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Feedback from Right to Repair Europe on the JRC Study for the guidelines on removability and replaceability of portable and LMT batteries - 2nd draft

The [Right to Repair Europe](#) coalition represents over 100 organisations from 21 European countries. It represents environmental NGOs and repair actors such as community repair groups, social economy actors, spare parts distributors, self-repairers, repair and refurbishing businesses, and any citizen who would like to advocate for their right to repair. This is a rapidly growing movement, and its objective to make repair affordable, accessible and mainstream is aligned with the objectives of the European Green Deal and the Circular Economy Action plan. Browse member organisations by country [here](#).

[ECOS](#) is an international NGO with a network of members and experts advocating for environmentally friendly technical standards, policies and laws. We ensure the environmental voice is heard when they are developed and drive change by providing expertise to policymakers and industry players, leading to the implementation of strong environmental principles. Browse member organisations by country [here](#).

This feedback concerns the second draft of the JRC's report *Support for the new batteries regulatory framework: technical input for the Guidelines on removability and replaceability of portable and light Means of Transport batteries*, shared with stakeholders on October 16th, 2023 and discussed during a stakeholder meeting held on October 20th. Our comments on the first draft shared in May 2023 can be found [here](#).

The [Right to Repair Europe](#) coalition and [ECOS](#) applaud the intent and effort to clarify the precise meaning of several aspects of battery replaceability in *Regulation (EU) 2023/1542 of the European Parliament and of the Council concerning batteries and waste batteries*.

However, we are **very concerned about the shift in interpretation regarding the interaction between the Batteries Regulation and the Ecodesign Regulation** for smartphones, resulting in less ambitious requirements for the user-replaceability of batteries.

We also feel that the guidelines insufficiently reflect the **Batteries Regulation's intent to distinguish between tools available to end-users and those available to professionals**, and that further refinement is needed regarding the **definition of compatible batteries** as well as the **specifications for software not impeding the use of compatible batteries**.

Below, we present our comments and suggestions in more detail, with a view to improving the relevance and effectiveness of the guidance to the Regulation.

Interaction between Ecodesign and Batteries regulation

We are quite concerned to see a **shift in interpretation** compared to the first draft of the report, regarding the interaction between the Ecodesign requirements for smartphones and tablets laid down in Regulation (EU) 2023/1670 and the removability requirements in Regulation (EU) 2023/1542 on batteries.

According to the previous draft, the **requirements laid down in the Ecodesign and Batteries Regulations were considered to be both applicable** after the entry into force of both regulations, resulting in a requirement for *all* batteries to be removable by end users. In our [feedback to the first report](#), we welcomed that Ecodesign requirements would thus not serve to weaken the provisions for battery removability, as it would not be in the spirit of the law to have specific and anterior regulations limit the ambition of a horizontal measure, and we urged the Commission and the JRC to preserve the ambition as initially worded in spite of pressure from manufacturers to have Ecodesign requirements undercut the requirements of the Batteries Regulation.

In this second draft however, the Ecodesign **exemption from requirements for user-replaceable batteries** in the case of durable batteries in ingress-protected phones is considered to take precedence over the requirements of the Batteries Regulation, with the report stating that the durability requirement for non-removable batteries ensures a higher level of protection of the environment and human health as per art. 11.1 of the Batteries Regulation and arguing that “there are no negative effects (...) because the batteries are still replaceable in all cases.”

We find this reasoning to be severely flawed. Art. 11.1 of the Batteries Regulation states that its removability and replaceability requirements “shall be without prejudice to any specific provisions ensuring a higher level of protection of the environment and human health *relating to the removability and replaceability of portable batteries by end-users* laid down in any Union law on electrical and electronic equipment” (emphasis added). While one might argue that the Ecodesign Regulation’s durability requirement for non-removable batteries might have certain environmental benefits, it is **clearly not the case that exempting any type of batteries from requirements for end-user replaceability offers a higher level of protection *relating to the removability and replaceability of portable batteries by end-users*** - in fact it does precisely the opposite.

We therefore **urge the JRC and the Commission to revert to their original position and preserve the ambition as intended in the Regulation.**

Appliances designed to operate in a wet environment

Having previously asked for additional clarifications, we **applaud the addition of guidance** clarifying that the partial derogation related to user-replaceable batteries for appliances designed to operate primarily in a wet environment (‘washable or rinseable’), requires the **fulfilment of a specific set of additional criteria** summarised as (1) ‘specifically designed’, (2) ‘primary environment’, (3) ‘compromising safety’ and (4) ‘no way to redesign’.

We invite the JRC and the Commission to **preserve these rigorous criteria** and observe the utmost rigour when defining and illustrating them. Specifically:

- During the stakeholder meeting, it was clarified by the JRC team that an **IP rating** corresponding to protection from splashing water or immersion **does not in and of itself qualify any product for an exemption**. The specification of IP classes according to IEC 60529 merely helps to understand the meaning of such ‘wet environments’. Regardless of whether a product carries an IP rating or not, in order to qualify for an exemption for the requirement of user-replaceable batteries, the manufacturer is required to demonstrate the applicability of all four of the above mentioned criteria (‘specifically designed’, ‘primary environment’, ‘compromising safety’ and ‘no way to redesign’). We would welcome the inclusion of this clarification in the final written guidance so as to avoid any confusion about the exemption of IP rated products.
- Regarding the fourth criterion (‘no way to redesign’), we would like to challenge the views expressed by several industry representatives in the stakeholder meeting, that this condition should merely be taken to mean that redesign might affect the cost or performance of the product. Recital 39 of the Batteries Regulation states that “this derogation should *only* apply when it is not *possible*, by way of redesign of the appliance, to ensure the safety of the end-user and the safe continued use of the appliance after the end-user has correctly followed the instructions to remove and replace the battery” (emphasis added). **The exemption is very precisely worded in the Regulation, without allowing any room for other considerations including production cost.** Therefore, in order to remain within the remit of their mandate, the JRC and the Commission **should not add any such additional considerations to the requirements for the exemption**. Adding such considerations would be a very dangerous precedent indeed. As it is usually the case that observing regulations is more costly than not doing so, accepting costs as an excuse for sidestepping regulations would open a genuine Pandora’s box.

Insofar as the ‘no way to redesign’ criterion were to need further clarification, we suggest to simply refer it **not being possible ‘with the current state of the art’**, meaning that no technology currently exists that would allow the product to satisfy the criteria for user-replaceable batteries. As such, a claim to the ‘no way to redesign’ criterion can be indisputably refuted not just by **the existence of a product of a similar type with user-replaceable batteries**, but even by the **existence of technologies used in other products** that would allow for the design of the applicable product with user-replaceable batteries.
- Within the principle-based approach that is applied in this policy process, the use of examples can easily lead to confusion. Any example of a product merely satisfying one of the abovementioned criteria can easily be misread as an endorsement for an exemption of the product in question. We would therefore suggest that whenever a concrete product is used to illustrate compliance with one of the criteria, actual or potential failure to meet any of the other criteria be explicitly mentioned. For instance, we have conclusively demonstrated in our feedback to the previous draft guidelines that electric toothbrushes, whether they are powered by batteries of general use or any other type of battery, can not satisfy the ‘no way to redesign’ criterion since there does exist a version with user-replaceable batteries.

- We suggest the **inclusion of all of the above mentioned criteria in the overview table as well as in the flowchart** illustrating the specification of exemptions, as in the example below:

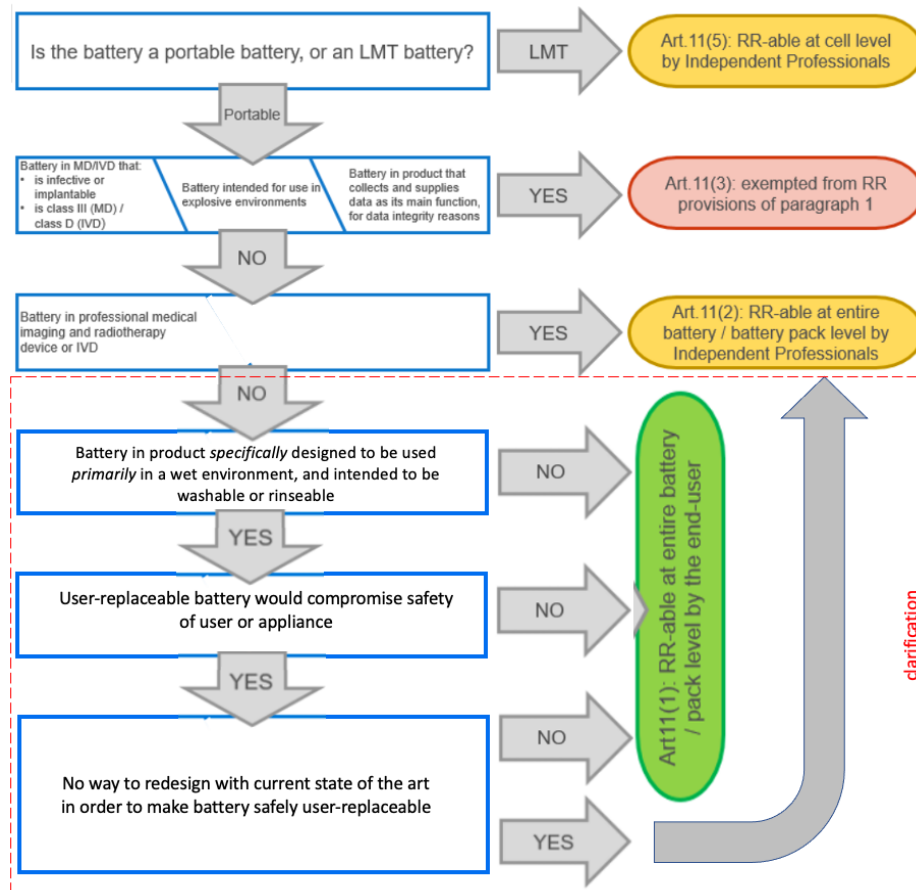


Fig. 1: Suggested clarification of the flowchart in the guidance document.

Compatible batteries

Following requests by several stakeholders, the second draft of the guidelines explores in slightly more detail the concept of compatible batteries as referenced in art. 11.6 of the Batteries Regulation. However, we feel that this could be specified more clearly and that some of the current wording is in fact counterproductive.

We feel that it is essential for any guideline to safeguard the Regulation's requirement to ensure that **batteries can be replaced with any compatible battery, not just an OEM battery**,¹ as well as its intention to allow the user of the product or, where applicable, a competent technician, to **select a compatible battery among those offered for sale by a variety of producers** and use it to replace a faulty or aged battery.

¹ By OEM or Original Equipment Manufacturer, we refer to the producer of the product containing a portable or light means of transportation battery.

Safety concerns were highlighted by several stakeholders at both the previous and last stakeholder meeting. While we understand the relevance of the reference to safety as a criterion for compatibility, we feel that the **applicable criteria to evaluate a battery's compatibility with regards to safety should be defined more clearly in order not to render art. 11.6 of the Batteries Regulation inoperable.**

We would therefore like to reiterate the suggestion from our [feedback on the previous draft guidelines](#) that the manufacturer should communicate in the user's manual the **technical specifications (such as capacity, internal resistance, temperature range, charge and discharge thresholds etc.) that compatible batteries need to meet** in order to be safe, with reference to international standards.

This is in line with the wording used in EN50614 § 5.7.2 to specify suitable replacement parts to be used for preparing for reuse:

“the preparing for re-use operator shall ensure that components of WEEE are sourced only with:

- a like-for-like REEE component recovered which complies with the specifications of the manufacturer for the specific equipment and that has been assessed for preparing for re-use;

- a new or used manufacturer's spare-part / component which complies with the specifications of the manufacturer for the specific equipment, or

- an after sales spare-part / component that complies with the specifications of the manufacturer for the specific equipment manufactured by a third party other than the manufacturer.

(...) Any replacement components shall comply with all of the legal requirements in force at the time when the EEE was placed on the market.”

Concerning the reference to compatible batteries “allowing the device to operate **seamlessly**”, we agree with the view expressed by several stakeholders that this reference **should be deleted**. In fact, given that the **concept of compatibility is used in the Regulation as a prerequisite rather than a requirement**, we feel that this wording implies a **circular reasoning** in conjunction with the requirement put forward in article 11.8 of the regulation (“software shall not be used to impede the replacement of a portable battery or LMT battery with another compatible battery or key components”) and thus creates a **potential loophole**.

Specifically, if software were to be used by a manufacturer to keep an aftermarket or harvested battery from functioning seamlessly with the device, the current wording of the guidelines could be taken to mean that this would make the battery in question by definition not compatible, and therefore not covered by the prohibition of software blocks. As such, **the proposed definition of ‘compatible’ with reference to seamless operation would de facto make article 11.8 of the regulation null and void.**

Software limitations

The second draft of the guidelines mentions that “*notifications [...] can be provided, as long as such notifications do not affect any functionality of the device, or affect the user experience*”. Industry stakeholders highlighted the difficulty of not affecting user experience and suggested replacing ‘affecting’ by ‘impeding’.

On the one hand, it is indeed hard to imagine notifications not having *any effect at all* on user experience. On the other hand, the term ‘impeding’ does not adequately reflect the adverse effects on user experience potentially created by repetitive and obnoxious notifications. Hence we feel it would be expedient to **define what it means for notifications to substantially affect user experience**. We also believe the guidelines should not focus solely on the notifications, but **take into account any way in which user experience or functionalities may be affected** by serialisation.

We would therefore like to **suggest the following wording**:

“Notifications informing the user of the presence of a non-original battery may be provided as long as they are not false or misleading the consumer into thinking the device will malfunction, and as long as they do not substantially affect the user experience. Repetitive notifications or notifications that cannot be permanently dismissed by the user with a single action, are considered to substantially affect user experience. Software should not be used to affect the functionalities of the device or deprive the user from essential information about the performance of the battery. In all cases, repair with a compatible battery should not be impeded.”

We believe this clarification to be essential for the application of the Regulation according to its intent. Serialisation of spare parts is not new, however the way it is used to impede third party repair and affect battery functionality is. This is why art 11.8 of the Regulation is quite novel and requires clear guidance on how the provision should be enforced.

Parts pairing can **affect user experience in multiple ways**.

- Certain **functionalities can be restricted immediately** after the installation of a compatible part. [This has already been the case for years](#) with iPhones, which are no longer displaying the first battery use and the number of charge cycles after an aftermarket battery is installed. This makes it impossible for the user to monitor his or her battery use and plan battery replacement accordingly. In other words, software is impeding a compatible battery from providing the same performance as the original one.

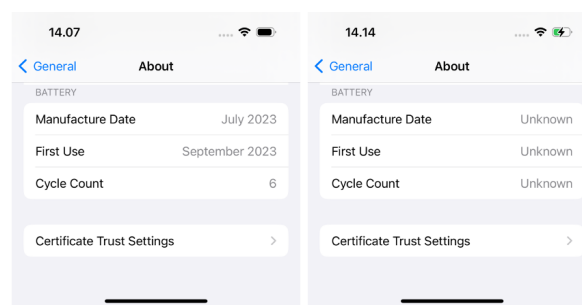


Fig. 2: iPhone 15 displaying the number of times it charged an original battery (left) but not providing the same information about a compatible battery.

- However, **problems may also occur at a later point in time**. For instance, there are increasing reports of [iPhones \(from model 11 upwards\) with compatible batteries not being able to update 'over the air'](#), and displaying a message stating “Unable to Verify Update: iOS 16.6 failed verification because you are no longer connected to the Internet” in spite of the device actually having internet access. In this case, the update is still possible via iTunes when connecting the iPhone to a computer, but not over the air - however there is no way for the user to know this without extensive testing. The problem has been independently confirmed by several professionals active in repair and refurbishment in the EU. It occurs in a fairly unpredictable manner, but it **only affects iPhones after replacement of the battery with a compatible battery**.

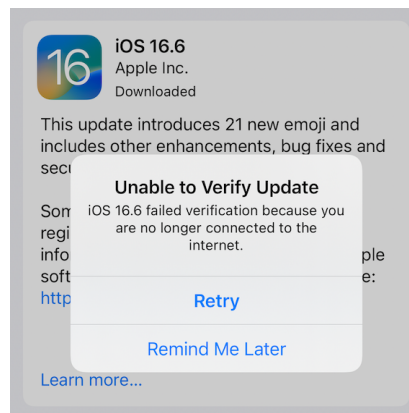


Fig. 3: Software update error displayed by an iPhone fitted with a compatible battery.

The fact that such problems may occur at a random point in time after the battery replacement, makes it impossible for independent repairers and refurbishers to ensure customer satisfaction when using compatible batteries. This is an excellent example of how software can affect the user experience after battery replacement **to the extent that it can be considered to practically impede replacement** of the battery with compatible batteries. Clarification is therefore needed to specify that this sort of events constitute a violation of art. 11.8 of the Regulation.

Definition of independent professionals (editorial comment)

The second draft of the guidelines adds a new element to the definition of professional repairers, in that they conduct their business ‘on commercial premises’. This wording is somewhat ambiguous, since the plural ‘premises’ could refer both to the rationale (“on a commercial basis”) as to the location of the activity (“located on the premises”). Used in the latter sense, the qualification would be overly restrictive, since repairs may also take place elsewhere (for instance goods may also be repaired in the consumer’s home). If, as we assume, the former sense is intended, we suggest avoiding confusion by using wording such as “as part of a commercial activity”.

Information for battery replacement

The second draft of the guidelines is unchanged with regards to guidance on the provision of information for battery replacement. It gives an overview of relevant information, but **does not specify the means by which such communication should be communicated**. Especially taking into account the example already given in our [comments to the previous draft guidelines](#), of a replaceable battery that is described as non-replaceable in the user's manual², we think it is essential to specify that the requirement for "products to be accompanied with instructions and safety information on the use, removal and replacement of the batteries" be further specified to **require inclusion of instructions for battery replacement in the user's manual**. As a bare minimum, any statements in the user's manual or other documentation misrepresenting the replaceability of the battery by the user or by a professional repairer should be explicitly identified as contradictory to the Regulation.

As regards the duration of availability, during the consultation meeting, an industry member expressed concern about the requirement for information to be made permanently available, and suggested that this should be limited to the lifetime of the product. Apart from the **methodological difficulty of ascertaining the maximum lifespan** of any battery-operated product for which battery replaceability is ensured, we would like to highlight that the **wording of the Regulation is clear and unambiguous**: "Those instructions and that safety information shall be made available permanently online, on a publicly available website, in an easily understandable way for end-users." We therefore **urge the JRC and the Commission not to weaken the regulatory text by adding limitations not foreseen by the legislator**.

Tools for battery replacement

Regarding tools, fasteners and joining techniques, we would like to reiterate that the current **identical specification of tools for replacement by the end-user and by a professional** is inconsistent, lacking in ambition and **not in line with the Regulation's intent**.

The Batteries Regulation excludes both the use of specialised and proprietary tools for user-replaceable batteries (with the latter concept being defined in EN45554:2020, but not the former). It does not formulate any requirements related to allowable tools for replacement by professionals. Hence there is a need to further clarify the requirement for disassemblability by a user or a professional, in terms of the required tools.

² See the description of the user-removable battery in the [Oral B iO](#) toothbrush in our [previous feedback](#) (p. 3). The [user's manual](#) however states (p. 6): "This appliance contains batteries that are non-replaceable. (...) Opening the handle will destroy the appliance and invalidate the warranty".

The proposed JRC guidance document **does not clarify the meaning of non-specialised tools**. It merely specifies commercially available tools for both repair scenarios, with the additional exclusion of the use of proprietary tools for batteries replaceable by independent professionals. However, given that proprietary tools are already excluded from the definition of commercially available tools in EN45554, the latter specification is redundant.

This means that, according to the current guidelines, the **specification of tools for user-replaceable batteries is the same as the specification for replaceability by professional repairers**. This is not reasonable, since end-users generally have access to a less diversified set of tools than professional repairers.

Moreover, the current lack of specification of a 'specialised tool' could easily give rise to a situation where, in order to replace a battery, an end-user would have to purchase one or more tools that are in fact specialised (for instance a battery terminal puller, terminal crimping pliers, or a specialised set of screwdrivers), but are not identified as such for lack of a definition. The cost of these tools could easily exceed the cost of the replacement battery.

Excluding proprietary tools is not a sufficient specification to exclude specialised tools as intended by the Batteries Regulation - a fact which is clearly demonstrated by the Regulation mentioning both separately.

Therefore, there is a **need to clarify what the term 'non-specialised' tools means**. As mentioned in the general considerations section of the draft guidelines, a battery can be considered replaceable if it is removable with tools commonly available to the end-user. This needs to be differentiated from simply commercially available tools, given that these are complementary requirements in the Regulation. Furthermore, in order to offer precise guidance that is coherent with other policy tools, it seems advisable to refer to a concept that is already established in standardisation or regulations.

Considering that 'product group specific tools', which is the closest equivalent for the Regulation's wording of 'specialised tools', are the next level down from 'basic tools' in EN45554 and such specialised tools should be excluded for user-replaceability according to the Regulation, the specification of **'basic tools' according to EN45554 would be the most appropriate specification for non-specialised tools to ensure replaceability by end-users**.

In other words, we suggest to provide as clarification that the Battery Regulation's wording 'removal without specialised tools' should be understood as removal 'with no tool, a tool or set of tools that is supplied with the product or spare part, or basic tools'. This would also **ensure consistency with recent Ecodesign Regulations, where the 'basic tools' specification is systematically used for user-replaceable parts**.

Battery availability

Regarding the availability of spare batteries for a reasonable and non-discriminatory price, we would like to draw attention once more to the need for more guidance on the interpretation of this requirement. We **encourage the JRC to propose criteria for reasonable end-user battery prices based on proportionality to product price**. Such criteria could refer to the price of the most expensive spare part, the average price of spare parts, or both, and should make sure that parts bundling practices do not create a backdoor for part prices exceeding the set threshold.

In addition to the price of spare batteries, we suggest that **guidance is also provided on the delivery time of spare parts**. In order to ensure consistency with Ecodesign regulations, we suggest that manufacturers, importers or authorised representatives shall ensure the delivery of the spare batteries within 5 working days after having received the order.

For more details on this subject, we refer to the comments provided in our [feedback to the previous draft guidelines](#).

Contact:

Cristina Ganapini, Right to Repair Europe coordinator: info@repair.eu
Mathieu Rama, ECOS: mathieu.rama@ecostandard.org