E
Article 7 point (b)	Annex VII Part E
Article 8	--
Article 9	--
Article 10(1)	--
Article 10(2)	--
Article 10(3)	--
Article 10(3)	--
Article 10(4)	--
Article 11(1)	--
Article 11(2)	--

Article 12	--
Article 13	--
Annex I	Article 4 (1)
Annex II	--
Annex III	--
Annex VII	--
Annex V	Annex VII Part E
Annex VI	--