



RIGHT TO REPAIR



Feedback from Right to Repair Europe on the proposed Ecodesign and Energy labelling regulations for vacuum cleaners

The [Right to Repair Europe](#) coalition represents over 130 organisations from 23 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](#).

Following the online stakeholder meeting held on December 4, 2023, in which the Commission presented their draft for a vacuum cleaner repair score, Right to Repair Europe members welcome the opportunity to comment on the proposal. With main contributions from members iFixit and Halte à l'Obsolescence Programmée (HOP) which is ECOS member, we would like to provide the Commission with the following comments:

Ecodesign requirements

Spare parts availability

Selected parts and definitions

The proposed requirements concern the availability of power cord roll-up, motor, carbon brushes (if applicable), hose, nozzles, filters, bags (if applicable), cable drum and tube extensions. The repair score, on the other hand, considers the ease of replacement (in terms of disassembly depth, tools, fasteners etc.) of the suction motor, nozzle, filters, dust receptacle, electromechanical power button, power supply systems (power cord, power cord mechanism and battery) and extension systems (tube extension and primary hose).

We find it **hard to justify that another set of parts would be considered for spare parts availability and ease of disassembly**. It would seem much more logical to consider the same priority parts for both. We therefore suggest **harmonizing the parts lists for minimum requirements and repair score**, adding the electromechanical power button to the list of parts for which availability is required and considering carbon brushes for the repair score.

In addition, we would strongly suggest **requiring the availability of the following parts**:

- **Printed circuit boards.** Many vacuum cleaners have circuit boards that control the motor speed, which are prone to failure. These should preferably be replaceable separately; alternatively they could be included in the definition of “Electromechanical power button” (see below)
- **Wheels.** These wheels (or more precisely their hubs which are often integral with the wheel) are often prone to failure.¹

Secondly, in both the proposed Ecodesign and Energy Labelling regulations, a **definition is lacking** for many of the relevant parts. No parts are defined in art. 2 of the proposed Ecodesign regulation and only primary hose and secondary hose are defined in Annex I. The only part defined in Annex I of the proposed Ecolabelling regulation is the dust receptacle; in addition a clarification of the meaning of power supply systems is offered between brackets within the list of parts under Annex IV, §9.

As a consequence, the **precise meaning of some of the part descriptions is not clear**; for instance, it is unclear if a distinction should be made between motor and suction motor (and whether these would include the suction turbine), or between power cord roll-up, cable drum and power supply systems - and if so what the difference would be.

We recommend the inclusion of the definitions for each of the parts (as discussed we suggest considering the same parts in both regulations) in Annex I of both the Ecodesign and Ecolabelling regulation.

In addition, when defining said components, it is important to specify:

- that the **‘(Suction) Motor’ part comprises** not only the electrical motor itself (either brushed or brushless) but **also the turbine and bearings**, which may or may not be combined into a motor-turbine assembly.
- that the **‘Power Supply Systems’ part comprises all parts of the power cord rewind mechanism** (including rewind spring, locking pawl etc.)
- that the **‘Electromechanical power button’ part comprises any circuit boards** (unless these are listed as separate priority arts, cf. supra).

Duration of availability

The proposed Ecodesign regulation requires the availability to professional repairers of certain spare parts, including the motor for a minimum period of 5 years after placing the last unit of the model on the market. Other parts such as the cable drum and tube extensions need to be made available for 10 years to repairers and consumers alike.

We **strongly support a period of at least 10 years for the availability of parts**. However, we think it makes little sense to limit this requirement to a number of parts, particularly excluding the motor. According to the Open Repair Alliance², **58% of vacuum cleaners brought in for repair at community initiatives were 6 years old** or older and the motor was the second most frequent part to fail.

¹ Wheels were also identified as a priority parts for vacuum cleaners in Ellen Bracquené e.a., *Repairability criteria for energy related products: Study in the BeNeLux context to evaluate the options to extend the product life time. Final Report* (Leuven, 2018) p. 84.

² See <https://openrepair.org/open-data/insights/vacuum-cleaners/>. Ca. 42% of vacuum cleaners brought in for repair were less than 6 years old, 33% were between 6 and 10 years old, 10% were 11-15 years old, another 10% were 16-20 years old and a final 5% were > 20 years old.

Therefore, if manufacturers only have to make frequently failing parts such as motors available for 5 years, it is clear that a huge potential for resource savings will be missed.

In addition, we do not support the distinction between availability to end-users and professionals, which we consider to be arbitrary and discriminatory and for which no rationale has been offered so far, apart from unsubstantiated claims regarding safety issues. Instead, we suggest that spare parts should be made available to both target groups.

As a minimum, we would recommend that commonly failing parts such as cord roll-up, carbon brushes (if applicable), motor and batteries should be made available for at least 10 years, not only to repairers but also to end-users.

Spare parts price

It is well established that the cost of repair is one of the most decisive factors in a consumer's decision to have a product repaired or not. In the absence of requirements for reasonable spare prices, **transparency regarding spare parts prices should at least be ensured, allowing consumers to make informed decisions.** We therefore suggest the mandatory communication of spare parts prices. In line with the ecodesign requirements for smartphones, we suggest the following wording:

“During the period referred to in (...), manufacturers, importers or authorised representatives shall provide indicative pre-tax prices at least in euro for spare parts listed in points (...), including the pre-tax price of fasteners and tools, if supplied with the spare part, on the free access website of the manufacturer, importer or authorised representative.”

Information for consumers

The proposed Ecodesign regulation only requires information to be made available to professional repairers. This is not only particularly unambitious compared to other recent Ecodesign regulations, but also inconsistent with the provision of spare parts to consumers. At the very minimum, information about required maintenance, common failures and their solutions should be made available to consumers, as well as information on the availability of spare parts, repair services etc.

We would propose the inclusion of the following wording adapted from the ecodesign requirements for washing machines:

“The user instructions shall include instructions for the user to perform maintenance operations. Such instructions shall as a minimum include instructions for:

(a) periodic cleaning, including optimal frequency;

(b) periodic checks of filters, including optimal frequency, and procedure;

(c) identification of errors, the meaning of the errors, and the action required, including identification of errors which can be resolved by the consumer and those requiring professional assistance;

(d) how to access professional repair (internet webpages, addresses, contact details);

(e) the minimum period during which the spare parts for the household washing machine or the household washer-dryer are available.”

Energy labelling (Repairability index)

Priority parts

As discussed above, we suggest harmonizing the parts lists for minimum requirements and repair score. At a bare minimum, we would want to include carbon brushes in the list of priority parts considered for the score, but we would also suggest including the wheels. Furthermore, as discussed above, the '(Suction) Motor' part should include the turbine and bearings and the 'Power Supply Systems' part should comprise all parts of the power cord rewind mechanism.

We therefore suggest the following lists of priority parts and weights:

	Current proposal		Right to repair proposal	
	Primary parts	Secondary parts	Primary parts	Secondary parts
Suction motor (including turbine)	19%		15%	
Carbon Brushes	/		5%	
Dust receptacle	18%		15%	
Electromechanical power button	18%		15%	
Circuit boards	/		10%	
Power supply systems (including cable rewind systems)	16%		16%	
Nozzle		9%		6%
Filters		9%		6%
Extension systems		9%		6%
Wheels		/		6%

In case a priority part is not present in the product, the current proposal suggests awarding the maximum score for this part for each criterion. We find that this approach is not technology neutral. Instead, we recommend an adaptive approach to scoring: in case any of the above parts are absent from the product, we suggest increasing the weighting of the other parts proportionally to recalibrate for a total of 100%. This can easily be implemented using a spreadsheet approach. The wording of the proposed legislation could be amended by adding: "In case one of the parts is not present of the product, the score shall subsequently be divided by the sum of the weighting factors for the parts which are present and multiplied by 100", and an example could be added to clarify the calculation.

Parameters

Price of spare parts

As discussed above, the cost of repair is of decisive importance in enabling repair. Therefore, a reparability score that does not take into account the price of spare parts would be ineffective in guiding consumers towards products that have a better chance of being repaired when they fail. Specifically, the French Indice de réparabilité for vacuum cleaners already addresses spare parts price, but would likely be replaced by a European repair score. To avoid losing this essential parameter that has a major bearing on likelihood of repair, it is important that it is addressed in the European repair score.

In the French Repair Index, the spare parts price metric is established by calculating the ratio between, on the one hand, the sum of the pre-tax price of the most expensive priority part and the average of the pre-tax prices of the other priority parts and, on the other hand, the pre-tax price of the model of vacuum cleaner they relate to. We consider that there should be no issue in determining a European level price. Many manufacturers have fixed prices for their parts across Europe and those who do not can be provided with adequate guidance on how an EU level price should be determined from their Member state level prices. We would recommend a population-weighted average.

We propose that the following scoring approach is adopted:

Price ratio	Points
Under 10%	10
Ratio of 11% to 14%	8
Ratio of 15% to 18%	6
Ratio of 19% to 22%	4
Ratio of 23% to 25%	2
Ratio over 25%	0

In order to include the spare parts price criterion, we recommend to adapt the selection of parameters and their weighting as follows:

	Current proposal	Right to repair proposal
Disassembly depth	30%	25%
Fasteners type	20%	15%
Tools type	20%	15%

Spare parts (target group/duration)	15%	15%
Spare parts (price)	/	20%
Repair information	15%	10%

Disassembly depth

The proposed scoring method does not use the same thresholds as the French *Indice de réparabilité* and, based on a cursory analysis of vacuum cleaner scores in France, is unlikely to yield results that are sufficiently differentiating.

We invite the Commission to perform an analysis of the scores of products populating the *Indice de réparabilité* and underpin the proposed thresholds with data on the score distribution for the disassembly depth criterion. In the absence of such data, we propose to use the same thresholds as the French index, as well as to follow the *Indice de réparabilité* in applying different thresholds for the suction motor, which is a separate part that may take more steps to disassemble. We consider it is appropriate to apply stricter thresholds to access to the dust receptacle and battery, which are two essential components in the daily use of the vacuum cleaner.

We recommend to review the disassembly depth criteria as follows:

Number of disassembly steps for primary and secondary parts (except for suction motor and carbon brushes if present) → <i>Dust receptacle, electromechanical power button, power supply systems</i>	Score
DDi ≤ 3	10
DDi = 4	7
DDi = 5	4
DDi ≥ 6	0

Number of disassembly steps for suction motor	Score
DDi ≤ 5	10
6 ≤ DDi ≤ 11	7
12 ≤ DDi ≤ 17	4
DDi ≥ 18	0

Required tools

We think that the current approach to tool types is too lenient, does not take full advantage of the categorization offered by EN 45554, and offers insufficient differentiation between products. In this respect, it stands in stark contrast with the proposed tool scores for smartphones and as such introduces both inconsistency across policies as well as a lack of ambition.

The current proposal awards a maximum score to manufacturers who market products that can be disassembled using specific tools, as long as these are provided with the product or the spare part. This can prove problematic:

- if the tool is supplied with the spare part: correct diagnosis of a faulty part often requires access to the part. Therefore, only having access to the tools once one has ordered the part is putting the cart before the horse and may lead to repairers or consumers ordering the wrong parts, which is detrimental to the desired purpose of resource use reduction. Additionally, some repairs as well as maintenance operations may not require replacement of a part but another operation such as cleaning, which would also require a complete or partial dismantling of the device. In such cases where parts need to be accessed without replacing them, the specific tool would not be accessible.
- if the tool is sold with the appliance at the time of purchase: since the purpose of the regulation is to extend the lifetime of vacuum cleaners, a significant period of time may pass before a failure occurs. During this period, it's easy to imagine that the consumer might misplace or discard the tool, in which case they would no longer be enabled to disassemble the product. One might however consider an exception for tools stored on board of the product.

Finally, we find it unacceptable that points would be awarded for repairs that are only feasible with proprietary tools, as this is clearly the worst possible option among the various tool classes. We recommend that this worst class scenario should score 0 points. In our opinion, the lowest tool class to obtain any point should be commercially available tools, as is the case in the repair score for smartphones.

In order to address the concerns mentioned above and provide sufficient differentiation, we propose to separate tools supplied with parts or products, and to use the class B and C of EN45554 (*product group specific tools* and *other commercially available tools*).

Specifically, we propose to award points for the delivery of tools supplied with the part or product only if they are of the basic or product specific variety.³ This is because tools which are not proprietary and serve to repair products from different manufacturers are more likely to be of use beyond the single repair for which they are intended, providing additional material efficiency. In addition, if the tool supplied with the product gets lost or if the tool is supplied with the part but a harvested or aftermarket part is used, there remains a higher likelihood of the repair succeeding as the required tools are more widely available.

³ Product specific tools for the vacuum cleaner category might include less common screwdrivers or bits such as interrupted flathead (known as snake eye or spanner bits), hexalobe with recess (tamperproof hex), hexagon with recess (tamperproof torx), tripoint and triangular bits.

In line with the proposed repair score for smartphones, we further propose to award a higher score to tools provided with the spare part than to tools provided with the product (unless stored on-board), since tools provided with the product are likely to be mislaid by the user before the repair operation occurs resulting in a lower likelihood of repair, whilst those provided with the spare part or stored on-board are not.

We therefore recommend to improve the tools criteria as follows :

Commission proposal	Right to repair proposal	Score
Repair possible without tools, with commercially available tools or with tools supplied with the spare part or with the household vacuum cleaners	Without tools or with basic tools	10
Repair only possible with tools that are exclusively available to a professional repairer	A basic or product group specific set of tools that is supplied (or offered to be supplied at no additional cost) with the spare part, or supplied with the product and stored in or on the product	7
Repair only possible with proprietary tools that are exclusively available to authorised service partners	A basic or product group specific set of tools that is supplied (or offered to be supplied at no additional cost) with the product	5
-	Product group specific tools	3
-	Commercially available tools	1
Not removable with any existing tool	Not removable with any existing tool	0

Fasteners type

We support the inclusion of a fastener criterion in the repairability score. However, we think it would be beneficial to use a scoring table offering a higher degree of granularity. The current proposal only takes into account reusable and removable fasteners. In line with our comments on the computer repairability score, we suggest adding resupplied and reusable captive fasteners.

Resupplied fasteners are fasteners which are not reusable, but for which replacement fasteners are supplied with the spare part. Such resupplied fasteners should score lower than reusable ones, but higher than removable ones.

Captive fasteners are fasteners (such as screws) that when unfastened, remain attached to or retained within the part or assembly of the product which they fasten and can be

completely reused for the same purpose in the reassembly, without any damage either to the product or to the fastener that would make their multiple reuse impossible.

This avoids fasteners being lost or mixed up, which could lead to damage (e.g. when inserting a screw in the wrong hole). We propose an improved classification of fasteners incorporating this category (reusable, captive fasteners) as the highest fastening class. This approach will also be proposed in discussions around the next revision of EN 45554:2020.

We therefore suggest adapting the fastener score for each priority part as follows:

Fasteners types	Points
All fasteners are reusable, captive fasteners	10
All fasteners are reusable	8
All fasteners are at least resupplied and require no heating or cooling to be removed	6
All fasteners are at least resupplied. Some require heating or cooling to be removed	4
All fasteners are at least removable	2

Spare parts availability (duration and target group)

The current proposal only takes into account the types of parts and the target audiences to which they are made available. As discussed above, we would suggest mandatory availability of all parts to all target groups (cf. supra), nevertheless we would consider this a relevant criterion in the repair score should less stringent minimum requirements be applied.

However, we believe that the duration of availability should also be included in the score as this is a parameter that has a high potential for differentiation. Given that 20% of vacuum cleaners brought in for community repair were between 11 and 20 years old (see note 2), incentivising prolonged availability of spare parts is quite relevant, and a period of 15 years seems like a reasonable threshold for the maximum score. The minimum score should obviously correspond with the legal minimum requirement (5 years according to the current proposal or 10 years as we would suggest).

To reward manufacturers who make as many spare parts as possible available to repairers and consumers for as long as possible, we propose to include in the index a score for the number of years parts are made available.

Based on the assumption that priority and secondary parts will have to be available for at least 10 years for repairers and consumers (cf the minimum requirements part of this document), **we propose the following granularity:**

Spare parts availability	Points
Secondary and primary parts are available to professional repairers and end-users for at least 15 years	10
Secondary and primary parts are available to professional repairers and end-users for at least 12 years	5
Secondary and primary parts are available to professional repairers and end-users for at least 10 years	1

In case number of years couldn't be taken into account, we suggest this option :

Spare parts availability	Points
Spare parts for all priority parts are available to end users and professional repairers	10
Spare parts for all priority parts are available to professional repairers and secondary parts and dust receptacle are available to end users	7
Spare parts for all priority parts are available to professional repairers and dust receptacle are available to end users;	5
All priority parts are only available to professional repairers.	1

Inclusion of transparency requirements

In addition to the checks to be carried out by the authorities in each member state, in order to assess and monitor manufacturers' commitment and their scores, the scores and calculation details for each criterion should be accessible to all. In this way, every consumer should be able to access the details of the rating, in order:

- to be able to choose the product that best meets their needs;
- to be able to appeal to the national authorities in charge of market surveillance in order to assert their rights in the event that a rating does not reflect reality.

We therefore suggest to include an obligation to make available the complete calculation including all of the subscores on a publicly available website. **This platform must be accessible via the QR code on the energy label.**

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