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Industrial Property Rights in Circular Economy: Challenges and Opportunities

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Ad A. Bianchi,

mio primo maestro del diritto.

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ABSTRACT

Starting from the latest steps of the European legislator on the circular economy, this work moves in two directions. The first is to examine the challenges presented by intellectual property rights in the spare parts sector, specifically addressing issues related to trademarks and patents. The study then turns to the repair sector, assessing the constraints faced by the exhaustion doctrine when applied to IP-protected products undergoing repair. The analysis aims to propose solutions by reevaluating the current system and advocating for a more nuanced balance of competing interests, taking into account the goals of circularity. In this context, it pays special attention to the existing limitations within the trademark legislative framework, highlighting how their restrictive interpretation, particularly in the context of spare parts, conflicts with the circular economy's objectives. Furthermore, the study scrutinizes the criteria used to differentiate lawful and illicit repair activities involving IP-protected products, often relying on arbitrary factors. It also investigates the limitations of applying the exhaustion doctrine to manipulated products, proposing a potential revision of its scope. Throughout this examination, emphasis is placed on the importance of general clauses, such as fair commercial practices, as regulatory principles that can effectively harmonize the various interests at stake.

INTRODUCTION

Sustainability issues are now on the agenda and affect most areas of the legal system. Recently, the European legislator has implemented extensive legislative and policy interventions on the circular economy, including a proposed directive on the repairability products. These legislative and policy documents promote a shift from a linear to a circular economy model, aiming to keep resources in the cycle and reduce waste. However, they do not address the potential impact of intellectual property ('IP') rights on products' repair, recycling and reconditioning, which could hinder this transition under various aspects.

It is widely recognised that important economic interests are centred on the spare parts and repair sectors, which are predominantly controlled by manufacturers. Both operate in an area where competition law and IP intersect. Manufacturers pursue a strategy of enforcing their IP rights to prevent independent spare parts suppliers from entering the market and to prevent independent repairers from carrying out repairs of IP-protected products. In this context, this work starts from the assumption that IP rights cannot and must not be disregarded for the latest legislative interventions to be effectively implemented. The interpretation of the scope of exclusivity and its limits must, therefore, fit within the European legislative framework on the circular economy.

As the potential barriers and uncertainties are numerous and concern all IP rights, this study focuses on selected issues. In particular, based on a broad definition of repair that includes both access to spare parts and repair as a service, the work analyses the main obstacles that may arise in the spare parts and repair markets, with a focus on trademarks and patents. Ultimately, in the all scenarios considered, the aim of this study is to achieve a better balance of interests. This balance must take into account the prerogatives of IP holders, as well as the interests of third parties seeking entry into the spare parts and repair markets. Furthermore, it must consider consumers' access to alternatives in the market, repair services, as well as repaired, refurbished and recycled products. Finally, it should be in line with the political objectives for circularity, as set by the European legislature.

Against this backdrop, the first chapter discusses the main legislative and policy documents issued at the EU level. In particular, the New Circular Economy Action Plan is being analysed in detail as one of the tools for achieving the goals of the European Green Deal. The analysis then shifts to the main recently adopted EU legislative

instruments aimed at making products more repairable and, more generally, more durable. Special attention is given to the latest part of this framework, represented by the new proposal for a Directive on the repairability of products, which is presented as a key factor in achieving the circular economy, while highlighting its challenges, in particular the lack of coordination with IP rights. The aim is to provide a detailed analysis of the specific issues that arise in the aftermarket and repair markets, which are explored in detail in two separate sections.

The second chapter focuses on the heated debate on the protectability of spare parts through design and trademarks. Particular emphasis is placed on the latter, highlighting how the absence of a repair clause similar to that provided within the design framework and the fragmented case law make it difficult to determine the applicability of the limitations provided for in relation to descriptive and referential use of the trademark. The chapter then analyses the main issues that may arise in relation to patent rights, which can also cover spare parts and thus prohibit their reproduction. It then discusses the other type of infringement provided for by our legal system, namely indirect infringement, which, under certain circumstances, may prohibit the supply of non-patented spare parts if they are intended to be used for a patented device. In this context, the inconsistency of certain criteria adopted by the case law to distinguish lawful from unlawful acts, such as the 'identity of the product' and the 'essential character of the invention', are highlighted.

The third chapter focuses on repair as a service, examining the doctrine of exhaustion and the fundamental - but still little explored - role that this principle plays in the repair of products. In parallel, it discusses the legitimate reasons that may prevent its application, with reference to both trademarked and patented products that have been tampered with after being lawfully put on the market by their owner. A detailed analysis is made of the limited and long-standing case law which attempts to distinguish between lawful repair and unlawful manufacture, integrating a legitimate ground for opposition by the proprietor, while at the same time drawing attention to the inherent limitations of such an approach. Although the core of the problem remains the same, the discussion is approached differently depending on whether the product is covered by a patent or a trademark.

Building on the considerations carried out in the preceding chapters, the fourth and final chapter attempts to outline some concluding remarks and interpretative proposals. Regarding spare parts, it argues for giving more space to the limitations

provided by the trademark legislative framework within jurisprudential interpretation. This interpretation must be in line with the general clause of fair and commercial practices in industrial and commercial matters, which applies across all limitations provided by trademark law. In parallel, it argues for a more radical solution that would help solving the root issue, namely the non-registrability of trademarks for spare parts when the application is conducted in bad faith, precisely with the sole intent to prevent competitors from entering the market. As for patents, the study argues for a more objective interpretation of the requirements to assess indirect infringement. It further calls for the admissibility of conduct aimed at reviving patented products and single components that have reached the end of their lifecycle, as long as it complies with the general clause of fair and honest commercial practices. Finally, in a critique of the functional doctrine for trademarks, the work argues for a more consistent interpretation of the exhaustion doctrine to include products that have been manipulated. In this context, it proposes some measures that can be taken to reduce the risks of jeopardising the functions of IP protection, while at the same time recognising the interests of circularity, which are equally deserving of protection.

CHAPTER I
THE EU TRANSITION TOWARDS CIRCULAR ECONOMY AND THE 'RIGHT TO REPAIR'

TABLE OF CONTENTS: *1. The EU Path Towards Circular Economy - 1.1. From a 'Linear' to 'Circular' Economic Model - 1.2. Providing a Definition of 'Circular Economy'- 2. The Legislative Framework on Circular Economy - 2.1. The European Green Deal - 2.2. The Circular Economy Package – 2.2.1. The First Circular Economy Action Plan - 2.2.2. The New Circular Economy Action Plan - 2.2.3. The Four Legislative Proposals on Waste - 2.3. The Eco-design Directive and the Energy Labelling Framework Regulation - 3.Towards the introduction of a 'Right to repair' - 3.1. The 'R Activities'- 3.2. Obstacles to Repair - 3.3. The 'Right to Repair' Movement - 3.4. Towards the Adoption of a Genuine 'Right to Repair'- 3.4. The Right to Repair Proposal – 3.5. …And its Ineffectiveness on IP rights*

According to recent studies, to realise the ambitious goals of the Paris Agreement[1] it is not enough to rely on renewable energy, but it is also crucial to change the way we produce and consume.[2] This can only be accomplished through a systemic change involving all social and economic activities, starting from the products supply chain.[3] To this end, in the last decade the European Union ('EU') has concentrated its policy

[1] UNFCC, The Paris Agreement (2015) FCCC/CP/2015/10/Add.1, Annex. The Paris Agreement, ratified by the parties to the UNFCCC at the Paris Climate Conference (COP21) in December 2015 and entered into force in 4 November 2016, is the first worldwide and legally binding accord aimed at fighting global climate change. It establishes a global framework for mitigating the impact of climate change by capping global warming well below 2°C of pre-industrial levels and aiming to limit it to 1.5°C. The Treaty also strives to bolster the capacity of all countries, especially developing nations, to cope with the effects of climate change. See also 'Paris Agreement on Climate Change' (*Council of the European Union*, 3 January 2024) <https://www.consilium.europa.eu/en/policies/climate-change/paris-agreement/> accessed 6 January 2024.

[2] 'Climate and the Circular Economy' (*Ellen MacArthur Foundation*) <https://ellenmacarthurfoundation.org/topics/climate/overview> accessed December 15, 2022, arguing that while shifting to renewable energy would help cutting about 55% of the emissions, the remaining 45 % can be addressed by adopting a circular economic model. See also 'Special Eurobarometer 501. Attitudes of European Citizens towards the Environment' (European Commission - Directorate General for Communication 2019) stating that the most effective ways of tackling environmental problems are to 'change the way we consume' and 'change the way we produce and trade.'

[3] This encompasses both the stages of production and consumption, along with the management of waste. See Anne PM Velenturf and Phil Purnell, 'Principles for a Sustainable Circular Economy' (2021) 27 Sustainable Production and Consumption 1437, 1443.

efforts to accelerate the transition towards a sustainable, low carbon and regenerative system, namely a circular economy system.[4]

Circular economy represents a key element in making the EU a resource-efficient and climate-neutral country. Although the EU has made progresses in the shift to circularity, it still relies heavily on natural sources.[5] In addition, inefficient waste management practices during disposal, incineration and recycling phases significantly increase the loss of valuable resources.[6] Therefore, substantial changes in resource use patterns are needed, along with the development of new models of industrial organisation, in order to decouple economic growth from increasing resource consumption.[7] According to the Circular Economy Package,[8] a cornerstone of the EU's resource efficiency strategies, this goal can be accomplished through two complementary actions: maximising the value of products by extending their lifespan as much as possible and minimising waste production by reintegrating resources back into the system to be reused. [9]

[4] See European Commission, 'Towards a circular economy: a zero waste programme for Europe' (Communication) COM(2014) 398 final, acknowledging the necessity to establish a consistent and integrated EU framework to promote the circular economy.

[5] Despite the potential for high technical and economic recycling of many raw materials, the recycling rate is generally low due to factors such as high costs of recycling technologies, delays ins scrap collection, and increasing demand of raw materials in various industrial sectors. See 'Markets for Many Commonly Recycled Materials Struggle in the EU' (*European Environment Agency*, 26 January 2023) <https://www.eea.europa.eu/en/newsroom/news/markets-for-many-commonly-recycled-materials-struggle-in-the-eu> accessed 6 January 2024.

[6] Directorate-General for Internal Market I and others, Report on Critical Raw Materials and the Circular Economy (Publications Office of the European Union 2018) <https://data.europa.eu/doi/10.2873/167813> accessed 18 April 2023, conducting an analysis of current waste management and resource losses for five specific types of waste, namely batteries, waste electrical equipment and electronic equipment, plastic waste, textile waste, and natural rubber.

[7] Felix Preston, 'A Global Redesign? Shaping the Circular Economy' [2012] Briefing paper 1,2.

[8] How it will be later better explored, the Circular Economy Package comprises two Action Plans for the circular economy released by the Commission, namely 'Closing the loop - An EU action plan for the Circular Economy' (Communication) COM(2015) 614 final ('CEAP I') and 'A new Circular Economy Action Plan For a Cleaner and more Competitive Europe' (Communication) COM(2020) 98 final ('CEAPII'), and the four legislative proposals on waste policy, namely (i) the Waste Framework Directive (2008/98/EC); (ii) the Landfill Directive (1999/31/EC); (iii) the Packaging and Packaging Waste Directive (1994/62/EC); (iv) the Directives on end-of-life vehicles (2000/53/EC) on batteries and accumulators and waste batteries and accumulators (2006/66/EC) and on waste electrical and electronic equipment (2012/19/EU).

[9] See 'Circular Economy' (*European Commission I Environment*) <https://environment.ec.europa.eu/topics/circular-economy_en> accessed 6 January 2024.

As part of the Circular Economy Package, the most recent 'New Circular Economy Action Plan' ('CEAP II')[10] aims to make sustainable products the norm in the EU by transforming consumption and production patterns. Accordingly, reducing the quantity of generated waste requires adopting measures that encourage reuse and repair, promote recycling (including through separate waste collection) and enhance product design for sustainability and eco-friendliness.[11]

Currently numerous products - particularly technological devices - have short lifespans and cannot be easily repaired, reused, or recycled.[12] This is due to several factors: behavioural drivers (such as social norms, rapid devaluation of trendy products, status-quo bias and inertia), market failures (lack of incentives for circular business models and sustainable production/consumption, negative externalities and insufficient information on sustainability criteria and environmental impacts) and regulatory failures (limited coverage of material efficiency in existing regulations and fragmentation of product legislation across Member States).[13]

Furthermore, limited availability of spare parts, inadequate or unavailable repair information and planned obsolescence exacerbate repair challenges. These obstacles lead to more frequent product replacements, excessive use of resources in manufacturing new products and the disposal of old ones.

To tackle these issues, the CEAP II announced, in line with the goals of the European Green Deal[14], the adoption of a genuine 'right to repair', which would empower consumers to repair and maintain purchased products while ensuring the availability of compatible spare parts.[15]

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[10] European Commission, 'A new Circular Economy Action Plan For a cleaner and more competitive Europe' (Communication) COM(2020) 98 final.

[11] See European Commission, 'Commission Staff Working Document - Leading the way to a global circular economy: state of play and outlook' SWD(2020) 100 final.

[12] CEAP II 3.

[13] See European Commission, 'Commission Staff Working Document – Executive Summary of the Impact assessment Accompanying the documents Commission Regulation laying down ecodesign requirements for smartphones, mobile phones other than smartphones, cordless phones and slate tablets pursuant to Directive 2009/125/EC of the European Parliament and of the Council and amending Commission Regulation (EU) 2023/826 and Commission Delegated Regulation supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to the energy labelling of smartphones and slate tablets' SWD(2023) 102 final.

[14] European Commission, 'The European Green Deal' (Communication) COM(2019) 640 final ('Green Deal').

[15] CEAP II 7.

Against this backdrop, the first part of this chapter discusses the necessity of changing our current system of production and consumption to align with the circularity goals set by the EU legislator and provides a definition of the 'circular economy.'[16] It then explores the most recent and relevant EU policy and legislative initiatives on the green transition, with a focus on the Circular Economy Package and its implementation through the Ecodesign Directive.[17] In the third part, the chapter lists current obstacles to product repairability and introduces the 'right to repair' movement. It then shifts to the most recent legal landscape by exploring the steps leading to the newly-published EU proposal on the right to repair,[18] highlighting its relevance for the transition to circular economy and discussing the main provisions. Finally, the chapter sets the stage for analysing the role of IP rights in this transition from the linear to the circular economy, with a particular emphasis on the enforcement of the right to repair

1. The EU Path Towards Circular Economy

The EU transition towards circular economy finds its inception in the 'Manifesto for a resource-efficient Europe' of 17 December 2012, where the Commission recognised that resources are being use too inefficiently and that the EU 'has no choice but to go for the transition to a resource-efficient and ultimately regenerative circular economy.'[19] Acknowledging Earth's limited resources and the continual surge in raw material demand, the statement advocates for a circular economy and society as a means to address the crisis, fostering the EU's reindustrialisation through sustainable and

[16] The work does not delve into analysing the viability of the circular economy approach, specifically concerning repair. Its sole focus is describing the proposed EU-level model. However, for completeness, it is important to note that this model, or some of its aspects, has faced criticisms. For a comprehensive overview of the debate, see Neal Millar, Eoin McLaughlin and Tobias Börger, 'The Circular Economy: Swings and Roundabouts?' (2019) 158 Ecological Economics 11 and Julian M Allwood, 'Squaring the Circular Economy', *Handbook of Recycling* (Elsevier 2014) <https://linkinghub.elsevier.com/retrieve/pii/B9780123964595000301> accessed 23 September 2023.

[17] Council Directive (EC) 2009/125/EC establishing a framework for the setting of ecodesign requirements for energy-related products [2009] OJ L 285/10 ('Ecodesign Directive').

[18] Proposal for a Directive of the European Parliament and of the Council on common rules promoting the repair of goods and amending Regulation (EU) 2017/2394, Directives (EU) 2019/771 and (EU) 2020/1828 of 2023 COM(2023) 155 final.

[19] 'Manifesto for a Resource-Efficient Europe' (*European Commission*) <https://ec.europa.eu/commission/presscorner/detail/en/MEMO_12_989> accessed 19 April 2023.

efficient growth.[20] This shift requires profound changes to current industrial processes to prevent the depletion of social and environmental resources.[21]

1. From a 'Linear' to 'Circular' Economic Model

Our current economic system is based on a 'take-make-use-dispose' path, whereby with extracted resources new products are created and, once used, are disposed of as waste.[22] The economic phases mirror such scheme on the assumption that the Earth's resources are virtually unlimited. However, resource extraction and processing contribute to nearly half of total carbon emissions and over 80% of biodiversity loss.[23] The current system of production and consumption has led to the exceeding of the planet's limits, necessitating almost three Earth-sized planets by 2050 if these patterns persist.[24]

The linear production and consumption model, as outlined by the MacArthur Foundation,[25] functioned effectively for advanced economies until the latter part of the last century.[26] Western economies benefited from an unequal distribution of raw materials, relying on abundant low-cost resources to cut labour expenses.[27] However,

[20] ibid. See also Florin Bonciul, 'The European Economy: From a Linear to a Circular Economy' The European Economy 78, 83.

[21] Rebecca KM Clube and Mike Tennant, 'The Circular Economy and Human Needs Satisfaction: Promising the Radical, Delivering the Familiar' (2020) 177 Ecological Economics 106772.

[22] See Ellen MacArthur Foundation, 'Towards the Circular Economy. Economic and Business Rationale for an Accelerated Transition' (2013) Vol. I.

[23] 'Resources Extraction Sector Responsible for 80% of Biodiversity Loss and Half World's Carbon Emission, UN Reports Finds' (*The EU Business @ Biodiversity Platform*, 6/04) <https://ec.europa.eu/environment/biodiversity/business/news-and-events/news/news-130_en.htm> accessed 20 April 2023.

[24] 'About' (*One Planet network*, 19 June 2021) <https://www.oneplanetnetwork.org/programmes/sustainable-lifestyles-education/about> accessed 21 April 2023.

[25] The MacArthur Foundation, officially named the John D. and Catherine T. MacArthur Foundation, is a US-based private, non-profit organisation. It offers grants to support diverse causes such as human rights, climate change, nuclear risks, conservation, and the arts. Founded in 1970, the mission is to 'support creative individuals and effective institutions dedicated to constructing a fairer, greener, and more peaceful world.' See 'About Us: What We Do' (*Ellen MacArthur Foundation*) <https://ellenmacarthurfoundation.org/about-us/what-we-do> accessed 25 April 2023.

[26] Ellen MacArthur (n 22) 14. See also Furkan Sariatli, 'Linear Economy Versus Circular Economy: A Comparative and Analyzer Study for Optimization of Economy for Sustainability' (2017) 6 Visegrad Journal on Bioeconomy and Sustainable Development 31, 32.

[27] Sariatli (n 26) 32.

this consumption-oriented approach led to an escalation in the wastage of valuable resources due to the ease of obtaining new products.[28]

Today the usual linear economic model is no longer sustainable.[29] It generates unnecessary resource waste at various production stages, end-of-life product disposal, energy loss, environmental degradation and imbalances between resource supply and demand.[30] With the global population rising and raw material availability dwindling, there's an urgent need to identify a new economic model capable of providing goods and services for a growing populace without escalating raw material consumption or generating harmful environmental waste.[31]

The core principle of the circular economy paradigm revolves around creating an economy that not only takes from the planet but also rejuvenates and replenishes it through a regenerative process.[32]

1.2. Providing a Definition of 'Circular Economy'

[28] ibid.

[29] See, among others, MacArthur Foundation (n 22); Deborah Andrews, 'The Circular Economy, Design Thinking and Education for Sustainability' (2015) 30 Local Economy 305 and Bonciul (n 20) 88, discussing that 'for many years science and technology allowed for the increase of the efficiency of the linear model and therefore the production of one unit of product or service was possible with a lower consumption of raw materials and energy' and that 'anyway, this increase of efficiency could only postpone the moment when this type of economic system became unsustainable.'

[30] Gustavo Michelini and others, 'From Linear to Circular Economy: PSS Conducting the Transition' (2017) 64 Procedia CIRP 2. See also MacArthur Foundation (n 22) 15.

[31] Bonciul (n 20) 83.

[32] 'The Circular Economy in Detail' (*Ellen MacArthur Foundation*) <https://www.ellenmacarthurfoundation.org/the-circular-economy-in-detail-deep-dive> accessed 7 January 2024. See also Sveinung Jørgensen and Lars Jacob Tynes Pedersen, 'The Circular Rather than the Linear Economy', *RESTART Sustainable Business Model Innovation* (Springer International Publishing 2018) 103.

There is not a single definition of 'circular economy' as it is an umbrella term that evolves over time[33] and may reference to different concepts.[34] Furthermore, its origin is highly debated among scholars.[35]

In general terms, circular economy is conceived as a way to keep utilising used products by turning them into new items at the end of their useful life.[36] As opposed to a linear production and consumption model, circular economy is therefore designed as a closed system, evoking the idea of interconnected circles.'[37] More specifically, it has been defined by the MacArthur Foundation and World Economic Forum as:[38]

> An industrial system that is restorative or regenerative by intention and design. It replaces the end-of-life concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse and return to the biosphere, and aims for the elimination of waste through the superior design of materials, products, systems and business models.

[33] Zengwei Yuan, Jun Bi and Yuichi Moriguichi, 'The Circular Economy: A New Development Strategy in China' (2008) 10 Journal of Industrial Ecology 4,5.

[34] See Julian Kirchherr, Denise Reike and Marko Hekkert, 'Conceptualizing the Circular Economy: An Analysis of 114 Definitions' (2017) 127 Resources, Conservation and Recycling 221, arguing the term 'circular economy' may carry multiple connotations. Based on that assumption, the article gathers and analyses 114 definitions of this concept with the aim to provide greater transparency and understanding of the circular economy concept. See also Roberto Merli, Michele Preziosi and Alessia Acampora, 'How Do Scholars Approach the Circular Economy? A Systematic Literature Review' (2018) 178 Journal of Cleaner Production 703,718, providing a picture of the 'state of the art' of the research on circular economy through a thorough and comprehensive analysis of the academic literature on the topic.

[35] According to some scholars, Stahel was the first who referred to a closed- loop industrial ecosystem, which he referred to as 'spiral-loop system. Alan Murray, Keith Skene and Kathryn Haynes, 'The Circular Economy: An Interdisciplinary Exploration of the Concept and Application in a Global Context' (2017) 140 Journal of Business Ethics 369,371. Whereas others attribute the introduction of the idea of a closed economic system to Boulding. See Vasileios Rizos, Katja Tuokko and Arno Behrens, 'A Review of Definitions, Processes and Impacts' (CEPS 2017) 2017/08. However, it was Pearce and Turner who developed the circular economy concept in economic terms during the 1990s, advocating for closing industrial cycles and considering the natural environment in economic flows. For an overview, see Paul Ekins and others, 'The Circular Economy: What, Why, How and Where' (OECD 2020) <https://www.oecd-ilibrary.org/urban-rural-and-regional-development/managing-environmental-and-energy-transitions-for-regions-and-cities_f0c6621f-en> accessed 9 December 2022 and K Winans, A Kendall and H Deng, 'The History and Current Applications of the Circular Economy Concept' (2017) 68 Renewable and Sustainable Energy Reviews 825.

[36] Stahel WR, 'The Circular Economy' (2016) 531 Nature 7595, 435.

[37] Murray at al. (n 35) 371.

[38] MacArthur Foundation (n 22) 7. See also 'The Economy of the Future is Circular. Here's How Entrepreneurship Can Help' *(World Economic Forum*, 22 October 2019) <https://www.weforum.org/agenda/2019/10/innovation-entrepreneurship-waste-circular-economy/> accessed 26 April 2023.

The circular economy model represented by the MacArthur Foundation is characterised by two distinct and complementary cycles whose common goal is to limit the dispersion of resources. The first cycle pertains to 'biological' materials (such as food waste, natural fibres and paper) that are biodegradable and return to the Earth through decomposition.[39] The second cycle involves 'technical materials' (such as plastics, glasses and other and other non-naturally occurring materials) which are man-made and can be reintroduced into the economy through processes such as sharing, maintenance, reuse, remanufacturing and recycling of products.[40]

For both the technical and biological cycles, circularity aims to maximise the number of consecutive cycles and the length of each cycle, both by increasing product lifespan and incentivising reuse.[41] The cycles adhere to three core principles: (1) maintaining and enhancing natural capital by managing finite resources and balancing renewable resource flows; (2) maximising resource efficiency by keeping products, components and materials in use in both technical and biological cycles; and (3) promoting system effectiveness by identifying and eliminating negative externalities. [42] This work specifically focuses on the technical cycle.

In the technical diagram the external loops are surrounded by smaller internal loops. The latter should be implemented first because they are 'more likely to preserve the intrinsic value of products'.[43] Stahel had already formulated this principle, according to which: 'Do not repair what is not broken, do not remanufacture something that can be repaired, do not recycle a product that can be remanufactured.'[44]

Sharing serves as the initial entry point to the technical cycle, although its applicability across all products in the economy may vary.[45] Our society already showcases numerous instances of sharing practices, seen in systems like car-sharing

[39] Didier Bourguignon, 'Closing the Loop: New Circular Economy Package' (European Parlament Briefing, January 2016).
[40] ibid.
[41] ibid 7.
[42] Ellen MacArthur Foundation, 'Towards a Circular Economy: Business Rationale for an Accelerated Transition' (2015).
[43] Ellen MacArthur Foundation, 'The Technical Cycle of the Butterfly Diagram' (*Ellen MacArthur Foundation*) <https://ellenmacarthurfoundation.org/articles/the-technical-cycle-of-the-butterfly-diagram> accessed 2 May 2023. See also E. MacArthur Foundation 2013 (n 22) 44.
[44] Stahel (n 36) 435. Leveraging existing products and materials in circulation, these cycles offer cost and resource savings for both customers and companies, unlike the investments required to produce new ones. See MacArthur Foundation 2013 (n 22) 44.
[45] ibid.

and electric car chargers.[46] Taking mobile phones as an example, the EU Parliament estimates that both used and unused chargers contribute to approximately 11,000 tons of electronic waste annually.[47] In response, the EU has reached a provisional agreement to amend the Radio Equipment Directive[48] , aiming to establish a universal charger for specific electronic devices, including mobile phones.[49] This proposal aligns with the broader EU endeavour to enhance the sustainability of its products, reduce electronic waste and simplify the lives of consumers.[50]

Recycling represents the last stage as it involves reducing the product to its basic materials, resulting in the loss of its intrinsic value.[51] For instance, mobile phones consist of high-value components. Maximising their potential for circularity requires minimising the reverse cycle, which involves breaking down and remaking the product, in processes like remanufacturing, refurbishing, and recycling.[52]

Internal cycles, such as sharing, maintenance, and reuse, offer more practical and sustainable alternatives by preserving the product's value and requiring fewer resources than external cycles.[53] For products that can no longer be used, nor refurbished or remanufactured, recycling constitutes the only way to extend the value of the materials and prevent them from being thrown away as waste.[54] Not only about

[46] See generally Cheng-Wen Lee and Hao-Yuan Yu, 'Examining Cross-Industry Collaboration in Sharing Economy Based On Social Exchange and Social Network Theories' (2020) Advances in Management and Applied Economics 29.

[47] 'Deal on Common Charger: Reducing Hassle for Consumers and Curbing e-Waste | News | European Parliament' (*News | Euroepan Parliament*, 7 June 2022) <https://www.europarl.europa.eu/news/en/press-room/20220603IPR32196/deal-on-common-charger-reducing-hassle-for-consumers-and-curbing-e-waste> accessed 7 January 2024.

[48] Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC 2014 [2014] OJ L 153/62.

[49] See 'The EU Common Charger' (*European Commission*) <https://single-market-economy.ec.europa.eu/sectors/electrical-and-electronic-engineering-industries-eei/radio-equipment-directive-red/one-common-charging-solution-all_en> accessed 11 May 2024.

[50] At the core of this legislative draft lies the principle of sharing, exemplified by the introduction of a universal charger for cell phones, tablets, headsets and headphones, and digital cameras.

[51] MacArthur Foundation 2013 (n 21) 44. See also Mikael Skou Andersen, 'An Introductory Note on the Environmental Economics of the Circular Economy' (2007) 2 Sustainability Science 133, arguing that the assumed benefits of minimising material residuals through recycling are acknowledged, but there is a point where recycling becomes too difficult and burdensome to provide a net benefit. Hence, a circular economy cannot sustain perpetual recycling.

[52] ibid.

[53] For example, refurbished smartphones, on the one hand, have a high potential resale value; on the other hand, they entail high costs related to the replacement of essential parts, their transportation, and refurbishing activities. See ibid.

[54] MacArthur Foundation (n 22) 39.

80% of the materials used in mobile phones can be effectively recycled,[55] but a Norwegian study estimated that high-quality recycling can save up to 1 kg of Co2 for each phone.[56]

Against this backdrop, the EU highlights the necessity to redesign materials and products for circular use and to replace the classic linear model of 'take-make- use-dispose' with 'make-use-reuse-remake-recycle.'[57] This transition inevitably involves the entire supply chain – from design, production, remanufacturing and distribution to waste management. Each stage has potential for circularity, in terms of dependence on natural resources, cost reduction, emission and waste limitation, as well as reduction of environmental damages.[58] For all these phases, the objective is to 'close material loops' so to reduce the resources leaking out of the circle.[59]

In a circular economy model resources are re-introduced in the production and consumption chain after being extracted, processed and used, thereby reducing waste to a minimum. In other words, once resources are obtained from the environment and used are then captured and reused again and again, becoming a valuable input for another process.[60] In this new perception, resources are no longer something that is taken at a great cost from the environment and once used are thrown away or burnt, but rather a component of the production process that is designed in a circular way.[61]

However, in order to move to a circular economy system substantial changes are needed at all stages of the product life cycle, including their design, on which up to 80% of the environmental impact depends.[62] At the same time, the production, utilisation and disposal models of products and services should also be designed to

[55] Julia Moltó and others, 'Thermal Decomposition of Electronic Wastes: Mobile Phone Case and Other Parts' (2011) 31 Waste Management 2546.

[56] See John Baxter and others, 'High-Quality Collection and Disposal of WEEE: Environmental Impacts and Resultant Issues' (2016) 57 Waste Management 17. However, there are currently many obstacles to efficient recycling of products, resulting in the waste of resources. These include the lack of demand and market for recycled products, low price of virgin materials comparing to cost of processing, low consumer awareness and difficulties in separating the various components of products that generate complex waste. See ETC/WMGE, 'ETC Report: Are we losing resources when managing Europe´s waste?' (2019) 3.

[57] Purva Mhatre and others, 'A Systematic Literature Review on the Circular Economy Initiatives in the European Union' (2021) 26 Sustainable Production and Consumption 187.

[58] A zero waste programme for Europe, 4.

[59] ibid.

[60] Preston (n 7) 3.

[61] Bonciul (n 20) 84.

[62] 'Sustainable Product Policy' (*EU Science Hub*) <https://joint-research-centre.ec.europa.eu/scientific-activities-z/sustainable-product-policy_en> accessed 12 December 2022.

facilitate the reuse of products and raw materials, along with the recovery of natural resources.[63] This calls for profound shifts in the approach companies adopt to generate value and presents a prospect to foster innovation across various industries, as well as the efficiency and productivity of the supply chain.[64]

Benefits associated to a circular economy model are substantial. On the one hand, enterprises would take advantage of the introduction of innovative business models powered by digital technologies which would promote the dematerialisation of the economy[65] and make the EU less dependent on raw materials; on the other hand, citizens would enjoy high-quality, functional and safe, efficient and affordable products that last longer and are designed for reuse, repair and recycling, as well as a new range of sustainable service.[66] Finally, besides reducing the environmental impact, circular economy offers a promising pathway for economic growth, as it would help improving global competitiveness and creating new business opportunities.[67]

2. The EU Legislative Framework on Circular Economy

In order for the circular economy to achieve its objectives, it necessitates a tailored legal and institutional framework that facilitates the transformation across various sectors of the economy.[68] To this end, the EU adopted a series of policy and legislative proposals aimed at making environment the priority at every stage of product's life.

2.1. The European Green Deal

[63] Bonciul (n 20) 84. See also OECD, *Managing Environmental and Energy Transitions for Regions and Cities* (OECD 2020) <https://www.oecd-ilibrary.org/urban-rural-and-regional-development/managing-environmental-and-energy-transitions-for-regions-and-cities_f0c6621f-en> accessed 9 December 2022.

[64] See generally Bianchini, Rossi, and Pellegrini, 'Overcoming the Main Barriers of Circular Economy Implementation through a New Visualization Tool for Circular Business Models' (2019) 11 Sustainability 6614.

[65] See Annika Hedberg A, Stefan Š and Johan B, 'Creating a Digital Roadmap for a Circular Economy' (2019) EPC Discussion Paper Sustainable Prosperity for Europe Programme, discussing the role of digitalisation and sharing of information in the transition towards circular economy.

[66] CEAP II 2.

[67] 'Circular Economy' (*European Commission*) <https://environment.ec.europa.eu/topics/circular-economy_en> accessed 8 June 2023.

[68] Bonciul (n 20) 86.

The EU policy interventions on circular economy find their basis in the Green Deal, a roadmap towards climate neutrality.[69] The Green Deal was adopted in December 2019 with the intent to make Europe the first climate-neutral continent by 2050, i.e. an economy with net-zero greenhouse gas emissions, through two complementary key actions: promoting the efficient use of resources by moving to a clean, circular economy and stopping climate change by reverting biodiversity loss and cutting pollution.[70] Hence, the transition towards a circular economy is closely linked to the journey towards a climate-neutral economy.[71]

The pivotal role of industry is also emphasised by the Industrial Strategy for Europe.[72] Industry presents both a challenge and an opportunity, serving as a platform to build a fairer, sustainable society and a greener, digital Europe.[73] However, it also poses challenges as industrial value chains, particularly energy-intensive ones, must reduce their ecological impact.[74] This necessitates the development of new production processes, investments in research and innovation, and the adaptation of infrastructure to provide suitable and affordable green technology solutions.[75]

However, while the EU has already started the transition and has made some progresses in reducing its greenhouse emissions[76], it is far from achieving climate neutrality. Moreover, in absence of organic supranational legislation, Member States are independently adopting initiatives at the national level to promote product

[69] European Commission, 'The European Green Deal' (Communication) COM(2019) 640 final ('Green Deal').

[70] 'The European Green Deal Sets out How to Make Europe the First Climate-Neutral Continent by 2050, Boosting the Economy, Improving People's Health and Quality of Life, Caring for Nature, and Leaving No One Behind' (*European Commission*) <https://ec.europa.eu/commission/presscorner/detail/en/ip_19_6691> accessed December 14, 2022

[71] See European Commission, 'Implementation of the Circular Economy Action Plan' (Report) COM(2019) 190 final.

[72] European Commission, 'A New Industrial Strategy for Europe' (Communication) COM(2020) 102 final 3-4 ('A New Industrial Strategy for Europe').

[73] ibid.

[74] ibid.

[75] ibid.

[76] 'Is Europe Reducing Its Greenhouse Gas Emissions?' (*European Environment Agency*) <https://www.eea.europa.eu/themes/climate/eu-greenhouse-gas-inventory/is-europe-reducing-its-greenhouse> accessed 8 June 2023.

circularity.[77] Although such initiatives denote a commitment of States to a sustainable transition, they risk creating market fragmentation.[78]

Against this backdrop, the Green Deal emphasises the need to speed up the transformation across all Member States, starting from the most impacting sectors, such as textiles, construction, electronics and plastics. To this end, the Green Deal, among other actions, sets the stage for the adoption of a new Action Plan on the circular economy, aimed at establishing policy framework for circular products and reducing waste production. Where it is not possible to eliminate waste, it is essential to recover its economic value by zeroing or minimising its impact on the environment.[79] To do this it is crucial to adopt measures and principles common to all Member States aimed at encouraging the reduction and reuse of raw materials, while countering the use of excessive packaging and the generation of waste.[80] The EU's ambitious final goal is to ensure that by 2030 all packaging used is reusable or recyclable, bringing benefits not only to the environment but also to citizens.[81]

2.2. The Circular Economy Package

As mentioned, the EU Circular Economy Package has been adopted with the aim of helping to accelerate the transition towards circular economy. It comprises two Action Plans, as well as four legislative proposals on waste policy.

2.2.1. The First Circular Economy Action Plan

The First Circular Economy Action Plan[82] (CEAP I) provides 54 actions aimed at contributing to 'close the loops' in the whole life cycle of products: from production to consumption, repair and remanufacturing, waste management and secondary raw

[77] European Commission, 'Impact Assessment accompanying the document Proposal for a Regulation of the European Parliament and of the Council establishing a framework for setting ecodesign requirements for sustainable products and repealing Directive 2009/125/EC' (Staff Working Document) COM(2022) 142 final 11.
[78] ibid.
[79] Green Deal 7-9.
[80] ibid.
[81] ibid.
[82] European Commission, 'Closing the loop - An EU action plan for the Circular Economy' (Communication) COM(2015) 614 final.

materials.[83] For each step of the value chain the CEAP I poses concrete and ambitious measures to support the transition.

As for the production process, the CEAP I emphasises the importance of sustainable sourcing of raw materials, both within and outside the EU, and encourages industries to make commitments and cooperate for sustainable practices. Best practices, waste management and resource efficiency are promoted in various industrial sectors, with support provided to SMEs. The Commission also highlights the significance of innovative industrial processes, such as industrial symbiosis and remanufacturing, and provides funding and support for their development.[84]

As for the consumption phase, the CEAP I poses three main objectives. Firstly, it aims to provide consumers with reliable, trustworthy information while addressing challenges related to the compliance of green claims. Secondly, it focuses on empowering consumers through improved labelling systems and pricing mechanisms that reflect environmental costs. Lastly, it aims to strengthen consumer protection measures related to warranty periods and burden of proof.[85] In this context, the Plan acknowledges the crucial role of repair activities in the context of extending product lifespans and reducing waste.

In line with this, the CEAP I introduces interventions aimed at informing consumers and establishing sustainability principles. It emphasises the need for product lifecycle thinking during the design phase to promote durability, ease of repair, upgradability, and remanufacturing. Additionally, improved product designs facilitate efficient disassembly by recyclers, enabling the recovery and reuse of valuable materials and components and resulting in substantial energy and resource savings.[86]

With regard to waste management, the CEAP II focuses on prioritizing prevention, reuse, recycling, and energy recovery over disposal, guided by a waste hierarchy system. It aims to improve waste collection, sorting, and recycling systems, address challenges, tackle illegal waste transport and explore the role of 'waste to energy' in alignment with EU energy and climate policies.[87]

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[83] 'Closing the Loop: Commission Delivers on Circular Economy Action Plan' (*European Commission*) <https://ec.europa.eu/commission/presscorner/detail/en/IP_19_1480> accessed 8 June 2023.
[84] CEAP I 4-5.
[85] CEAP I 6-7.
[86] CEAP I 6-7.
[87] CEAP I 8-10.

Furthermore, the Plan identifies five priority areas (plastics, food waste, essential raw materials, construction and demolition, biomass and biological materials) that face specific challenges in the context of the circular economy, due to the specificities of their products or value chains, their environmental footprint or dependence on imported materials from non-EU countries.[88] These sectors require a targeted approach to ensure that the interactions between the various stages of the cycle are fully taken into account to accelerate the transition.[89]

On 12 March 2019, the Commission published a report presenting the main results of the implementation of the Plan and the future challenges to be further investigated to complete the circular agenda.[90] Among these, the Commission identifies a number of sectors not specifically addressed by the CEAP I with a high environmental impact and potential for circularity.[91] These sectors have been included in the New Circular Economy Action Plan (CEAP II), released by the Commission in March 2020.[92]

2.2.2. The New Circular Economy Action Plan

The CEAP II is one of the main building blocks of the Green Deal. It announces a series of legislative and non-legislative initiatives to establish a strong and coherent product policy framework to be implemented, among others, through the new legislative proposal that replaces the Ecodesign Directive.[93] The ultimate goal is to make sustainable products, services and business models the norm in the EU, as well as transforming production and consumption patterns so that they do not produce waste.[94]

Like the previous Action Plan, the CEAP II also acknowledges that many products have short lifespans, limited reusability, repairability, and recyclability, perpetuating a

[88] CEAP I 13.
[89] CEAP I 13.
[90] European Commission, 'Report on the implementation of the Circular Economy Action Plan', COM(2019) 190 final ('Report on the implementation of the Circular Economy Action Plan').
[91] Report on the implementation of the Circular Economy Action Plan 10.
[92] European Commission, 'A new Circular Economy Action Plan For a cleaner and more competitive Europe' (Communication) COM(2020) 98 final.
[93] Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products [2009] OJ L 285/10. As will be better explored in the next section, the objective of the Ecodesign Directive is to establish a coherent framework for applying ecodesign requirements to energy-related products.
[94] CEAP II 3. 'A New Circular Economy Action Plan' (*European Commission*) <https://ec.europa.eu/commission/presscorner/detail/en/QANDA_20_419> accessed 15 June 2023.

linear production and consumption model.[95] This hinders manufacturers' incentives to create sustainable products.[96] In response, the CEAP II introduces a sustainable products policy framework that includes actions aimed at ensuring products align with the principles of a carbon-neutral and resource-efficient circular economy. The CEAP II places particular emphasis on seven resource-intensive sectors, namely electronics and ICT, batteries and vehicles, packaging, plastics, textiles, construction and buildings, food, water, and nutrients.

Firstly, the CEAP II encompasses measures to improve the durability, reusability, and upgradability of products, such as increasing the use of recycled materials, restricting single-use items, and addressing premature obsolescence.[97] Additionally, it announces the introduction of sector-specific legislation to establish minimum mandatory green public procurement (GPP) criteria and targets in sectoral legislation related to products reuse, recycling, remanufacturing and end-of-life.[98]

Secondly, the CEAP II emphasises the importance of empowering consumers with reliable information to make informed choices when purchasing products. It recognises the need for consumers to have access to trustworthy, comparable, and verifiable information to facilitate sustainable decision-making and combat greenwashing practices.[99] To this extent, the CEAP II announces the introduction of new measures to safeguard consumers against greenwashing and address premature obsolescence, including the implementation of minimum requirements for sustainability labels/logos and information tools.[100] More importantly, as anticipated by the Green Deal[101], it announces the establishment of a 'right to repair,' as well as new horizontal material rights in favour of consumers, such as upgrading services.[102]

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[95] CEAP II 3.
[96] CEAP II 3.
[97] CEAP II 7. The CEAP II highlights that the sector is also a priority area for implementing the 'right to repair', including a right to update obsolete software.
[98] CEAP II 5.
[99] CEAP II 5.
[100] CEAP II 5.
[101] Green Deal 7, stating that 'the circular economy action plan will also include measures to encourage businesses to offer, and to allow consumers to choose, reusable, durable and repairable products. It will analyse the need for a 'right to repair', and curb the built-in obsolescence of devices, in particular for electronics.'
[102] CEAP II 5. See also European Parliament, 'Resolution of 10 February 2021 on the New Circular Economy Action Plan' (Resolution) (2020/2077(INI)).

Thirdly, the CEAP II focuses on promoting circularity and reducing waste in a toxic-free environment. It addresses the export of waste from the EU and aims to establish a robust EU market for secondary raw materials.[103] By efficiently using recycled materials in manufacturing processes, the EU can reduce its reliance on imported resources.[104] To achieve this, the CEAP II aims to set EU-wide quality standards for secondary raw materials, creating sufficient demand for recycled materials in products and infrastructures while ensuring a well-functioning internal market.[105]

Lastly, the CEAP II encompasses a range of crosscutting measures aimed at integrating circular economy objectives into various sectors. Among these, the Plan acknowledges the crucial role of digitalisation in driving the green transition, particularly within the production chain. Digital technologies have the capacity to trace the journey of products, components, and materials, while ensuring secure accessibility to resulting data.[106] Data sharing among producers is therefore encouraged to facilitate sound recycling practices and reduce overall waste generation.[107] In alignment with the CEAP II, the European Strategy for Data[108] highlights the creation of data spaces as a key initiative to encourage data sharing for circular practices.[109]

2.2.3. The Four Legislative Proposals on Waste

In support of the transition towards circular economy and as part of the Circular Economy Package, the Commission introduced four legislative proposals on waste: (i) the Waste Framework Directive (2008/98/EC)[110]; (ii) the Landfill Directive

[103] CEAP II 13-14.
[104] CEAP II 13-14.
[105] CEAP II 13-14.
[106] CEAP II 17.
[107] CEAP II 3.
[108] European Commission, 'A European Strategy for Data' (Communication), COM(2020) 66 Final (hereinafter 'European Strategy for Data').
[109] Data spaces represent an ongoing initiative within the EU, aimed at promoting the availability of extensive pools of data in specific sectors and domains of public interest. This initiative includes the provision of technical tools, infrastructures, and appropriate governance mechanisms to facilitate the utilization and exchange of data. See European Commission, 'Commission Staff Working Document on Common European Data Spaces' SWD(2022) 45 final.
[110] Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives [2008] L 312/3 ('Waste Framework Directive').

(1999/31/EC)[111]; (iii) the Packaging and Packaging Waste Directive (1994/62/EC)[112]; (iv) the Directives on end-of-life vehicles (2000/53/EC)[113] on batteries and accumulators and waste batteries and accumulators (2006/66/EC)[114] and on waste electrical and electronic equipment (2012/19/EU)[115]. These proposals aim to establish new waste-management targets for reuse, recycling, and landfilling, enhance provisions related to waste prevention and extended producer responsibility, and streamline definitions, reporting obligations and calculation methods for achieving these objectives.[116]

The Waste Framework Directive (2008/98/EC) lays down basic waste management principles that require waste to be managed protecting human health and the environment, while preventing or minimising the negative effects associated with waste generation and management.[117] The waste management system is based on a five-step 'waste hierarchy', which sets an order of preference for managing and disposing of waste.[118] In addition, several criteria are established to determine when specific waste ceases to be waste and instead becomes a secondary raw material or a product.[119]

The Landfill Directive (1999/31/EC) deals with the last step of waste management, namely landfill disposal.[120] It establishes consistent technical standards and guidelines for waste management and landfill facilities with the intent to minimise or eliminate negative environmental effects.[121] To accomplish this, it sets specific goals for Member States on the amount of biodegradable municipal waste to be sent to landfills.

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[111] Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste [1999] L 182/1 ('Landfill Directive).

[112] European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste [1994] L 365/10 ('Packaging and Packaging Waste Directive').

[113] Directive 2000/53/EC of the European Parliament and of the Council of 18 September 2000 on end-life of vehicles [2000] L 269/34 ('Directive on end-of-life-vehicles').

[114] Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators and waste batteries and accumulators and repealing Directive 91/157/EEC [2006] OJ L 266 ('Directive on batteries and accumulators and waste batteries and accumulators').

[115] Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE) [2012] OJ L 197 ('WEE Directive').

[116] Didier Bourguignon, 'Circular economy package - Four legislative proposals on waste' (European Parliament Briefing, March 2018).

[117] Waste Framework Directive, Article 1.

[118] Waste Framework Directive, Article 4.

[119] Waste Framework Directive, Article 6.

[120] Ana Dajić and others, 'Landfill Design: Need for Improvement of Water and Soil Protection Requirements in EU Landfill Directive' (2016) 18 Clean Technologies and Environmental Policy 753.

[121] Landfill Directive, Article 1.

The objective of the Directive on packaging and packaging waste (1994/62/EC) is twofold: to safeguard the environment and ensure the smooth operation of the internal market. It establishes measures, targets and incentives for Member States to prevent the generation of packaging waste and promote the reusing and recycling of packaging materials.[122] As part of the European Green Deal and the CEAP II, the Commission announced a revision of the Packaging and Packaging Waste Directive in November 2022, with the intent to ensure that all packaging is economically feasible for reuse or recycling by 2030.[123]

The Directive on end-of-life vehicles (2000/53/EC) sets out provisions to prevent and limit waste from end-life-vehicles. It also aims to encourage the reuse, recycling, and other forms of recovery of end-of-life vehicles and their components, thereby reducing waste disposal. Moreover, it aims to improve the environmental performance of all economic operators involved in the vehicle life cycle.[124]

The Directive on batteries and accumulators and waste batteries and accumulators (2006/66/EC) establishes rules for the market placement of batteries and accumulators, including restrictions to ensure that potentially harmful materials are not present in batteries and accumulators available to consumers. It also sets specific regulations for the collection, treatment, recycling, and disposal of waste batteries and accumulators, aiming to improve environmental performance and engage all economic operators involved in their life cycle. The objective is to promote sustainable and responsible management of batteries and accumulators.[125]

Finally, the Directive on waste electrical and electronic equipment (2012/19/EU) seeks to encourage the re-use, recycling, and other methods of recovering waste electrical and electronic equipment (WEEE) as a means to prevent or reduce the negative environmental effects caused by the generation and management of WEEE, as well as the depletion of resources.[126] It also aims to enhance the environmental

[122] Member States should ensure that the packaging placed on the market meets the essential requirements stated in Annex II of the Packaging and Packaging Waste Directive, including: limiting the weight and volume of packaging while granting safety, hygiene, and acceptability for the product and consumers; minimizing the presence of hazardous substances and materials in the packaging and its components; designing packaging that is reusable or recoverable.

[123] See Guillaume Ragonnaud, 'Revision of the Packaging and Packaging Waste Directive' (European Parliament Briefing, March 2023).

[124] Directive on end-of-life vehicles, Article 1.

[125] Directive on batteries and accumulators and waste batteries and accumulators, Article 1.

[126] WEEW Directive, Recital 6 and Article 1. See also generally V Pérez-Belis, Md Bovea and V Ibáñez-Forés, 'An In-Depth Literature Review of the Waste Electrical and Electronic Equipment Context: Trends

practices of all stakeholders engaged in the life cycle of electrical and electronic equipment (EEE), including producers, distributors, and consumers. To this extent, the WEEE Directive establishes guidelines for the collection, treatment, and recovery of waste electrical and electronic equipment, outlining specific criteria to be followed.

2.3. The Ecodesign Directive and Energy Labelling Framework Regulation

As mentioned, the new product policy framework laid down in the CEAP II will be implemented *inter alia* through the Ecodesign Directive, which sets common standards across the EU to remove the least performing products from the market and the Energy Labelling Regulation[127], which establishes standardised energy efficiency information for consumers. Both instruments aim to facilitate energy savings, making it easier for consumers to save money on household energy bills and contribute to reducing greenhouse gas emissions across the EU, while promoting innovation and investments into the production of more energy efficient products.[128] Both the Ecodesign Directive and the Energy Labelling Framework Regulation provide guidelines for implementing measures that focus on specific product categories.

The Energy Labelling Framework Regulation establishes a framework for energy-related products that enables customers to choose more efficient products in order to reduce energy consumption. It encompasses product labelling, standardised information on energy efficiency and resource consumption during use and supplementary details.[129]

The Ecodesign Directive enhances the environmental performance of energy-related products by establishing mandatory requirements for manufacturers, which ensure that products meet certain standards before they can be introduced to the market or put into use. By doing so, the Ecodesign Directive reduces energy consumption for consumers and businesses, resulting in lower energy and utility

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and Evolution' (2015) 33 Waste Management & Research: The Journal for a Sustainable Circular Economy 3.

[127] Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 setting a framework for energy labelling and repealing Directive 2010/30/EU [2017] L 198/1.

[128] 'About the Energy Label and Ecodesign' (*European Commission*) <https://commission.europa.eu/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/energy-label-and-ecodesign/about_en> accessed 22 June 2023.

[129] Energy Labelling Framework Regulation 2017/1369, Article 1.

costs.[130] Additionally, it promotes a harmonised internal market, preventing unnecessary expenses caused by divergent national regulations for businesses and consumers.[131]

Both the Ecodesign Directive and the Energy Labelling Framework Regulation rely on subsequent acts to achieve their goals. In October 2019 the Commission adopted ten separate ecodesign implementing regulations[132] establishing energy efficiency for ten products categories, namely refrigerators, washing machines, dishwashers, electronic displays (including televisions), light sources and separate control gears, external power suppliers, electric motors, refrigerators with a direct sales function (e.g. fridges in supermarkets, vending machines for cold drinks), power transformers and welding equipment.[133] Ecodesign requirements have also been adopted for these products to promote reparability and ensure the availability of spare parts. More specifically, the new measures ensure that (i) spare parts are available for longer period of time after purchase (e.g.: 7 years minimum for refrigerating appliances); (ii) spare parts can be replaced with the use of commonly available tools and without permanent damage to the appliance; (iii) professional repairers have access to relevant information for repair and maintenance.

Most stakeholders agreed that the Ecodesign Directive effectively fulfilled its role in eliminating the least energy-efficient products from the market.[134] However, despite these efforts, there are still several aspects that remain uncovered. The regulations inadequately address the environmental impact throughout the lifecycle of products, particularly concerning complex materials that are challenging to recycle.[135] In addition, the access to repair information is limited to professional repairers and not extended to consumers. Moreover, many products with significant environmental impact and potential for circularity, such as mobile phones and laptops, are not included in the current regulations. As a result, a comprehensive revision of the Ecodesign Directive hiss been deemed necessary and officially announced in the September 2020

[130] European Commission, 'Ecodesign Working Plan 2016-2019' (Report) COM(2016) 773 final ('Ecodesign Workig Plan').
[131] ibid.
[132] 'New rules make household appliances more sustainable' (*European Commission)* <https://ec.europa.eu/commission/presscorner/detail/sv/ip_19_5895> accessed 16 June 2023.
[133] 'The New Ecodesign Measures Explained' (*European Commission*) https://ec.europa.eu/commission/presscorner/detail/it/qanda_19_5889 accessed 16 June 2013.
[134] Bacian I, 'Revision of the Ecodesign Directive' (European Parliament Briefing, April 2022).
[135] ibid.

Inception Impact Assessment.[136] A new proposal establishing a framework for setting ecodesign requirements for sustainable products and repealing Directive 2009/125/EC has been released at the end of March 2022.[137]

The new proposal builds upon the Ecodesign Directive, but with a broader applicability in terms of both scope and requirements.[138] It covers a broader range of products, such as electronic appliances and textiles, and establishes ecodesign requirements for each products group that aim to promote not only energy efficiency but also circularity, while reducing environmental and climate impacts.[139] Those requirements relate to products durability, reliability, reusability, upgradability, reparability, ease of maintenance and refurbishment, as well as the energy and resource efficiency.[140] These rules may also address the presence of substances of concerns, the amount of recycled content in products and methods to facilitate remanufacturing and recycling.

Ecodesign requirements shall include both performance and information requirements. Performance requirements can be expressed as either quantitative thresholds or non-quantitative criteria.[141] They are designed to enhance specific aspects of a product, based on selected product parameter(s).[142] Whereas information requirements shall include information on the performance of a product or information for consumers on how to install, use, repair or disassembly the product.[143] The information requirements will empower consumers to make informed and sustainable

[136] European Commission, 'Inception impact assessment', Ares(2020)3256804. See also Robin Barkhausen, Antoine Durand and Katharina Fick, 'Review and Analysis of Ecodesign Directive Implementing Measures: Product Regulations Shifting from Energy Efficiency towards a Circular Economy' (2022) 14 Sustainability 10318, arguing that the new proposal offers an opportunity to integrate circular economy goals into framework legislation from the outset, rather than only within delegate acts, thereby broadening both the scope and environmental benefits of ecodesign regulation.

[137] European Commission, 'Proposal for a regulation of the European Parliament and of the Council establishing a framework for setting ecodesign requirements for sustainable products and repealing Directive 2009/125/EC' COM(2022) 142 final ('Ecodesign Proposal').

[138] The Ecodesign Proposal will work in synergy with the Energy Labelling Regulation, which continues to apply enabling end-consumers to identify the better-performing energy-related products.

[139] Ecodesign Proposal, Recital 103.

[140] Ecodesign Proposal, Article 5.

[141] Ecodesign Proposal, Article 6. They encompass elements such as reliability, reusability, upgradability, reparability, maintenance and refurbishment options, presence of substances of concern, energy use and efficiency, resource use and efficiency, recycled content, remanufacturing and recycling possibilities, material recovery potential, environmental impacts including carbon and environmental footprint, and the expected generation of waste materials.

[142] The list of the parameters is contained in Annex I.

[143] Ecodesign Proposal, Article 7.

choices across the entire value chain. This will be achieved also through the implementation of Digital Product Passports for all regulated products.[144]

Finally, as part of the revision of the Ecodesign Directive, the Commission released a Regulation laying down ecodesign requirements for smartphones, mobile phones other than smartphones, cordless phones and slate tablets[145] and a Delegated Regulation supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to the energy labelling of smartphones and slate tablets.[146] Both Regulations integrate Ecodesign requirements with a reparability scoring index and Energy Labelling requirements. They address issues such as products durability, by requiring devices to undergo testing under controlled charging conditions governed by the battery management system, ensuring long-lasting performance and durability; (limited) availability of updated versions of the operating system, firmware or software, by ensuring that such updates are available free of charge at least until the end date of the products' commercialisation; (limited) availability of the most commonly damaged spare parts, such as battery, main microphone(s), display and back cover; (limited) availability of relevant information, by ensuring that certain information, including minimum battery endurance in cycles, recyclability rate and the percentage of recycling content, are made publicly available on free-access websites.[147]

[144] Ecodesign Proposal, Recitals 27-28 and Article 8. See also 'Questions and Answers: Sustainable Products Initiative' (*European Commission*), Text <https://ec.europa.eu/commission/presscorner/detail/en/QANDA_22_2014> accessed 21 June 2023. The Digital Product Passport is a tool that enhances traceability of products and provides comprehensive information to all actors along the supply chain. It empowers consumers, supports repairers and recyclers in having access to relevant information and aids authorities in enforcing regulations. The information to be included should be assessed on a case-by-case basis when establishing product-specific rules and it is made available on a need-to-know basis through a decentralized data system maintained by economic operators. See 'Digital Product Passport - European Commission' (*European Commission*, 11 May 2023) <https://hadea.ec.europa.eu/calls-proposals/digital-product-passport_en> accessed 7 January 2024.

[145] European Commission, 'Regulation laying down ecodesign requirements for smartphones, mobile phones other than smartphones, cordless phones and slate tablets pursuant to Directive 2009/125/EC of the European Parliament and of the Council and amending Commission Regulation (EU) 2023/826' C(2023) 3538 final.

[146] European Commission, 'Delegated Regulation supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to the energy labelling of smartphones and slate tablets' C(2023) 1672 final.

[147] ibid. See also European Commission, 'Inception Impact Assessment' Ref. Ares(2020)7893117.

3. Towards the Introduction of a 'Right to Repair'

To promote circular economy there are a number of activities, referred to as 'R activities'[148], that should take place to preserve the value retention of products. These activities include reusing, redistributing, repairing, refurbishing, remanufacturing and recycling.[149] According to the 'Factsheet for Policymakers' released by the United Nations Environment Programme, remanufacturing and refurbishment can reduce the GHG emissions by 79% to 99% in certain sectors. In addition, compared to traditional production, remanufacturing can save 80% to 98% of new materials, while refurbishment saves between 82% to 99%. Repairing and direct reuse can save even higher percentages of materials, ranging from 94% to 99%.[150]

3.1. The 'R Activities'

'Reuse' and 'redistribution' refer to any operations, such as donation, exchange and resale, whereby products and their components are put back into service with no modifications.[151] Reuse and redistribution represent the first step of the technical cycle, as they allow the maintenance of the full value of products.[152] Indeed, a mobile phone or a laptop is overall more valuable than its individual components, which can eventually be used for refurbishing or remanufacturing. Some products, such as

[148] The term 'R activities' in the contest of circular economy has already been used by various scholars. See *e.g.* Denise Reike and others, 'The Circular Economy: New or Refurbished as CE 3.0? — Exploring Controversies in the Conceptualization of the Circular Economy through a Focus on History and Resource Value Retention Options' (2018) 135 Resources, Conservation and Recycling 246; Mary Greene and others, 'Bringing the Circular Economy Home – Insights from Socio-Technical Perspectives on Everyday Consumption' [2023] Cleaner and Responsible Consumption 100157.

[149] See 'Towards a More Resource-Efficient and Circular Economy The Role of the G20' (OECD 2021) background report <https://www.oecd.org/> accessed 26 June 2023. See also Anna Wójcik-Karpacz and others, 'Barriers and Drivers for Changes in Circular Business Models in a Textile Recycling Sector: Results of Qualitative Empirical Research' (2023) 16 Energies 490.

[150] IRP, 'Re-defining value - the manufacturing revolution. Remanufacturing, refurbishment, repair and direct reuse in the circular economy. Key insights for policy makers' (United Nations environment Programme 2018). However, it is important to recognise from the outset that merely relying on these activities may not be sufficient to achieve circularity objectives if products are designed with planned obsolescence. Therefore, alongside the R activities, it is crucial to adopt measures that ensure product longevity and repairability. By prolonging the lifespan of products and ensuring they can be easily repaired, the goals of the circular economy can be effectively achieved.

[151] MacArthur Foundation (n 22) 33.

[152] ibid.

textiles, despite having a relatively short life span, have a high potential for reuse.[153] Similarly, resale practices of second-hand ICT products discarded by first users are spreading in the electronics sector.[154]

'Refurbishing' means 'restoring an old product and bringing it up to date.'[155] Comparing it to 'reconditioning', which does not encompass any aesthetic upgrade, refurbishing typically implies aesthetic improvement of a product that may look like new with functional improvements.[156] It may also include the replacement of parts without complete disassembly.[157]

'Remanufacturing' is defined as 'an industrial process in which a product is produced from objects that are waste, products or components and in which at least one change is made to the product that affects the safety, performance, purpose or type of the product typically placed on the market with a commercial guarantee.[158]

'Recycling' encompasses the conversion of waste into resources, through the extraction of raw material that can be used for new products.[159] It is a key pillar of the circular economy, as it helps reduce the use of primary sources by replacing them with

[153] ibid 54. Since textiles can be used several times, reusing clothes offers the best benefits at the lowest price.

[154] Purva Mhatre and others, 'A Systematic Literature Review on the Circular Economy Initiatives in the European Union' (2021) 26 Sustainable Production and Consumption 187, 195. See also Hampus André, Maria Ljunggren Söderman and Anders Nordelöf, 'Resource and Environmental Impacts of Using Second-Hand Laptop Computers: A Case Study of Commercial Reuse' (2019) 88 Waste Management 268, discussing the case of a Swedish company that procured second-hand company computers and then sold them to private individuals and other companies operating in the public sector. See also Christine Cole, Alex Gnanapragasam and Tim Cooper, 'Towards a Circular Economy: Exploring Routes to Reuse for Discarded Electrical and Electronic Equipment' (2017) 61 Procedia CIRP 155, exploring reuse operations within the electronic sectors of two UK organizations).

[155] Piero Morseletto, 'Targets for a Circular Economy' (2020) 153 Resources, Conservation and Recycling 104553.

[156] Mangesh Gharfalkar, Zulfiqur Ali and Graham Hillier, 'Clarifying the Disagreements on Various Reuse Options: Repair, Recondition, Refurbish and Remanufacture' (2016) 34 Waste Management & Research: The Journal for a Sustainable Circular Economy 995, 1000.

[157] 'The Circular Economy in Detail' (*MacArthurFoundation*) <https://www.ellenmacarthurfoundation.org/the-circular-economy-in-detail-deep-dive> accessed 4 November 2023. See also United Nations Environment Programme, and International Resource Panel (2018) 'Re-defining Value: The Manufacturing Revolution - Remanufacturing, Refurbishment, Repair and Direct Reuse in the Circular Economy', specifying that refurbishment activities for vehicle parts primarily occur at the component level outside of industrial factory processes, restoring functionality.

[158] Ecodesign Proposal, Article 20. See aslo Andrew M King and others, 'Reducing Waste: Repair, Recondition, Remanufacture or Recycle?' (2006) 14 Sustainable Development 257, supporting remanufacturing as a strategy to enable the preservation of the embodied energy invested in the initial production, while safeguarding the inherent 'added value' of the product for manufacturers.

[159] 'Recycling' (*Oxford Reference*) <https://www.oxfordreference.com/display/10.1093/oi/authority.20110803100408736> accessed 11 January 2024.

secondary recycled materials.[160] However, not only can many materials not be recycled, but for some of them, recycling is actually more energy-consuming than production.[161] Recycling should then be considered as a viable option when other activities, such as remanufacturing or reusing, are not feasible.[162] It typically occurs at the final stage of the product life cycle, specifically during the disposal phase.[163]

Finally, 'repairing,' which represents the main focus of this work, refers to the process of restoring a defective product or waste to a state 'where it can fulfil its intended use.[164] Through the extension of product and material lifespans, repair actively contributes to the reduction of waste and the consumption of resources.[165] Nevertheless, despite its importance, it is not always a viable choice due to various barriers that may impede repairability.

3.2. Obstacles to Repair

In today's market, products have become increasingly complex due to their multiple components. Manufacturers often take advantage of this complexity to create products that are intentionally difficult to repair.[166] This aligns with the linear economy model,

[160] See Anahita D'Souza, 'Turning Waste into Valuable Resources: Recycling as a Major Pillar of Raw Materials Supply' (*EIT RawMaterials*, 25 November 2020) <https://eitrawmaterials.eu/turning-waste-into-valuable-resources-recycling-as-a-major-pillar-of-raw-materials-supply/> accessed 11 January 2024.

[161] See generally Julian M. Allwood, 'Squaring the Circular Economy: The Role of Recycling within a Hierarchy of Material Management Strategies', Handbook of Recycling (Ernst Worrell and Markus A Reuter 2014).

[162] See Pavlů, Kočí, and Hájek, 'Environmental Assessment of Two Use Cycles of Recycled Aggregate Concrete' (2019) 11 Sustainability 6185, arguing that 'When the materials have been used in construction and there is no way to reuse them, recycling is the best possible way to reduce primary sources.'

[163] 'Recycling and the Circular Economy: What's the Difference?' (How to Build a Circular Economy) <andlt;https://ellenmacarthurfoundation.org/articles/recycling-and-the-circular-economy-whats-the-differenceandgt accessed> January 18, 2023. However, according to the World Economic Forum, the focus should be on adopting proactive ex-ante solutions that prevent waste generation altogether in order to establish an efficient circular economy. See 'For a True Circular Economy, We Must Redefine Waste' (World Economic Forum, 15 November 2019) <https://www.weforum.org/agenda/2019/11/build-circular-economy-stop-recycling/> accessed 25 June 2023.

[164] ETC/CE, 'An overview of Europe's repair sector' (2022) 6 ('JTC Report').

[165] See José Potting and others, Circular economy : Measuring innovation in the product chain' (PBL Netherlands Environmental Assessment Agency 2017).

[166] John Baxter and others, 'High-Quality Collection and Disposal of WEEE: Environmental Impacts and Resultant Issues' (2016) 57 Waste Management 17.

where products are designed with limited repairability in mind.[167] Several factors contribute to this situation.

Manufacturers often bind consumers to a select few repairers during the warranty period, limiting the availability of repair services. OEMs and authorised repairers dominate the repair sector. Independent repairers who want to provide repair services must seek specific authorization from OEMs, pay a fee and agree to purchase spare parts at fixed prices.[168] And even once authorised, repairers are only permitted to carry out a limited range of repairs, such as those involving the screen and battery, while more complex repairs must be carried out by the parent company, such as Apple.[169] Independent repairers are thus deprived of a significant portion of the profits they could potentially earn from repair activities. Furthermore, official repairers are often located far away from consumers and charge higher fees compared to alternative repair options.[170] This leads to the proliferation of unauthorised repairers carrying out repairing original products using non-original components, [171] resulting in an increase in IP infringement concerns. Moreover, the complexity of products often makes repair impossible. For instance, individual components are frequently glued together, making it difficult to separate them and access or replace specific parts.[172] Due to cost

[167] See Jida Huang, Behzad Esmaeilian and Sara Behdad, 'Design for Ease-of-Repair: Insights From Consumers' Repair Experiences', Volume 4: 21st Design for Manufacturing and the Life Cycle Conference; 10th International Conference on Micro- and Nanosystems (American Society of Mechanical Engineers 2016) <https://asmedigitalcollection.asme.org/IDETC-CIE/proceedings/IDETC-CIE2016/50145/Charlotte,%20North%20Carolina,%20USA/258528> accessed 27 June 2023, analysing a dataset obtained from a website that offers online repair manuals, we studied the reparability of various types of electronics.

[168] Sahra Svensson and others, 'The Emerging "Right to Repair" Legislation in the EU and the U.S.' [2018] Paper presented at Going Green CARE INNOVATION 2018 , Vienna, Austria.

[169] See Koebler J, 'Do You Know Anything About Apple's 'Authorized Service Provider' Program?' (*Vice*, 16 March 2017) <https://www.vice.com/en/article/ypkqxw/do-you-know-anything-about-apples-authorized-service-provider-program> accessed 7 May 2023, highlighting that for example repairing involving cameras and the charge ports must be carried out by Apple. See also Ganapini C, 'Apple's self-repair programme is not the Right to Repair we need' (*Right to Repair Europe*, 12 June 2022) <https://repair.eu/it/news/apples-self-repair-programme-is-not-the-right-to-repair-we-need/> accessed 25 June 2023.

[170] 'Why is the "Right to Repair" Gadgets and Machines Spreading?' (*The Economist*, 19 November 2021) <https://www.economist.com/the-economist-explains/2021/11/19/why-is-the-right-to-repair-gadgets-and-machines-spreading> accessed 26 June 2023.

[171] ibid.

[172] Mostafa Sabbaghi and others, 'The Current Status of the Consumer Electronics Repair Industry in the U.S.: A Survey-Based Study' (2017) 116 Resources, Conservation and Recycling 137,144, explaining that there are instances where it becomes necessary to replace non-broken parts that are glued together with broken components.

considerations, products are indeed often designed in a way that renders them unfeasible to be disassembled, replaced and repaired.[173]

Planned obsolescence is another obstacle to repairability. Products are intentionally designed to break down quickly and become obsolete, forcing consumers to make repeated purchases within a short period of time.[174] This outcome is accomplished, among other means, through the marketing and advertising campaigns, incompatibility strategies and inadequate after-sales services.[175] Provided that there is no universally accepted definition for product obsolescence,[176] it can be understood as 'the outcome of a deliberate decision by suppliers that a product should no longer be functional or desirable after a predetermined period.'[177] Its detrimental impact on the environment and consumers is widely recognised.[178]

Consumer preferences and attitudes, driven by advertising campaigns promoting constantly new and improved products, further exacerbate the hindrance of the repair process. These advertisements influence consumers to prioritize purchasing new products rather than repairing existing ones, emphasising convenience over repairability.[179] In addition, the high cost of repairing strongly influences consumers to choose purchasing new products instead of opting for repairs, thereby decreasing demand for such services.[180]

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[173] Ricardo J Hernandez, Constanza Miranda and Julian Goñi, 'Empowering Sustainable Consumption by Giving Back to Consumers the "Right to Repair"' (2020) 12 Sustainability 850, 5.

[174] See Jeremy Bulow, 'An Economic Theory of Planned Obsolescence' (1986) 101 The Quarterly Journal of Economics 729, investigating how planned obsolescence and lifespan of products affect the environment.

[175] Harald Wieser, 'Beyond Planned Obsolescence: Product Lifespans and the Challenges to a Circular Economy' (2016) 25 GAIA - Ecological Perspectives for Science and Society 156.

[176] See Jana Valant 'Planned obsolescence: Exploring the issue' (European Parliament, Briefing May 2016), tracing the origins of references to planned obsolescence back to the aftermath of the 1929 Great Depression in the US. Notably, Bernard London discussed this phenomenon in his work 'Ending the Depression Through Planned Obsolescence' (1932), while Brook Stevens defined it as the deliberate creation of consumer desire for products that are slightly newer, better, or released sooner than what is essential.

[177] Tim Cooper, *Longer Lasting Products: Alternatives To The Throwaway Society* (2010) 3. See also Tim Cooper, 'Inadequate Life?Evidence of Consumer Attitudes to Product Obsolescence' (2004) 27 Journal of Consumer Policy 421.

[178] See Kamila Pope (ed), *Understanding Planned Obsolescence: Unsustainability Through Production, Consumption and Waste Generation* (1st edition, Kogan Page 2017) 44-59.

[179] McCollough J, 'Factors Impacting the Demand for Repair Services of Household Products: The Disappearing Repair Trades and the Throwaway Society' (2009) 33 International Journal of Consumer Studies 619.

[180] Sahra Svensson-Hoglund and others, 'Barriers, Enablers and Market Governance: A Review of the Policy Landscape for Repair of Consumer Electronics in the EU and the U.S.' (2021) 288 Journal of

Technical barriers arise from limited access to spare parts, restricted availability of repair information and tools. Manufacturers typically limit the availability of such resources to their authorised service providers or recognised repairers of specific brands.[181] Furthermore, companies often leverage their market power in the products aftermarket, including hardware maintenance contracts, spare parts and software upgrades.[182] These combined factors impede independent repairers from accessing necessary resources and competing in the repair aftermarket while also perpetuating consumers' dependence on manufacturers for such services in the durable goods industry.

Digital locks can significantly complicate repair procedures. These security systems are designed to prevent unauthorised entry into digital devices or access to digital content. They typically use methods such as software authorisation sequences, encryption keys and hardware devices to secure and regulate access to data, applications or electronic devices.[183] Among these, Technological Protecting Measures ('TPMs') are technological methods that act as safeguards for digital content, controlling access and use.[184] By creating a sort of virtual barrier, they may impede product repair and maintenance, and, more generally, the establishment of secondary markets.[185] For instance, in 2020, HP faced an investigation by the Italian Competition and Market Authority ('AGCM') for introducing firmware updates in their HP-branded printers.[186] These updates restricted the use of non-original cartridges

Cleaner Production 125488, 6. See also Aaron Perzanowski, 'Consumer Perceptions of the Right to Repair' (2020) 96 361, 362, arguing that consumers value the right to repair, but the practices and policies of device manufacturers impede the enforcement of this right, hindering consumers' expectations and experiences with the products.

[181] ETC Report (n 56) 18.

[182] Severin Borenstein, Jeffrey K Mackie-Mason and Janet S Netz, 'Exercising Market Power in Proprietary Aftermarkets' (2000) 9 Journal of Economics & Management Strategy 157,158.

[183] Carla Meninsky, 'Locked Out: The New Hazards of Reverse Engineering' (2003) 21 J Marshall J Computer and Info L 591.

[184] See Valentina Moscon, 'Data Access Rules, Copyright and Protection of Technological Protection Measures in the EU. A Wave of Propertisation of Information' [2023] Max Planck Institute for Innovation and Competition Research Paper No. 23-14 <https://www.ssrn.com/abstract=4515815> accessed 8 January 2024.

[185] See Anthony D Rosborough, 'Unscrewing the Future: The Right to Repair and the Circumvention of Software TPMs in the EU' (2020) 11(2) JIPITEC.

[186] AGCM, 'HP- Stampante e Ricambi Non Originali. Provvedimento n. 28451'(17 November 2020).

without informing consumers. Each time consumers inserted a non-original cartridge, they encountered an 'error' message that prevented the printing process.[187]

In addition to TPMs, another technology that has gained popularity is Digital Rights Management (DRM). DRM refers to advanced information systems designed to protect copyright.[188] DRM often uses TPMs to enforce these controls and restrictions.[189] One notable case is exemplified by John Deere, a prominent agricultural equipment manufacturer in the US. Modern John Deere tractors have progressively integrated embedded computers and software into their products.[190] Proprietary software and DRMs are exploited by the company to prevent non-authorised repairs and the use of non-proprietary parts.[191] From the viewpoint of John Deere, farmers are not seen as owners of their tractors; instead, they are granted an implicit license to operate the vehicle throughout its lifespan.[192] John Deere's monopoly over the repair market has resulted in increased costs for farmers and a significant erosion of competition within the repair services industry, ultimately restricting farmers' options to find suitable mechanics.[193]

Legal barriers, including IP rights, contribute to creating obstacles to repair. These will be thoroughly analysed in the following sections. Here, we limit ourselves to anticipating that IP rights over technology-oriented products strengthen the market position of rights holders. Furthermore IP rights can hinder access to essential information, parts and methods necessary for repair. Moreover, given that they can

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[187] The practice was considered unfair under the Consumer Code. Interestingly, the Authority emphasised that the defenses put forward by the investigated party regarding the alleged necessity to protect its IP rights, particularly patents, from counterfeit cartridge copies, were outside the scope of the dispute. In any case, the Authority stressed that TPMs are considered legitimate solely for copyright protection and are not applicable to justify other measures aimed at protecting industrial property rights. See ibid paras 136 -140.

[188] P Ghatak, RC Tripathi and AK Chakravarti, 'Digital Rights Management: An Integrated Secure Digital Content Distribution Technology' (2004) 9 Journal of Intellectual Property Rights 313.

[189] 'Digital Rights Management and Technical Protection Measures' (*Office of the Privacy Commissioner of Canada*, 24 November 2006) <https://www.priv.gc.ca/en/privacy-topics/technology/mobile-and-digital-devices/digital-devices/02_05_d_32/> accessed 25 October 2023.

[190] See Anthony Rosborough, 'Unscrewing the Future: The Right to Repair and the Circumvention of Software TPMs in the EU' (2020) 11 JIPITEC.

[191] Kyle Wiens, 'We Can't Let John Deere Destroy the Very Idea of Ownership' (*Wired*, 21 April 2015) <https://www.wired.com/2015/04/dmca-ownership-john-deere/> accessed 8 January 2024.

[192] Aaron K Perzanowski, Chris Jay Hoofnagle and Aniket Kesari, 'The Tethered Economy' (2010) 87 The George Washingtion Law Review 783, 820.

[193] Aaron Perzanowski and Jason Schultz, *The End of Ownership: Personal Property in the Digital Economy* (The MIT Press 2018) 1, 145 <https://direct.mit.edu/books/book/4662/The-End-of-OwnershipPersonal-Property-in-the> accessed 26 June 2023.

protect not only the product as a whole but also its individual components, they grant exclusive rights that can be exploited to prevent certain activities in the aftermarkets.

Contractual mechanisms, such as End User License Agreements (EULAs), which typically accompany the purchase of software-embedded products, may include provisions declaring that the licensed material is protected by copyright law, trade secret law and laws governing confidential information.[194].[195] Additionally, users are restricted from reverse engineering, decompiling, translating, adapting, or disassembling the material, further impeding their ability to effectively comprehend and maintain the equipment.[196]

All these obstacles make it more convenient and cost-effective for consumers to simply buy new products rather than dealing with the challenges of repair. Products that are difficult or impossible to repair end up being discarded, contributing to the ever-growing problem of electronic waste accumulating in landfills every year. It has been estimated that within the EU alone the premature disposal of repairable products generates 35 million tons of waste and 261 million tons of greenhouse gas emissions annually.[197] As a response to the barriers consumers face when trying to repair their electronic devices, a 'right to repair' movement gained momentum.[198]

3.3. The 'Right to Repair' Movement

The right to repair movement advocates for the freedom of consumers to repair their own purchased products or to use an independent repair service, rather than

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[194] License Agreement for John Deere Embedded Software <https://www.deere.com/assets/pdfs/common/privacy-and-data/docs/agreement_pdfs/english/2016-10-28-Embedded-Software-EULA.pdf > accessed 3 July 2023. See also Michael Carrier, 'How the Federal Trade Commission Can Use Section 5 To Strengthen the Right to Repair' (2022) 37 Berkeley Technology Law Journal 1145, 1152.

[195] Ibid. See also Estelle Derclaye, 'Repair and Recycle between IP Rights, End User License Agreements and Encryption' in Anselm Kamperman Sanders and Christopher Heath (eds), *Spares, Repairs and Intellectual Property Rights* (Wolters Kluwer 2009), for a comparative analysis of EU and US disciplines.

[196] ibid. See also Irene Calboli, 'The Right to Repair: Recent Developments in the USA' (*Wipo Magazine*, August 2023) <https://www.wipo.int/wipo_magazine_digital/en/2023/article_0023.html> accessed 5 October 2023.

[197] 'Right to Repair: Making Repair Easier for Consumers' (*European Commission*) <https://ec.europa.eu/commission/presscorner/detail/en/ip_23_1794> accessed 26 June 2023.

[198] Thorin Klosowski, 'What You Should Know about Right to Repair' (*The New York Times* July 15, 2021) <https://www.nytimes.com/wirecutter/blog/what-is-right-to-repair/?searchResultPosition=3> accessed January 23, 2023.

being forced to refer to the manufacturer or its authorised service providers.[199] This includes access to repair manuals, schematics and software updates,[200] as well as to the necessary tools and parts to fix their devices.[201] In addition, it calls for products and devices to be designed to be repairable, ensuring that repair processes are not hindered by proprietary software or inaccessible components.[202] Another crucial aspect involves legalising unlocking, customisation and device modification, empowering owners to install personalised software and tailor devices to their needs.[203]

The movement originated in the US and gained traction after a successful campaign in Massachusetts led to a 2012 law, compelling car manufacturers to furnish repair tools and information to independent repairers, granting the right to repair automobiles.[204] Following its enactment, automotive OEMs collaborated with independent repairers in 2014, expanding the movement beyond automobiles to encompass smartphones, computers, appliances and other electronic devices.[205] Spearheaded by the Repair Association[206] the movement garnered substantial support and made significant strides toward its goals.

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[199] Irene Calboli, 'The Right to Repair: Recent Developments in the USA' (August 2023) <https://www.wipo.int/wipo_magazine_digital/en/2023/article_0023.html> accessed 23 October 2023.

[200] Selcen Ozturkcan, 'The Right-to-Repair Movement: Sustainability and Consumer Rights' [2023] Journal of Information Technology Teaching Cases 204388692311780, 1–3. See also 'It's Time For a Common-Sense Perspective' (*Repair.Org*) <https://perma.cc/7LPC-G567> accessed 6 July 2023.

[201] S Kyle Montello, 'The Right to Repair and the Corporate Stranglehold over the Consumer: Profits over People' 22 167.

[202] ibid.

[203] ibid.

[204] *Mass.Gen.Laws* ch93K (2019): 'Manufacturers shall provide access to their diagnostic and repair information system through a non-proprietary vehicle interface[…] The manufacturer's diagnostic and repair information system shall provide the same diagnostic and repair information, including technical updates, which the manufacturer makes available to its dealers and authorized motor vehicle repair facilities […]. All content of said repair information system shall be made available to owners and to independent repair facilities in the same form and manner and to the same extent as is made available to dealers and authorized repair facilities utilizing said repair information system.' See also Leah Chan Grinvald and Ofer Tur-Sinai, 'Intellectual Property Law and the Right to Repair' (2019) 88 Fordham Law Review 63,72.

[205] Jennifer Huseby, 'Who Gets to Operate on Herbie? Right to Repair Legislation in the Context of Automated Vehicles' (2020) Journal of Law and Mobility 41,48.

[206] The 'Repair Association' was officially founded in 2013. It represents businesses and individuals whose mission is advocating for the right to repair. See 'About Us' (*The Repair Association*) <https://www.repair.org/aboutus> accessed 27 June 2023.

Predictably, major multinational companies strongly opposed the right to repair movement, citing concerns about consumer safety and repair service quality.[207] For example, John Deere and Apple contend that in the absence of digital DRM, consumers have the capability to alter the software in a way that eliminates the integrated safety mechanisms, thereby jeopardising the safety of the devices.[208] Nonetheless, there have also been indications of a more open approach. For instance, Apple introduced the Self-Service Repair program in 2022 to provide individual customers with access to genuine Apple OEM parts and documentation for 'do it yourself' ('DIY') fixing on iPhones and subsequently Macs.[209] Samsung and Fixit collaborated to launch a repair program enabling owners of Galaxy S20, S21 Tab S7 Plus devices to buy replacement parts and access guides for DIY repairs.[210] Other companies subsequently launched similar repair programs.[211] While these initiatives had certain limitations and unresolved queries, they have been viewed as a potential enhancement in customer relations by increasing repair accessibility.[212] However they fall short of establishing a genuine right and instead represent a self-regulatory attempt to showcase environmental consciousness.[213] In fact, they underscore the inadequacy of leaving it solely to private entities to determine whether and how to implement 'rules' to facilitate product repairs. Instead, a comprehensive legislative intervention is necessary to effectively tackle repairability issues.

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[207] 'A "Right to Repair" Movement Tools Up' (*The Economist*, 30 September 2017) <https://www.economist.com/business/2017/09/30/a-right-to-repair-movement-tools-up> accessed 27 June 2023.

[208] Daniel Moore, 'You Gotta Fight For Your Right To Repair: The Digital Millennium Copyright Act's Effect On Right-To-Repair Legislation' (2019) 6 Texas A&M Law Review 509, 514. See also Louise Matsakis, 'Security Experts Unite Over the Right to Repair' (*Wired* 30 April 2019) < https://www.wired.com/story/right-to-repair-security-experts-california/> accessed 6 July 2023.

[209] See 'Apple Announces Self Service Repair' (*Apple Newsroom* 17 November 2021) <https://www.apple.com/ca/newsroom/2021/11/apple-announces-self-service-repair/> accessed 27 June 2023.

[210] Mitchell Clark, 'iFixit and Samsung Are Now Selling Repair Parts for Some Galaxy Devices' (*The Verge*, 8 February 2022) <https://www.theverge.com/2022/8/2/23288062/ifixit-samsung-repair-program-galaxy-s20-s21-tab-s7-plus> accessed 27 June 2023.

[211] Garling Wu, 'Looking to Do a DIY Repair? These 5 Tech Companies Offer Self-Repair Programs' (*MUO*, 28 April 2022) <https://www.makeuseof.com/diy-repair-tech-companies-offer-self-repair-programs/> accessed 27 June 2023.

[212] Ozturkcan (n 200) 4.

[213] Anthony D Rosborough, 'Apple's Pledge to Let Consumers Repair Their Own Gadgets Doesn't Go Far Enough' (*Corporate Knights*, 21 December 2021) <https://www.corporateknights.com/waste/apples-pledge-to-let-consumers-repair-their-own-gadgets-doesnt-go-far-enough/> accessed 27 June 2023.

In 2015, the US Congress approved an exemption to the rule contained within Digital Millennium Copyright Act (DMCA) prohibiting actions aimed at circumventing TPMs that control access to copyrighted works, including tractor software.[214] The exception grants consumers the possibility to engage in the diagnosis, repair, or lawful modification of certain software-embedded devices without incurring copyright infringement.[215] Every three years, the Librarian of Congress, based on the recommendation of the Register of Copyright, has authority to introduce temporary exemptions for certain copyrighted works.[216] Following this procedure, the exemption introduced in 2015 underwent review and expansion in 2018 to encompass computer programs controlling smartphones, home appliances, home systems, allowed third-party service providers to perform diagnostic and repair work.[217] In 2021, this exemption was once again renewed and broadened, permitting the circumvention of computer programs governing the operations of motorized land vehicles, marine vessels, personal and commercial vehicles, and consumer devices, whenever such circumvention is required for the diagnosis, repair, or lawful modification of the vehicle's function.[218] However, the exemption's scope remains quite limited as it does not cover access to the repair toolkit, including repair information or software tools.[219]

[214] The Digital Millennium Copyright Act (DMCA) was enacted in 1998 to implement two World Intellectual Property Organization (WIPO) treaties from 1996: the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty. In addition, the DMCA covers several other important copyright-related-issues. See 'The Digital Millennium Copyright Act of 1998.U.S. Copyright Office Summary' [1998], <https://www.copyright.gov/legislation/dmca.pdf > , accessed 4 July 2023.

[215] 17 U.S.C. §1201(a)(1): '[N]o person shall circumvent a technological measure that effectively controls access to a work protected under this title'; to 'circumvent' means 'to descramble a scrambled work, to decrypt an encrypted work, or otherwise to avoid, bypass, remove, deactivate, or impair a technological measure, without the authority of the copyright owner.'

[216] 17 U.S.C. § 1201(a)(1)(B). See also Bill D Herman and Oscar H Gandy, 'Catch 1201: A Legislative History and Content Analysis of the Dmca Exemption Proceedings' (2006) 24 Cardozo Arts and Entertainment Law Journal 121.

[217] See 'Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies' (*Federal Register*, 28 October 2021) <https://www.federalregister.gov/documents/2021/10/28/2021-23311/exemption-to-prohibition-on- -of-copyright-protection-systems-for-access-control> accessed 3 July 2023. See also Lindsay Korotkin Schneider Megan A Rzonca, Brian D, 'Updated DMCA Exemptions Are a Win for the Automotive Industry. Could Higher Education Be Next?' (ArentFox Schiff, 9 December 2021) <https://www.afslaw.com/perspectives/alerts/updated-dmca-exemptions-are-win-the-automotive-industry-could-higher-education> accessed 3 July 2023.

[218] 37 CFR § 201.40 (2023).

[219] Montello (n 201) 168.

In addition, the 27 states are individually considering the enacting right-to-repair bills, based on model legislation proposed by the Repair Association.[220] These bills would mandate OEMs to provide documentation, parts and tools, including any updates to information or embedded software, to independent repairers and consumers enacting right-to-repair bills, based on model legislation proposed by the Repair Association.[221] New York took the lead among states by introducing and enacting the 'Digital Fair Repair Act'[222] in 2022, which mandates manufacturers to provide consumers and independent repair shops with equitable access to diagnostic and repair details, along with necessary components.[223]

In the EU, the movement has gained traction, although with a different focus compared to the consumer-oriented approach in the US. Attention has shifted towards environmental concerns, circular economy principles and sustainability goals.[224] At the legislative level, efforts have been widely discussed to promote durability, reusability, and access to spare parts for certain product categories through the Ecodesign delegated acts. In addition, measures promoting repair can also be found in other EU legislation on product requirements. For example, Article (1) of Regulation 715/2007 on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information includes an obligation for manufacturers to 'provide unrestricted and standardised access to vehicle repair and maintenance information to independent operators through websites using a standardised format in a readily

[220] See 'Working Together to Make Repair-Friendly Public Policy' (*Repair.Org*) <https://www.repair.org/legislation > accessed 8 July 2023. The model template provides that (a) OEMs must provide fair and reasonable access to documentation, parts and tools for independent repair providers and equipment owners of digital electronic equipment (b) For equipment with electronic security locks, OEMs must offer fair and reasonable access to specialized documentation, tools and parts for owners and independent repair providers to reset disabled locks during maintenance or repair.

[221] European Commission. Joint Research Centre, 'Towards an Effective Right to Repair for Electronics: Overcoming Legal, Political and Supply Barriers to Contribute to Circular Electronics in the EU' (Publications Office 2022) <https://data.europa.eu/doi/10.2760/42722> accessed 27 June 2023 ('JRC Technical Report').

[222] *Digital Fair Repair Act of 2022* S4104A (US NY 2022).

[223] See Australian Competition and Consumer Commission, 'Motor Vehicle Service and Repair Information Sharing Scheme: Guidance for Data Providers' (*Australian Competition and Consumer Commission 20 December* 2022) Australia <https://www.accc.gov.au/about-us/publications/motor-vehicle-service-and-repair-information-sharing-scheme-guidance-for-data-providers> accessed 23 October 2023.

[224] Anthony D. Rosborough, Leanne Wiseman, and Taina Pihlajarinne, 'Achieving a (Copy)Right to Repair for the EU's Green Economy' (2023) 18 Journal of Intellectual Property Law and Practice 344, 346.

accessible and prompt manner, and in a manner which is non-discriminatory compared to the provision given or access granted to authorised dealers and repairers.'[225] Government fiscal policies have complemented legislative efforts to promote repair. For example, the Austrian government has reduced the value-added tax (VAT) on 'small repairs' of bicycles, clothing and shoes from 20% to 10%.[226] However, these measures have been deemed insufficient. The Commission has emphasised the need for an effective right-to-repair legislative initiative in various strategic documents, including the Green Deal.[227]

3.4. The 'Right to Repair' Proposal

In the current EU legislative framework, the amended version of Sale of Goods Directive 2019/771 ('SGD')[228], which repeals the Consumer Sales Directive (1999/44/EC),[229] and EU contract laws, give consumers the right to have faulty products repaired only during the warranty period.[230] This period is set by the SGD to a minimum of two years from the delivery of the good.[231] Members States are however allowed to introduce longer limits.[232]

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[225] Regulation (EC) No 715/2007 of the European Parliament and of the Council of 20 June 2007 on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information [2007] L 171/1.

[226] Markus Piringer and Irene Schanda, 'Austria makes repair more affordable' (*Right to Repair Europe*, 22 September 2020) <https://repair.eu/it/news/austria-makes-repair-more-affordable/> accessed 8 January 2024.

[227] Green Deal 8. See also Šajn N., 'Right to repair' (European Parliament Briefing, January 2022).

[228] Directive (EU) 2019/771 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the sale of goods, amending Regulation (EU) 2017/2394 and Directive 2009/22/EC, and repealing Directive 1999/44/EC [2019] L 136/28.

[229] Directive 1999/44/EC of the European Parliament and of the Council of 25 May 1999 on certain aspects of the sale of consumer goods and associated guarantees [1999] L 171/12. For an overview of the new provisions and the steps leading to the amended version of the SGD, see Nikolina Šajn, 'Consumer sale of goods' (European Parliament Briefing EU Legislation in Progress, March 2019).

[230] SGD, Article 10(1) and (2).

[231] ibid.

[232] SGD, Article 10(3). Certain European countries have adopted rules that go beyond the minimum set by the SGD. For instance, in Sweden, the guarantee of the conformity period is 3 years. In the Netherlands, there is no time limit for claiming the legal guarantee, and it takes into account the expected lifespan of the product. Norway has a 5-year guarantee of conformity for goods meant to last longer than 2 years. See European Commission. Directorate General for Justice and Consumers. and others, 'Study on the Costs and Benefits of Extending Certain Rights under the Consumer Sales and Guarantees Directive 1999/94/EC.' (Publications Office 2017) <https://data.europa.eu/doi/10.2838/590766> accessed 8 January 2024.

During the legal conformity guarantee period, if a product breaks and the damage is covered by the warranty, i.e. in case of lack of conformity, consumers can choose between having it repaired or replaced free of charge.[233] This choice is unless 'the remedy chosen would be impossible or, compared to the other remedy, would impose costs on the seller that would be disproportionate, taking into account all circumstances.'[234] If the seller has not repaired or replaced the product within a specified time frame, or if the repair or replacement does not effectively resolve the issue of non-conformity, the consumer is entitled to a price reduction or the ability to terminate the contract.[235]

However, in situations not covered by the guarantee (after the warranty period or in cases where the product breaks due to circumstances not covered by the legal guarantee, such as misuse), consumers do not have the right to repair their products, even if they are willing to pay for it.[236] In other words, sellers are not legally obligated to provide repair services or support. The absence of such a right means consumers face the obstacles described in the previous paragraphs.

Against this backdrop, the Commission's State of the Union in 2021 announced the introduction of a right to repair as one of the key initiatives for 2022.[237] In addition, both the EU Parliament Resolution of 25 November 2020 for a sustainable single market for business and consumers[238] and of February 2021 on Circular Economy Action Plan[239] called on the Commission to support businesses and consumers in committing to sustainable production and consumption patterns and to make repair systematic, cost-efficient and attractive. Again, on 7 April 2022, the Commission adopted a resolution

[233] SGD, Article 13, providing that 'In the event of a lack of conformity, the consumer shall be entitled to have the goods brought into conformity or to receive a proportionate reduction in the price, or to terminate the contract, under the conditions set out in this Article.' See also Katarzyna Kryla-Cudna, 'Sales Contracts and the Circular Economy' (2020) 28 European Review of Private Law 1207, explaining that the SGD does establish a preference for repair over replacement, leaving the choice between the two options to the buyer, without imposing any obligation or providing incentives for the consumer to elect repair instead of replacement.

[234] SGD, Article 13 para 2. The circumstances include: the value the goods would have if there were no lack of conformity; the significance of the lack of conformity; and whether the alternative remedy could be provided without significant inconvenience to the consumer.

[235] SGD combination of Recitals 50 and Article 13(4), Article 15 and Article 16.

[236] See Šajn (n 227).

[237] European Commission, 'State of the Union 2021 Letter of Intent' (15 September 2021).

[238] European Parliament, 'Resolution of 25 November 2020 Towards a more sustainable single market for business and consumers' (2020/2021(INI)) (2021/C 425/03).

[239] European Parliament, 'Resolution of 10 February 2021 on the New Circular Economy Action Plan' (2020/2077(INI)) (2021/C 465/03).

on the right to repair, emphasizing the necessity to grant access to repair services to all actors, including consumers and independent repairers.[240] All these initiatives paved the way for the legislative proposal on the right to repair, which was finally published by the Commission on March 22, 2023 (the 'Right to Repair Proposal').

The Proposal takes the form of a separate Directive, incorporating both a revision of the SGD to promote repairing during the legal guarantee and new provisions designed to encourage repairs beyond the seller's liability.[241] The primary novelty of the repair proposal is to provide a genuine right to repair beyond the warranty as regulated by the SGD.

Specifically, the Proposal amends Article 13 of the SGD, stating that the consumer may opt for replacement only if it is less expensive than repairing the product, making the latter the preferred remedy.[242] Whereas to promote repairing beyond the legal guarantee, the Proposal establishes an obligation for producers to carry out repairs outside the seller's liability for products for which repairability requirements are set by EU law.[243] This can be either against payment of a fee or free of charge as part of the commercial guarantee, unless the repair is impossible.[244]

To ensure that such obligation is effectively enforced, producers shall guarantee that repairers[245] have access to spare parts and repair-related tools and information in a clear and accessible manner.[246] In addition, producers who are obliged to repair

[240] European Parliament, 'Resolution of 7 April 2022 on the right to repair' (2022/2515(RSP)). Accordingly, consumers should have access to information of repairability on products at the time of purchase, so they can make more sustainable and informed choices. Relevant information should include the average lifespan, tools and spare parts, software updates and reparability services. In addition, the resolution stressed that a proper right to repair would cover all the phases of products' lifecycle, starting from design. It finally called for the extension of the guarantee period beyond the two years established by the SGD. See ibid.

[241] Right to Repair Proposal 4.

[242] Right to Repair Proposal, Article 12.

[243] The EU legal acts on repairability requirements are listed in the Annex II of the Right to Repair Proposal. These include, above all, the Ecodesign Directive. Accordingly, the *ratio* of such limitation is to 'ensures that only those goods which are reparable by design are subject to such obligation.'

[244] Right to Repair Proposal, Article 5(1), providing that 'Member States shall ensure that upon the consumer's request, the producer shall repair, for free or against a price or another kind of consideration, goods for which and to the extent that reparability requirements are provided for by Union legal acts as listed in Annex II'.

[245] The Proposal adopts a broad definition of 'repairer', which comprises 'any natural or legal person who, related to that person's trade, business, craft or profession, provides a repair service, including producers and sellers that provide repair services and repair service providers whether independent or affiliated with such producers or sellers'.

[246] Right to Repair Proposal, Article 5(2).

shall notify consumers and provide information on the repair services.[247] Those offering repair are required to issue estimates on the cost and terms for repair through a standardized format called the 'European Repair Information Form.'[248] This format facilitates consumers in evaluating and comparing repair services based on key parameters influencing their decisions, such as price, repair conditions, type of defect and repair time.[249]

Finally, the Proposal introduces an obligation for Member States to establish at least one national platform to connect consumers with suitable repairers and sellers of refurbished goods.[250] This would enable consumers to evaluate and compare different repair services, thereby encouraging them to choose repair over buying new goods. The online platform should also serve as a promoter of refurbished goods as an alternative to repair or purchasing new items, incorporating a search function that allows consumers to easily find sellers offering refurbished goods or businesses interested in purchasing defective items for refurbishment purposes.[251]

The Right to Repair Proposal certainly represents an important and eagerly awaited step towards the circular economy. It is a fundamental tool to empower consumers post-purchase, both on the guarantee period and the non-guarantee phase. Above all, it helps to address several of the numerous obstacles to repairability highlighted in the present section.

Nevertheless, the Proposal exhibits some vagueness in certain areas, suggesting a need for more thorough development and clarification. These concerns have recently come to the fore in a report published by the European Law Institute,[252] which underscores several key issues, including: the lack of legislative provisions regarding refurbished products; the need for clarification on the seller's obligation to provide updates for goods with digital elements within a reasonable expectation period, and the absence of mandatory quality standards for repair services.[253]

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[247] Right to Repair Proposal, Article 6.

[248] Right to Repair Proposal, Article 4.

[249] Recital 8 clarifies that 'Repairers should provide the European Repair Information Form only where the consumer requests that form and the repairer intends to provide the repair service or it is obliged to repair.'

[250] Right to Repair Proposal, Article 7.

[251] Right to Repair Proposal, Recital 26 and Article 7.

[252] See Susanne Augenhofer and others, 'Feedback of the European Law Institute on the European Commission's Proposal for a Directive on Common Rules Promoting the Repair of Goods (COM(2023) 155 Final)' (The European Law Institute (ELI) 2023).

[253] ibid.

In addition to those identified by the cited report, there are other grey areas that deserves to be mentioned. For instance, the Proposal does not include any provisions that would enable consumers to repair products themselves, maybe due to safety concerns. It also fails to specify when a repair is deemed 'impossible', whether it refers to being too costly or for other reasons. Furthermore, the calculation of repair costs is not clear in this regard. Additionally, in its opinion, the European Economic and Social Committee ('EESC') emphasises the need for provisions in the Proposal allowing distributors to take legal action against manufacturers if they fail to provide access to spare parts and information.[254] The EECS further advocates for supplementary actions beyond the Proposal's scope, such as measures aimed at reducing repair costs for consumers.[255] The absence of regulations on repair prices constitutes one of the most critical aspects of the Proposal. As extensively discussed earlier, prohibitive prices stand as a primary obstacle to the right to repair. This issue persists as long as manufacturers, mandated to provide spare parts, can set monopolistic prices.[256]

3.4.1. …And its Ineffectiveness on IP rights

More importantly for the purposes of this work, the Proposal does not address the coordination of the right to repair with IP rights, which pose significant concerns that will be examined in the following paragraphs and represent the core of the present study.

As stated, products are increasingly intricate with an extensive array of components. Each element of a complex product has the potential to be safeguarded by one or even more IP rights. For example, trademarks can be applied to individual parts of a mobile phone, such as screens. Although these logos are not visible once the phone is assembled, they serve as examples of how trademarks can extend

[254] Opinion of The European Economic and Social Committee on the Proposal for a Directive of the European Parliament and of the Council on Common Rules Promoting the Repair of Goods and Amending Regulation (EU) 2017/2394 and Directives (EU) 2019/771 and (EU) 2020/1828 (14 June 2023).

[255] These include the spread and development of second-hand product materials, as well as the establishment of markets for safe and recycled spare parts.

[256] See Atsuhiro Furuta and Christopher Heath, 'The Right to Repair, Refill and Recycle by Way of an Anti-Trust Defence – Comment on the Japanese Decisions *Ricoh I* , *Ricoh II* and *Brother*' [2023] GRUR International 1, 3. On the importance to establish competition in the spare parts aftermarket to decrease prices, see Wiss Mitarbeiter Victor Mehnert, 'Reparaturen für alle? – Rechtliche Perspektiven des „Right to repair"' (2023) ZRP 9.

protection to individual parts and even the shape of products: OEMs manufacturers can seek trademark protection for the shape of their bumpers, provided that they are distinctive and do not serve a purely functional purpose. Furthermore, OEMs can seek design protection for the appearance of the whole product (the car) or individual components (the bumper), provided they meet the requirements of novelty and individual character. In addition, elements such as a USB data cable or a complex system such as a charger or touch control system can be eligible for patent protection. These are just a few examples of how OEMs wield significant power through IP rights over the products we use every day. In some instances, their enforcement might impede repair, how it will be discussed in the following chapters.

A broad definition of repair is adopted here, encompassing not only repair as a service but also access to spare parts. If these parts are not available or otherwise accessible because they are controlled by OEMs, third parties are unable to conduct repair activities. Therefore, even though spare parts and repair pertain to different markets, they are closely interlinked.

A primary obstacle to repair lies therefore in the supply of spare parts. These parts can be protected by design, trademark, patent, and even copyright. As a result, their unauthorised reproduction by third parties constitutes infringement. Specific issues then arise when the proprietor's logo is affixed to the spare parts' shape. As it will be observed, this matter has been a subject of extensive debate in jurisprudence for decades, particularly raising concerns in the automotive sector.[257] The key question revolves around whether, and under what circumstances, the proprietor's figurative trademark can be reproduced on spare parts without incurring in trademark infringement. A conclusive resolution to this matter has not been reached, and the landscape remains rather fragmented. In addition, spare parts, and replacement component more generally, have the potential to be protected also by patents, so that their unauthorised reproduction constitutes patent infringement. If replacement part, even not patent protected, are commercialised to be used for repairing an item protected by a patented combination it could be considered an indirect infringement of the patent rights associated with that combination.[258]

[257] See *infra* chapter 2.

[258] Sahra Svensson-Hoglund and others, (n 180) 4. See *infra* chapter 2.

The second obstacle to repair concerns the extent to which an IP-protected product can be manipulated – and eventually re-placed on the market - without infringing upon IP rights. The issue specifically revolves around the limitations of the doctrine of exhaustion.[259] This seemingly straightforward principle states that the rights of the holder are exhausted once the protected item is introduced to the market. Consequently, the lawful purchaser can use, sell, and also repair it ,without requiring the holder's permission. However, if the purchaser significantly modifies the product to the extent that it becomes a new item, exhaustion no longer applies. Yet, the boundaries between lawful and unlawful repair are not clearly defined, making it challenging to determine if the considered activity falls under the principle of exhaustion.

While not the main focus of this study, copyright can pose a barrier to repairs as well. Copyright protection may limit access to repair manuals or software updates, creating challenges for independent repairers and consumers seeking to fix their products.

Currently, there is ambiguity surrounding the scope of activities permitted for software repair. The exclusive rights of a holder cover various acts, including loading, displaying, running, and more.[260] While there is a non-mandatory exception for correcting errors in faulty computer programs,[261] the definition of 'error corrections' remains unclear.[262] The uncertainty extends to activities involving the modification of software, such as bug fixes, updates, upgrades, optimizations and revisions. As a consequence, copyright law may impact consumers' rights to repair, modify, or sell their personal property that contains copyrighted software, particularly when these activities involve making changes to the software or transferring ownership of the product with embedded software.[263]

Moreover, repair manuals, guides, and related documents, including diagrams and figures, often exhibit sufficient originality to qualify for copyright protection, despite their

[259] See *infra* chapter 3.
[260] Directive 2009/24/EC of the European Parliament and of the Council of of 23 April 2009 on the legal protection of computer programs [2009] O JL 111/16, ('Computer Programs Directive'), Article 4(1).
[261] Computer Programs Directive, Article 5(1).
[262] See Bohdan Widła, 'Circular Economy versus Copyright Protection of Computer Programs in the EU: Challenges and Lessons from the CJEU's Judgment in Top System' (2023) 18 Journal of Intellectual Property Law and Practice 353.
[263] Brian T Yeh, 'Repair, Modification, or Resale of Software-Enabled Consumer Electronic Devices: Copyright Law Issues' (Congressional Research Service 2016).

predominantly utilitarian character.[264] Copyright holders can leverage their rights to control and prevent the dissemination of such information.[265] The Right to Repair Proposal establishes an obligation for OEMs to provide access to repair information after the warranty period to independent repairers, thereby expanding the scope of recipients.[266] Nevertheless, it merely provides that those information must be easily accessible, clear and comprehensible[267], without addressing issues related to copyright.[268] Adding to the complexity, despite the potential profitability for the companies themselves, large manufacturers are often hesitant to share valuable know-how and IP with third parties, as seen in the case of BMW's patented tool for draining oil from shock absorbers.[269]

In reality, all of these challenges are not new; in fact, they have been recognised in a number of EU policy documents and reports. For instance, the JRC Technical Report by the Joint Research Centre (JRC) of the Commission recognises that 'While intellectual property protection is vital to ensure a product is not illegally copied, reproduced or sold, it can limit the ability to repair a product or to replace some of its parts.'[270] In addition, the 2020 Intellectual Property Action Plan ('IP Action Plan') highlights that repair and re-use should not be blocked 'by unfair or excessively

[264] Anthony D Rosborough, 'The InfoSoc Directive and the Right to Repair: Exploring the Boundaries of a Lesser-Known Copyright Exception' (*Kluwer Copyright Blog*, 14 December 2022) <https://copyrightblog.kluweriplaw.com/2022/12/14/the-infosoc-directive-and-the-right-to-repair-exploring-the-boundaries-of-a-lesser-known-copyright-exception/> accessed 3 October 2023.

[265] Ibid. See Kit Walsh, 'Medical Device Repair Again Threatened With Copyright Claims' (*Electronic Frontier Foundation*, 6 November 2020) <https://www.eff.org/deeplinks/2020/06/medical-device-repair-again-threatened-copyright-claims> accessed 3 October 2023. Emblematic is the case of iFixit, which, during the Covid-19 pandemic, faced a cease and desist letter from STERIS Corporation, alleging copyright violation of their rights on repair manuals after iFixit published a series of repair information for certain medical devices on its website. See Kit Walsh, 'Medical Device Repair Again Threatened With Copyright Claims' (*Electronic Frontier Foundation*, 6 November 2020) <https://www.eff.org/deeplinks/2020/06/medical-device-repair-again-threatened-copyright-claims> accessed 3 October 2023

[266] Right to Repair Proposal, Article 5.

[267] Right to Repair Proposal, Article 6.

[268] See Anthony D Rosborough, 'Zen and the Art of Repair Manuals: Enabling a Participatory Right to Repair Through An Autonomous Concept of EU Copyright Law' (2022) 13(2) JIPITEC.

[269] See Kyle Wiens, 'Intellectual Property is Putting Circular Economy in Jeopardy', (*The Guardian* 6 April 2014) <https://www.theguardian.com/sustainable-business/intellectual-property-circular-economy-bmw-apple> accessed 4 July 2023.

[270] JRC Technical Report 24.

restrictive IP practices'.[271] It is therefore acknowledged that an inadequate IP legislative framework 'can result in preventing repair or making it less attractive.'[272]

Yet, the latest Right to Repair Proposal indicates that the EU has not yet adopted a clear stance on IP rights. Nevertheless, it is argued that for the efficient implementation of the Right to Repair Proposal, akin to the other legislative instruments, including the Ecodesign Directive and the Waste Framework Directive, IP rights should be harmonised with the goals of the circular economy without diminishing their inherent strength.

[271] European Commission, 'Making the most of the EU's innovative potential. An intellectual property action plan to support the EU's recovery and resilience' COM(2020) 760 final.
[272] JRC Technical Report 23.

CHAPTER II
INDUSTRIAL PROPERTY RIGHTS IN CIRCULAR ECONOMY: THE ISSUE OF SPARE PARTS

TABLE OF CONTENTS: *1. The Market for the Supply of Spare Parts: Between IP and Competition Law Concerns – 2. Design Protection for Spare Parts – 2.1. The 'Must-Match' Spare Parts and the 'Repair Clause' Exception - 2.2. The Non-Applicability of the Repair Clause to Trademarks – 3. The Issue of Trademark Protection for Spare Parts - 3.1. Legislative Framework – 3.2. Case Law – 3.2.1. Reproducing -– 3.2.2. Importing – 4.. The Issue of Patent Protection for Spare Parts – 4.1. Legislative Framework – 4.2.. The Supply of Spare Parts As Indirect Patent Infringement*

'Spare parts' is an umbrella term that refers to a wide range of components, varying significantly from one another and serving distinct functions. These include original spare parts, which are marketed by OEMs or third parties under contract; compatible spare parts, which essentially are reproductions of originals carried out by non-affiliated third parties; and universal spare parts, which are standardised components usable across different product models and brands.[273]

The issues surrounding IP rights primarily centre on the second category, specifically the compatible spare parts that essentially replicate the originals marketed by the manufacturer. Indeed, standardised spare parts usually do not meet the threshold for IP protection, which clearly differs across the different types of IP categories.[274] Conversely, spare parts intended for a specific model or product, such as radiator grilles, car rims, but also vacuum cleaner components and light bulbs,[275] can be the subject of overlapping IP rights.[276]

Due to the highly profitable nature of the spare parts sector, OEMs often enforce their IP rights to prevent the emergence of markets for alternative compatible spare

[273] Pettiti Priscilla, *Concorrenza, Marchio e Brevetto Nella Disciplina Dei Pezzi Di Ricambio* (Quaderni di giuridprudenza commmerciale 256, 2004) 9.
[274] ibid.
[275] See *e.g.* Catarina Teixeira and others, 'Multi-Criteria Classification for Spare Parts Management: A Case Study' (2017) 11 Procedia Manufacturing 1560.
[276] See Annette Kur, Annette Kur, 'Cumulation of Rights with Regard to 3D Shapes' (Max Planck Institute) <https://wwCumulation of rights with regard to 3D shapesw.ip.mpg.de/fileadmin/ipmpg/content/personen/annette_kur/brussels_cumulation_082.pdf>.

parts, including for repair purposes.[277] This has sparked significant debate, not only from an IP perspectives but also, and especially, from a competitive standpoint, raising concerns about potential abusive and monopolistic behaviours by OEMs. Notably, the challenge of limited access to spare parts is prominent in the automotive sector but also extends to other industries.[278]In the context of the automotive field, the debate has primarily focused on 'must-match' parts, which play a crucial role in restoring the appearance of complex products. Following extensive discussion at the EU level, an exemption from design protection has been implemented for these parts only, specifically intended for repair purposes.[279] However, the exemption has only partially resolved the complex issue of access to alternative spare parts, which, as mentioned, can be protected also by other IP rights.

In fact, spare parts can be protected by trademarks, either by incorporating the OEMs' mark into the part itself or by protecting the shape of that part. Within the trademarks field, the issue is to whether and to what extent the manufacturer's trademark can be used by third parties to market non-original spare parts. This is not a recent concern, but it has re-emerged in the wake of European legislative interventions that have identified access to spare parts as a fundamental requirement for the effective implementation of the right to repair.[280]

In addition, spare parts and replacement components in general may be protected by patents, making their unauthorised reproduction a form of patent piracy. Moreover, when spare parts, although not patented, are marketed, even for repair purposes and are intended for use in an article covered by a patent or within a process protected by a patent, then it may be considered an indirect infringement of the related patent rights**.**[281] This distinction drives the discussion on two levels, differentiating between indirect and direct infringement, which will be discussed in the second and third chapters.

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[277] Dana Beldiman and Constantin Blanke-Roeser, *An International Perspective on Design Protection of Visible Spare Parts* (Springer International Publishing 2017) 1.

[278] See *e.g.* Case T-427/08 *Confédération européenne des associations d'horlogers-réparateurs (CEAHR) v. Commission* [2017] ECLI:EU:T:2017:748 whereby The General Court of the EU dismissed an action brought by the European Confederation of Watch and Clock Repairers (CEAHR) against luxury watch manufacturers alleging the existence of an agreement or concerted practice under Article 101 TFEU and abuse of a dominant position under Article 102 TFEU due to manufacturers refusing to supply spare parts to independent watch repairers.

[279] See *infra* chapter 2, section 2.

[280] See Right to Repair Proposal Recital 9, Recital 14, Recital 16, Article 2 and Article 5.

[281] Vincenzo Di Cataldo, *Le Invenzioni. I Modelli* (Giuffrè Editore 1990) 109.

The complex and diverse landscape introduces challenges in both industrial property law and matters of unfair competition and antitrust.[282] Within this framework, the second chapter delves into a detailed examination of the spare parts aftermarket, approaching it from the combined perspectives of IP and competition laws considerations.

The chapter begins by examining a central antitrust concern in the aftermarket, namely the exploitation of market power or monopoly by manufacturers namely the exploitation of market power or monopoly by manufacturers, which enables them to raise aftermarket prices.[283] It the then argues that one of the strategies carried out by OEMs to rule out competitors is to use IP rights as a means to exclude competitors by preventing the commercialisation of parts replicating the originals by unauthorised parties.[284] Based on these premises, the chapter then delves into the debate that led to the exception in design for must-match parts. In this context it argues that this exception, which focuses solely on designs, leaves numerous unresolved issues in relation to the other IP rights. From this point of view, the analysis moves on to examine the challenges associated with trademarks and patents for spare parts. The chapter then critically examines potential remedies to address these challenges and suggests courses of action to resolve the issues identified. By navigating through the complexities of competition concerns, IP rights enforcement and exceptions, the analysis aims to provide a comprehensive understanding of the landscape and offer practical solutions to the issues at hand in the fourth and final chapter.

1. The Market for the Supply of Spare Parts: Between IP and Competition Law Concerns

The spare parts market is notably lucrative.[285] It allows OEMs to leverage their primary product development and remains attractive to new market players due to its

[282] Vincenzo Di Cataldo, 'Il Problema Della Tutela Giruidica Dei Pezzi Di Ricambio' (1998) Europa e diritto privato 793, 795.

[283] See Benjamin Klein, 'Market Power in Aftermarkets' (1996) 17 Managerial and Decision Economics 143.

[284] Beldiman and Blanke-Roeser (n 277) 2.

[285] See SM Wagner and E Lindemann, 'A Case Study-Based Analysis of Spare Parts Management in the Engineering Industry' (2008) 19 Production Planning & Control 397, finding that, on average, the firms in the case study generate 13.3% of their revenues from spare parts sales, ranging from 3.2% to 35%, excluding additional or related after-sales services.

potential for high profit margins alongside relatively low development costs.[286] Given its attractiveness, the spare parts market has generated extensive debate, especially within the automobile sector, due to the potential abusive behaviour by OEMs.

The approach taken by OEMs to maintain control of the aftermarket is influenced by the consideration that the involvement of third parties could lead to a significant loss of profit.[287] This control is reinforced by the exercise of IP rights[288], ultimately affecting consumers. The latter are faced with the 'lock-in' effect, which often forces them to remain dependent on OEMs for access to spare parts and leads them to consider the purchase of a new product as the only means of breaking free from this dependency.[289] Indeed, as widely known, non-original parts are far less expensive than OEM's parts.[290]

With specific reference to the role of IP rights in the spare parts aftermarket, the debate mainly focused on whether it is necessary under an incentive point of view to secure additional profits for IP holders already capitalising on the sale of the primary product. Back in late nineties, the ECJ was implicitly asked to address this question, namely the scope and content of the holder's exclusive right in two cases relating to automobile replacement parts.

In *AB Volvo*,[291] a British company faced legal action for the unauthorised import and sale of patented Volvo body parts, specifically involving the front fender. The ECJ was asked to addressed three key question, primarily related to antitrust concerns: (i) whether exclusive rights granted by a Member State to produce and import replacement body parts for a car model could establish a dominant position in the marketplace; (ii) if refusal to supply such parts, even under a reasonable price, constitutes an abusive exploitation of dominant position; and (iii) whether this abuse

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[286] Beldiman and Blanke-Roeser (n 277) 9.

[287] See Benjamin Liu, 'Toward a Patent Exhaustion Regime for Sustainable Development, 32 Berkeley J. Int'l Law (2014) 330, 359.

[288] Notably, it is not the mere existence of IP rights that is subject to antitrust scrutiny, but rather their potential for abusive exploitation. See generally Nicolas Petit, 'The Antitrust and Intellectual Property Intersection in European Union Law', *Roger D. Blair and D.Saniel Sokol (eds) Handbook of Antitrust, Intellectual Property and High Tech* (Cambridge University Press 2016).

[289] Roberto Natoli, 'Le Parti Di Ricambio: Il Problema Economico e Il Sistema Giudico' [2002] Riv. Dir. Ind. 158, 161: arguing that the 'lock-in' effect becomes more pronounced when there is a greater difference in value between the items owned and those to be acquired. This gap may arise for intrinsic reasons, such as the need to complement lower value items or services with the primary asset, as observed in the context of spare parts.

[290] Norman W Hawker, 'Automotive Aftermarkets: A Case Study in Systems Competition' (2011) 56 The Antitrust Bulletin 57 68.

[291] Case C-238/87 *AB Volvo v. Erik Veng (UK) Ltd.,* [1987] ECLI:EU:C:1988:477.

could harm trade between Member States by hindering the import of body components from another Member State. In the context of the relevant market being defined as that for body parts sold by the vehicle manufacturer, the ECJ found Volvo to hold a dominant position because there were no substitute products that did not conflict with the patented parts.[292] However, the Court found that the refusal by a patent holder of a design model related to car body components to supply spare parts is not inherently deemed an abusive exploitation of a dominant position.[293]

In its analysis, the ECJ did not address the extent of the scope exclusivity deriving by patent protection, nor the boundaries of its exploitation. Nevertheless, the hearing report contains insights on the position of the Commission with reference to the breadth of the IP holder's exclusive rights. Accordingly:

> [T]he right of a proprietor of a protected design to prevent third parties from manufacturing and selling or importing, without his consent, products incorporating the design constitutes the *very subject-matter* of his exclusive right. It follows that an obligation imposed upon the proprietor of a protected design to grant to third parties, even in return for a reasonable royalty, a licence for the supply of products incorporating the design would lead to the proprietor thereof being deprived of the substance of his exclusive right […].[294]

In *Maxicar* case[295], the ECJ held a similar opinion. In its first preliminary question, District Court of Milan [Tribunale di Milano] asked the ECJ whether it was within the exclusive right of the car manufacturer Renault, holder of a patent for an ornamental design relating to car bodywork parts, to oppose the manufacture and sell by independent repairers of detached car body parts. The national judge had observed that Renault had already obtained remuneration from its exclusive right through the marketing of the entire bodywork.[296] Accordingly, the monopolistic position resulting

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[292] Case C-238/87 *AB Volvo v. Erik Veng (UK) Ltd.,* [1987] ECLI:EU:C:1988:332 opinion of AG Jean Mischo paras 8-14.

[293] Instead, according to the ECJ, it is necessary that the conduct of the company in the alleged dominant position manifests in abusive practices, such as arbitrarily refusing to supply spare parts to independent repair shops, setting spare parts prices unfairly, or deciding to cease production of spare parts for a specific model. These behaviors could be deemed a violation if they have the potential to harm trade between Member States. See ibid para 9.

[294] Case C-238/87 *AB Volvo v. Erik Veng (UK) Ltd.,* [1987] ECLI:EU:C:1988:477 report of the hearing para 2.

[295] Case 53/87 *Consorzio italiano della componentistica di ricambio per autoveicoli (CICRA) and Maxicar v Régie nationale des usines Renault* [1988] ECLI:EU:C:1988:472.

[296] ibid para 4-5.

from the registration of ornamental designs for each car body part does not constitute a 'return' for aesthetic research and progress.[297] This is because such returns were exhausted by the overall design of the car.[298] Therefore, claiming exclusivity even for individual detached parts was not justified, and moreover went against the principles of free movement of goods.[299] However, the ECJ, with particular reference to the exclusivity, held a different opinion, stating that:

> [T]he authority of a proprietor of a protective right in respect of an ornamental model to oppose the manufacture by third parties, for the purposes of sale on the internal market or export, of products incorporating the design or to prevent the import of such products manufactured without its consent in other Member States constitutes the substance of his exclusive right.[300]

In both cases, despite the arguments presented by both the parties and Advocate General Jean Mischo,[301] the ECJ did not directly address the specific issue of the scope of IP protection for spare part.[302] In other words, it abstained from analysing its function and the related concerns of double remuneration.[303] Instead, it merely stated that spare parts are an essential aspect of the IP holder's profit, and the IP holder cannot be obliged to provide them, almost akin to imposing a compulsory license scheme.

Yet, as pointed out by scholars, the matter of the scope of IP protection in the aftermarkets is not of secondary relevance. For instance, Mohri argues with reference to patent protection that holders may strategically sell the original products at a relatively low price and then capitalise on replacement parts.[304] Govarere further highlights 'the fact that the case concerned the design protection on components of complex products that also benefit from design protection would have been highly relevant. In particular the question would have arisen of whether and when the alleged

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[297] Case 53/87 *Consorzio italiano della componentistica di ricambio per autoveicoli (CICRA) and Maxicar v Régie nationale des usines Renault* [1988] ECLI:EU:C:1988:330 opinion of AG Jean Mischo para 25.
[298] ibid. On the exhaustion see more specifically *infra* chapter 3.
[299] *Maxicar* para 5.
[300] ibid para 11.
[301] *Maxicar* and *AB Volvo* opinion of Jean Mischo.
[302] Anna Tischner, 'Chopping off Hydra's Heads: Spare Parts in EU Design and Trade Mark Law' in Ansgar Ohly and others (eds), *Transition and Coherence in Intellectual Property Law: Essays in Honour of Annette Kur* (Cambridge University Press 2021) 395.
[303] ibid.
[304] Mineko Mohri, *Maintenance, Replacement and Recycling - Patentees' Rights in the Aftermarkets: Germany, the U.S. and Japan* (Utz 2010) 9.

possibility of obtaining a reward twice can be justified by the function of design rights.'[305]

While IP rights undeniably affects incentives for the products as a whole, such as the auto vehicles, this correlation is not so clear with reference to the ancillary market for spare parts.[306] As noted by Drexl, Hilty and Kur, two practical reasons underlie this: first, it is hard to argue that OEMs expect gains from aftermarket sales through legal protection of designs, given the necessity of reproducing the same part for restoring the original appearance, thereby undermining incentives for innovation; second, it is questioned that OEMs consider aftermarket returns in their investment calculations, as standard investments in car design are typically covered by the sales price.[307] Thus, providing additional protection to IP holders in the aftermarket lacks of justification.[308] The same reasoning applies not only to designs, but also to patents. Liu, for instance, questions why patent incentives should vary based on the recyclability of a product.[309] With regard to the resale market for copyrighted materials, Puig underscores that alternative distribution systems, such as libraries and websites, play a role in bolstering competition in the primary market.[310] This, in turn, incentivises rightsholders to enhance or update their products.[311]

Similar arguments have been put forward in favour of the liberalisation of the spare parts market, suggesting that the secondary market lacks innovation and that the initial investment in innovation has already been recouped through primary market sales, ultimately claiming that IP protection no longer serves its traditional incentive

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[305] Inge Govaere, *The Use and Abuse of Intellectual Property Rights in E.C. Law : Including a Case Study of the E.C. Spare Parts Debate* (Sweet and Maxwell 1996) 216.

[306] See European Commission, 'Staff Working Document on the Commission Proposal for a Directive amending Directive (EC) 98/71 on the legal protection of designs COM(2004)582 final 30, observing that 'It is (..) difficult to estimate the effect of design protection for spare parts on the innovative activities of manufacturers, their costs and their profits. Two factors should be taken into account. First, the true purpose of creating car designs is to sell cars; here design has an impact on consumer behaviour, in the spare parts sector it does not. Thus, vehicle manufacturers will certainly continue to use design as a marketing instrument for their core business irrespective of whether or not there is protection in the aftermarket'.

[307] Josef Drexl, Reto M Hilty and Annette Kur, 'Design Protection for Spare Parts and the Commission's Proposal for a Repairs Clause' IIC - International Review of Intellectual Property and Competition Law 448, 455-456.

[308] ibid.

[309] Liu (n 287) 59. Yet, it is crucial to acknowledge that designs and patents serve different functions, and this disparity has implications for the required level of reward. See Govaere (n 299) 220.

[310] Antoni Rubi Puig, 'Copyright Exhaustion Rationales and Used Software ' (2013) 4 J Intell Prop Info Tech and Elec Com L 159, 160.

[311] ibid.

function.[312] This has extended the controversial debate within the EU regarding the extent of design protection for spare parts, especially in the automotive sector.

2. The Issue of Design Protection for Spare Parts

As stated, design can cover both the product as a whole and individual components. With regard to the latter, protection is available for both single-unit products and 'must match' parts[313], i.e. those parts, such as fenders, lights etc., whose shapes are necessary to restore the original appearance of complex products[314], such as motor vehicles. The concept of 'must match' differs from that of 'must-fit' parts, which refers to components that need to be connected or assembled with other parts of a car.[315]

Designs merely dictated by their technical function are not eligible for protection.[316] Therefore, spare parts can be protected to the extent that they are new and have individual character.[317] In relation to must-match parts, a component part is considered new and possessing individual character only if, once incorporated into a complex product, it remains visible during normal use, and the visible features of the component part alone fulfil the criteria of novelty and individual character.[318] In other words, for integral parts of a complex product to be protected, they must have distinctive features such as lines, colours, shapes and textures that create a unique overall impression that is independent of the larger complex product.[319]

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[312] See Beldiman and Blanke-Roeser (n 277) 918.

[313] ibid 1674.

[314] See the definition provided by Article 1(c) of the Directive 98/71/EC of the European Parliament and of the Council of 13 October 1998 on the legal protection of designs [1998] OJ L 289/28 ('DD') ''complex product' means a product which is composed of multiple components which can be replaced permitting disassembly and reassembly of the product.'

[315] Rupert Hughes, 'Design Protection of Auto Spares: the Automotive Spares Industry Perspective' (1994) 22 *Int'l Bus Law* 116,117.

[316] DD, Article 7.

[317] DD, Article 3(2).

[318] DD, Article 3(3).

[319] See Case C-123/20 *Ferrari SpA v. Mansory Design Holding GmbH, WH* [2021] ECLI:EU:C:2021:889 on the protectability of body parts as unregistered Community designs, which had been entirely reproduced by the defendant and sold as accessory kits. Apart from clarifying the requirements for protecting parts of a complex product, the ECJ also established that disclosure to the public is necessary for its protection as an unregistered design ex Art. 11 CDR, and such disclosure can occur through the dissemination of the entire product. For a critical analysis of the judgment, refer to Vincenzo Di Cataldo, 'Parti Di Carrozzeria Della Ferrari FXX K e Tutela Di Disegni e Modelli Non Registrati' [2022]

Spare parts have been the subject of a long and in-depth debate regarding whether they should receive full protection or be subject to a 'repairs clause', allowing reproduction specifically for repair purpose. The significance lies in the potential impact on aftermarket entry for repairers, as strong design protection could impede their ability to engage in repair activities, considering that both their unauthorised use and reproduction constitute infringement.[320] The discussion has primarily centered on automobile spare parts, taking into account their restricted interchangeability and the potential to develop alternative designs due to the fact that these parts require a particular form.[321] The debate has finally come to an end following the reform of the design law package, which has provided a harmonised solution to the issue of IP protection for must match parts.

2.1. The 'Must-Match' Spare Parts and the 'Repair Clause' Exception

The design legislative framework has been recently revised by the EU legislator, who issued two package proposals,[322] amending the Design Directive 98/71/EC[323] ('DD') and Community Design Regulation 6/2002('CDR').[324] With the objective to open the market for competition, the new DD Proposal has recently introduced a harmonised 'repair clause' with reference to the must-match parts only, similar to the exception already contained in Article 10 of the CDR. In particular, the proposed Article 19 clarifies that:

> Protection shall not be conferred on a registered design which constitutes a *component part of a complex product*, upon whose appearance the design of the component part is dependent, and

Giurisprudenza Commerciale 1033, who emphasises that the Court did not contribute any additional insights beyond the normative framework.

[320] David Llewelyn and Veronica Barresi, 'Right Holders' Control over Repair and Reconditioning' in Christopher Heath and Sanders Kamperman (eds), *Spares, Repairs, and Intellectual Property Rights* (Kluwer Law Intl 2009).

[321] Hughes (n 315) 117.

[322] Namely, the European Commission 'Proposal for a Directive of the European Parliament and of the Council on the legal protection of designs (recast)' COM(2022) 667 final ('new DD Proposal') and 'Proposal for a Regulation of the European Parliament and of the Council amending Council Regulation (EC) No 6/2002 on Community designs and repealing Commission Regulation (EC) No 2246/2002' COM(2022)666 final.

[323] Directive 98/71/EC of the European Parliament and of the Council of 13 October 1998 on the legal protection of designs [1998] OJ L 289/28.

[324] Council Regulation (EC) No 6/2002 of 12 December 2001 on Community designs [2001] O JL 3/1.

> which is used […] for *the sole purpose of the repair* of that complex product so as to *restore its original appearance*.

Compared to the version of Article 110 contained in the CDR,[325] Article 16 of the new DD Proposal makes explicit that the repair exception shall be invoked as a defence against infringement claims only if consumers are adequately informed about the origin of the product to be used for repairing the complex product.[326] As for its entry into force, the new provision applies solely to designs that are registered following the implementation of the Directive, while a transitional period of 10 years is introduced for previously registered designs that will still receive protection.[327]

Consistently with *Acacia* ruling[328], the purpose of the repair clause is to liberalise the spare parts aftermarket by ensuring that consumers are not perpetually dependent on OEMs to obtain those parts necessary "by virtue of their function for the visual appearance of the complex product. [329] As said, the aftermarket distribution of spare parts is dominated by OEMs and poses entry barriers for competitors due to the intricate nature of these parts: perfectly matching the original specifications demands significant investments in research, development and reverse engineering.[330] The OEMs, having already amortised its investments with sales in primary market, enjoy a competitive advantage, which they exercise to control also secondary markets for replacement parts. [331] As a consequence, consumers not only have limited choices

[325] Providing that 'Until such time as amendments to this Regulation enter into force on a proposal from the Commission on this subject, protection as a Community design shall not exist for a design which constitutes a component part of a complex product used […] for the purpose of the repair of that complex product so as to restore its original appearance.'

[326] Design Proposal, Article 19, para 2. For an in-depth comment on the wording of the article, see Annette Kur, Tobias Endrich-Laimböck and Marc Huckschlag, 'Position Statement of the Max Planck Institute for Innovation and Competition of 23 January 2023 on the "Design Package" (Amendment of the Design Regulation and Recast of the Design Directive)' [2023] SSRN Electronic Journal <https://www.ssrn.com/abstract=4344539> accessed 11 January 2024.

[327] Design Proposal 1.

[328] Joined Cases C-397/16 and C- 435/16 *Acacia Srl v Pneusgarda Srl and Audi AG and Acacia Srl and Rolando D'Amato v Dr. Ing. h.c.F. Porsche* AG [2017] ECLI:EU:C:2017:992.

[329] ibid para 50, stating that 'The purpose of the repair clause is to avoid the creation of captive markets in certain spare parts and, in particular, to prevent a consumer who has bought a long-lasting and perhaps expensive product from being indefinitely tied, for the purchase of external parts, to the manufacturer of the complex product.'

[330] Dana Beldiman and Constantin Blanke-Roeser, 'European Design Law: Considerations Relating to Protection of Spare Parts for Restoring a Complex Product's Original Appearance' (2015) 46 IIC - International Review of Intellectual Property and Competition Law 915, 918.

[331] ibid.

between competing parts, but they also face uncertainty with regard to the legality their purchases.[332]

The new DD Proposal, once adopted, will harmonise the protection for must match spare parts across EU and will put an end to the transitional period that has caused uncertainty and fragmentation for decades. Particularly, the current situation is governed by said Article 10 of the CDR including a repair clause, which works in parallel with the DD, never adopting a similar repair clause.[333] Instead, Article 14 of DD, currently into force, obliges Member States to maintain their existing laws on design protection for must-match spare parts until amendments to the Directive are adopted by means of a proposal of the Commission ('freeze-plus' period); at the same time it allows Member States to introduce changes to their national legal provisions for the sole purpose of liberalising the market for such parts.[334] As a result, certain countries, such as Italy[335], France, Poland, Hungary, Spain and Germany,[336] have

[332] ibid. See also David Stone, 'The Design Directive' in David Stone (ed), European Union Design Law: A Practitioners' Guide (Oxford University Press 2016) 621.

[333] See Marcella Panucci, 'La tutela dei disegni e modelli alla luce della nuova direttiva CE' (Working Papers 1999), discussing the intricate legislative process that resulted in the adoption of the DD and the accompanying debate on the repair clause, which concluded without a consensus, ultimately leaving the decision to the Member States.

[334] Art. 14, Design Directive (providing that 'Until such time as amendments to this Directive are adopted on a proposal from the Commission […] Member States shall maintain in force their existing legal provisions relating to the use of the design of a component part used for the purpose of the repair of a complex product so as to restore its original appearance and shall introduce changes to those provisions only if the purpose is to liberalise the market for such parts.').

[335] In Italy, the directive was implemented through legislative decree no. 95 of 2 February 2001, which stipulated that 'Until Directive 98/71/EC on the legal protection of designs is amended upon a proposal by the Commission pursuant to Article 18 of the same Directive, exclusive rights on the components of a complex product cannot be invoked to prevent the manufacture and sale of those components for the purpose of repairing the complex product in order to restore its original appearance.' See Roberto Natoli, 'The Spare Parts Issue in Italy After the New Design Law: Is There Still Room for an Automobile Manufacturers' Monopoly?' (2002) IIC 688-697, arguing that despite the Italian legislature's refusal to grant protection to spare parts in order to foster a highly competitive market for car repair and service, manufacturers could potentially establish a monopolistic position by enforcing the provisions on slavish imitation.

[336] A repair clause has been included within Section 40a of the Design Act (2014), effective as of 1 January 2021. It provides that: '(1) Protection as a design does not exist for a design incorporated in or applied to a product which constitutes a component part of a complex product used for the sole purpose of enabling the repair of that complex product so as to restore its original appearance. This does not apply if the main purpose for which the aforementioned component is put on the market is other than the repair of the complex product. (2) Subsection (1) only applies if consumers are duly informed, by means of an identification mark or in other appropriate form, about the origin of the product used for repair purposes so that they are able, with full knowledge of the facts, to make an informed choice between competing products.'

incorporated a repair clause into their legislation, allowing the reproduction of must-match parts for repair purposes without infringing on design rights. Meanwhile, other countries, including Austria, Malta, Slovakia, Slovenia, Czech Republic and Portugal, have continued to apply their design law for spare parts protection without having a repair clause in their legislation. The lack of harmonisation led the EU legislator to introduce a repair exception also within the DD to address fragmentation at the national level and ensure the proper functioning of the internal market.[337] In this context, the new DD Proposal is crucial in ending a prolonged period of legislative uncertainty, while it providing significant considerations on limiting exclusivity for OEMs.

Coming back to the initial question 'how much protection is actually needed' and 'which is the function of design rights', the Position Statement of the Max Planck Institute on the Design Package pointed out that 'granting full exclusivity of design protection on the secondary market for form-dependent parts of complex products would be incompatible with the very purpose of design protection to foster the development of innovative design, which can only materialise on markets where a choice exists for the consumer.'[338] Choice exists, for example, regarding parts not sold for typical repair purposes and to which the exemption does not apply.[339] This is the case of parts which have independent market and in relation to which consumers detain certain degree of decision.[340] The category includes accessories capable of modifying the product's original appearance, like car rims, fog lights, external mirrors and similar items.[341] In terms of its scope, the exception encompasses both the commercialisation and the production of must-match parts, provided that they are solely intended for replacement in repair scenarios.[342]

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[337] 'Intellectual Property: New Rules Will Make Industrial Designs Quicker, Cheaper and More Predictable' (*European Commission*) <https://ec.europa.eu/commission/presscorner/detail/en/ip_22_7216> accessed 1 December 2023.

[338] Max Planck's Position Statement on the Design Package 10.

[339] Luigi Carlo Ubertazzi, 'Commento All'Articolo 36 Codice della Proprietà Industriale ('CPI')' in *Commentario breve alle leggi su proprietà intellettuale e concorrenza* (G. Cian and A. Trabucchi *Breviaria Iuris*, Wolters Kluwer, CEDAM 2019) 35, 392.

[340] ibid. See also Giovanni Guglielmetti, 'La Contraffazione Del Brevetto per Equivalenti' [2000] *Riv. Dir. Ind.* 112.

[341] ibid. See *e.g. Ruote Company s.p.a. v Bayerische Motoren Werken* AG, District Court of Florence [Tribunale di Firenze], 17 March 2003, Sec. II, Case No. 21162 in (2003) Riv.Dir.Ind., II, 89 ff holding that the repair clause does not apply to accessories chosen by the consumer purely for aesthetic reasons, such as models of alloy wheels for cars.

[342] ibid 13.

According to some scholars, the repair clause is an exception to exclusivity and, as such, must be narrowly interpreted.[343] According to this approach, it should not therefore extend to other exclusive rights like patents, copyrights[344] and trademarks, which may also cover spare parts.

Specific issues arise concerning trademarks, particularly regarding the OEM's logo over spare parts. In the absence of a repair clause similar to that for designs, reproducing the logo without the owner's authorisation, even for repair purposes, constitute trademark infringement.

2.2. The Non-Applicability of the Repair Clause to Trademarks

In *Ford Motor Company*[345] the ECJ asked to clarify whether the limitations contained in Article 14 of DD and Article 110 of CDR can be applied by analogy to trademarks. Particularly, the case concerned a party supplier of automotive spare parts marketed wheel rims bearing an unauthorised reproduction of Ford's trademark. Ford claimed trademark infringement, while Wheeltrims argued that the use of the trademark was entirely lawful as it was purely aesthetic and descriptive, not intended to identify origin but rather the manufacturer in relation to the complex product - the car - on which the wheels are mounted.[346] Wheeltrims relied on Article 241 of the Codice

[343] See Ubertazzi (n 339) 392.

[344] Both the DD and the CDR allow the cumulation of design and copyright protection, with Member States having the authority to decide the level of originality required and the conditions for conferring such protection. While maintaining the principle of cumulation, recent CJEU case law have limited Member States' discretion in determining conditions for copyright protection, which must comply with the requirements set by Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 [2011] O JL 167/10. See European Commission, 'Impact Assessment Report Accompanying the documents to the Proposal for a Regulation of the European Parliament and of the Council amending Council Regulation (EC) No. 6/2002 on Community designs and repealing Commission Regulation (EC) No 2246/2002 and the Proposal for a Directive of the European Parliament and of the Council on the legal protection of designs COM(2022) 666 final, Annex 11. In Case C-833/18 SI, *Brompton Bicycle Ltd v Chedech/Get2Get* [2020] ECLI:EU:C:2020:461 the ECJ clarified that to be eligible for copyright protection, spare parts,, and in general products whose shape is essential for achieving a technical result, must meet the criteria of being an 'original work resulting from intellectual creation' and reflecting 'the creator's personality. See also generally AM Tettenborn, 'Copyright and Spare Parts: Judicial Legislation in a Good Cause' (1986) 45 The Cambridge Law Journal 216. For a critical analysis of the cumulation of copyright and design protection, see Vincenzo Di Cataldo, Davide Sarti and Marco Saverio Spolidoro, 'Riflessioni critiche sul libro verde della commissione delle comunità europee sulla tutela giuridica dei disegni industriali' (1993) Riv.Dir.Ind, II, 49 f.

[345] Case 500/14 *Ford Motor Company v Wheeltrims srl* [2015] ECLI:EU:C:2015:680.

[346] ibid para 24.

della Proprietà Industriale ('Industrial Property Code', 'CPI')[347], which implemented the exception contained within the Design Directive[348], specifying that exclusive rights on components of a complex product cannot be enforced to prevent the manufacture or sale for the repair of the complex product to restore its original appearance.[349]

The national judge asked the ECJ how Article 14 DD and Article 110 CDR should be interpreted in relation to trademarks. Particularly, it asked whether producers of replacement parts and accessories have the right to use trademarks registered by third parties to restore the original appearance of a complex product.[350] Furthermore, it sought clarification on whether the repair clause, as outlined in these articles, constitutes a subjective right for third-party producers to use another party's trademark concerning replacement parts and accessories, especially when the trademark is externally visible and contributes to the external appearance of the complex product.[351]

As pointed out by the ECJ, two opposing trends have developed in Italy on the matter. The first interprets the clause broadly, considering its objective to be the general restoration of the original appearance of complex products, irrespective of the type of protection involved.[352] This theory suggests that the use of a third party's trademark should be permissible if the sign indicates the purpose of the spare part or if its use is essential to replicate all elements of the original product.[353] The second orientation sees the repair clause for designs, and the implementing Article 241 of the Italian CPI, as an exception to the exclusive rights of the proprietor and, as such, not subject to broad interpretation.[354] This approach is further supported by the wording of

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[347] *Decreto legislativo 10 febbraio 2005, n 30 of 10/02/20025* (2005) [Codice della proprietà industriale].
[348] See *above* chapter 2, section 2.1.
[349] 'Until Directive 98/71/EC of the European Parliament and of the Council, dated October 13, 1998, on the legal protection of designs and models is modified upon the proposal of the Commission in accordance with Article 18 of the same directive, exclusive rights on components of a complex product cannot be invoked to prevent the manufacturing and sale of those components for the repair of the complex product, with the aim of restoring its original appearance.' According to the prevalent doctrine, the provision should be interpreted as allowing the registration of components while prohibiting the enforcement of the rights derived from the registration against use for repair purposes. See Adriano Vanzetti, 'Commento all' Articolo 35 CPI' in *Codice della proprietà industriale* (Le fonti del diritto italiano, Giuffè Editore 2007) 3, 603-606.
[350] *Ford Motor* para 38.
[351] ibid.
[352] Niccoló Ferretti and Alessandro Zito, 'Comment on "Wheel Covers": Decision of the Supreme Court (2nd Criminal Section) 7 July 2015 – Case No. 28847 (in Re V.A.'s Application)' (2016) 47 IIC 750, 751.
[353] ibid.
[354] *Ford Motor* para 27.

the provision, which specifically refers to designs without making any reference to trademarks.[355]

Following this second stance, the ECJ resolved the matter negatively, holding that 'Article 14 of DD and Article 110 CDR must be interpreted as not allowing, […] a manufacturer of replacement parts and accessories for motor vehicles, such as wheel covers, to affix to its products a sign identical to a trademark registered for such products *inter alia* by a producer of motor vehicles, without obtaining the latter's consent, on the ground that the use thus made of that trademark is the only way of repairing the vehicle concerned, restoring to that complex product its original appearance.'[356]

Yet, *Ford Motor* left open the question of the scope of applicability of the limitations contained in trademark laws, specifically those concerning situations whereby the use of the manufacturer's trademark is necessary to indicate to consumers the products for which the third-party spare parts or accessories are intended. This measure holds crucial importance for manufacturers and distributors of such products: they would be unable to distribute them without using the main product's trademark, effectively facing barriers to entry into the market.

3. The Issue of Trademark Protection for Spare Parts

3.1. Legislative Framework

The EU legislative framework on trademarks is contained within the Directive (EU) 2015/2436 to approximate the laws of the Member States relating to trademarks ('TMD')[357] and the Regulation (EU) 2017/1001 on the European Union trademark ('EUTMR').[358]

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[355] ibid. *See e.g.* District Court of Turin, 29/09/2008 in (2008) *Sez. Spec. P.I*. 1, 379, holding that the 'repair clause' applies specifically to conflicts arising from the exercise of exclusive rights resulting from the registration of a design or model. Notably, this provision does not encompass trademark rights, as they have separate protection mechanisms and are theoretically perpetual.

[356] *Ford Motor* para 46.

[357] Directive (EU) 2015/2436 of the European Parliament and of the Council of 16 December 2015 to approximate the laws of the Member States relating to trade marks [2015] OJ L 336/1 ('TMD').

[358] Regulation (EU) 2017/1001 of the European Parliament and of the Council of 14 June 2017 on the European Union trademark [2017] O JL 154/1 ('EUTMR').

Spare parts, as in *Ford* case, ca first be put on the market under a specific brand name or logo.[359] Secondly, they can be protected as three-dimensional shapes, given that trademark extends also to containers, packaging, the product itself and their appearance.[360] Yet, to qualify for trademark protection, replacement parts not only have to be distinctive, but they also have to overcome the so-called 'functionality test', meaning that they do not have to fulfil a mere utilitarian or technical purpose.[361] Although few parts can meet the distinctiveness requirement,[362] OEMs, particularly within the automobile sector, have successfully obtained trademarks over replacement part, including grilles, taillights and other vehicle components.[363] The exclusivity resulting from trademark protection can be exploited by OEMs to 'prevent the [manufacture, use and] importation of replacement parts that contain manufacturers' trademarks or appear similar to the part that is registered as a trademark.'[364]

According to Article 9(2) of the EUTMR[365], unauthorised third parties are prevented from using in the course of trade an identical sign for identical products or services, or a similar sign for identical or similar products or services when there is a likelihood of confusion on behalf of the relevant public (so-called double identity test). Article 9(3) then contains a non-exhaustive list of the activities that are prohibited under para 2. These include: using the sign on goods or their packaging, offering, marketing, or storing goods with the sign, importing or exporting goods with the sign, utilising the sign as a trade or company name, incorporating it in business papers and advertising, and employing the sign in misleading advertising.

[359] See Joined Cases C–720/18 and C–721/18 *Ferrari SpA v DU* [2020] ECLI:EU:C:2020:854.

[360] Commission Implementing Regulation (EU) 2018/626 of 5 March 2018 laying down detailed rules for implementing certain provisions of Regulation (EU) 2017/1001 of the European Parliament and of the Council on the European Union trade mark, and repealing Implementing Regulation (EU) 2017/1431[2018] OJ L 104/37 ('EUTMIR') Article 3(2)(c).

[361] See Article 7(1) EUTMR and Article 4(1) TMD excluding from protection signs which merely consists of '(i) the shape, or another characteristic, which results from the nature of the goods themselves; (ii) the shape, or another characteristic, of goods which is necessary to obtain a technical result; (iii) give substantial value to the goods.'

[362] Kur (n 276).

[363] Aaron Perzanowski (ed), 'Repair and Intellectual Property', *The Right to Repair: Reclaiming the Things We Own* (Cambridge University Press 2022) 148 <https://www.cambridge.org/core/books/right-to-repair/repair-and-intellectual-property/2D27354DBCF2991134B426370DB1D885> accessed 9 October 2023.

[364] Grinvald and Tur-Sinai (n 204) 117.

[365] And corresponding Article 10 of the TMD.

Article 9(1)(c) addresses the protection of trademarks with reputation. In such instances, infringement is determined regardless of whether the identical or similar sign is used for identical or similar products if 'the use of that sign takes unfair advantage of, or is detrimental to, the distinctive character or the repute of the EU trademark' 'without dues cause.'[366] The provision aims to protect trademarks with reputation against dilution by prohibiting unauthorised use that could diminish or blur their uniqueness and prestige.[367]

The case-law of the ECJ has subsequently made it clear that the proprietor of a trademark may exercise its rights under Article 9 of the EUTMR as long as the use of the sign in the course of trade interferes with one of the functions trademarks are indented to protected.[368] These functions overcome the traditional origin and quality functions, encompassing also communication, investment and advertising.[369] It has been later clarified that so-called 'functional theory' equally applies to trademarks with a reputation.[370]

Applying the analysis framework proposed by Annette Kur, once trademark infringement is established, it is necessary to evaluated if there is room for a defence.[371] In the latter case, it should be assessed whether one of the limitations contained in Article 14 EUTMR apply.[372] The article introduces limitations to the exclusive rights of the trademark owner, allowing the use of the trademark without the proprietor's consent when justified, such as when it is necessary to inform consumers about product or service characteristics, or when it is generally unfair to prohibit such use to third parties.[373] The aim of the provision is to limit the exclusive rights of the

[366] Annette Kur and Martin Senftleben, *European Trade Mark Law: A Commentary* (Oxford 2017) section 5.1.5.
[367] ibid.
[368] See Case C-487/07 *L'Oréal SA, Lancôme parfums et beauté and Cie Laboratoire Garnier and Cie v Bellure NV Malaika Investments Ltd Starion International Ltd* [2009] ECLI:EU:C:2009:378 para 63-65 and caselaw cited.
[369] ibid. See also Case C-323/09, *Interflora Inc., Interflora British Unit v Marks and Spencer plc, Flowers Direct Onlin*e Ltd [2011] ECLI:EU:C:2011:604 para 38
[370] Tobias Cohen Jehoram, 'The Function Theory in European Trade Mark Law and the Holistic Approach of the CJEU' (2019) 102 Trademark Rep 1243,1244.
[371] Annette Kur, '"As Good as New" – Sale of Repaired or Refurbished Goods: Commendable Practice or Trade Mark Infringement?' (2021) 70 GRUR International 228.
[372] ibid 229.
[373] Luigi Carlo Ubertazzi, 'Commento All'Articolo 14 EUTMR' in *Commentario breve alle leggi su proprietà intellettuale e concorrenza* (G. Cian and A. Trabucchi *Breviaria Iuris*, Wolters Kluwer, CEDAM 2019) 1249.

trademark proprietor in light of other legitimate interests deserving protection, while ensuring that the enforcement of trademark rights does not hinder the free movement of goods and services within the EU.[374] Specifically, current EU trademark law[375] and harmonised national laws provide that:

> An EU trade mark shall not entitle the proprietor to prohibit a third party from using, in the course of trade:
>
> a) the name or address of the third party, where that third party is a natural person;
> b) signs or indications which are not distinctive or which concern the kind, quality, quantity, intended purpose, value, geographical origin, the time of production of goods or of rendering of the service, or other characteristics of the goods or services;
> c) the EU trade mark for the purpose of identifying or referring to goods or services as those of the proprietor of that trade mark, in particular, where the use of that trade mark is necessary to indicate the intended purpose of a product or service, in particular as accessories or spare parts.

All the limitations are subject to the condition that the use by the third party must align with 'honest practices in industrial or commercial matters.'[376] Recital 21 of the EUTMR and 27 of the TMD outline certain types of use that are considered 'fair' and in accordance with honest practices.[377] It is a general clause that should, however, be tailored to the specificities of each case.

Based on the described legislative framework, the following sections will focus on the limitations applicable to the commercialisation of non-original spare parts and the

[374] ibid.

[375] EUTMR Article 14(1) and TMD Article 14(1).

[376] EUTMR Article 14(2) and TMD Article 14(2).

[377] Annette Kur, Thomas Dreier, and Stefan Luginbuehl, *European Intellectual Property Law. Text, Cases and Materials* (2nd edn, Elgar 2019) section 6.1.3. Particularly: 'In order to ensure equal conditions for trade names and EU trade marks in the event of conflicts, given that trade names are regularly granted unrestricted protection against later trademarks, such use should be only considered to include the use of the personal name of the third party. It should further permit the use of descriptive or non-distinctive signs or indications in general. Furthermore, the proprietor should not be entitled to prevent the fair and honest use of the EU trade mark for the purpose of identifying or referring to the goods or services as those of the proprietor. Use of a trade mark by third parties to draw the consumer's attention to the resale of genuine goods that were originally sold by or with the consent of the proprietor of the EU trade mark in the Union should be considered as being fair as long as it is at the same time in accordance with honest practices in industrial and commercial matters […].' See Recital 21 of the EUTMR and 27 of the TMD.

clause of fairness in industrial and commercial fields, as interpreted by both EU and national caselaw.

3.2. Supply of Spare Parts as Trademark Infringement

The reproduction of trademarks on spare parts is a complex issue that has sparked numerous disputes across various sectors, not solely within the automotive industry, often leading to conflicting outcomes. Within the automotive sector, particular concerns arise in situations where the trademark forms a part of the shape of a component in a complex product, given that no equivalent provisions to the repair clause applicable to designs currently exist in trademark laws.

In addition to the issue of the lawfulness of the production and commercialisation of spare parts protected by trademarks, concerns arise also with regard to the lawfulness of their offer or presentation to the public by reference to the OEM's product with which they are intended to be used. Specifically, questions revolve around to what extent retailers or third-party suppliers can utilise the OEM's trademark when selling instrumental, accessory, or complementary products associated with the entire trademarked product.[378] This involves presenting these items to the public while referring to the main product using its registered trademark.[379] It follows that when a trademark is used descriptively but unfairly promotes the user's own product, implying qualities it does not have, the use becomes unlawful.[380]

3.2.1. Reproducing

Let's first consider the most common scenario of an independent entity involved in manufacturing and wheel covers. The practice of placing logos on car rims is particularly widespread among major automotive companies. Let's suppose that a third-party supplier, specialised among others in the sale of car rims, reproduces the exact logo of the original car manufacturer without seeking authorisation and place them on the market. The question is whether such use of the trade mark is essential to indicate the intended purpose of the wheel rims, and thus falls within the limitation

[378] Giorgio Aghina, *La Utilizzazione Atipica Del Marchio Altrui* (Giuffrè 1971) 172.
[379] See *infra* chapter 3, section 3.
[380] Adriano Vanzetti, Vincenzo Di Cataldo and Marco Saverio Spolidoro, *Manuale Di Diritto Industriale* (9th edn, Giuffrè 2021) 269.

of Article 14(1)(c) of the EUTMR, or whether it constitutes trademark infringement. Furthermore, the question arises whether the answer varies according to the specific spare part and its function, e.g. a radiator versus the windscreen of a car.

Designed with the intention to allow the development of the aftermarkets, the limitation in question is intended to liberalise the use of the OEM's trademark in cases where such use is necessary to indicate the intended purpose of a product or its association with a particular service.[381] The rationale behind it stems from the fact that spare parts for a vehicle have no autonomous value unless they are used to replace the worn out or defective original part.[382] If the supplier of these complementary products could not refer precisely to the complex product for which they are intended, they would not be present on the market and the manufacturer of the main product would gain a monopoly position over the accessories or spare parts of the said product.[383]

As noted above, two conditions must be met for Article 14(1)(c) to apply: (1) the use should be necessary for that purpose and (2) the use should be in accordance with the principles of fairness and honesty in industrial or commercial matters.[384] With regard to the first requirement, the ECJ clarified in *Gillette,*[385] which pertained to the marketing of razor blade packages prominently featuring the owner's distinctive marks, that the use of a trademark is necessary if 'that information cannot in practice be communicated to the public by a third party without use being made of the trademark of which the latter is not the owner.'[386] To ascertain whether other means can be used to provide such information, the ECJ listed among the parameters to consider the potential existence of technical standards or norms generally used for the type of product being marketed, as well as the nature of the target audience for the product.[387] Ricolfi emphasises that such an interpretation of the necessity requirement promotes

[381] See Marco Ricolfi, *Trattato dei marchi: diritto europeo e nazionale*, vol 2 (Giappichelli Editore 2015) section 141.1., highlighting that the Regulation identifies specific situations whereby the use of someone else's trademark, which in theory would be prohibited, does not constitute an infringement by virtue of the existence of a provision authorising such conduct.
[382] ibid section 144.1.
[383] ibid.
[384] Luigi Carlo Ubertazzi (n 373) 1255, identifying also a third requirement according to which the use should be intended to indicate the destination of the goods or services.
[385] Case C-228/03 *Gillette Company and Gillette Group Finland Oy v. LA-Laboratories Ltd Oy* [2003] ECLI:EU:C:2005:177.
[386] ibid para 35.
[387] ibid paras 36-37.

the balancing of conflicting interests: on the one hand, the protection of the trademark owner's prerogatives and, on the other hand, the promotion of commercial freedom and competition.[388] In *Opel v Autec*,[389] which concerned the reproduction of the logo of the renowned automotive company on a reduced scale on toy cars, the ECJ further stated that the third party' use of the sign must not prejudice the functions of the trademark, particularly its essential function of ensuring consumers recognise the product's origin.[390] It follows that if the relevant public does not perceive the identical sign as an indication that these products originate from the owner or an economically connected enterprise, such use does not undermine the essential function of the registered trademark.[391]

The second requirement makes trademark's use subject to compliance with the principles of professional fairness in order to prevent the exception to the owner' exclusive rights from leading to unfair exploitations.[392] In *Gillette* the ECJ clarified that 'the condition of 'honest use' […]constitutes in substance the expression of a duty to act fairly in relation to the legitimate interests of the trademark owner.'[393] On these premises, 'such use of the trademark will not comply with honest practices in industrial or commercial matters where, first, it is done in such a manner that it may give the impression that there is a commercial connection between the reseller and the trademark proprietor.[394] Nor such use should affect the value of the trademark 'by taking unfair advantage of its distinctive character or repute.'[395]

As Ricolfi pointed out, in practical terms, the two requirements often tend to overlap, especially when a third party not only refers to the trademark owner through packaging but also directly replicates the trademark on the product.[396] In these cases, as seen in the subsequent examples, some judges argued that the necessity requirement is not met because the informative function could be adequately fulfilled by referring solely to the verbal aspect of the trademark; yet this scenario could also be categorised under

[388] Ricolfi (n 381) section 144.2.
[389] Case C-8/05 *Adam Opel AG v. Autec AG.* [2007] ECLI:EU:C:2006:154.
[390] ibid paras 21-25.
[391] ibid.
[392] Vanzetti, Di Cataldo, and Spolidoro (n 380) 276.
[393] ibid. See *Gillette* para 41.
[394] ibid. See *Gillette* para 42.
[395] ibid. See *Gillette* para 43.
[396] Ricolfi (n 381) section 144.3.

the ‘compliance’ requirement with fairness principles, creating an impression of a commercial association with the trademark owner.

The issue arises precisely in the context of the reproduction of the OEM’s logo on car rims and wheel covers, which has been the subject of legal disputes for years. Part of the jurisprudence, which now appears to be outdated, has at times classified this specific case under the limitation set out in Article 14 of the EUTMR, while at other times it has attempted to take alternative routes, asserting the legitimacy of the conduct on the basis of the absence of prejudice to the owner’s interests. And where courts have allowed the reproduction of the trademark, they did not reached a consensus on where its production could be deemed lawful, whether only on the packaging through which they are marketed or also on the products themselves.

For instance, in a case of 2011, the Italian Criminal Court of Cassation [Corte di Cassazione Penale][397] ruled that the reproduced trademark on car wheel covers does not serve to identify the origin of the individual component. Instead, it serves an ‘atypical function’, aiming to communicate to the consumer that the product has an instrumental or otherwise associated purpose with the manufacturer’s product.[398] In other words, it does not indicate the origin of the single component, in relation to which it has no distinctive function, but performs its ‘ordinary’ function of identifying the manufacturer only in relation to the product as a whole. Conversely, as regards to the individual component, the trademark, while influencing the overall perception of the origin of the complex product, has a purely aesthetic and descriptive function.[399] In this perspective, reproducing it on the spare part does not diminish its distinctive function; rather, it seeks to establish an aesthetic equivalence between the original component and the replacement.[400]

Previously, the Court of Cassation [Corte di Cassazione] had ruled that the reproduction of the Fiat trademark on grille covers for various car models was lawful.[401] The Court further ruled that the need to avoid any risk of confusion with the proprietor's trade mark did not require affixing third party's trademark alongside that of the

[397] *GAN IL* Criminal Court of Cassation No.47081 in (2012) *Giur.Ann.Dir.Ind* 25.
[398] ibid.
[399] ibid.
[400] ibid.
[401] *Fiat Auto s.p.a v Isam* [2000] Court of Cassation Case No. 144 in (2000) *Giur.Ann.Dir.Ind*. 22.

proprietor.[402] In another case the Court of Appeal of Naples [Corte di Appello di Napoli][403] held that the third party's production and marketing of wheel rims bearing the BMW trademark felt within the exception outlined in Article 21 of CPI, implementing the limitation provided by Article 14 EUTMR.[404] Accordingly, such reproduction is it necessary as it aims to ensure the exact replication of the 'originals' in all their formal elements, as allowed by Article 241 CPI in relation to designs.[405] Otherwise, the reproduction of the spare part could never be considered accurate.[406] Accordingly, fitting of alternate shaped spare parts may result in a significant alteration of the car's overall design, so that generic spare parts lacking trademarks would not possess the same commercial appeal as their branded counterparts and could not therefore be considered as a viable alternative to the original product.[407] With regard to compliance with 'honest practices in industrial or commercial matters' or, under national law, 'principles of professional fairness', the Court found that the indication 'compatible non-OEM replacement wheels' was sufficient to exclude any risk of undue association/unfair advantage.[408] This consideration was further supported by the fact that the target public consisted of garages or workshops, i.e. 'informed consumers.'[409] The risk of confusion was further excluded by the price difference with the original parts, even in the eyes of the end user.[410]

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[402] ibid. See also Frassi's comments on the judgment at first instance, suggesting that the case should be resolved in the light of the distinctive function of the proprietor's trademark. According to Frassi, this function would not be affected in any way by the third party's use of the mark in an atypical manner, aimed solely at informing the consumer that their product is interchangeable with the original. In this context, that use does not indeed serve the typical distinctive function. See *Fiat Auto s.p.a v Isam* [1994] in (1994) Riv.Dir.Ind. (District Court of Milan) with comment of Paola Frassi.

[403] *BMW v Acacia srl* [2013] Court of Appeal of Naples Case No 3678.

[404] Providing that 'Registered trademark rights do not allow the owner to prohibit third parties from using, in economic activities, provided that such use complies with the principles of professional fairness: a) their name or address, in the case of an individual; b) signs or indications that are non-distinctive or relate to the kind, quality, quantity, destination, value, geographical origin, manufacturing period of the product or provision of the service, or other characteristics of the product or service; c) the trademark to identify or refer to products or services of the trademark owner, especially if the use of the trademark is necessary to indicate the purpose of a product or service, particularly as accessories or spare parts […].'

[405] *BMW v. Acacia srl* (n 390) para 7 a).

[406] ibid.

[407] ibid.

[408] *BMW v. Acacia srl* (n 390) para 7b).

[409] ibid.

[410] ibid.

Consistently with this approach, in another case involving the sale of non-original wheel covers featuring the Ford trademark, the District Court of Torino [Tribunale di Torino] clarified that catalogues, repeatedly labelling them as 'non-original adaptable wheel covers' in Italian, English and French, along with the distinct packaging - differing in type, graphics, and colours from original products - conveyed the message that these were 'Non-original wheel covers, but perfectly adaptable.'[411] This effectively excluded also claims of unfair competition asserted by Ford.[412] Still with reference to the wheel rims, the Court of Appeal of Milan hold that reproducing is necessary to enhance visibility and inform consumers about their destination.[413] At the same time, it has acknowledged that the rights of the proprietor should be protected against uncontrolled use by third parties that could diminish the value of the trademark itself.[414] Accordingly, to comply with the rules of fair practices, it must be clear to consumers that the product does not come from the original manufacturer, thus excluding any risk of confusion.[415] Particularly: the use of the trademark shall not create the impression of a commercial connection between the third party and the owner; the use of the trademark shall not compromise the value of the exclusive right, allowing the third party to unduly benefit from its distinctive character or the notoriety of the trademark; the use of the trademark shall not cause discredit or denigration to the trademark; the use of the trademark shall not be carried out to present the marked product as an imitation or counterfeit of the original product manufactured by the legitimate owner.[416]

As stated, in contrast to the above summarised viewpoint, another opposing perspective has emerged and is currently considered to be predominant. This second approach tends to assert the counterfeit nature of reproducing the trademark on spare parts, arguing that the exemptions outlined in Article 14 EUTMR cannot be invoked due to the absence of specific prerequisites.[417] The District Court of Rome [Tribunale di Roma] ruled that the use of the 'Renault' trademark on the wheel covers was not necessary to describe their intended use, since this function was fulfilled by the word mark, including the mention of Renault, on the packaging and inside the wheel

[411] *FM Company v Team s.r.l* [2007] District Court of Turin Ord. No.18646.
[412] ibid.
[413] *BMW AG v Team srl* [2013] Court of Appeal of Milan.
[414] ibid.
[415] ibid.
[416] ibid.
[417] *G.A.N. IL* (n 384).

covers.[418] Conversely, the affixion of the trademark on the wheel covers serves a distinctive and attractive purpose for consumers, which amounts to trademark infringement.[419]

More recently, and in line with the indications from the ECJ, the Court of Appeal of Turin [Corte d'Appello di Torino] has drawn a distinction between the legitimate use of a trademark, which can be lawfully affixed to the product's packaging to indicate its intended use on complex products protected by exclusivity, and its affixing on the product itself.[420] In the latter case, the use of the trademark would not be necessary and would serve an origin function by making the spare part appear as original.[421] Such conduct would not even comply with professional fairness requirements as it might lead to the belief that it is an authentic Ford part.[422]

Similarly, in the case of a motorcycle windscreen, the District Court of Milan [Tribunale di Milano] held that an independent manufacturer could not lawfully affix the trademark to a part of the complex product without the authorisation of the proprietor.[423] In this case, too, the Court considered it sufficient to indicate the trademark on the packaging and not on the product itself.[424] The was based, *inter alia*, on the fact that such information is relevant at the time of purchase and not after installation on the complex product.[425] Accordingly, the characteristics of the product are such as to provide a sufficient description of its intended destination for certain motor vehicles.[426]

In a case concerning radiator grilles, the German Federal Supreme Court [Bundesgerichtshof] was called to an alleged trademark infringement by a spare parts manufacturer imitating Audi's distinctive four-ring logo.[427] The defendant invoked Article 14 TDM as a defence, stating that the use of Audi's logo over the radiator was necessary to inform the public that this was a replacement part for the plaintiff's

[418] *Team s.r.l v Renault Italia s.p.a* [2011] Dictrict Court of Rome Case No.2912.
[419] ibid.
[420] *Wheeltrims srl v Ford Motor Company* [2019] Court of Appeal of Turin in (2020) *Giur.Ann.Dir.Ind*. 226.
[421] ibid.
[422] ibid.
[423] *Piaggio & C spa v Isotta srl* [2019] Distrcit Court of Milan in (2020) *Giur.Ann.Dir.Ind.* 376.
[424] ibid.
[425] ibid.
[426] ibid.
[427] German Federal Supreme Court [2018] Case No. I ZR 61/18. For a translation on English of the case, see David Wright, 'Use of a Mounting Device with a Protected Trade Mark on a Spare Part' (2020) 69 GRUR International 71.

vehicles. However, the Federal Court did not agree. It first stated that the use was in the course of trade under Article 9(2), as the grille sign had both a technical function and served as an indication of the origin of the goods from the OEMs.[428] It then found that that Article 14 EUTMR did not apply because the use of the sign was neither necessary nor did the third party act in accordance with fair and honest practices. Accordingly, the defendant could have used other means to inform the public: for example 'he could have easily referred to this in the text of the internet offer for sale or – since the radiator grille supplied differed visually from the one ordered – also in the text of the delivery note by making it clear there that the radiator grille was suitable for certain of the plaintiff's vehicle models.'[429] The Federal Court further acknowledged that the public generally expects motor vehicle replacement parts to visually resemble the originals, thus requiring an appropriate mounting device.[430] However, the plaintiff did not argue that the contested mounting device was indispensable for visually matching their radiator grille with the owner's logo, suggesting the possibility of applying Audi's logo also to a different mounting device.[431] The Court then found that reproducing the OEM's trademark on a mounting fixture was not necessary to indicate the intended purpose of the radiator grille, nor it was compliant to fair commercial practices.[432] Conversely, using the trademark on online information or on the packaging of the spare parts would have been sufficient 'to draw attention to this purpose.'[433]

As stated, the uncertainties are not confined solely to the automotive sector but expand also to other fields. In a case involving the commercialisation of non-original spare parts for vacuum cleaners reproducing the original trademark, the Criminal Court of Cassation [Corte di Cassazione Penale] held that such reproduction would infringe upon the trademark's role as a source identifier, which ensures the authenticity, origin and quality of the product.[434] According to the Court the provision 'necessary to indicate

[428] ibid.

[429] ibid para 37. See also Peter Ling, 'Four Rings to Rule Them All – German Federal Court of Justice Finds Trademark Infringement in Radiator Grille with Audi-Logo-Shaped Mounting Fixture' (*The IPKat*, 20 August 2019) <https://ipkitten.blogspot.com/2019/08/four-rings-to-rule-them-all-german.html> accessed 12 October 2023.

[430] ibid para 45.

[431] ibid para 46. See also Ling (n 429).

[432] German Federal Supreme Court (n 427).

[433] ibid.

[434] *Vorwerk Folletto* [2014] Criminal Court of Cassation Case No 37451.

the intended purpose' must be interpreted that the trademark can be lawfully placed on the packaging, but it cannot be affixed on the component itself.[435] Accordingly, its presence on the component, after assembly, would no longer serve to identify the – already reached – destination but instead the origin of the component itself.[436]

As demonstrated, case law is diverse and fragmented. Notwithstanding that is the duty of the national judge to assess if the use of the trademark is both necessary and in compliance with fair commercial practices, the absence of consistent criteria at the EU level has led to diverse, fragmented and non-uniform rulings across the Member States. In particular, the interpretation of the 'necessity' criterion varies widely, especially given the diverse nature of spare parts and their different functions. It can therefore be particularly difficult to determine when reproduction of the trade mark is essential to indicate the intended use of the product and when it is not. Apparently, the main issue revolves around the use of the figurative trademark, known for its attractiveness to consumers. Scholars have debated whether the problem could be solved by solely using the wordmark instead of the figurative mark. [437] However, this is not always feasible a feasible option, as in case of radiator grilles, where the trademark also serves also as mounting element. In such instances, questions arise about the coherence of having a design repair clause that restricts reproducing the trademark when technical considerations necessitate its reproduction.

Far from being settled, the issue was brought again in 2022, this time before the Regional Court of Warsaw, which referred the matter to the ECJ. [438] The Regional Court has essentially reiterated the question previously analysed by the German Federal Court, namely whether the use of four rings on a car grille infringes upon the OEM's trademark when the sign constitute a mounting element for a car accessory (an emblem reflecting the EU trade mark). The national judge first asked whether the proprietor of a trademark has the right to prohibit the commercial use of a similar sign

[435] ibid. See also Marco Bellia, 'Comment on "Vorwerk Folletto": An Important Decision Concerning Trade Mark Reproduction on Replacement Components: Decision of the Supreme Court of Cassation, (V Criminal Division) (Suprema Corte Di Cassazione, Sezione V Penale). 13 May 2014 – Case No. 37451/2014' (2015) 46 IIC 620.

[436] ibid.

[437] Luigi Carlo Ubertazzi (n 373) 1256, citing Günther Eisenführ and others, *Unionsmarkenverordnung: Kommentar* (Heymanns Taschenkommentare zum gewerblichen Rechtsschutz, 7. Auflage, 2024) 522 f.

[438] Case C-334/22 *Audi AG vs GQ* [2020] ECLI:EU:C:2020:854, request of preliminary ruling from the Sąd Okręgowy w Warszawie (Regional Court, Warsaw, Poland).

in connection with automobile spare parts, specifically radiator/grille components, when such a sign serves as an accessory fixing element of the car, and the technical reproduction of the sign is necessary to mount the original emblem.[439] In the affirmative case, the national judge sought clarification on whether it can be asserted that in such circumstances the trademark does not perform a distinctive function, even if it is identical to the trademark itself or similar enough to cause confusion on the origin of the products.[440] It further asked clarification on which criteria should be taken into consideration when assessing the compliance with honest practices in industrial and commercial matters.

AG Laila Medina in her opinion[441] suggested the Court to approach the matter by stating that the incorporation in a non-original radiator grille of an element designed for the insertion and fixing of the car manufacturer's emblem, which reproduces the shape of a registered EU trademark (or which is so similar as to cause confusion), does not constitute a 'use in the course of trade' pursuant to Article 9 of the EUTMR[442], and the corresponding Article 10 of TMD, which is the pre-condition to establish *prima facie* trademark infringement. Preliminarily, the AG observed that not all spare parts have the same function: when it comes to external elements, spare parts are intended to restore the original appearance of the repaired vehicle, which can only be achieved with parts that visually match the original ones.[443] This is especially important for radiator grilles, which are located at the front of vehicles and must be identical to the original spare part to restore the vehicle's original appearance.[444] The AG also noted that while the ECJ stated that the repair clause does not extend to trademarks, a decision based solely on trademark rights could potentially harm the designs and models framework as well.[445] The conflict has the potential to undermine the objectives of the repair clause, which is to ensure that consumers have access to alternatives to original spare parts. However, the AG did not rule out trademark infringement by relying on defences or limitations provided by the legal system. Instead, she focused on leveraging the definition of a sign performing the function of a trademark, which

[439] ibid.
[440] ibid.
[441] Case C-334/22 *Audi AG vs GQ* [2020] ECLI:EU:C:2023:700 opinion of Advocate General Medina.
[442] ibid para 46.
[443] ibid para 31.
[444] ibid.
[445] ibid para 45.

appeared to be lacking in the specific case. Accordingly, the sign reproducing the shape of the figurative trademark is perceived by the relevant public not as an indication of origin but rather as a description of the product's characteristics.[446] In making this assertion, the AG referred to an empirical study which examined how the use of the original manufacturer's marks on spare parts influences consumers' perceptions of the origin of the spare part and their quality expectations.[447] The study examined various trademark scenarios in the commercialisation of spare parts in Polish market, including the reproduction of the original car manufacturer's trade mark, a spare part without any trademarks, the use of a trademark for informative purposes, and the affixing of an independent manufacturer's trade mark. One of the primary objectives was to investigate whether the perception of the trademark in these scenarios had varying effects on quality ratings, willingness to buy, and recommendation of the spare parts, depending on the target audience. The study found that while professional part sellers were able to recognise that the spare parts came from an external source, end users, such as car owners, had a slightly higher likelihood of being misled as to the origin of the replacement parts.[448] It concluded that based on these results, it can be inferred that professionals may view OEM's trademark as a description of characteristics of the goods, rather than as an indication of origin.[449] Similar results have been reached with regard to quality ratings and willingness to buy, as it was observed that the use of different types of trademarks did not have a significant effect on the variables considered.[450] The AG also referred to *Opel* case, so far as it stated that consumers would not perceive the OEM's mark reproduced on scale models as an indication that they came from the trade mark proprietor, but rather as a feature of the scale replica of cars.[451]

The AG then proceeded with the analysis, considering that the limitation in Article 14(1)(c) EUTMR was *prima facie* inapplicable if the ECJ were to find that there was indeed use of the mark in the course of trade.[452] This view is based on *Gillette* case, which, as noted above, suggests that the necessity requirement is met if there is a

[446] ibid para 36.
[447] Anna Tischner and Katarzyna Stasiuk, 'Spare Parts, Repairs, Trade Marks and Consumer Understanding' (2023) 54 IIC 26.
[448] ibid 52–54.
[449] ibid.
[450] ibid.
[451] *Audi* opinion of AG Medina paras 38-39. See also *Opel* para 24.
[452] ibid para 57.

need to inform consumers that cannot be satisfied without reference to the OEM's trademark.[453] On the basis of these premises, the AG took the view that the aforementioned limitation did not apply in this case, since the use of the OEM's trademark was purely technical and not for informational purposes.[454]

Finally, with regard to the requirement of fairness in the industrial and commercial field, AG emphasised that paragraph 2 of Article 14 EUTMR should be interpreted as requiring that the use of the trademark does not discredit or denigrate the original product; that the user should take all necessary measures to indicate that the products were manufactured by them, ensuring they are not considered imitations or reproductions of the original part; that the manufacturer or seller is subject to a diligence obligation regarding the downstream users' compliance with the principles of fairness in the industrial and commercial matters.[455]

One weak aspect of the AG's analysis is that, with regard to the likelihood of confusion, it might not be sufficient that a section of the public is not confused in order to rule out infringement.[456] Moreover, as stated in the previous section, the protection afforded by Article 9(2)(c) for trademarks with a reputation could well be invoked in these cases, where there may be infringement irrespective of confusion. For example, in *Adidas*[457] the ECJ ruled that despite the use of the sign in a decorative function, it is enough to establish similarity with a trademark enjoying reputation that 'the relevant section of the public makes a connection between the sign and the mark, that is to say, establishes a link between them even though it does not confuse them.'[458] However, the most problematic aspect of the AG's observations concerns the exclusion of limitations outlined in Article 14(1) of the EUTMR, specifically that contained in letter (c).[459] Although the ECJ has interpreted the necessity requirement strictly so far,

[453] ibid paras 53-55.
[454] ibid para 56.
[455] ibid para 58.
[456] Marcel Pemsel, 'Advocate General vs. German Supreme Court – Does the Use of Four Rings on a Car Grille Infringe Audi's Trademark?' (*The IPKat*, 10 October 2023) <https://ipkitten.blogspot.com/2023/10/advocate-general-vs-german-supreme.html> accessed 13 November 2023.
[457] Case C-102/07 *Adidas AG e adidas Benelux BV v. Marca Mode CV and others* [2008] ECLI:EU:C:2008:14.
[458] ibid paras 41-42.
[459] In this sense Łukasz Żelechowski, 'Non-Original Car Spare Parts and Trade Mark Infringement: Is There No Room for Referential Use? The AG Opinion in C-334/22 *Audi*' (2023) 18 Journal Of Intellectual Property Law and Practice 843,846.

associating it only with informational purposes, this does not exclude that such interpretation can be expanded as to include situations where the trademark, if regarded as such, serves a technical purpose to the extent that its precise reproduction is necessary.

In the present case, it would have been appropriate also to examine the potential applicability of Article 14(1) EUTMR letter (b).[460] This limitation encompasses two scenarios: signs lacking distinctiveness and signs describing product or service characteristics.[461] It aims to strike a balance between market operators' need to describe their products or services without hindrance from trademark owners and consumers' right to obtain information.[462] In this context, one could argue that consumers perceive the Audi sign solely as a product characteristic, not as an exclusive indication of its origin,[463] as it appears to be implied also by the AG's opinion. Therefore, the permissible use under scrutiny could extend to describing the goods' characteristics, ensuring this information remains freely available to all market participants, in accordance with the principle of availability.[464] However, this allowance depends on the third party's use of the sign purely for informative purposes, specifically to describe the features of the goods they offer. The limitation should therefore be assessed -again- under the general clause of honest and fair practices in industrial and commercial matters. It is the third party's responsibility to make use of the trademark solely for informative purposes, avoiding any risk of confusion and ensuring compliance within this rule.[465]

Unfortunately, the ECJ has ruled out the applicability of both limitations. The judgment was finally released on January 25 by the ECJ[466] and contradicts the

[460] In this sense also Żelechowski (n 459).
[461] Luigi Carlo Ubertazzi (n 373) 1254.
[462] ibid 1253.
[463] See Tischner and Stasiuk (n 447) 40.
[464] Ricolfi (n 381) section 143.3, arguing that since the manufacture of spare parts constitutes the faithful and detailed copying of their appearance, in the case of a trade mark that constitutes an integral part of an original part, its reproduction on that part may be regarded as the use of ''another characteristic'' of the product, as referred to in Art. 14(1)(b) EUTMR, justified by the interest of other operators in competing on the same terms and by the interest of the user of spare parts in having access to a wider choice of such parts.
[465] Luigi Carlo Ubertazzi (n 373) 1254. Yet, in t*he Gerolsteiner Brunnen* case, the ECJ also affirmed that the use of a sign similar to the registered trademark of the owner could be deemed lawful even if there's a risk of confusion, as long as it complies with honest practices in industrial and commercial matters. See Case C-100/02 *Gerolsteiner Brunnen GmbH & Co. v Putsch GmbH* [2004] ECLI:EU:C:2004:11.
[466] Case C-334/22 *Audi AG v GQ* [2024] ECLI:EU:C:2024:76.

conclusions reached by the AG. First and foremost, the Court held that the scope of protection of the Audi trademark extends to elements intended for the application of the Audi emblem to radiator grilles. In responding positively to this matter, the Court resolved the issue based on Article 9 of the EUTMR, recognising in this specific case a use of the sign in commerce that creates prejudice to the typical functions of the trademark. The ECJ reiterated that the repair clause merely concerns design law and is not susceptible to analogical interpretation, nor can the objective of ensuring fair competition be interpreted to fall under the aforementioned Article 9.[467] Nothing new so far, as the principle was already expressed in the Ford Motor case.[468] In addition, in the first part of the judgment the ECJ dissented from the AG's observations in the part where she asserted that including an element resembling an automobile manufacturer's trademark in a non-original radiator grille, for emblem insertion, does not constitute a commercial use under Article 9(3) of the EUTMR.[469] What raises greater perplexity, however, is the restrictive interpretation that the Court adopts with reference to the exception Article 14(1)(c) EUTMR.

Regarding the scope of the limitation outlined in Article 14, letter c) of the EUTMR, the ECJ affirmed the need to differentiate between cases where the trademark of the owner is used to indicate that spare parts are intended to be integrated into the owner's product and cases where the trademark, or a similar/identical sign, is affixed directly to the spare part itself.[470] In the latter scenario, the limitation does not apply because, according to the Court, such use of the trademark exceeds the purpose of reference of said limitation.[471] Accordingly, in this situation the use of the trademark is not to indicate the destination of the spare parts but rather to create a reproduction as faithful as possible to the original product.[472]

The ECJ's trend aligns with the majority of recent national jurisprudence, as seen in the case of car rims, where the unauthorised placement of OEM's trademarks is deemed a trademark violation, as also affirmed by the ECJ in the Ford case. What is disappointing, however, in the ECJ's decision, is its failure to address whether there is a technical possibility of affixing the emblem reflecting the OEM's trademark on the

[467] ibid para 29.
[468] See *above* chapter 2, section 2.2.
[469] *Audi* opinion of AG Medina para 68.
[470] *Audi* para 57.
[471] ibid.
[472] ibid para 58.

radiator grille of vehicles.[473] It is believed that is precisely the technical necessity that distinguishes this case from that of wheel reems, where the trademark serves more of an aesthetic function, excluding the existence necessity requirement. Moreover, the ECJ did not provide an opinion on the second requirement, namely the compliance with the riles of fairness in industrial and commercial matters, as this evaluation is seemingly absorbed by the analysis of trademark violation.

The Audi case presented a valuable opportunity to finally take a stance on contentious issues, such as the use of OEM trademarks for alternative spare parts and the scope for the application of any limitations, as well as the definition of fair industrial and commercial practices in this context. As previously highlighted, the reproduction of trademarks on spare parts it is not recent issue: it has been a longstanding debate spanning decades.[474] The liberalisation of spare parts still remains a central topic of debate, raising concerns among lawmakers and courts.[475]

It is anticipated that within the foreseeable future the ECJ will give serious consideration to the possibility of establishing consistent criteria ought to safeguard the brand owners' interests while allowing independent manufacturers to provide alternatives to the originals in the spare parts aftermarket. This appears also to be the rationale behind the repair clause as adopted within the design regime.[476] The question of whether the use of a trademark is necessary to indicate a product or service's intended purpose is a matter for the national judges to determine and will vary depending on the circumstances of each case. As spare parts differ in function, shape and destination, establishing universal criteria for all spare parts is impractical. However, the ECJ should consider establishing uniform factors to take into account in the assessment of the applicability of the limitation, such as whether the trademark serves a technical function in addition to a distinctive one, the location of the trademarked spare part in relation to the complex product (front, back, top, etc.), and whether restoring the appearance of the complex product is not possible without a spare part that faithfully reproduces the original one in all its elements, including the

[473] ibid para 59, affirming that the outcome would not have depended on 'whether or not there is a technical possibility of attaching the emblem representing the trade mark of the motor vehicle manufacturer to the radiator grille without the shape of the element of the radiator grille designed for that attachment constituting a sign identical with, or similar to, the trade mark.'

[474] Tischner and Stasiuk (n 447) 27.

[475] On the debate within the automobile spare parts sector, refer to Roberto Natoli (n 289).

[476] See *Acacia*.

trademark.[477] Additionally, the ECJ could assess whether the use of the trademark is necessary to inform or ensure the product's compatibility or safety for the end user and whether such use aligns with common industry practices. The distinguishing criteria might be that when reproducing the trademark is not strictly necessary to restore the appearance of the products, such in the case of accessories which have an autonomous and independent market,[478] the OEM's trademark should not be affixed to the spare parts, but shall only be used in advertising, online or on the packaging. The common denominator between the two limitations is indeed the compliance with honest practices in industrial and commercial matters condition. As a general clause, its interpretation is contingent upon the specificities of each individual case. However, the prejudicial question raised by the Polish judge implies a certain uncertainty as to the interpretability of this provisions and their application in the spare parts aftermarket. It should therefore be clear on the packaging, online, and/or on the spare part itself – when available – that they are non-original parts and that the producer has no commercial connection with the OMEs, so that to mitigate any potential risk of commercial association.[479] Attention must also be paid to how the mark is used. For example, the descriptive indication should be used in such a way as to avoid any risk of confusion with the OEM's registered trade mark, without going beyond that purpose.[480] To this extent, it could be evaluated whether only the word of the trademark should be used, excluding any figurative elements. In addition, the presentation of the product should be accompanied by an informative statement. [481] It may even be worth considering the inclusion of the third party's sign.[482]

Ultimately, finding the right balance between the interests of rightsholders, independent third parties and consumers becomes crucial, especially in the light of the new legislative package on the circular economy, which emphasises activities such as repair, recycling and reuse. Repairing also entails creating alternative and satisfactory

[477] In this sense *Audi* opinion of AG Medina para 32.

[478] Doctrine and jurisprudence have clarified that spare parts with an autonomous market are accessories capable of altering the appearance of a product to enhance its aesthetics. These encompass alloy wheels for cars, interchangeable shells for mobile phones, and universal spare parts. See Luigi Carlo Ubertazzi, 'Commento All'Articolo 35 CPI', *Commentario breve alle leggi su proprietà intellettuale e concorrenza* (Wolters Kluwer, CEDAM 2019) 392.

[479] See more specifically *infra* chapter 3, section 3.

[480] Luigi Carlo Ubertazzi (n 373) 1254.

[481] ibid.

[482] See more specifically *infra* chapter 3, section 3.

market channels for sub-suppliers and giving consumers access to cost-effective options in the market, thereby ensuring that they are not forced to buy a new product every time they need to replace a part.[483]

3.2.2. Importing

Let's consider the scenario where the independent entity does not produce the spare parts but imports them without the owner's authorisation for repair purposes. According to Article 9 EUTMR, unauthorised importation of trademarked products is considered an infringement, even if the purpose of importation is for beneficial activities such as repair.

A similar scenario, yet in the mobile phone sector, was addressed by the Norwegian Supreme Court the case of an independent repairer who imported from China screens bearing the Apple logo without Apple's consent.[484] The logo, that once installed remains invisible to consumers, was concealed with a black marker. Apple contended that the screens were counterfeits, whereas the repairer argued that they were refurbished parts that he obtained legally.[485] It further asserted that the cancellation of a trademark did not constitute infringement, since there was no actual 'use' of Apple's registered trademark.

The Oslo District Court ruled in favour of the repairer, stating that because Apple's logo was not visible during normal use and Huseby did not intend to reveal it, there was no intention to deceive customers into thinking they were OEM parts, thus dismissing any valid trademark infringement claim.[486] However the Court of Appeal reversed and the Norway Supreme Court confirmed.

The Norway Supreme Court conducted a comprehensive analysis to determine whether the subsequent cancellation of the trademark after import constitutes 'use' as defined under Article 5 of the old Trade Mark Directive 89/104/CEE,[487] now Article 10

[483] See Heath and Furuta, note (n 256) 3, arguing that 'a right to repair can only be implemented effectively if original manufacturers do not control the markets for replacement parts.'
[484] *Henrik Huseby v Apple Inc* [2020] Norway Supreme Court (Norges Høyesterett) HR-2020-1142-A. See also Kristina Stenvik, 'Importation of Goods Affixed with a Trademark Concealed by a Removable Marker' (2021) 70 GRUR International 285.
[485] Montello (n 201) 172.
[486] ibid 173.
[487] First Council Directive of 21 December 1988 to approximate the laws of the Member States relating to trademarks [1988] (89/104/EEC) OJ L 40/1.

of the TMD. However, the mere act of importation alone is deemed sufficient to establish trademarks use as a prerequisite for *prima facie* infringement. Indeed, the unauthorised importation of products bearing the trademark qualifies as trademark 'use in the course of trade', both in accordance with Article 10 of the TMD and Article 4 of the Norwegian Trademark Act.[488] Article 10(3) TMD indeed specifically lists 'importing the goods under the sign' among the activities prohibited to all third parties. The ECJ then clarified that 'import' within the meaning of Article 9(3)(c) EUTMR and 10(3)(c) TMD requires 'introducing the marks into the EU territory for the purpose of gaining a commercial advantage.'[489] This condition is met in the case at stake, as the intention of the defendant was indeed to use these screens within the repair business to gain an economic advantage.

However, as stated, the mere use of an identical or similar sign for identical or similar products is not enough to establish infringement. According to the doctrine of function, the allegedly use of the trademark should be likely to cause detriment to one of the functions of trademark. Therefore, the Norwegian judges perhaps conducted the detailed analysis on the removal of the trademark to ascertain whether the established use of the sign during importation could potentially jeopardise the functions of the trademark, considering that it has been cancelled. This is a question the Norway Supreme Court answered affirmatively, establishing that the cancellation of the trademark constitutes a use that negatively affects the quality and origin of the products. Accordingly there was a likelihood of confusion, regardless of whether the trademark is concealed or left unaltered.[490]

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[488] *Lov av 8.mars 2010 nr 8 om varemerker (varemerkeloven) [The Norwegian Trademarks Act] of 26 March 201* 08 (Norway 26 March 201), which basically resembles Article 10 of the EUTMR by stating that 'A trademark right has the effect that no one, without the consent of the proprietor of the trademark right (the trademark proprietor), may use in an industrial or commercial undertaking: 1. any sign which is identical with the trademark for goods or services for which the trademark is protected ; 2. any sign which is identical with or similar to the trademark for identical or similar goods or services if there exists a likelihood of confusion, such as if the use of the sign may give the impression that there is a link between the sign and the trademark. […] Use is considered to include the following: 1.affixing the trademark to goods or to the packaging thereof; 2. offering goods for sale or otherwise putting them on the market, stocking or delivering them under the sign, or offering or supplying services thereunder; importing or exporting goods under the trademark; 4. using the sign on business documents and in advertising.'

[489] Kur and Senftleben (n 366) section 5.2.8.4.

[490] *Huseby* para 37-38.

One might wonder, however, if, once the trademark remains invisible during assembly,[491] how the public could remain confused and mistakenly believe that these are parts of Apple. On this specific point the Courts merely states 'It is out of consideration for this trade circle that Apple labels its original screens, although the logos are not visible to the end user after the screen has been fitted into the phone. The relevant trade circle will, because of the trademark, immediately be able to see that the screen is an original Apple screen.'[492] And the relevant trade circle seems to be identified with 'Repairers and professional retail links [who] are at the centre of the circle trading in spare parts.'[493] If relevant public consists of professional repairers, the question is whether they would be able to recognise that the screens came from an external source, given their expertise in the repair sector.[494] Within the framework of post-sales confusion, the question becomes whether consumers, when seeking services from an independent repairer non-affiliated with OEMs, are not aware that the repairer uses non-original parts as well. While courts' analysis cannot rely solely on assumptions, consumer expectations should play a more consistent role in the analysis of cases involving potential IP infringement in the repair sector. Furthermore, the issue with spare parts, as it was discussed in the previous section, particularly arises with visible parts that reproduce the trademark of the proprietor. Therefore, what OEMs assert is that consumers might be misled into believing that those parts originate from the same undertaking or an affiliated one. This issue does not arise here because the trademark is not visible from the outside. However, all these considerations might be irrelevant if the trademark proprietor invokes protection for trademarks with a reputation under Article 10(2)(c) EUTMR and 9(2)(c) TMD. In such instances, the infringement can be established independently from the likelihood of confusion.

Another issue is whether the problem could actually be resolved, as suggested by the claimant, if the repairer had simply imported non-original parts without the Apple logo.[495] In the preceding section, it was discussed how spare parts can also be protected by designs and trademarks that can cover the product's shape. If the

[491] ibid para 30.
[492] ibid
[493] ibid.
[494] See Tischner and Stasiuk (n 447).
[495] *Huseby* para 39.'The Trademark Act does not prevent a Norwegian mobile phone repairer from importing screens that are compatible with Apple's smart phones, as long as the imported screens do not have trademarks unlawfully affixed to them.'

imported parts closely resemble parts whose shape is protected by trademarks or designs they could be deemed counterfeit in any case. Additionally, they could also not suffice to dismiss a claim for unfair competition for slavish limitation.[496]

4. The Issue of Patent Protection for Spare Parts

Spare parts and individual components, whether for everyday items like printers or for industrial machinery, can be protected under patents, such as utility models or invention patents, provided they meet the requirements.[497] However, the repair clause, limited to designs and models, does not extend to the other IP rights, including patents.[498] Therefore, if a patent exclusively covers a component or its features, reproducing the same component by a third party could constitute infringement, even if its reproduction is necessary to restore the original appearance of the product.[499] This becomes particularly relevant in cases involving combination patents for machinery or equipment, where third-party production of interchangeable parts or repair, refurbishment, or recycling of original equipment may infringe upon patent rights.[500] In these cases, the solution is straightforward because manufacturing a patented single part is considered patent infringement.[501]

The matter becomes more complicated if the component itself is not covered by a patent, but the device in which it must be incorporated is. This is because potential infringement extends to those who supply or sell parts of the patented product, provided these components are not patented themselves or have become part of the public domain, provided that the suppliers are aware that their use is specifically

[496] On the point see Natoli (n 291) 166 f.

[497] Cesare Galli and Alberto Contini, 'Stampanti 3D e Proprietà Intellettuale: Opportunità e Problemi'' (2018) Riv.Dir.Ind. 115, 123.

[498] ibid. See *MR and MA* [2020] Criminal Court of Cassation Case No 29965, stating that the repair clause does not apply to patents. As observed by case law regarding trademarks, the Court of Cassation emphasised that the literal content of the exception provides a clear interpretative indication, suggesting that the provision refers only to designs and models.

[499] Galli and Contini (n 497) 123.

[500] Mohri (n 304) 9.

[501] ibid. See also Christopher Heath, 'Repair and Refill as Indirect Patent Infringement' in Christopher Heath and Anselm Kamperman Sander (eds), *Spares, Repairs and Intellectual Property Rights* (Wolters Kluwer 2009) 85.

intended for that purpose.[502] This is referred to as indirect counterfeiting or contributory infringement in some countries.[503]

In essence, while the third-party supplier does not directly infringe the patent, it engages in facilitating activities for the illicit act.[504] Indirect infringement expands the scope of patent protection, potentially involving more entities that could be subject to lawsuits for patent infringement.[505]

4.1. Legislative Framework

Patents give holders the exclusive right to prevent third parties from making, offering, selling, placing on the market, using, importing, or storing the innovation for a limited period of time in the country where the patent is granted.[506] The provided exclusivity allows patent holders to control and restrict various aspects of the use and commercialisation of the protected invention, as well as its individual components.

The legislative framework it is only partially harmonised at the procedural level through the EPC and the Community Patent Convention ('CPC')[507], while the litigation phase is subject to national patent laws.[508] A change of the picture is expected after

[502] ibid. See also Massimo Scuffi, 'La Tutela Dell'esclusiva Brevettuale: Estensione e Limiti Dei Diritti Di Privativa Industriale in Ambito Nazionale e Comunitario', *Studi di diritto industriale in onore di Adriano Vanzetti*, vol II (Giuffrè 2004) 1477, 1480.

[503] *E.g.* the 35 U.S. Code § 271 defines 'contributory infringement' as 'the act of selling or offering, import or export 'a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial non-infringing use, shall be liable as a contributory infringer.'

[504] Scuffi (n 502) 1480.

[505] Heath (n 501) 86.

[506] Notices from European Union Institutions, Bodies, Offices and Agencies Council 'Agreement on a Unified Patent Court' (2013/C 175/01) C175/1 ('UPC'), Article 25.

[507] 'Council Agreement Relating to Community Patents' [1989] (89/695/EEC).

[508] Paul England, 'Common Issues of Direct and Indirect Infringement in Europe and the UPC' (2017) 12 Journal of Intellectual Property Law & Practice 601, explaining that although the CPC was never ratified, it influenced the national laws of Member States, incorporating some of the principles outlined therein with similar wording. See also Rosa Maria Ballardini, Marcus Norrgård and Timo Minssen, 'Enforcing Patents in the Era of 3D Printing' (2015) 10 Journal of Intellectual Property Law & Practice 850, 852.

the entry into force on 1 June 2023 of the Agreement on the Unified Court ('UPCA')[509] for the 17 signatory Member States.[510]

As stated, with respect to the types of conduct prohibited by national laws jurisdictions make a distinction between direct and indirect patent infringement.[511] Indirect infringement involves activities that contribute to infringe a patent. According to Article 26 of the CPC, it occurs when a third party, without the consent of the patent holder, supplies or offers to supply means related to an essential element of the patented invention to another person within the national territory, when the third party is aware or it is obvious from the circumstances that these means are suitable and intended for implementing the invention.[512] Whereas, direct infringement entails the unauthorised use or exploitation of a patented invention itself. Specifically, it occurs when an unauthorised third party engages in one the activities set out in Article 25 of the CPC, namely making, selling, offering to sell, using or importing the innovation absent the holder's consent.[513] This distinction is relevant as both types of infringements can take place in the repair sector.

More specifically, there is a risk of direct patent infringement when, within the scope of repair services, providers replace parts of a patent-protected overall device,

[509] Notices from European Union Institutions, Bodies, Offices and Agencies, 'Council Agreement on the Unified Patent Court' (2013/C 175/01) C175/1.

[510] See 'The Unified Patent Court (*Unified Patent Court*) <https://www.unified-patent-court.org/en> accessed 14 October 2023 and 'When Was the Unitary Patent System Launched?' (*Epo.Org*) (<https://www.epo.org/en/applying/european/unitary/unitary-patent/start> accessed 14 October 2023.

[511] See European Patent Academy, 'Fundamentals of infringement', <https://e-courses.epo.org/wbts_int/litigation/FundamentalsOfInfringement.pdf > accessed 12 October, 2023, emphasising that the determination of which acts constitute direct and indirect infringement is left to national law.

[512] 'A Community patent shall also confer on its proprietor the right to prevent all third parties not having his consent from supplying or offering to supply within the territories of the Contracting States a person, other than a party entitled to exploit the patented invention, with means, relating to an essential element of that invention, for putting it into effect therein, when the third party knows, or it is obvious in the circumstances, that these means are suitable and intended for putting that invention into effect.'

[513] 'A Community patent shall confer on its proprietor the right to prevent all third parties not having his consent: (a) from making, offering, putting on the market or using a product which is the subject-matter of the patent, or importing or stocking the product for these purposes; (b) from using a process which is the subject-matter of the patent or, when the third party knows, or it is obvious in the circumstances, that the use of the process is prohibited without the consent of the proprietor of the patent, from offering the process for use within the territories of the Contracting States; (c) from offering, putting on the market, using, or importing or stocking for these purposes the product obtained directly by a process which is the subject-matter of the patent.'

allowing the patentee to assert 'impermissible reconstruction' of the innovation.[514] There is indirect infringement when third parties supply replacement parts for committing a direct infringement even though they themselves do not violate the patent. [515]

In the first section, the focus will be on describing the second type of infringement, namely indirect infringement, which will also be revisited in the third chapter concerning direct infringement to draw some consideration in relation to the doctrine of exhaustion. The proposed distinction primarily aims to provide a more organised structure to the discussion while considering their frequent interconnection.

4.2. Supply of Spare Parts as Indirect Patent Infringement

As anticipated, patent holders not only seek to control the production and distribution of the main protected device, but also the business related to spare parts and operating materials necessary for using the patented invention.[516] Patent holders are entitled to take legal actions against third-party suppliers who sell compatible spare parts intended for use with the patented device, claiming indirect infringement of the patented product, as it enables direct patent infringement.[517] Given that replacement of single parts clearly plays a crucial role in the repair sector, over the years both courts and scholars have sought to establish criteria to distinguish between situations in which the supply of replacement parts is legitimate and when it may constitute indirect patent infringement instead.

German and Dutch courts stress the concept of 'essential element of the invention', according to which if the repairing of patented product implies the supply of an 'essential part of the invention', i.e. dealing with its 'inventive function', then it is considered to indirectly infringe patents.[518]

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[514] Wiss Mitarbeiter Victor Mehnert, 'Reparaturen für alle? – Rechtliche Perspektiven des „Right to repair"' (2023) 9. See also Mineko Mohri, 'Patents, Repair and Recycling from a Comparative Perspective*' [2010] IIC 780, 783.

[515] ibid. See also See also Heath (n 501) 85.

[516] Niels Hölder, 'Contributory Patent Infringement and Exhaustion in Case of Replacement Parts - Comment on a Recent Supreme Court Decision in Germany' [2005] IIC 889.

[517] ibid.

[518] Christopher Heath, 'Right to Repair – Patent Law Aspects' (Workshop on 'The Right to Repair in the Context of Intellectual Property Rights' Artyzen Grand Lapa Hotel, Macau, 18 October 2022).

In *Flügelradzähler*[519] case, the Federal Supreme Court [Bundesgerichtshof] addressed a patent infringement dispute involving an impeller flow meter designed for recording the amount of liquids in transit, especially for measuring water consumption. In particular, the entire device comprised a measuring cup, an impeller, and a meter that formed a single unit capable of being removed from the housing and replaced separately. The plaintiff marketed impeller flow meters and flow meter housings; whereas the defendant manufactured and sold measuring capsules compatible with the plaintiff's housing. The plaintiff took a legal action for indirect patent infringement under Section 10(1) of the German Patent Act, which prohibits unauthorised third parties from supplying or offering to supply means, which pertain to an essential element of the patented invention, for use within the territorial scope of the Act.[520] To answer the question as to whether the supply of measuring capsules constituted indirect patent infringement the Court affirmed that it should be assessed whether the replacing measuring capsules offered for sale constituted a 'means relating to an essential element of the invention'.[521] This implies assessing whether these replacements could functionally interact with one or more aspects of the patented claim to execute the protected invention and, therefore, whether the replacement of such part was equivalent to making the device.[522] In the analysis, the Court focused on the 'identity' of the invention and whether it was preserved by the purchaser.[523] Accordingly:[524]

> It is true that the use of a patented product as intended also includes the maintenance and re-establishment of usability if the function or performance of the specific product is impaired or lost in whole or in part by wear or damage or on other grounds. However, there can no longer be a question of a re-establishment of the lost or impaired usability of a product put into circulation with

[519] *Impeller Flow Meter (Flügelradzähler)* [2004] Federal Supreme Court Case No. X ZR 48/03. An English translation of the decision is available at '"Impeller Flow Meter" (Flügelradzähler)' [2005] IIC 963.
[520] *Patentgesetz of 2005* (11th Sess. 2005): 'Patents further have the effect that any third party is prohibited, in the absence of the consent of the proprietor of the patent, from supplying or offering to supply, within the territorial scope of this Act, persons other than those entitled to exploit the patented invention with means relating to an essential element of the invention for use within the territorial scope of this Act if the third party knows or if it is obvious from the circumstances that those means are suitable and intended for using that invention.'
[521] '"Impeller Flow Meter" (Flügelradzähler)' (n 519) 967–969.
[522] ibid.
[523] ibid. See also Horst-Peter Götting and Sven Hetmank, 'The Scope of Patent Protection for Spare Parts and Its Extension through Other Tools of Intellectual Property', *Research Handbook on Patent Law and Theory* (Edward Elgar Publishing 2019) and Mohri (n 514) 788-789.
[524] Götting and Hetmank (n 523) 969-970.

> the patent holder's consent if the measures taken in fact amount to making the patented product again [citations omitted]. […]
> [T]he distinction between a (permissible) repair and a (prohibited) remaking depends on whether the measures taken maintain the identity of the specific patented product already put into circulation [citation omitted], or are the equivalent of the creation of a new product according to the invention. As a rule, this can only be determined in the light of the particular nature of the subject matter of the invention and a balancing of the conflicting interests.

In balancing these interests, the first criteria to consider is whether the replacement of components is reasonably foreseeable during the lifetime of the invention.[525] The second criteria is whether the replaced parts represent an 'essential element' of the invention, i.e. they reflect its technical effect.[526] In this latter circumstance, it cannot be inferred that the patentee had fully reaped the entitled benefits deriving from the first put in circulation of the device.[527] On these premises, the Federal Court finally concluded that the defendant's conduct amounted to indirect patent infringement, based on the consideration that the replaced part embodied the inventive function of the innovation.[528] Accordingly, the use of a new measuring capsule created a new impeller flow meter, which by definition can be putted in circulation only by the holder or authorised parties.[529] In drawing this conclusion, the Federal Court adopted a broad definition of 'essential element of the invention', aligning it with the patent claims: what is an element of the patent claim is typically considered an essential element of the invention.[530] The patent claim serves to define the boundaries of the protected invention, restricting the patent holder's protection to forms of utilization that involve all aspects of the invention's features.[531] Against this backdrop, means related to an essential element of the invention refer to components or methods capable of functionally interacting with such an element during the implementation of the protected inventive concept.[532] These means have the potential

[525] "Impeller Flow Meter" (Flügelradzähler)' (n 519) 967–969.
[526] ibid.
[527] ibid.
[528] ibid.
[529] ibid.
[530] ibid 967.
[531] ibid.
[532] ibid.

to contribute to and encourage interference in the subject matter protected by the patent due to their capacity to interact with essential elements of the invention.[533]

In *Pipettensystem*[534] the Federal Supreme Court took a different view. The defendant was selling syringes compatible with various pipette systems, including the plaintiff's manual pipette. The Court of Appeal asserted that both the pipette housing and the syringe formed the protected structural unit in the patent claim and that replacing the syringe realised the technical and economic advantage of the protected invention: by inserting a new syringe, the user essentially created a new device, constituting a patent infringement.[535] However, the Federal Court disagreed with this perspective: it stated that the patent holder's exclusive rights were expired with the initial sale of the unit comprising the manual pipette and syringe.[536] This encompassed subsequent replacements of the syringes, considered within the intended use of the patented product.[537] The Court likened this situation to the 'replacement of a worn part', given the expected multiple replacements of syringes during the pipette's lifespan.[538] In terms of the invention's technical effects, the Court highlighted that the syringe did not embody the essential elements of the inventive concept but instead served as an object of the improved functioning of the whole apparatus.[539] Finally, the Court emphasised in its ruling that in similar cases the legitimate interests of the patentee in economic exploitation must be balanced against the customer's right to use the device without interference.[540]

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[533] ibid. Ultimately, the criterion for determining whether means relate to an essential element involves assessing their suitability to functionally interact with such an element, thus implementing the protected inventive concept. This excludes means that, while possibly suitable for exploiting the invention (such as energy needed for device operation), do not contribute to implementing the technical teachings of the invention. See ibid.

[534] *Pipettensystem: (nicht-)wesentliches Element der Erfindung i S.d § PATG § 10 PatG* [2007] Federal Supreme Court Case No. X ZR 38/06, 2007 MPR 105.

[535] ibid 108–109.

[536] ibid.

[537] ibid.

[538] ibid 969.

[539] Christopher Heath, 'Exhaustion and Patent Rights' in Ruth L Okediji and Margo A Bagley (eds), *Patent Law in Global Perspective* (Oxford University Press 2014) 448.

[540] *Pipettensystem* 108. In this balancing the Court recognised that, of course, the patent holder has an economic interest in extending their exclusivity rights to this replacement need. However, it stated that this interest is not protectable as it extends beyond the interest in the economic exploitation of the invention. By controlling the supply of a component (like syringes) related to a mass-produced item, the patent holder might benefit financially beyond the direct scope of their patent.

In *Senseo* case[541] Dutch courts were asked to interpret the notion of an essential element, included in Section 73 of the Dutch Patents Act[542], in relation to coffee pods compatible with a coffee preparation device manufactured by Senseo. The apparatus claim extended its scope to include the coffee pad; however, the patentee was unable to secure autonomous protection for the coffee pad due to the existence of prior art.[543] The question was whether coffee capsules can be considered an 'essential element of the invention', which consisted of an 'assembly for use in a coffee machine for preparing coffee, container and pouch of said assembly', and thus whether replacing patented coffee capsules of a patented coffee brewing apparatus amounts to patent infringement.[544] The District Court determined that there was an indirect infringement of the patent, despite the pods being considered new or innovative. However, the Dutch Court of Appeal reversed the decision, holding that not everything that is necessary for using the patented invention should be deemed an essential part of the invention.[545] If so, even the hot water, which is equally essential to coffee preparation process, should be considered an essential element of the invention.[546] In affirming the Court of Appeal's judgment, the Dutch Supreme Court [Hoge Raad] further noted that 'the mere circumstance that a fitting coffee pod is necessary to apply the patented invention does not entail outright that this pod is a means that regards an essential part of the invention.'[547]

The same matter was brought before Düsseldorf Courts little later, but the outcome was entirely different. In *Kaffee-Filterpads*[548] both the District and the Appeal Court in Düsseldorf ruled that selling compatible filter pads constituted indirect infringement as

[541] *Sara Lee v Vomar Voordeelmarkt* Dutch Supreme Court [2003] Case C02/227HR.

[542] *Rijksoctrooiwet [Dutch Patent Act] of 1995* (Netherlands 1995): 'The patent holder may bring actions available to them for enforcing their patent against any person who, in the Netherlands, Curaçao, or Sint Maarten, offers or supplies, in or for their business, means relating to an essential element of the invention to parties other than those authorised […]to apply the patented invention in the Netherlands, Curaçao, or Sint Maarten. This applies provided that the said person knows or, considering the circumstances, it is evident that those means are suitable and intended for that application.'

[543] Heath (n 539) 445.

[544] A summary in English of the case can be found in Jan Brinkhof, 'Pure Coffee? On Indirect Infringement', *Festschrift fu ̈r Jochen Pagenberg* (Cologne: Heymanns 2006).

[545] ibid.

[546] ibid.

[547] ibid.

[548] *Kaffee-Filterpads* [2005] Oberlandesgericht [OLG] Düsseldorf Case 2U 35/04.

both the pads and holder performed an innovative function.[549] Accordingly, the pads are not ancillary to the invention but embody the core concept.[550] The desired effect of the invention relies not only on the container but also on the specific design and arrangement of the pouch within it.[551] The claim explicitly outlined requirements for the pouch within the container, illustrating that the invention's teaching centres on the coordination between the container's bottom and the push mechanism.[552] It follows that 'every time a user puts a new pad into the apparatus, the latter is reconstructed.'[553] Underlying the Court's decision were, among other factors, the protection of the economic interests of the patent owner, particularly reliant on the supply of replacement filter tablets.

Similarly to the Dutch and German courts, the Italian courts emphasised the notion of the 'inventive idea' and maintained that the right to implement this idea belongs exclusively to the patent holder.[554] Regarding the reconstruction of individual parts of the product, it has been established that there is indirect counterfeiting in the case of supplying components essential for the creation of the finished product if the supplier is aware or should be, given the specific circumstances, of the sole destination of the parts for the patent infringement.[555]

The pivotal case from the Court of Cassation [Corte di Cassazione] in '56 laid the groundwork for Italy's approach to indirect infringement.[556] It did so before the formal recognition of this concept within Article 66 of the CPI, which essentially incorporates the solutions adopted by the case law on indirect infringement, requirint for the recognition of indirect infringement, on the one hand, the supply to third parties of means relating to an essential element of the invention and, on the other hand, the third party's knowledge of the intended use of those means to implement the

[549] A summary in English of the case be found in Thomas Kühnen and Frank D Peterreins, *Patent Litigation Proceedings in Germany: A Handbook for Practioners* (7. ed, Heymanns 2015) 155.
[550] ibid 157.
[551] ibid.
[552] ibid.
[553] See Christopher Heath, citing the wording of the decision in Christopher Heath, 'Intellectual Property Liability of Consumers, Facilitators and Intermediaries: The Case of Patents' in Christopher Heath and Anselm Kamperman Sanders (eds), *Intellectual Property Liability of Consumers, Facilitators and Intermediaries* (Wolters Kluwer 2012).
[554] Danilo Tonon, 'Problematiche Giuridiche Relative al Mercato Del «rigenerato»' (1991) Riv. Dir. Ind. 97,125.
[555] ibid 124.
[556] *Roncuzzi v Pastè* [1956] Court of Cassation No. 3387 in (1958) Riv. Dir. Ind. with comment of Vito La Gioia, 3,4.

invention.[557] Emphasised by Cogo, it also established that patent protection extends to a product's repair.[558] The case focused on the supply of spare parts for patented chemical industry pumps. The Court ruled that manufacturing and selling these spare parts, even if they were not patentable or in the public domain, constitutes counterfeiting if their sole purpose is to repair a patented pump. Specifically, the Court focused on the intended use of these machine parts, as explicitly outlined in catalogues designating their application for the patented pump.

Although not explicitly stated by the Court of Cassation, La Goia, in accompanying commentary, emphasised that this was indeed a case of indirect infringement, referred to as 'participation in counterfeiting.'[559] This conclusion arises because although the components lacked patent protection, they were intended to be used for the patented machine. Hence, since the parts themselves were not patented, it could not be considered partial counterfeiting; otherwise, as he notes, it would lead to the absurdity that even the reproduction of screws and bolts, which are equally part of the invention, would be considered counterfeiting.[560] The distinction lies in the fact that manufacturing such parts would be lawful itself, but it becomes unlawful if these parts are intended for use in a patented machine.[561] Thus, as emphasised by Cogo, the subjective aspect becomes crucial in cases of indirect infringement: essentially, the supplier must be aware that the means in question are clearly intended to implement the innovation.[562] From an objective point of view, Italian jurisprudence, similar to the German approach, has adopted the notion that infringement occurs when the

[557] The Law of November 3, 2016, no. 214 (published in the Official Gazette on 24/11/2016, no. 275) introduced paragraph 2-*bis*, providing that: The patent also confers on its proprietor the exclusive right to prohibit third parties, except with their consent, from supplying or offering to supply to third parties other than those entitled to use the patented invention, means relating to an indispensable element of that invention and necessary for its implementation within the territory of a State in which it is protected, if the third party has knowledge of the suitability and purpose of those means for implementing the invention or is able to obtain such knowledge with ordinary diligence; 2-*ter*. Paragraph 2-bis does not apply when the means consist of products that are commonly found on the market, unless the third party induces the person to whom they are supplied to perform the acts prohibited under paragraph 2; 2-*quater*. For the purposes of paragraph 2-bis, persons performing the acts referred to in Article 68(1) shall not be considered to be those entitled to use the invention.' Specifically, Article 68 provides limitations on patent rights within private settings and for non-commercial purposes or research aims.
[558] Alessandro Cogo, 'La Contraffazione Indiretta' [2018] *Giurisprudenza Italiana* 1727, 1729.
[559] La Goia (n 556) 10.
[560] ibid 4.
[561] La Gioia (n 556) 10.
[562] Cogo (n 558) 1730.

reproduced components constitute the 'heart of the invention', essentially embodying the inventive meaning of the innovation.[563]

In a case involving – again – the sale of coffee capsules for use in Nespresso coffee machines incorporating patented devices, the District Court of Turin [Tribunale di Torino] confirmed that it did not constitute indirect infringement.[564] Accordingly, the reproduction concerned a component – the capsule –which, although essential to the operation of the machine, was not considered to be an expression of the inventive activity covered by the patents sought to be protected.[565]

In another case, the District Court of Turin [Tribunale di Torino] was called upon to rule on a matter involving the sale of compatible cartridges for HP thermal inkjet printers.[566] The Court first identified and distinguished the following categories of cartridges:[567]

- Original cartridges: newly produced by the manufacturer;
- Compatible cartridges: considered illegal if they are reproductions of patented cartridges;
- Refilled cartridges: original cartridges refilled with new or regenerated ink or by trimming.

In the case at stake, the Court inferred from the defendants' invoices, emails, advertisements, the marketing strategy displayed on the website, and the testimonies of purchasers that the marketed cartridges belonged to the second category, namely, compatible cartridges replicating original cartridges without the patent holder's consent.[568] As these cartridges were protected by a patent, their reproduction amounted to direct patent infringement.[569] Yet, given that also the printer was protected by a patent, the Court then concluded that the defendants' actions constituted both

[563] See *SMT spa v Rieter Ingolstadt Spinnereimachinenbau AG* [2006] Court of Cassation in (2006) Riv Dir Ind. involving the production and commercialisation of discs that formed the 'core of the invention,' intended for sale as spare parts for a complex patented machinery.
[564] *Nestec SA and Nespresso Italiana s.p.a v Casa del Caffè Vegnano s.p.a* [2012] District Court of Turin (Ord) in (2012) Giur.Ann.Dir.Ind. 864.
[565] ibid
[566] *Hawlett Packard Development LP and Hewlett Packard Company v Recycler Componnet s.r.l* [2004] District Court of Turin in (2005) Giur.Ann.Dir.Ind. 326.
[567] ibid para 2.1.
[568] ibid para 2.2.
[569] ibid.

direct infringement of two cartridge patents and indirect infringement because they were intended for use in a product - the printer - that was also patented.[570]

The outcome would have been different if the cartridges were 'refilled', i.e., original cartridges refilled with new ink. Indeed, the prohibition to manufacture compatible cartridges reproducing those protected by a patent does not apply to refilled cartridges. Upon the initial commercialisation of the original product, the exhaustion principle applies, meaning that the patentee's control over that specific product ends after its initial sale, allowing subsequent activities like refilling or reuse of the product without infringing on the patent's right.[571] Refilling the product, in this context, is not considered a change or modification that would violate the exhaustion principle. However, a distinct scenario may arise concerning the sale of recycled cartridges, whereby alterations to the product might impede the application of exhaustion principle.[572]

In a more recent case involving the production and commercialisation of a specific hooking device designed to cooperate with a patent related to automatic waste collection equipment - a device composed of a waste container and its corresponding hooking mechanism - the Italian Court of Cassation affirmed it constituted indirect infringement.[573] Accordingly, the hooking device represented an essential element of the patented invention: without it, the coupling, lifting, emptying, and repositioning of the containers would not be feasible.[574]

The analysis of national cases conducted so far demonstrates uncertainty in delineating the boundaries between supplying replacement parts for repair purposes, which is permissible, and actions that constitute indirect patent infringement. In the preceding section, it was emphasised that access to compatible spare parts is crucial to enable the exercise of the right to repair, as well as the other R activities. These general considerations can also apply to patents, although they must be adapted to the specific patent system.

In this context, the main issue appears to be defining when a part intended for replacement becomes an essential element of the invention, potentially leading to indirect patent infringement. However, the determination of what constitutes this

[570] Ibid para 2.3.
[571] ibid. See more specifically *infra* chapter 3, section 4.
[572] See *infra* chapter 3, section 4.
[573] *Nord Engineering s.r.l v Farid Industrie s.p.a and Palvi SL* [2018] District Court of Turin (ord.) in (2019) Giur. Ann. Dir. Ind. 412.
[574] ibid.

essential element and the criteria to establish it is left to the discretion of national courts, often resulting in conflicting and arbitrary outcomes.

Some scholars emphasise the role of these parts within the overall machine: if these components are deemed essential and embody the inventive concept, manufacturing them would constitute infringement. [575] In this regard, part of German scholars suggest that for a means to be considered infringing, it must exhibit a specific relationship with the patented invention.[576] This relationship is defined by two criteria: first, the means should differ from those previously used or should be specifically designed in light of the patented invention; second, the means should not be unsuitable or of minimal importance in the context of the invention.[577] It has also been observed that, in general, an element is deemed essential if it is explicitly stated in the claim.[578] Yet, there might be exceptional scenarios where an element mentioned in the claim might not be considered essential, as it does not contribute to the realisation of the innovative concept of the invention.[579]

Another perspective focuses on the intended use of the means: if the manufactured parts are intended specifically for constructing a patented machine, it constitutes infringement; conversely, if the manufactured part serves other purposes beyond this construction, it might not be considered infringement.[580] Another broad interpretation of ‘means related to the essential element of the invention’ suggests that any means, including known ones, can be considered infringing if they exhibit a suitable relationship with the protected invention.[581]

Another issue pertains to the criterion of the 'working life' of the patented product. If it is anticipated that these components are meant to be replaced during the lifespan of the product, it might help to exclude infringement. However, as Pihlajarinne notes,

[575] In this sense Parrella, ‘Sulla Riproduzione Di Pezzi Di Ricambio per Macchine Coperte Da Brevetto e Marchio’ [1937] Riv. Dir. Priv. 205. See also La Gioia (n 556) 7.
[576] Hölder (n 516) 891–892.
[577] ibid.
[578] Kühnen and Peterreins (n 549) 142–143.
[579] ibid.
[580] La Gioia (n 556) 7. The means’ inteded use in connection with the patented device can be deduced from brochures, device usage instructions, advertising material, and more broadly, from any indications provided by the supplier regarding the suitability of the means for the patented purposes and other uses. See Kühnen and Peterreins (n 549) 145. See also *Hawlett Packard.*
[581] ibid.

there is no clear definition of 'product lifespan.'[582] Essentially, the decision of how long a product should last lies with the OEMs, namely the patent holder. Indeed, she observes: 'The concept of a normal lifespan under a common understanding in society can lead to imbalances results since the way the public perceive a product's lifespan very much depends on the patent's holder's guidance. In addition, a normal lifespan, does not necessarily reflect the core interests that are aimed to be protected by IP rights.'[583] In this context, she highlights that patent holders' marketing strategies strongly influence consumers' perceptions regarding product durability, suggesting whether part replacements are inherent in its lifespan.[584] This information impacts sustainability, potentially conflicting with the actual longevity of the product.[585]

Another consideration is linked to exhaustion doctrine for replacement parts and will be further analysed in the third chapter of this work. It relates to the importance of understanding whether and to what extent entitlements arise from the exhaustion of patent rights, especially when providing spare parts for protected devices to remedy defects or repair devices.[586] It involves distinguishing between the right to use these spare parts and the possibility of infringing on patent rights when providing standard parts for patented devices.

[582] Taina Pihlajarinne, 'Repairing and Re-Using from an Exclusive Rights Perspective: Towards Sustainable Lifespan as Part of a New Normal?' in Ole-Andreas Rognstad and Inger Ørstavik, *Intellectual Property and Sustainable Markets* (Edward Elgar Publishing 2021) <https://www.elgaronline.com/view/edcoll/9781789901344/9781789901344.00010.xml> accessed 15 March 2023.
[583] ibid 9.
[584] ibid.
[585] ibid.
[586] Kühnen and Peterreins (n 549) 143.

CHAPTER III
INDUSTRIAL PROPERTY RIGHTS IN CIRCULAR ECONOMY: EXHAUSTION AND REPAIR

TABLE OF CONTENTS: *1. The Exhaustion Doctrine – 1.1. Origins and Rationale - 1.1.1. The Full Ownership Theory – 1.1.2. The Rewards Theory – 1.1.3. The Certainty of Trade Theory – 1.2. The Regional Approach –. 1.2.1. Tailoring Exhaustion to IP Rights – 1.2.3. – Requirements for Applicability – 2. Exhaustion and Repair – 2.1. The Market for Repair and Maintenance Services – 2.1.1. Repair for Private Use – 2.1.2. Repair for Commercial Use – 3. Exhaustion, Trademarks and Repair – 3.1. Legislative Framework –3.2. The Legitimate Reason to Oppose to Further Commercialisation–3.2.1. De-Branding – 3.2.2. – Joint-Branding – 3.2.3. Repackaging and Relabelling – 3.2.4. Advertising – 3.2.5. – The Conditions of the Goods have Been Changed or Impaired – 4. Exhaustion, Patents and Repair – 4.1. Legislative Framework – 4.2. Repair as Direct Patent Infringement – 4.3. A Look Abroad*

The exhaustion doctrine states that the rights of the IP owner are exhausted upon the first lawful placing of the protected goods on the market. This means that the owner cannot interfere with the subsequent circulation of the goods by the legitimate purchaser.

According to Drexl, the principle of European exhaustion stands as 'one of the most fundamental principles within European intellectual property law.'[587] This doctrine of exhaustion plays a pivotal role in the examination of product repair within the context of this work. However, its application is not without limitations, and these constraints will be thoroughly explored in the subsequent section.

Against this backdrop, this chapter will start with a discussion of the origins and rationale of the exhaustion doctrine, analysing the doctrinal concepts behind it. It will then then focus on the approach adopted at the EU level, namely the regional exhaustion, and briefly outline its boundaries. The analysis will then shift to the role of exhaustion in the repair sector. In this context, the chapter will discuss in details the applicative limits of trademarks and patents, using primary case studies as examples.

[587] Joseph Drexl, 'EU Competition Law and Parallel Trade in Pharmaceuticals: Lessons to Be Learned for WTO/TRIPS?' in Jan Rosén (ed), *Intellectual Property at the Croassroads of Trade* (Edward Elgar 2012) 3.

It will then conclude with remarks and proposals, which will be further examined in the final chapter of the present work.

1. The Exhaustion Doctrine

The doctrine of exhaustion guides the circulation of IP-protected goods.[588] According to this principle, the exclusivity ceases after the first lawful introduction of the good on the market.[589] In other words, once an item incorporating an IPR is lawfully placed in circulation, the holder's exclusive rights are exhausted and the purchaser is free to dispose of it without the interference of the holder.[590]

Absent the exhaustion, owners could use their power to control over resale, rental, export, and import, potentially determining segmentation of the market and hindering trade.[591] Yet, IP holders are still recognised as the owners of these rights,[592] as the exhaustion does not concern the substance of IP rights, but rather their enforcement.[593] It follows that certain rights, including the reproduction right, the right to protect the reputation of the trademark and public lending or public performance rights remain with their holders.[594] However, the latter lose the ability to restrict the further disposal, distribution and circulation of the product.[595] Therefore, they cannot hinder any further sale, use, or otherwise disposal of the product.

The historical evolution of exhaustion within the EU egal frameworks effectively clarifies its boundaries, implications, and the evolution of interpretations that guide its current applications.[596]

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[588] Davide Sarti, *Diritti Esclusivi e Circolazione Dei Beni* (1996) 55.
[589] ibid.
[590] See Friedrich Karl Beier, 'Territoriality of Trademark Law and International Trade' (1970) 1(1) IIC 48: stating that the principle of exhaustion is nothing more than a figurative expression for the simple legal idea that once genuine goods have been marketed subsequent distribution should not be impeded by [IPR] actions.
[591] Heath (n 539) 421.
[592] Pettiti (n 273) 91.
[593] Heath (n 539) 421. See also Taina Pihlajarinne and Rosa Ballardini, 'Paving the Way for the Environment - Channeling "Strong" Sustainability into the European IP System' (2020) 42 239.
[594] Gül Okutan, 'Exhaustion of Intellectual Property Rights: A Non-Tariff Barrier to International Trade?' (2011) 30 Annales de la Faculté de Droit d'Istanbul 46, 110, 112-119.
[595] David T Keeling, 'The Exhaustion of Rights' in David T Keeling (ed), *Intellectual Property Rights in EU Law Volume I: Free Movement and Competition Law* (Oxford University Press 2004) 75.
[596] Ricolfi (n 381) section 146.

1.1. Origins and Rationales

The exhaustion doctrine, which elaborated the principle in relation to patents, originated with Kohler, who is regarded as the 'father' of this doctrine.[597] According to Kohler's theory, the act of exploiting an innovation includes both the initial sale and the subsequent use and manufacture of the patented product, constituting a single act of exploitation.[598] This implies that the power of the patent holder cannot be used to fragment the product's circulation and, therefore, the subsequent enjoyment of the invention.[599] Such a fragmentation would occur if the inventor were able to limit the purchaser's right to dispose of or to use the patented item, thereby significantly harming the purchasers' legitimate expectations.[600] Consequently, once the exclusive rights expire with the first lawful sale of the patented item, the proprietor can no longer interfere with the exploitation of the patented item by the purchaser and its assignees, except by means of contractual restrictions which have purely *inter partes* binding effects.[601]

The doctrine developed by Kohler for patents has also been extended by the courts to trademarks.[602] Auteri explains that when products bearing a trademark are lawfully put on the market, this is considered as a continuation of the legal act of affixing the trademark to these products.[603] In this context, the exclusive rights serve to indicate

[597] Shubha Ghosh and Irene Calboli, *Exhausting Intellectual Property Rights: A Comparative Law and Policy Analysis* (Cambridge University Press 2018) 13 ff.

[598] Paolo Auteri, *Territorialità Del Diritto Di Marchio e Circolazione Di Prodotti 'Originali'*, vol 13 (Giuffrè Editore 1973) 70.

[599] ibid. See also Heath (n 539) 426, providing an English translation of Kohler's work: 'Every patent grants all forms of exploitation rights to the extent possible according to the type of invention: It is improper to grant a patent with the mere right of use, another with the mere right of manufacture. It is equally impossible to subsequently relegate the patent to such step.' It follows that: 'The use and distribution of patented products, be it that the product or the manufacture is patented, is always in connection with the manufacture; it is a continuation of the latter, it is a further economic development of the patent exploitation that lies in the manufacture' and 'The domestic use and distribution of goods can be the continuation of a previous act of domestic distribution; it is so if the use and subsequent distribution is a legal consequence of a previous distribution.'

[600] Ibid. See also Sarti (n 588) 67 and Heath (n 539) 428: 'Once the entitled person has brought the object into commerce, it is open to free distribution and life would not tolerate any form of interference. Certainly it is possible to impose contractual limits; yet such a thing only has contractual effects.'

[601] ibid. And therefore do not affect parties who lawfully acquire the item.

[602] ibid 71-72.

[603] ibid.

the origin of the products, which is guaranteed by the lawful use of the trademark and the first commercial release.[604]

At the outset, the exhaustion principle carries economic justifications: it addresses inefficiencies and market failures in exclusive IP rights by expanding access through secondary markets.[605] This not only enhances affordability for consumers with lower purchasing power but also provides alternative access methods for those unable to afford market prices.[606] The exhaustion further finds its roots in policy considerations.[607] Whereas under a legal point of view, three main orientations emerged to justify the foundation of the exhaustion principle: the full ownership theory, the rewards theory and the theory of the certainty of trade.[608]

1.1.1. The Full Ownership Theory

Cohen, referring to Kohler's work, commented: 'Kohler viewed this rule as an essential demarcation line between two conflicting properties: the IPR of the producer and the common proprietary right of the owner of a purchased copy of a product.' [609] Within the framework of property theory, the principle of exhaustion serves the specific purpose of conferring on a lawful purchaser who acquires a lawfully marketed product exactly the same rights and privileges associated with traditional ownership.[610] In practical terms, this entails that a lawful purchaser who acquires a copy of a product that has been lawfully placed on the market has the same rights and privileges as a traditional owner of that property.[611] Consequently, the purchaser may exercise those rights, which include the ability to resell or dispose of the product in any manner.[612]

In this context, the principle of exhaustion effectively distinguishes between what is protected by IP rights, such as copyrights or patents, and what is covered by traditional

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[604] ibid.

[605] Ariel Katz, 'The Economic Rationale of Exhaustion: Distribution and Post-Sale Restraints in in Irene Calboli and Edward Lee (eds) *Research handbook on intellectual property exhaustion and parallel imports* (Elgar 2016) 25.

[606] ibid.

[607] Ghosh and Calboli (n 597) 13 ff.

[608] Antoni Rubí Puig, 'Copyright Exhaustion Rationales and Used Software' (2013) 4 JIPITEC 159,161.

[609] Herman Cohen Jehoram, 'International Exhaustion versus Importation Right: A Murky Area of Intellectual Property Law' [1996] GRUR International 280.

[610] Puig (n 310) 161.

[611] ibid. See also Jehoram (n 609) 280.

[612] ibid.

property rights.[613] IP rights give creators or inventors control over how their work or invention is used, but once a legal sale has taken place, these IP rights are limited to that initial transaction.[614] Any subsequent ownership or use of the product is subject to traditional property rights, which allow the buyer to treat the product as any other property they own.[615]

1.1.2. The Rewards Theory

The rewards theory posits that exhaustion confines the legally protected interests of exclusive rights, focusing on obtaining monopolistic profit from controlling the circulation of the protected work.[616] This theory is largely supported by German scholars, who draw its foundation from the work of Kohler and the theory of the connection of individual acts of exploiting.[617] Accordingly, when a patented invention is legally first introduced to the market, the range of profits available to the patent holder is determined by all the economically exploitable connected acts related to that patent.[618] However, the profits include and are limited to those acts which are strictly necessary to derive economic benefit from its work.[619] Subsequent commercial activities are exempted as they exceed what is essential for obtaining compensation from the invention. [620] Therefore, the rightsholders have no entitlement to any further compensation deriving to any distribution actions following the first legal sale, preventing double compensation.[621]

In essence, once the patent holder has received their reward for a particular product, their exclusivity is exhausted and the product can be freely used and

[613] Katharina de la Durantaye and Kuschel Linda, 'Der Er Principio Della Creazione – Josef Kohler, UsedSoft, and Beyond' 8 Rivista für proprietà intellettuale (ZGE) 195, 212-213.
[614] ibid.
[615] ibid.
[616] Sarti (n 588) 62–72.
[617] Puig (n 310) 162.
[618] ibid.
[619] ibid. This is also the approach supported by Marchetti, who argues that monopolistic positions resulting from exclusivity are justified only to the extent that they are necessary to reward inventors. Consequently, extending exclusivity to subsequent acts of commercialization beyond the initial market entry goes beyond that limit, causing distortions in competition. See Piergaetano Marchetti Sull'esaurimento del brevetto d'invenzione, vol 16 (Giuffrè Editore 1974) 97 f.
[620] Heath (n 539) 422–423, highlighting that this perspective underscores exhaustion as an integral limitation, suggesting it should be inherent in patent rights rather than an exception.
[621] Durantaye and Kuschel (n 613) 212.

commercially exploited by others.[622] In this way, exhaustion strikes a balance between preserving the incentive to innovate and rewarding inventors with the right to exclude,[623] thereby ensuring that IP rights enforcement does not distort the mechanisms of competition.[624]

This theory is rooted in the need to strike an appropriate balance between the right of the proprietor to receive remuneration for its work and the right of purchasers to have access to valuable works.[625]

1.1.3. The Certainty of Trade Theory

The third theory, supported by Sarti, suggests that exhaustion was initially conceived to safeguard trade certainty by limiting the holder's freedom to control product circulation.[626]

By doing so, exhaustion preserves the smooth flow of legal and economic transactions and prevents transaction costs, as it relieves the IP holder of the obligation to negotiate a license for each single use of the circulated product copy.[627] In addition, exhaustion promotes legal certainty by preventing IP holders from exploiting their bargaining power to engage in potentially abusive and hold-up behaviours.[628]

1.2. The Regional Approach

The TRIPs Agreement has deliberately left open the question of the national or international scope of the exhaustion of IP rights.[629] The issue arises in particular in relation to parallel imports, also known as the grey market. In the case of parallel imports, a product is legally marketed in one country on the basis of the IP regime and then imported into a second country without the consent of the right holder.[630] In this second scenario, whether the IP rights for that product are exhausted in relation to the second country depends on whether the first country where the product is marketed

[622] Heath (n 539) 422.
[623] David Tseng, 'Bypassed: The Kirtsaeng Decision's Underwhelming Impact on Exhaustion'(2015) 43 AIPLA Q J 559
[624] Sarti (n 588).
[625] ibid.
[626] Sarti (n 588) 72-80.
[627] ibid. See also Puig (n 310) 161.
[628] ibid.
[629] Cohen (n 609) 284.
[630] Alexander J. Stack, 'TRIPS, Patent Exhaustion and Parallel Imports''(1998) 1 J World Intell Prop 657.

has adopted national, international or regional exhaustion principles. The distinction lies in the scope of the exhaustion of IP rights based on the geographical area of the sale. The regional exhaustion is limited to a specific region (like the EU). Whereas international exhaustion extends globally, meaning that the rights of the holder are considered exhausted once the product is legally sold anywhere in the world, regardless to a specific country. Finally, the national exhaustion confines the exhaustion principle to a specific geographical area countries, so the IP holder can control and restrict the resale or importation of the product only within the borders of the country where the initial sale occurred.

Article 6 of TRIPs Agreement leaves signatory nations free to decide and implementing the specific rules and requirements related to exhaustion within their own legal framework, stating that 'nothing in this Agreement shall be used to address the issue of the exhaustion of intellectual property rights.'[631] The silence of the provision reflects the challenge of defining exhaustion, both in terms of its geographical and substantive scope.[632] This task is further hampered by the differences between different IP regimes.[633]

Upon the creation of the common market, the EU embraced a regional approach to exhaustion, whereby the IP rights are deemed exhausted following the initial legal sale within a particular Member State or within the EEA (which includes EU Members States plus Norway, Island and Liechtenstein). Therefore, when a product bearing a IP right is put on the market by the owner or with its consent, the exclusive rights relating to that product expire or, in other words, are exhausted.[634] Consequently, the owner cannot invoke its national rights to prevent the resell or import of the product into another Member State.[635] This is because, as later clarified by the ECJ caselaw, IP rights should not be used as a means of partitioning markets.[636]

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[631] On the background history of Article 6 of the TRIPs Agreement see Santanu Mukherjee, *Patent Exhaustion and International Trade Regulation*, vol 13 (World Trade Institute Advanced Studies, Brill Nijhoff 2023) 115 ff.

[632] Ghosh and Calboli (597) 10-11.

[633] ibid.

[634] Vanzetti, Di Cataldo, and Spolidoro (n 380) 271.

[635] Kamal Saggi, 'Regional Exhaustion of Intellectual Property' (2014) 10 International Journal of Economic Theory 125. See also Irene Calboli, 'Trademark Exhaustion in the European Union: Community-Wide Or International? The Saga Continues' (2002) Marq. Intellectual Property L. Rev. 47, 49, discussing that the regional exhaustion is a compromise between national and international exhaustion.

[636] Sarti (n 588) 89.

1.3. A 'Horizontal' Principle

Doctrine and jurisprudence typically dissect this principle independently for each IP category. However, as noted by Sarti, the EU has established this principle in uniform terms.[637] Therefore, the present work analyses exhaustion initially as a common principle, before tailoring it to each type of IPR.[638]

The Community-wide exhaustion principle[639] was developed by jurisprudence before it found a regulatory basis. It finds its inception in *Deutusche Grammophon*[640], where the ECJ held that territorial distribution limitations resulting from the exercise of an IP right (in the case at hand copyright) were contrary to the provision of the free movement of goods and the objectives of the EU Treaty.[641] The basis of this principle lies in Article 34[642], which encompasses the concept of free movement of goods, explicitly prohibiting quantitative import restrictions and any measures that could have similar effects between Member States.[643] However, Article 36[644] TFEU, provides a derogation to this principles for '[the]protection of industrial and commercial property', provided that the prohibitions or restrictions eventually adopted do not 'constitute a means of arbitrary discrimination or a disguised restriction on trade between Member States.' In *Grammophon* the ECJ clarified that the limitations contained in Article 36 shall be exercised to the extent that they are strictly necessary to protect the subject

[637] Sarti (n 588) 58.

[638] Yet it should be highlighted from the outset that exhaustion has different nuances for the aspects we are concerned with here, depending on whether we are talking about the patent or the trademark sector. See Enrico Macrì, 'Riflessioni in Tema Di Importazioni Parallele Con Particolare Riguardo al Settore Farmaceutico', *Impresa e mercato. Studi dedicati a Mario Libertini* (Giuffrè Editore 2015).

[639] See Jens Schovsbo, 'The Exhaustion of Rights and Common Principles of European Intellectual Property Law' in Ansgar Ohly (ed.) *Common Principles of European Intellectual Property Law* (Mohr Siebeck 2012), discussing that as opposed to the UK, the EU Community conceptualized the exhaustion under a 'principle approach', as finds its source in the legislator, and not in the contractual autonomy of parties. According Sarti, the concept of 'EU exhaustion' defines the scope of the exclusive right to determine the number of protected goods that can be used in the market, particularly as a right that does not allow allocating to the Italian territory a quantity of products different (and lower) than what the holder has made available in the EU as a whole. See Sarti (n 588) 89.

[640] Case 78/70 *Deutsche Grammophon Gesellschaft mbH v. Metro-SB-Großmärkte GmbH and Co. KG.222* [1971] ECLI:EU:C:1971:42.

[641] ibid para 12.

[642] Previous Article 28 TEC.

[643] 'Quantitative restrictions on imports and all measures having equivalent effect shall be prohibited between Member States.'

[644] Previous Article 30 TEC.

matter of IP.[645] On this basis, it found that the conduct of the phonogram manufacturer, relying on its exclusive rights granted under the laws of one Member State to restrict the sale of its products in another EU Member State, was incompatible with the rules on the free movement of goods in the common market.[646]

In *Silhouette v Hartlauer*[647] the ECJ confirmed the adoption of the regional exhaustion at the EU level. Specifically, the ECJ mandated that Member States must adhere to the regional exhaustion system of the EEA, and therefore they are prohibited from implementing an international exhaustion system that would permit parallel imports from countries outside the EEA.[648] While the case specifically dealt with trademarks, the principle applies to all categories of IP rights. As a result of the territorial approach adopted by the EU, once the domestic IP rights of the holders have been exhausted (i.e. they no longer have control over products once sold in their own country), they can still prevent parallel imports of the same original goods outside the defined region.[649] The limitation is justified by the need to strike a balance between the

[645] *Deutsche Grammophon* para 11.

[646] *Deutsche Grammophon* paras 12-13. See also Case 58/80 *Dansk Supermarked A/S v A/S Imerco* [1981] ECLI:EU:C:1981:17 para 19, holding that 'Articles 30 and 36 of the EEC Treaty must be interpreted to mean that the judicial authorities of a Member State may not prohibit, on the basis of a copyright or of a trade mark, the marketing on the territory of that State of a product to which one of those rights applies if that product has been lawfully marketed on the territory of another Member State by the proprietor of such rights or with his consent.'

[647] Case C-355/96 *Silhouette International Schmied GmbH and Co. KG v Hartlauer Handelsgesellschaft mbH* [1998] ECLI:EU:C:1998:374 paras 26-27: '[T]the Directive [89/104/EEC] cannot be interpreted as leaving it open to the Member States to provide in their domestic law for exhaustion of the rights conferred by a trade mark in respect of products put on the market in non-member countries. This, moreover, is the only interpretation which is fully capable of ensuring that the purpose of the Directive is achieved, namely to safeguard the functioning of the internal market. A situation in which some Member States could provide for international exhaustion while others provided for Community exhaustion only would inevitably give rise to barriers to the free movement of goods and the freedom to provide services.'

[648] Keeling (n 595). See also Luigi Mansani, *La Funzione Di Indicazione d'origine Del Marchio Nell'ordinamento Comunitario* (Giuffrè Editore 2000) 174-175, discussing that the principle expressed in *Silhouette* finds its foundation in preventing different regimes among Member States from favoring either importing companies or trademark holders based on their adopted approach. The uniform application of exhaustion within the EU thus aims to prevent disparities that could hinder trade within the Community.

[649] Gül Okutan, 'Exhaustion of Intellectual Property Rights: A Non-Tariff Barrier to International Trade?' (2011) 30 Annales de la Faculté de Droit d'Istanbul 110, 112. See Case C-51/75 *EMI Records Limited v CBS United Kingdom Limited* [1976] ECLI:EU:C:1976:85.

protection IP rights, in particular the need to maintain control over protected products, and the principles of free trade and movement of goods.[650]

In essence, the regional approach adopted at the EU level treats Member States collectively as one region. While IP holders cannot use national laws to obstruct the internal movement of goods within the EU, they still retain the power to prevent parallel imports from third countries that might compete with their products.[651] The rationale of the EU Community-wide exhaustion principle was well-summarised by Beier as[652]:

> [N]othing but the descriptive expression of the simple legal notion that further distribution and use of genuine goods according to their very purpose should not be controlled after the owner, a licensee or a related company has put the genuine goods on the market. The principle of exhaustion is essentially based on the concept of free movement of genuine goods put into circulation by the owner or with his consent, under both national and Community law.

Such an approach protects IP rights, while promoting the development of an internal market preventing unauthorized 'grey' imports. [653] On the negative side, scholars noted that it may contribute to creating market barriers and fostering abusive behaviours by IP holders to the detriment of consumers.[654] In this context, Mansani emphasises with particular reference to trademarks rights the approach according to which by imposing territorial restrictions, rights holders can leverage their exclusive rights to dictate where their products are sold and practice price discrimination.[655] This control could potentially restrict competition among their local licensees.[656]

1.2.1. Tailoring Exhaustion to IP rights

[650] The EU's approach, based on territorial exhaustion, differs from that of the US, which has instead adopted international exhaustion.
[651] Okutan (n 594) 117.
[652] Friedrich-Karl Beier, Industrial Property and the Free Movement of Goods in the Internal European Market (1990) IIC 131, 152.
[653] Okutan (n 594) 125-128.
[654] ibid.
[655] Mansani (n 648) 175 -176.
[656] ibid. According to this view, parallel imports could be beneficial for the Community, as importers would have access to products at a lower price than those sold in the importing country, thus promoting competition. Conversely, the opposite view argues that brand owners protect themselves from free riding by choosing distributors. In addition, uncontrolled imported products may be of lower quality than those sold by the trademark owner and may also reduce the traceability of counterfeiting activities. See ibid 176-177.

While the existence of IP rights is governed by national law, the ECJ has claimed competence to scrutinise how these rights are being exercised.[657] To this extent, any restriction to the free movement of goods pursuant to Article 36 TFEU shall be evaluated in relation to the specific subject matter of the property.[658]

In *Merck v. Stephar*[659] and *Centrafarm v. Sterling Drug*[660] the ECJ clarified that the 'subject matter' of a patent encompasses the exclusive right to use their invention for the production and to put it in commercialisation.[661] This allows the patentee reap the rewards of its inventive efforts, even if it does not guarantee this reward in every situation.[662] On these premises, Article 36 can be invoked to restrict imports if the product is not patentable in the Member State from which it is imported or if it is imported without the consent of the patent holder and has been manufactured by a third party.[663] However, it cannot be invoked where the product has been lawfully marketed by the patentee in the Member State from which it is imported, particularly in the case of parallel patents.[664]

As for trademarks, in *Centrafarm v. Winthrop*[665] the ECJ clarified that the subject matter can be identified in the proprietor's exclusive right to use the trademark for the initial launch of the product.[666] This protection prevents potential competitors from capitalizing on the company's reputation and trademark through unauthorised use.[667] However, this does not imply the authority to prevent the import of protected products marketed by them or with their consent in another Member State, not even for safety

[657] Guido Westkamp, 'Intellectual Property, Competition Rules, and the Emerging Internal Market: Some Thoughts on the European Exhaustion Doctrine' (2007) 11 Marquette Intellectual Property Law Review 291, 294.
[658] *Deutsche Grammophon* para 11.
[659] Case C- 187/80 *Merck v Stephar and Exler* [1981] ECLI:EU:C:1981:180.
[660] Case C-15/74 *Centrafarm BV e a. v. Sterling Drug* [1974] ECLI:EU:C:1974:114.
[661] *Centrafarm* para 9.
[662] *Stephar* para 10.
[663] *Centrafarm* para 11.
[664] ibid.
[665] Case C-16/74 *Centrafarm BV and Adriaan de Peijper v Winthrop BV* [1974] ECLI:EU:C:1974:115.
[666] ibid para 8.
[667] ibid.

concerns.[668] Such behaviour would allow national markets to be partitioned, thereby restricting trade between Member States.[669]

However, in *Keurkoop BV v Nancy Kean Gifts BV*[670] the ECJ hold that the owner of an exclusive design right in one EU Member State can invoke their exclusive right to oppose the importation of products with an identical appearance put on the market by another Member State without the owner's involvement or consent.[671] This is because, according to the ECJ, the protection of industrial and commercial property would generally be meaningless if another entity in a Member State could market identical products without authorisation, rendering the rule in Article 36 void itself.[672]

Similarly to the other IP rights, exhaustion applies to copyright to prevent control by the copyright holders on further sale of copies of the work to guarantee the free circulation of creative works within the common market.[673] The first case was the aforementioned *Grammophon*, in which the ECJ held that using copyright-related rights to prevent the sale of products in one EU Member State, distributed by or with the consent of the rightsholder in another Member State, simply because the distribution did not occur within the borders of the first Member State, would essentially endorse the segregation of national markets.[674]

1.2.2. Requirements for Applicability

For the principle of exhaustion to apply, two requirements are necessary: the IP-protected good must have been placed on the market within an EU Member State or the EEA and must have been placed there by the right holder directly or with their consent.[675]As for the first requirement, an act of disposing of the goods is usually

[668] ibid paras 11-21. Specifically, the case concerned a pharmaceutical product and the owner invoked its right to regulate its distribution, citing consumer safety concerns. However, the ECJ ruled that the matter was beyond the scope of IP rights, suggesting that any related issues should be dealt under public health law.
[669] ibid para 12.
[670] Case C- 144/81 *Keurkoop BV v Nancy Kean Gifts BV* [1982] ECLI:EU:C:1982:289.
[671] ibid paras 21-29.
[672] ibid para 22.
[673] Keeling (n 595) 76.
[674] *Grammophon,* para 12.
[675] Giulio Enrico Sironi and Anna Colmano, 'Commento all' Articolo 5 CPI' in Adriano Vanzetti (ed.) *Codice della proprietà industriale* (Le fonti del diritto italiano, Giuffè Editore 2007) 3, 43.

required, typically represented by a sales contract.[676] In *Peak Holding*[677] the ECJ held that 'Exhaustion occurs at the latest when the proprietor of the trademark or a person who has acquired the right to use the mark offers the goods for sale to consumers in the EEA.'[678] Whereas importing the goods with the intent to selling them in the EEA or offering them for sale in the EEA do not exhaust the holder's rights, since 'Such acts do not transfer to third parties the right to dispose of the goods bearing the trademark' and 'They do not allow the proprietor to realise the economic value of the trademark.'[679] Similarly, in the field of patents, it is generally recognised that the rights of the proprietor are extinguished by the first lawful act of putting the patented product on the market, which may be any transaction intended to allow a third party to enjoy the patented product.[680]

As for the consent's requirement, the ECJ clarified that 'consent must be so expressed that an intention to renounce those rights is unequivocally demonstrated.'[681] Such intention 'will normally be gathered from an express statement of consent.'[682] However, the consent can also be implicit if 'it follows from facts and circumstances prior to, simultaneous with or subsequent to the placing of the goods on the market outside the EEA which, in the view of the national court, unequivocally demonstrate that the proprietor has renounced his right to oppose placing of the goods on the market within the EEA.'[683] Scholars further clarified that placing a product on the market with the proprietor's consent can also take place through licensing arrangements or transactions where the rightsholder intends to authorise the circulation of the asset by a third party infringer.[684]

2. Exhaustion and Repair

[676] ibid.
[677] Case C-16/03 *Peak Holding AB v. Axolin-Elinor AB* [2004] ECLI:EU:C:2004:759.
[678] ibid para 27.
[679] ibid paras 41-42.
[680] Vanzetti, di Cataldo, Spolidoro (n 380) 454-455.
[681] Joined Cases C-414/99 to C-416/9, *Zino Davidoff SA v A and G Imports Ltd and Levi Strauss and Co. and Others v Tesco Stores Ltd and Others* [2001] ECLI:EU:C:2001:617 paras 45-46.
[682] ibid.
[683] ibid para 69. See also Vanzetti, di Cataldo, Spolidoro (n 380) 310.
[684] Sarti (n 588) 93-107.

The exhaustion principle does not solely cover the right to sell an IP-protected product.[685] It also includes the right to conduct the activities which are essential for its further commercialising, like advertising, [686] as well as to use the purchased item without the consent of the right holder. This is, after all, confirmed by Kohler itself, stating that, 'Had the object been domestically produced in a legitimate manner, then it can also be domestically marketed and domestically used […] The […] principle cannot be abrogated by the patentee.'[687] The right to use a product encompasses all the necessary activities for its uninterrupted use, including repair:[688]

> If a buyer purchases a patented computer monitor from the patent owner, there is an implied license that the repairer can repair the screen should it become broken. The purchaser need not obtain permission from the patent owner to pursue this because the normal expectation that a repair will be allowed is implicit in the product and the sale. Therefore, the patent owner does not have the right to prevent repairs. A similar argument can be made for reselling a product portion of which may be protected by copyright, patent or trademark.[689]

As highlighted by Ghosh and Calboli, if a consumer buys a car, they should have the right to repair it without facing legal restrictions due to IP law. [690] This principle is well expressed in *Wilson v. Simpson*[691], one of the first US cases on the intersection between IP and repair:

> [I]t a hardship for the man who invested his capital in the purchase of an entire machine, that he should be deprived of the use of it because one part only has worn out […]It is the use of the whole of that which a purchaser buys, when the patentee sells to him a machine; and when he repairs the damages which may be done to it, it is no more than the exercise of that right of care which everyone may use to give duration to that which he owns, or has a right to use as a whole. [The right to repair encompasses also] the repair and replacement of broken or worn-out parts of larger and more complex combinations.

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[685] Ghosh and Calboli (n 597) 9.

[686] Giulio Enrico Sironi and Anna Colmano, 'Commento all' Articolo 21 CPI' in Adriano Vanzetti (ed.) *Codice della proprietà industriale* (Le fonti del diritto italiano, Giuffè Editore 2007) 3, 41.

[687] See the translation provided by Heath (n 539) 426-429.

[688] Mohri (n 514) 780.

[689] Ghosh and Calboli (n 597).

[690] ibid 204.

[691] *Wilson v Simpson*, 50 US 109 (1850). See also Ghosh and Calboli (n 597) 204.

In addition to allowing the purchaser to conduct repair activities in private context, the exhaustion principle plays a crucial role in the emergence of commercial repair activities in the aftermarkets, encompassing both the resale of used products and the offering of repair services.[692] The exhaustion becomes relevant also in the secondary market for parts: when a product is sold by the rights holder or with their consent, the exhaustion allows the purchaser to resell those parts in the second-hand market.[693] These parts, which fall under the exhaustion principle, can be sold separately or as components of an automobile in the secondary market.[694] The ECJ indeed clarified that: [695]

> [W]ith each sale of a car, the rights of the car manufacturer are exhausted not only in respect of the car sold, considered as a complex product, but also in respect of each component part of that car […].

Yet, as highlighted in the first part of the wok, when OEMs or rights holders produce and directly sell spare parts to consumers or businesses, a different scenario unfolds.[696] In this context, the original sale maintains the protection of these parts through IP rights. Exhaustion rules do not apply here, implying that the manufacturer or rights holder retain control over the distribution, use, and resale of these parts. Their reproduction without the authorisation of the holders, whether protected by a patent or by a trademark, is indeed deemed as infringement.[697]

Furthermore, exhaustion may not apply in cases where, within the scope of a commercial repair, the product is manipulated in a manner that alters it from its original state, rendering it a new and distinct unit from those originally put into circulation by the rightsholder. Therefore while the mere resale of a used product does not raise significant issues in terms of exhaustion because the product remains essentially the

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[692] ibid 2.

[693] ibid 204. This secondary market activity occurs subsequent to the initial sale, typically involving the resale or redistribution of these parts by third parties or entities outside the original manufacturer's scope. See ibid 205.

[694] Ghosh and Calboli (n 597) 205.

[695] Case C-397/16 *Acacia Srl v Pneusgarda Srl and Audi AG and Acacia Srl and Rolando D'Amato v Dr. Ing. h.c.F. Porsche AG* [2017] ECLI:EU:C:2017:730 opinion AG Saugmandsgaard Øe para 42.

[696] ibid.

[697] Indeed, as emphasised by Hilty in relation to patents, the eproduction of an IP-protected product is never covered by exhaustion. See Reto M Hilty, 'Legal Concept of "Exhaustion": Exhausted?' in Ansgar Ohly and others (eds), Transition and Coherence in Intellectual Property Law: Essays in Honour of Annette Kur (Cambridge Intellectual Property and Information Law, Cambridge University Press 2021) 272, 275.

one put into circulation by the rights holder[698], in repair, as well as in other R activities, the product inevitably undergoes a more or less invasive intervention. Such a distinction was highlighted by the Court of Appeal of Milan in an automotive industry case:[699]

> The resale of the same original product, even if it is used and repaired, remains unchanged because the used product always retains its original essence, whereas the original product, once disassembled and reconstructed, is no longer the same. Whether we consider cash registers, typewriters or cars, the conclusion remains the same because [...] a Fiat, Ansaldo or Alfa-Romeo car retains its identity even if it is used and undergoes routine repairs. However, if it is a worn-out and non-functional machine and the reconstructor uses its frame, its brain and its body, fitting a new engine, or worse still, if it is two worn-out machines from different factories and therefore of different makes, and the reconstructor uses the chassis of one and the body of the other, fitting a new engine, thus creating a reconstructed machine, that machine, as the work of the reconstructor, is no longer a Fiat, Ansaldo or Alfa Romeo and therefore cannot bear the original trademark.

The scenario described by the Milanese Court is indeed an extreme example. However, it sheds light on the core issue: is the product subject to intervention the same as the one originally put into circulation by the holder, or does it equate to a new product to which exhaustion does not apply?[700] A similar assessment necessitates a balance between the interests of the right holders and the economic exploitation of the product subject to IP protection on the one hand; and, on the other hand, the consumers who have the right to an unhindered use of the product without interference from the holder. In addition, there are several recent legislative and policy interventions described in the first chapter of this work that aim to support R activities and deserve consideration.

The challenges that then can arise when an IP-protected product is subject to repair are well highlighted by Marchetti in his patent monograph, citing the prevailing

[698] Concerns, however, might arise regarding the advertising methods for a second-hand product. See infra section 4.

[699] Court of Appeal of Milan (1935) in (1936) Foro It, I, 708 in Vecchie sentenze sempre nuove- Vendita sotto i vecchi segni altrui di cose rifatte, rinnovate, trasformate, sofisticate' with comment of Remo Franceschelli (1952) Riv. Dir. Ind. 226-229.

[700] Kühnen and Peterreins (n 549) 501.

orientation that considers repairs lawful as long as they do not lead to reconstructions or radical and total remakes.[701] This justification aligns with the principle of exhaustion, according to which[702]:

> [T]he first commercialisation severs all ties with the patent holder and the produced item, but obviously does not affect the exclusive rights to manufacture and market other units. The reconstituted product would be entirely comparable to a new and different unit; therefore, the reconstruction would amount to a new act of manufacture and thus be unlawful unless carried out by the patent holder or with its consent.

Issues also arise concerning trademarks, albeit with different nuances inherent in the communicative function they serve, as emphasised by Aghina in his monograph on the atypical use of someone else's trademark.[703] Accordingly[704]:

> The use of someone else's trademark becomes questionable when entities other than the trademark owner have made significant modifications to the original products identified by the trademark. Consequently, the trademark owner's interest in opposing any use of the mark in relation to such modified products appears more justified. In such cases, the interest of the proprietor conflicts with that of the party using the mark […] The latter, when selling the products, may have an interest in emphasising that they are trademarked products, especially if the trademark is well known to consumers. This interest clashes with that of the trademark owner, who wishes to avoid attributing to his trademark, and not to the wear and tear of the product or to the party actually responsible, any defects found in products manufactured by him but subsequently modified and altered beyond his control.

Aghina further highlights that similar concerns also arise when the trademarked product serves as raw material or a component in creating a new product.[705] Even in these situations, the processor might want to use the trademark to inform customers about the use of high-quality materials; conversely, the trademark owner may wish to oppose such use of the trademark to safeguard the prestige of their brand and prevent

[701] Marchetti (n 619) 153.

[702] ibid 154.

[703] Aghina (n 378).

[704] ibid 12.

[705] ibid 14–15. See also Pihlajarinne (n 582) 10, arguing that when a new item is created from used products like bags, jewelry, or home decor, trademarks may gain importance shifting from their original purpose to symbols of recycling, particularly reflecting the original function of the product as raw material. When a trademark has changed as a badge of recycling, the risk of confusion might be low, even though the trademark might be a prominent feature of the product.

any defective products from being associated with them.[706] Here too, the question arises of determining the exclusive rights resulting from trademark rights and the limits stemming from their exhaustion.

Defining the boundaries of lawful repair, whether the product is protected by a patent, a trademark, or both, is extremely challenging. The complexity primarily arises from the absence of a universally accepted definition o 'repair'. If we consider the definition adopted in the Ecodesign Directive in the first chapter, repair entails restoring a faulty product to its intended purpose.[707] This restoration might involve changing or replacing various components, whether protected by IP rights or not. For instance, Aghina listed several activities that may fall under the notion repair:

- Simple repairs of used or worn-out products;
- Repairs requiring part replacement;
- Refurbishment or reconditioning of the product to restore functionality;
- Complete and total reconstruction or remanufacturing. [708]

Each of these activities poses different complexities, depending on whether the product is protected by patents, trademarks, or both. However, the fundamental issue remains consistent: it is intricate to delineate the legitimacy boundaries of the subsequent manipulation of a product protected by IP rights, and consequently ascertain the scope of exhaustion's application.

It is commonly shared that ordinary maintenance activities are lawful and fall under the umbrella of exhaustion. On the opposite extreme, completely remaking the product is deemed infringing. All activities in between, such as extensive repair, including part replacement, refurbishment and recycling, constitute 'grey areas', where depending on the case, these activities may be considered infringing or not.[709] The outcome depends, *inter alia*, as will be further analysed in this work, on the proprietary rights persisting over the product or the specific part subject to intervention, the nature and characteristics of the replaced component, the more or less invasive nature of the

[706] Aghina (n 378) 14–15.
[707] See *above* chapter 1, section 2.3.
[708] Aghina (n 378) 72.
[709] See Rosa Maria Ballardini, Iñigo Flores Ituarte and Eujin Pei, 'Printing Spare Parts through Additive Manufacturing: Legal and Digital Business Challenges' (2018) 29 Journal of Manufacturing Technology Management 958, 965. See also Herbert Hovenkamp, 'Reasonable Patent Exhaustion'(2018) 35 Yale J on Reg 513, arguing that 'The purchaser of a patented office stapler automatically receives an implied license to practice embodied patents to the extent of using the stapler. That implied license does not give the purchaser a right to make more copies of the stapler.

intervention on the product as a whole and/or its components, and in the case of trademarks, how the product is presented to the relevant public after manipulation.

Yet, before delving into these distinctions, it is important to further define the scope of analysis. This involves initially describing the repair market and the involved parties, followed by distinguishing between repair activities within the private sphere and those carried out for commercial purposes. It is indeed in the latter scenario where issues arise.

2.1. The Market for Repair and Maintenance Services

Repair as service is provided by subjects, referred to in the Right to Repair proposal as 'repairers', comprising any natural or legal person offering repair services for commercial purposes.[710] This includes independent repairers, manufacturers and sellers offering repair services.[711] Therefore, on the supply side, the actors involved actors are the OEMs, OEM-authorised repairers, independent repairers, and consumers who undertake self-repairs (which however are not explicitly mentioned by the Right to Repair Proposal); on the demand side, there are individual consumers. [712] The latter, when faced with a product breakdown, may choose to either repair the product by themselves or seek assistance from one of the mentioned actors.[713]

The decision about whether the right to repair belongs to the original manufacturer or a third-party provider has significant implications for market dynamics.[714] Some argue that OEMs should handle repairs due to their expertise and access to tools. However, this approach might create monopolies in the repair market, limiting secondary market growth and driving up prices for consumers, which contradicts market logic.[715]

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[710] Right to Repair Proposal Article 2(2).

[711] ibid.

[712] Hoglund and others (n 180) 2.

[713] ibid.

[714] Dana Beldiman and others, 'Spare Parts and Design Protection – Different Approaches to a Common Problem. Recent Developments from the EU and US Perspective' (2020) 69(7) GRUR International 673, 676.

[715] ibid. See also See Mark A. Lemley MA, 'Ex Ante versus Ex Post Justifications for Intellectual Property' (2004) 71 The University of Chicago Law Review 129, discussing the concept of *ex post* justification for IP rights, which focus on the incentives that IP rights offer for the management or control of a work that is already created by its owner. Within the realm of *ex post* justifications, Lamley identifies two main categories: arguments suggesting that IP rights provide efficient incentives to holders to improve or further develop existing creations, and arguments suggesting that IP rights are tools to prevent

2.1.1. Repair for Private Use

Repair for private use undoubtedly DYI practices, which pertain to self-repair undertaken by consumers. DIY is a more common practice for certain products, such as textiles, accessories, bags, and shoes, where it is relatively straightforward and cost-effective.[716] This reduces potential risks of infringement, including those related to IP rights. In contrast, electronics, being complex and often expensive to repair, typically require consumers to resort to specialised repair centres. Nevertheless, there is a growing trend in the electronics sector towards DIY practices, with many OEMs incorporating it into their business strategies.[717]

DIY involves individuals attempting home repairs, acquiring necessary equipment,[718] and the rise of 'repair cafes.' These spaces provide both tools and expertise, allowing individuals to repair products with the help of skilled volunteers, often free of charge.[719]

The previous section has extensively discussed how individual components can be subject to protection by both trademarks and patents and that in certain circumstances the unauthorised use or replacement of protected parts without authorisation amount to IP infringement. As the following sections will better explore, the cases discussed concern situations where the unauthorised use of proprietary components occurred in a commercial context. In contrast, private use excludes instances of IP infringement.

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excessive or improper use of information. The first argument contends that since companies have invented a particular product, they are better informed than their competitors and are thus responsible for carrying out all necessary investments for the improvement, maintenance, and commercialisation of the innovation, and more generally, for its more efficient use. This perspective implies that IP holders should enjoy virtually perpetual protection, as perpetual ownership would continually motivate holders to utilise and enhance their creations. However, Lamley points out that a similar argument contradicts the rationale of the market, because it assumes that individuals and companies are more capable of exploiting an idea efficiently than the market itself. Instead, companies often make irrational decisions and do not necessarily promote the optimal use of a product. Above all, it is competition, rather than the specific capabilities or incentives of any particular firm, that drives the market towards efficiency.

[716] Shahrzad Manoochehri and others, 'An Overview of Europe's Repair Sector' (ETC/CE 2022).

[717] See *e.g.* 'Apple's Self Service Repair Now Available' (*Apple Newsroom*, no date) <https://www.apple.com/newsroom/2022/04/apples-self-service-repair-now-available/> accessed 15 November 2023.

[718] See Kirsi Laitala and others, 'Increasing Repair of Household Appliances, Mobile Phones and Clothing: Experiences from Consumers and the Repair Industry' (2021) 282 Journal of Cleaner Production 125349.

[719] 'About Repair Café - Repairing for a Sustainable Future' (*Repaircafe*, no date) <https://www.repaircafe.org/en/about/> accessed 2 November 2023.

As for trademarks, in order to find infringement there must be an use of a validly registered trade mark 'in the course of trade' by an authorised third party.[720] This requires active conduct by the third party involved, who being in the condition to have control over the infringing act, is also in a position to stop it.[721] Moreover, the use in the course of trade limits the exclusivity to unauthorised use occurring in a commercial context.[722] Indeed, the legislator does not intend to prohibit or control every single instance of trademark use, while acknowledging that trademarks are an integral part of communication and commerce in society, and that not all uses of trademarks should be subject to legal restrictions or enforcement.[723]

The ECJ caselaw thus distinguishes between use of a trademark in a private context and use in relation of commercial activities.[724] Accordingly, 'The use of a sign […] constitutes use in the course of trade where it occurs in the context of commercial activity with a view to economic advantage and not as a private matter.'[725] However, within the realm of 'private use,' the proprietor's exclusive rights find limitation in the purchaser's right to enjoy the purchased product.[726] Consequently, in the various activities carried out by the purchaser to enjoy the product, including repairs, the purchaser retains the ability to remove and/or reapply the trademark without the proprietor being able to oppose it.[727] Ultimately, it should not be the concern of the trademark holder what a private consumer does within the walls of their home, irrespective of exhaustion.[728] Similarly, in the case of repair cafes, where trademarks

[720] Article 15(2) EUTMR.

[721] Kur and Senftleben (366) section 5.16.

[722] ibid section 5.24.

[723] Ricolfi (n 381) section 124.

[724] ibid section 5.16.

[725] Joined Cases C-236/08, C-237/08 and C-238/08 *Google France and Google* [2010] ECLI:EU:C:2010:159, para 50. See also Case C-206/01 *Arsenal Football Club plc v Matthew Reed* [2002] ECLI:EU:C:2002:651, para 40, stating that 'The use of the sign identical to the mark is indeed use in the course of trade, since it takes place in the context of commercial activity with a view to economic advantage and not as a private matter.' See also Case C-379/14 *TOP Logistics BV, Van Caem International BV v Bacardi and Company Ltd* [2015] ECLI:EU:C:2015:497, affirming that 'Concerning the expression 'in the course of trade', it is settled case-law that the use of a sign identical to a trade mark constitutes use in the course of trade where it occurs in the context of commercial activity with a view to economic advantage and not as a private matter.'

[726] Tonon (n 554) 109.

[727] ibid. Accordingly, private purchasers of branded products are permitted both to remove the trademark affixed by the manufacturer for the purpose of repairing or remanufacturing the product and to reaffix it to the repaired or remanufactured product. See ibid.

[728] Ricolfi (n 381) section 124, emphasising that personal decisions regarding the use of a trademark within the domestic sphere do not constitute counterfeiting, highlighting the limited scope of trademark

are eventually used in public, there should not be trademark infringement issues, provided that the use remains non-commercial and does not involve 'the production or offering of goods and services in the market.'[729]

The conclusion remains the same when considering the matter from the perspective of exhaustion. As largely discussed, according to the principle of trademark exhaustion, once a trademarked product is lawfully sold in the market, the trademark owner's rights are typically exhausted, and they cannot prevent the subsequent resale or repair of that product, whether done privately or in a non-commercial context.

Similar conclusions can be drawn in relation to patents. Article 27(a) of the UPCA establishes that 'The rights conferred by a patent shall not extend to […] acts done privately and for non-commercial purposes.' These two requirements should be interpreted cumulatively.[730] It has been observed that activities like the sale of second-hand of patented goods and other exchanges among private individuals constitute non-commercial activities, irrespective of the agent's professional qualifications and the financial aspect of the transaction.[731] With particular reference to repair activities, it has been observed that only non-commercial activities conducted by private individuals fall under Article 27 UPCA.[732]

In this context, it should be distinguished between the independent third party repairer or supplier, who may be exposed to IPR infringements when handling the product or its parts or providing them for a patented product, and the consumer who receives the repaired or refurbished product or buys compatible components, who is in somewhat 'justified' and therefore cannot be liable for infringement. This approach is in line with the right to enjoy the goods acquired by the purchaser as a result of the exhaustion of the proprietor's rights.

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protection compared to copyright. This holds true irrespective of the application of the exhaustion principle.

[729] Case C-206/01, *Arsenal Football Club plc v. Matthew Reed* ECLI:EU:C:2002:373 [2002] opinion of AG Ruiz-Jarabo Colomer paras 59-63, affirming that 'The use which the proprietor of the trade mark may prevent is not any that might constitute a material advantage for the user, or even a use which is capable of being expressed in economic terms, but only […] use which occurs in the world of business, in trade, the subject of which is, precisely, the distribution of goods and services in the market.' See also Ricolfi (n 381) section 124.

[730] Ana Nordberg, 'Exceptions and Limitations (27 UPCA)' in *European Patent Law The Unified Patent Court and the European Patent Convention* (De Gruyter 2023) 109, 118.

[731] ibid.

[732] ibid.

By way of example, in the *Kaffee Filterpads* case mentioned earlier the Dusseldorf Court claimed that the unauthorised sale of coffee capsules compatible with a patented coffee machine apparatus constituted indirect infringement of the patent. It also clarified that whenever a coffee pod was inserted into the coffee machine, it amounted to reconstructing the patented invention.[733] This implies, as Heath ironically observed, that that every time a user puts a coffee pad into their coffee maker, they unwittingly become the inventors of a new device.[734] However, under a legal point of view, the relevant aspect is that since these actions were performed by consumers, they were considered private. The Dusseldorf Court indeed referred Section 11 of the PatG [German Patent Act][735], according to which 'The effect of the patent does not extend to [...] acts carried out in the private sphere for non-commercial purposes.' Therefore, even though private consumers were not authorised to use the contested items – i.e. the coffee filter pads – as per Section 10(3)of the Patent Act, their actions were considered private and not subject to patent infringement. The patent holder could not prevent private consumers from using these compatible coffee pods, as these actions were not for commercial purposes and were therefore exempted.[736] However, the Court found that the exemption did not apply to the suppliers, who were found liable for indirect infringement.

In this context, the exception for private use seems like a justification that excludes the act's unlawfulness despite aligning with the abstract legal provision but only concerning those individuals performing the typical action. This does not automatically exempt third-party suppliers from liability. In simpler terms, 'The fact that the buyer of the means is acting in a private capacity [or for experimental purposes] and is therefore itself not subject to any rights of prohibition based on the patent therefore does not preclude the supplier liability as a contributor infringer.'[737]

In summary, given that industrial property rights only prohibit acts of commercial use, IP rights issues can be circumvented by ensuring that repair activities are carried out by individual consumers for their personal use, as emphasised by Heath and Furuta.[738] Notably, this solution is often impractical. Even if consumers would have

[733] See *Kaffee-Filterpads*.
[734] Heath (n 539) 450.
[735] *Patentgesetz of 2005* (11th Sess. 2005).
[736] See *Kaffee-Filterpads*.
[737] Kühnen and Peterreins (n 549) 144.
[738] Heath and Furuta (n 256) 2.

access to the necessary tools and parts, repairing devices has become increasingly challenging due to their evident complexity and lack of necessary skills and knowledge by individuals.[739] In the vast majority of cases, individuals turn to a specialised centre for repairs. As explained in the first part of this work, in order to become an affiliated repairer of the parent company, repairers have to obtain a specific authorisation and purchase spare parts at a fixed price.[740] Not finding these conditions favourable, many repairers have consequently set up their own businesses, using non-original components for repairs. Obviously, these practices have increased the risk of possible legal action by the OEMs.

2.1.2. Repair for Commercial Use

In repair for commercial purposes, two scenarios are considered: repairs that return products to their owners and products that re-enter the market after being manipulated and then bought by consumers. In the former, issues may arise concerning access and use of essential tools and spare parts supplied by third parties.[741] In the latter case, challenges may emerge when substantial repairs or parts replacements potentially infringe on IP rights.

This refers to the sale of repaired or refurbished products, which typically have 'only have few small defects, and can be sold and used (like new) after some refurbishment, such as disassembling the returned products, replacing any worn or broken components, repairing any remaining defects, and repackaging the product for sales.'[742] Each of these actions could potentially raise issues from the perspective of

[739] Krista Hessey, 'Right to Repair: Why is It so Difficult to Fix Our Electronics? | Globalnews.Ca' (*Global News*, 13 May 2023) <https://globalnews.ca/news/9693719/right-to-repair-electronic-devices/> accessed 15 November 2023.

[740] See *above* chapter 1, section 3.2.

[741] See Cesare Galli, *Codice della proprietà industriale: la riforma 2010 ; prima lettura sistematica delle novità introdotte dal D.Lgs. 13 agosto 2010, n. 131* (Instant book, Diritto industriale, 2010) 3,11, asserting that any unauthorised manipulation resulting in a transformation of the product by either purchaser or a third party is unlawful, regardless of whether the repaired good is further commercialised. Whereas, according to Kur, repairs carried out for individuals would fall within the sphere of private use. See Kur (n 371) 229.

[742] Zhixin Chen and others, 'Refurbished Products and Supply Chain Incentives' (2022) 310 Annals of Operations Research 27, discussing the involvement of many OEMs, such as Apple, Samsung, and Lenovo, in selling refurbished products as part of their commercial strategies, while simultaneously implementing measures to prevent third parties from marketing used electronics.

IP rights, as will be discussed further in the following sections with reference to patents and trademarks.

After a brief introduction to the principle of exhaustion for trademarks and patents, the following section will therefore focus on the factors that could potentially prevent the principle of exhaustion from applying when it comes to the repairability of trademarked and patented product.

3. Exhaustion, Trademarks and Repair

3.1. Legislative Framework

The guiding principle is contained in Article 15 EUTMR,[743]stating that:

> 1.An EU trade mark shall not entitle the proprietor to prohibit its use in relation to goods which have been put on the market in the European Economic Area under that trade mark by the proprietor or with his consent. 2. Paragraph 1 shall not apply where there exist legitimate reasons for the proprietor to oppose further commercialisation of the goods, especially where the condition of the goods is changed or impaired after they have been put on the market.

As a general premise, Article 15(1) regulates the principle of the exhaustion for goods protected by trademarks: once trademarked goods are introduced into the EEA, the associated rights are exhausted, thereby preventing the trademark owner from using those rights to hinder or object to the subsequent trading of those goods.[744] However, under certain circumstances, the trademark owner can retain the right to object or prevent further trading of the goods despite the exhaustion of trademark rights.[745]

Article 15(2) of the EUTMR mentions the alteration or modification of the condition of products after they have been placed on the market as a legitimate reason for the non-applicability of exhaustion. As highlighted by Anette Kur, the mere resale of trademarked products does not pose significant issues because the product does not

[743] And corresponding Article 15(1) TDM.
[744] Ulrich Hildebrandt and Olaf Sosnitza, EU Trade Mark Regulation (EUTMR): Brussels Commentary (2023) 445.
[745] ibid.

entail any changes after the first legal sale.[746] Yet, when third parties have made unauthorised changes or modifications to the products after they have been put on the market, affecting their quality, the trademark owner has the right to take legal action against those who import or distribute these altered or modified products, which still bear the trademark.[747]

As stated, in case of repair and refurbishment, the product may undergo various modifications, more or less extensive, depending on the number of parts replaced or the extent of the repair.[748] In these premises, Annette Kur makes a distinction: if the product has undergone changes to the extent that it falls into an entirely different category, the exhaustion is unlikely to be applicable;[749] conversely, if the product has undergone extensive repair interventions without completely distorting its identity, then there may be room for application.[750]

However, settled case law interprets the adverb 'especially' in the provision as an indication that modifications to goods constitute only an example of the reasons why the trademark owner can invoke to oppose to the further commercialisation of the goods in question.[751] It was deemed that legitimate reasons exists in all circumstances the circulation of the product negatively impacts the interests of the trademark owner. This is the case when the use of the trademark seriously damages the reputation and prestige of the trademark itself.[752] It may occur if the product is sold or presented to the public in a manner that damages the reputation and prestige associated with that trademark, or if it does not align with the image that the trademark proprietor has built up in the market.[753] Moreover, the trademark holder can oppose to changes or alterations affecting the packaging of the product, especially in cases of repackaging

[746] ibid 232.
[747] Vanzetti, di Cataldo and Spolidoro (n 380) 308-309.
[748] ibid.
[749] This could be the case of upcycling, where the transformative and creative process results in the creation of a new product with its own identity falling into a different category than that of the original product. Therefore, in upcycling cases, the trademark holder may successfully enforce Article 15(2) of the EUTMR based on the fact that the conditions of the goods have been altered or changed. See Martin Senftleben, 'Developing Defences for Fashion Upcycling in EU Trademark Law' [2023] GRUR International 1, 4.
[750] Kur (n 371) 232.
[751] Case C-59/08 *Copad SA v Christian Dior couture SA, Vincent Gladel, as liquidator of Société industrielle lingerie (SIL), Société industrielle lingerie (SIL*) [2009] ECLI:EU:C:2009:260 para 54.
[752] ibid para 59.
[753] ibid.

or relabelling.[754] Finally, the trademark owner can also object to the use of the trademark if there is a risk that the public may be misled about the existence of a commercial connection with an affiliated third party.[755]

3.2. The Legitimate Reasons to Oppose to the Further Commercialisation

The legitimate reasons will be analysed in detail in the following section, particularly those that might prevent the application of exhaustion in the repair sector based on relevant case law. Disputes have arisen in cases involving both the removal of the trademark by the owner and the addition of a third-party trademark, as well as in scenarios of repackaging and relabelling. Additionally, controversies have emerged when the product has been changed or impaired as a result of repair pr refurbishment and then reintroduced into the market, either with the owner's trademark removed or with the owner's trademark added. Ultimately, uncertainties have arisen concerning how the repaired or modified product is presented to the public by making use of the proprietor's trademark. Such utilisation of the owner's mark raises the question of referential use, the boundaries of which are not always clear.

Each of these scenarios has the potential to impair one or more of the functions of the trademark, encompassing not only its primary function as an indication of origin but also its ancillary functions of communication, investment, and advertising, thereby posing uncertainties as to scope of the trademark protection and the extent of repair.

3.2.1. De-branding

The first scenario considered is that of a repairer who, to avoid potential claims for trademark infringement, decides to remove the trademark of the owner. A similar situation has already been considered in the second chapter in the section dedicated to imports.[756] However, in that case, the trademark had only been partially removed from the imported screens, as it was deleted with a black marker. Thus, the Norway Supreme Court stated that if the marker was removed, there was a potential risk for the relevant public to mistakenly perceive the screens as Apple's, while Huseby had

[754] Vanzetti, di Cataldo and Spolidoro (n 380) 308-309.
[755] Kur and Senftleben (n 366) section 6.2.4.
[756] See *above* chapter II section 3.2.2.

no commercial relationship or authorisation from the parent company.[757] And even if the marker was not removed, there remained a risk of confusion since the screens were identical to Apple's, and the marker was placed exactly where the logos on the original screens were located.[758] One might wonder what happens if instead the owner's trademark is permanently removed.

This practice is called de-branding and refers to the removal of the original trademark by the reseller from the goods (*de-branding*), and eventually the 'replacing with a label bearing his own trademark, with the result that the trademark of the original manufacturer of the goods in question is entirely concealed (*re-branding*).'[759] Since the removal of the trademark is not included among the actions explicitly prohibited by Article 10(3) EUTMR, the courts have questioned whether this constitutes an actual 'use' of the trademark within the meaning of Article 10(2) EUTMR.

In *Portakabin*[760] the ECJ answered affirmatively, establishing that if a retailer removes the trademark from a product without the owner's consent and subsequently replaces it with their own label, effectively hiding the original trademark, the trademark owner has can object to the retailer's use of that trademark for marketing the resale of those products.[761] So the removal of the mark constitute a legitimate reason for the trademark's holder to oppose to the further commercialisation of the goods.[762] The rationale is that consumers can no longer distinguish between products coming from the trademark owner and those coming from the retailer or other third parties.[763] This undermines the primary purpose of the trademark, which is notably to identify the product's origin.[764]

Apparently, the outcome does not change if the trademark is removed before the introduction of goods within the EEA, as the ECJ determined in *Mitsubishi*.[765] The ECJ indeed ruled that the removal, without Mitsubishi's consent, of signs identical to Mitsubishi's marks from forklift trucks purchased by a company outside the EEA and

[757] *Huseby* paras 37-38.
[758] Ibid.
[759] Kur and Senftleben (n 366) section 6.2.4.3.
[760] Case C-558/08 *Portakabin Ltd, Portakabin BV v. Primakabin BV* [2010] ECLI:EU:C:2010:416.
[761] ibid para 86.
[762] Ricolfi (n 381) section 152.2.
[763] *Portakabin* para 86.
[764] ibid.
[765] Case C-129/17 *Mitsubishi Shoji Kaisha Ltd, Mitsubishi Caterpillar Forklift Europe BV v Duma Forklifts NV, G.S. International BVBA* [2018] ECLI:EU:C:2018:594.

before their introduction within the EEA, and subsequent affixing of new signs, constitutes trademark use that infringes the owner's right to control the initial placement of goods bearing that mark within the EEA.[766] The fact that end users were still able to recognise that the forklifts were produced by Mitsubishi does not change the outcome; instead, according to the ECJ, it further exacerbates the risk of damage to the trademark owner.[767]

Interestingly, in making this ruling, the ECJ diverged from the conclusions of the Advocate General[768], who argued that the removal of the trademark does not meet the requirement of sign use because a sign which has allegedly been used 'must appear on the market so that it can take effect on the market as a communication tool.'[769] This holds true regardless of whether the products introduced by the third party are similar to those marketed by the trademark owner.[770] In the latter case, eventually it may constitute an unfair competition practice, but not an unauthorised use of the trademark.[771] The Advocate General arrived at this conclusion by noting that some Member States in their national laws introduced specific provisions to prohibit the removal of the trademark, indicating that otherwise such conduct would not be covered by the expressly prohibited actions under EU trademarks law.[772] For example, in Italy trademark's removal is prohibited by Article 20(3) of the CPI.[773]

Furthermore, even in such a circumstance, the applicability of the exhaustion doctrine was excluded. The ECJ clarified that Mitsubishi's rights were not exhausted because the goods bearing the registered trademark were marketed outside the EEC.[774] Notably, the EU does not follow an international exhaustion; therefore, the proprietor still maintains control over the first commercialisation of those products within the EEC. This is further confirmed by Section 4 of Article 9 EUTMR introduced

[766] *Mitsubishi* paras 42-47.
[767] ibid para 45.
[768] Case C-129/17 *Mitsubishi Shoji Kaisha Ltd, Mitsubishi Caterpillar Forklift Europe BV v Duma Forklifts NV, G.S. International BVBA* [2018] ECLI:EU:C:2018:292 opinion of AG Campos Sanchez Bordona.
[769] ibid para 55.
[770] ibid para 57.
[771] ibid para 59.
[772] ibid. Among these, the Advocate General cited the French *Code de la propriété intellectuelle* (Intellectual Property Code) which at Article L713-3-1 explicitly introduced a provision that prohibits the 'Removal or modification of a regularly affixed trademark.'
[773] 'The trader may affix his trademark to the products he offers for sale, but he may not remove the trademark of the manufacturer or distributor from whom he obtained the products or goods.'
[774] *Mitsubishi* para 31.

after the implementation of the 2015 Trademarks package[775], stating that 'the proprietor of that EU trade mark shall also be entitled to prevent all third parties from bringing goods, in the course of trade, into the Union without being released for free circulation there, where such goods, including packaging, come from third countries and bear without authorisation a trade mark which is identical with the EU trade mark registered in respect of such goods, or which cannot be distinguished in its essential aspects from that trade mark.'

While it is evident that in this case, exhaustion was precluded from the outset due to the owner's lack of consent regarding the EEA territory,[776] even in the case of the owner's consent, the applicability of exhaustion could still be excluded in any event. This is because in the *Portakabin* case the ECJ interpreted the removal of the trademark as one of the legitimate reasons for which the owner can object to the further commercialisation of the goods.[777]

Nevertheless, *Mitsubishi*'s ruling is particularly relevant for the definition provided by the ECJ regarding trademark 'use'. According to some scholars, the decision appears to suggest that any de-branding practice, even if not followed by re-branding, conducted without the owner's authorisation, constitutes trademark infringement.[778]

However, it should be noted that in both the *Mitsubishi* and *Portakabin* cases, the contested products were the same originally put in circulation by the trademarks' proprietor, which explains the risk of confusion that might arise if the trademark were removed. The situation is different in the case analysed by the present work: within repair scenarios, the product cannot be, by definition, the exact same item as the one originally placed on the market by the proprietor, as it has undergone some form of intervention. Consequently, in such cases, national courts have sometimes deemed it necessary to remove the trademark to avoid the risk of confusion, especially if the

[775] See Tambiama Madiega, 'The EU Trademark reform package (European Parliament Briefing, December 2015). For a comment on the provision, see also Martin Senftleben, 'Wolf in Sheep's Clothing? Trade Mark Rights Against Goods in Transit and the End of Traditional Territorial Limits' (2016) 47 IIC 941.

[776] Ubertazzi (n 373) 1267.

[777] Ricolfi (n 381) section 152.2.

[778] Sandra Stolzenburg-Wiemer, 'Debranding and Rebranding of Goods: The Mitsubishi Decision and the Scope of Trade Mark Protection Based on Function Theory' (2020) 15 Journal of Intellectual Property Law and Practice 326, 330.

product has undergone significant alterations.[779] This approach would also be supported by a strictly literal interpretation of Italian legislative provision, which in prohibiting the removal of the trademark refers exclusively to the 'retailer,' who notably is a different entity from the repairer.

Yet, considering the extended function of the trademark, prejudice to the proprietor's interests might still be found in any case. In *Mitsubishi* the ECJ affirmed that the removal of the trademark not only affects the product's origin function but also its related investment and advertising functions.[780] So, even if there is no risk of confusion because the product has been completely transformed as a result of the R activities, trademark infringement could still be found in these instances due to the compromised advertising and investment functions.

In conclusion, even approaching the issue from different angles, the solution of removing the trademark should be carefully examined with reference of the specific circumstances of the case, as it can be considered infringing trademark's use. It should also be noted that in some situations, removing the trademark is not even due to technical constraints.[781] This is particularly true for technical devices, where trademarks are, for instance, located on the surface of products or protect their shape or specific components.[782] Furthermore, in certain instances, removing the trademark is not feasible without adversely affecting the product's quality and aesthetics.[783] For example, a car might incorporate the manufacturer's trademark within the design of the front grille or the use of the trademark on the wheel rim. Removing it would require a change in the design of the car, which could be costly and potentially affect the performance and appearance of the vehicle.[784]

Therefore an alternative solution should also be evaluated. Then question arises as to whether the scenario would change if the product were marketed with both the owner's trademark and the new reseller's trademark. Alternatively, whether it was marketed with the original trademark and a disclaimer to inform consumers that the goods have been repaired or reconditioned and are not the original ones.

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[779] See *infra* section 4.
[780] *Mitsubishi* paras 36-37
[781] Kur (n 371) 235.
[782] ibid.
[783] Hildebrandt and Sosnitza (n 744) 453-454.
[784] This seems to be the case in *Audi*. See *infra* chapter 2, section 3.2.1.

3.2.2. Joint-branding

Now, let's assume that the repairer does not remove the owner's trademark but instead places a label with their own sign on the repaired product after completing the repair service. For example, this may be done with the intent to identify the entity that performed the repair. We refer to this practice as 'joint-branding' to distinguish it to 'co-branding', which refers to cooperation between recognised brands which are jointly used in the services and goods commercialised.[785] In fact, in the considered scenario there is no affiliation or commercial relationship between the repairer and the OEMs, and it is precisely this aspect that can lead to trademark infringement concerns.

In the *Viking Gas*[786] case, the ECJ dealt with the question of whether the practice of a company engaged in the sale of gas, which included filling and selling gas cylinders protected by trademarks after applying a self-adhesive label attesting to the refilling, infringes the owner's trademark rights. In affixing its own label, the defendant did not obscure the owner's marks. When addressing this issue, the ECJ approached it in two fundamental steps. Firstly, it had to determine whether the trademark owner's rights were exhausted with the initial placement of composite cylinders protected by the trademark on the market. In case of affirmative answer, it was then necessary to establish whether the owner could invoke legitimate reasons to oppose the marketing of gas-filled bottles by Viking Gas.

In relation to the first issue, the OEM argued that the cylinder was merely the packaging for the product, the gas, and that the trademark rights were not exhausted in this context.[787] Accordingly, the unauthorised replacement of the gas was seen as a modification of the product, in relation to which the owner had the right to object once the product was already in the market.[788] However, the ECJ held that composite cylinders could not be considered mere packaging because the consumer's payment covered both the gas and the packaging, and therefore they had an independent

[785] Tom Blackett and Nick Russell, 'Co-Branding - the Science of Alliance' (1999) 8(3) The Journal of Brand Management 161,163.

[786] Case C-46/10 *Viking Gas A/S v Kosan Gas A/S, formerly BP Gas A*/S [2011] ECLI:EU:C:2011:485.

[787] ibid para 20.

[788] ibid. While Commission distinguished between two types of use of the composite cylinder: one involving the cylinder filled with gas from the holder of the trademark or an empty cylinder, and the other involving the cylinder filled with gas from another company. In the first case, the owner of the packaging trademark cannot prohibit this use, as the rights have been exhausted upon the cylinder's sale. However, in the second case, where the gas originally marked by the trademark has been consumed and replaced with another company's gas without consent, the exhaustion did not apply. See ibid para 24.

economic value.[789] As a consequence, the sale of the composite cylinder exhausted the trademark rights associated with its shape and the rights derived from the trademarks affixed to it.[790]As a result, the buyer had the right to freely use and refill the cylinder, even with a competitor, once the original gas is consumed.[791]

Regarding the second matter, the ECJ first noted that a legitimate reason exists even when 'the use by a third party of a sign identical or similar to a trademark seriously damages its reputation or creates the impression of an economic link between the trademark owner and the third party using it, particularly that the latter belongs to the owner's distribution network or that a special relationship exists between these two entities.'[792] Ultimately, it is up to the national judge to determine whether such a legitimate reason exists.[793] Yet, in its ruling, the ECJ emphasised the importance of striking a balance between the rights of the trademark proprietor on one hand and the legitimate interests of purchasers to fully enjoy the right of ownership on the other.[794] To this extent, it provided some criteria to assess potential infringement, which include labelling methods, the conditions in which they are exchanged, the common practices within the sector, as well as whether consumers are used to gas cylinders being filled by other distributors.[795] In this context, the fact that the owner's trademark was not concealed by Viking Gas implied that such labelling did not alter the condition of the cylinders by hiding their origin.[796] It also seems to rule out the risk that the average consumer might mistakenly believe that there is a connection between the two companies.

Advocate General Kokott, in assessing the potential risk to the reputation of the trademark raised by the owner, observed that such risk was confined to a gas cylinder explosion or fire destroying the cylinder's trademark. [797] While such a risk is inherent in the resale of used items and generally accepted by the exhaustion principle, it is conceivable for various products, like vehicles, to pose even higher risks without the

[789] ibid para 20. See also Kur and Senftleben (n 366) section 6.2.4.5.
[790] ibid para 35.
[791] ibid.
[792] ibid para 37.
[793] ibid para 38.
[794] ibid para 31.
[795] ibid paras 39-40. See also Kur and Senftleben (n 366) Section 6.2.4.5.
[796] ibid para 41.
[797] Case C-46/10 *Viking Gas A/S v Kosan Gas A/S, formerly BP Gas A*/S [2011] ECLI:EU:C:2011:485 opinion of AG Juliane Kokott.

manufacturer being able to oppose resale.[798] This underscores the principle's acceptance of potential risks associated with the resale of used goods.[799] Regarding the risk of affiliation between the two companies, it was observed that it is essential not to create the impression of a connection between the two companies through a label.[800] By excluding any connection with the owner, would also eliminates the risk of undermining the trademark's quality standard.[801] Moreover, such adhesive labels should not compromise any trademarks placed by the owner on the composite cylinder, which indicates the origin of the cylinder.[802] With regard to the trademark's origin function, it is essential that the label prevents any error regarding the origin of the gas.[803] To this extent, it was noted that providing such indications solely in points of sale is not sufficient.[804]

The ECJ's approach was confirmed in the later *SodaStream*[805] case. In this instance, a retailer of carbon dioxide canisters had replaced the original label with its own label, covering most of the canister's surface while still displaying the original mark on the top of the canister.[806] The new label, in addition to stating Soda Stream's name as the company that had filled the canister, featured a disclaimer declaring no commercial affiliation with the original canister supplier.[807] The national judge asked first whether Soda Stream's practice could be considered as 'repackaging' in accordance with the case law of the Court.[808] If so, it asked whether the removal or detachment of the original label applied by the trademark owner, or its replacement with the retailer's label, can be viewed as circumstances justifying the necessity of exchanging or replacing the label with the retailer's label for the retailing of the refilled canister.[809] In the resolution of the case, the ECJ recalled the principles stated in *Viking Gas* and provided distinguishing criteria for the national judge to assess whether Soda

[798] ibid.
[799] ibid.
[800] ibid para 29.
[801] ibid paras 45-48.
[802] ibid para 30.
[803] ibid paras 40-44.
[804] ibid para 40.
[805] Case C-197/21 *Soda-Club (CO2) SA, SodaStream International BV v MySoda Oy* [2022] ECLI:EU:C:2022:834.
[806] ibid paras 14-15.
[807] ibid.
[808] ibid para 24.
[809] ibid para 26.

Stream's practice constituted a legitimate reason as per Article 15(2) EUTMR.[810] These criteria include the extent of information on the new labels, the nature of the product as a canister intended for multiple refills and reuse, the consumer's awareness when turning to a different operator for canister refilling, and the visibility of the owner's mark.[811]

In summary, caselaw seems to generally favour adding a third-party trademark alongside the owner's rather than removing the owner's mark. However, assessments should be made on a case-by-case basis. So, for example, scholars also highlight that when a trademark has a reputation, adding a third-party mark may not prevent the dilution of the original mark.[812]

3.2.3. Repackaging and Relabelling

In *Soda Stream* the ECJ did not ruled on the applicability of the requirements established in the *Bristol-Myers* judgment[813] in the context of parallel imports of repackaged pharmaceutical products, as probably it did not consider them fundamental for the resolution of the case at stake. However, Advocate General Pitruzzella suggested in his conclusions[814] that Soda Stream's practice could indeed be considered as repackaging, as it involved a series of operations, including opening, handling, inspecting, cleaning and filling, which could compromise the guarantee of origin provided by the trademark.[815] On these premises, he asserted that the requirements established in *Bristol-Myers* should find application also in *SodaStream*.[816] In many occasions the ECJ specified that the criteria established for repacking of pharma, which require specific packaging conditions, should apply also to other products.[817]

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[810] ibid para 46.
[811] ibid paras 47-54.
[812] Ricolfi (n 381) section 138.3.
[813] Joined Cases C-427/93, C-429/93 and C-436/93 *Bristol-Myers Squibb v Paranova and C. H. Boehringer Sohn, Boehringer Ingelheim KG and Boehringer Ingelheim A/S v Paranova A/S and Bayer Aktiengesellschaft and Bayer Danmark A/S v Paranova A/S* [1996] ECLI:EU:C:1996:282.
[814] Case C-197/21 *Soda-Club (CO2) SA, SodaStream International BV v MySoda Oy* [2022] ECLI:EU:C:2022:834 opinion of AG Giovanni Pitruzzella.
[815] ibid. See also Case C-349/9 *Frits Loendersloot, trading as F. Loendersloot Internationale Expeditie, V George Ballantine & Son Ltd and Others* [1997] ECLI:EU:C:1997:530 para 24.
[816] ibid.
[817] Kur and Senftleben, (n 366) section 6.110. See *Ballantine*, where the ECJ applied the criteria to the case of relabeling of whisky bottles.

Notably, altering or damaging a product's packaging can be a valid reason for objection under Article 15(2) EUTMR, as it strongly influences the perception and image of the trademark.[818] Damage to the packaging can affect the reputation of the trademark, especially in the case of luxury goods.[819] More specifically, in *Bristol-Myers*, the ECJ held that the trademark proprietor may oppose the further marketing of a repackaged product placed on the market in another Member State, unless the following conditions are cumulatively satisfied:[820]

- [The] reliance on trade mark rights by the owner in order to oppose the marketing of repackaged products under that trademark would contribute to the artificial partitioning of the markets between Member States;
- [T]he repackaging cannot affect the original condition of the product inside the packaging;
- [T]he new packaging clearly states who repackaged the product and the name of the manufacturer in print such that a person with normal eye sight, exercising a normal degree of attentiveness, would be in a position to understand;
- [T]he presentation of the repackaged product is not such as to be liable to damage the reputation of the trade mark and of its owner;
- [T]he importer gives notice to the trade mark owner before the repackaged product is put on sale, and, on demand, supplies him with a specimen of the repackaged product.[821]

Even if only one of the following conditions is not met, the trademark owner has the right to oppose the further commercialisation of the product, as per Article 15(2) EUTMR, whose package or label was affected.[822]

Yet, the present case differs slightly from S*odaStream* for at least two reasons: first, in *Bristol-Myers* the pharmaceutical products were first marketed in a third country before being imported into the EU. Second, *Bristol-Myers* involved the removal and re-application of the proprietor's trade mark, whereas in *SodaStream* the retailer applied a label with its own trademark without covering the proprietor's trademark.

Yet the conduct of the refillers in *SodaStream and Viking Gas* may well qualify as 'repackaging', as repackaging is 'any act affecting the original packaging, including

[818] Hildebrandt and Sosnitza (n 744) 454.
[819] ibid. See Case C-487/07, *L'Oréal SA, Lancôme parfums et beauté and Cie SNC, Laboratoire Garnier and Cie v. Bellure NV, Malaika Investments Ltd* [2009] ECLI:EU:C:2009:378.
[820] *Arsenal* para 57.
[821] *Bristol-Myers* para 80.
[822] Kur (n 371) 232.

the modification of the original labels, the addition of new labels, or the use of new packaging, regardless of whether the original trademark as be reaffixed on the new packaging, and also includes over stickering and reboxing.'[823] Therefore, the criteria established by the ECJ in *Bristol-Myers* may serve as a guidance to avoid potential legal disputes that may arise also in other context, such in the case where refurbished spare parts are repackaged or relabelled in such a way that they may jeopardise the reputation of the holder, as well as the primary function of source identifier.

There is little (if any) EU case law available on the matter, but we can take an example from across the Atlantic. In *Champion Spark Plug Co. v. Sanders*,[824] Sanders was in the business of repairing and reselling used trademarked spark plugs without removing the original trademarks.[825] Specifically, he retained the OEM's 'Champions' trademark on the repaired or reconditioned spark plugs and repackaged them in boxes bearing the word 'Champion', including smaller boxes in which the spark plugs were individually packaged, accompanied by a disclaimer stating 'renewed' although this disclaimer was almost illegible. In ruling that the defendant had infringed the trademarks, both the District Court and the Circuit Court of Appeals issued a decree explaining how Sanders was supposed to repackage the plugs for resale without infringing Champion's trademark.[826] The criteria set out by the appellate court following the revision of the first Court's decree can be summarised as follows:[827]

- The word 'Repaired' or 'Used' shall be printed and baked on the plug by means of an electric hot press in a contrasting colour so as to be clearly visible;[828]
- The trademark 'Champion' shall be removed from the cartons and containers;
- The repairer's name and address, along with the indication that any mentioned spark plug has been used and reconditioned, should be included on cartons, containers, sales and advertising materials, business records, correspondence, and any other documents.[829]

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[823] Hildebrandt and Sosnitza (n 744) 454.

[824] *Champion Spark Plug Co. v. Sanders*, 331 U.S. 125 (1947).

[825] ibid para 126.

[826] Chad Gilson, 'Putting the Brakes on Monopolistic Trademark Expansion: Where the First Sale Defense Stands against Post-Sale Confusion in the Wake of Au-Tomotive Gold v. Volkswagen' (2012) 37 U Dayton L Rev 223, 235.

[827] *Champion Spark Plug Co. v. Sanders* 156 F.2d 488 (2d Cir. 1946)

[828] While the District Court required that words 'used' or 'repaired' shall be imprinted on the metal part of the spark plug. See *Champion Spark Plug Co. v. Sanders*, 61 F. Supp. 247 (E.D.N.Y. 1945).

[829] The Appellate Court partially modified the District Court's stricter instructions, providing that the following words should be displayed: 'Spark plug(s) previously manufactured by Champion Spark Plug

A complex debate revolved around whether or not to remove the trademark's proprietor.[830] The District Court had, in fact, included a provision in the decree stating that the trademark 'Champion' should be removed from the spark plugs subject to repair and sale. However, this provision was later removed by the Circuit Court of Appeals in the revised version of the decree. In affirming the Appeal' position, the Supreme Court emphasised that 'The repair or reconditioning of the plugs [...] is no more than a restoration, so far as possible, of their original condition.' The Court also noted that 'reconditioned plugs are inferior in terms of heat range and other qualities,' but added that 'inferiority is expected in most second-hand articles.' In conclusion, even though the second-hand dealer gains some advantage from the trademark, 'that is wholly permissible as long as the manufacturer is not associated with the inferior qualities of the product resulting from wear and tear or the reconditioning by the dealer.' To this extent, 'full disclosure provides the manufacturer with all the protection to which they are entitled.'

The ECJ has addressed refilling but not repair cases. However, *Viking Gas* and *Soda Stream* demonstrate the EC's initial exploration of leaving the owner's trademark on manipulated products as a viable option to reduce potential confusion risks, as well as other prejudices to ancillary functions. This raises the question of whether a similar approach could be applied to repair of trademarked products, as explored in the US Courts. Kur proposes this option as a compromise between completely removing the owner's trademark and considering the interests of resellers and customers who may want to receive trademark's information.[831] Accordingly, this middle-solution could be implemented through a *disclaimer*. In order to avoid any risk of confusion, the repaired or reconditioned product could be labelled with disclaimer stating that the product has been repaired or reconditioned, the name and address of the repairer and that that there is no commercial link or any business relationship with the trademark proprietor.[832] This would help to eliminate the risk of commercial association and damage to the trademark owner's reputation.

Company, refurbished and made suitable for use up to 10,000 miles by Perfect Recondition Spark Plug Co., 1133 Bedford Ave., Brooklyn, N.Y.'

[830] Gilson (n 826).

[831] In this sense, Kur (n 371) 234.

[832] ibid 235.

Yet, Ricolfi points out that the disclaimers may perform a different function as perceived in the EU comparing the US. In the US, disclaimers signal a commitment to transparency and honesty when sharing information with consumers, providing clarity without confusion.[833] This approach is widely accepted within legal boundaries.[834] Conversely, the EU places more emphasis on safeguarding the proprietor against the exploitation of its promotional investments.[835] Hence, third party's use of a trademark in advertising, even with disclaimers, does not exclude infringement.[836] Therefore, for example in *Arsenal* the ECJ stated that the warning displayed in the kiosk where the disputed products were sold stating that they are not official Arsenal FC products, was not enough to exclude the possibility that some consumers may interpret the sign as indicating that Arsenal FC is the source of the products, and was therefore not sufficient to exclude trademark infringement.[837] However, the considered scenario is different and distinguishes itself from *Arsenal* because it concerns possible confusion so-called after-sale, namely not at the time when the purchaser buys the product, but later stage after the initial purchase.[838]

As highlighted by Ricolfi, questions have arisen in relation to post-sale confusion as to the conditions under which it may arise and how it should be assessed.[839] The presence of disclaimers or warnings may play a role, but their effectiveness may vary depending on the context and specific circumstances.[840] For instance, when a trademarked product is placed on the market and subsequently re-sold, the risk of confusion must be considered both at the time of the initial purchase and in subsequent sales.[841] Although a disclaimer or warning may be present at the time of initial purchase, it may not be effective or relevant to subsequent sales, unless it 'circulates with the product', as in the *Viking Gas* case.[842]

Post-sales confusion may also arise when the consumer is influenced by a sign identical or similar to the original one at a later stage after the initial purchase.[843] This

[833] Ricolfi (n 381) section 131.4.
[834] ibid.
[835] ibid.
[836] ibid.
[837] *Arsenal* para 57.
[838] Gilson (n 826) 229.
[839] Ricolfi (n 381) section 133.3.
[840] ibid.
[841] ibid.
[842] ibid.
[843] ibid.

could be the case in the context of repairs, where a post-sales confusion can occur when an individual buys a refurbished or repaired product, believing that it has been put on the market by the same undertaking from which they originally purchased the item and which also owns the trademark. Additionally, another scenario could involve a party purchasing a used and reconditioned vehicle, where some replaced parts bear the trademark of the owner. In such cases, the end user might mistakenly assume that these parts were reintroduced to the market by the trademark owner. Disclaimers could play a crucial role in this framework.

Purchasers in the aftermarket usually do not expect used products to have the same functionality as the original ones, and they may assume that some components have been substituted. Yet, they may not be aware that some parts have been replaced and/or from which company they originate. Thus, a disclaimer could help achieve a balance of the different interests at stake, namely the concerns of trademark holders who aim for their products to meet a specified level of quality and safety, the interests of independent repairers to act in compliance with trademark laws while operating their business, and the interests of consumers seeking access to repaired and reconditioned products and parts in a clear and transparent manner.

3.2.4. Advertising

The same requirements of honesty and non-deception apply to advertising activities. In particular, the question arises whether an unauthorised third party may use the trademark of the proprietor for advertising purposes when selling the repaired or modified product. The ECJ has not explicitly addressed the matter so far. However, it has clarified scenarios where a third party repairer, in the course of its business, uses a registered trade mark in promotional material - such as flyers, websites and general advertising - to market repair services for products bearing that trade mark. This is achieved explicitly by stating ‘We provide repair services for product X’ without any commercial connection to the OEM that owns the trademark. In these situations, the owner can enforce its trademark rights by claiming that such use in promotional activities is unlawful, as it harms their interests by misleading the public into believing that the advertiser is an authorised repairer or distributor or is associated with the trademark owner.

The issue was addressed by the ECJ *BMW v. Deenik*,[844] involving an independent repairer specialising in the resale of used BMW cars and repair and maintenance services for BMW vehicles. In the course of his commercial activities, he displayed advertisements containing the BMW trademark, stating 'BMW repair and maintenance,' 'BMW specialist,' and 'specialised in BMW.' BMW claimed that statements constituted an unlawful use of its trademark because they could give the impression that they came from a BMW dealer network, whereas Deenik did not have any commercial relationship with the OEMs. It is important to note that at the time of the decision, the old Trade Mark Directive 89/104/CEE[845] was still in force; thus, this analysis refers to the updated version currently in force.

First, the ECJ held that Deenik's use of the trademark constituted use in the course of trade within the meaning of Article 9(2)(a) of the TMD, specifically, identical sign use for identical products or services for which the trademark is registered.[846] Such use within advertising shall be prohibited, unless Article 15 on exhaustion and Article 14 on the limitations of TMD apply.[847] The ECJ then distinguished between the two announcements made by the repairer, namely advertising for the resale of second-hand BMW cars and advertising for repair services for BMW cars.

As regards the first activity, the principle of exhaustion applied because the cars were put on the market by the trademark's proprietor or with its consent, unless there are legitimate reasons to oppose further commercialisation of the goods in question. In *Parfums Christian Dior*,[848] the ECJ indeed specified that if a product bearing a trademark is lawfully placed on the market, the purchaser not only retains the right to resell that product, but also to use the trademark to promote its further commercialisation.[849] Otherwise, the right of resale would become much more difficult to exercise and 'exhaustion of rights' would be deprived of its intended meaning.[850] However, as largely discussed, the exhaustion does not find applicability if a legitimate

[844] Case C-63/97 *Bayerische Motorenwerke AG (BMW) and BMW Nederland BV v. Ronald Karel Deenik*.[1999] ECLI:EU:C:1999:82.
[845] First Council Directive of 21 December 1988 to approximate the laws of the Member States relating to trademarks [1988] (89/104/EEC) OJ L 40/1.
[846] *BMW v. Deenik*, paras 38-39, stating that 'The advertiser uses the BMW mark to identify the source of the goods in respect of which the services are supplied […].'
[847] ibid paras 45-46.
[848] Case C-337/95 *Parfums Christian Dior SA e Parfums Christian Dior BV v Evora BV* [1997] ECLI:EU:C:1997:517.
[849] ibid para 38.
[850] ibid para 37.

reason exists. This encompasses the use of the trademark in advertising which causes damage to the prestige and image of the trademark itself.[851] Applying this principle to *BMW v. Deenik*, the ECJ confirmed that, in the case of advertising for the resale of used cars, a damage occurs when the impression is created that there is a commercial connection with the trademark proprietor.[852] Yet, it should be highlighted, as the ECJ rightly observed, that a reseller of used BMW cars cannot convey that information without using the BMW trademark.[853] The fact that he took advantage from the use of the proprietor of the trademark is not a sufficient reason to exclude the applicability of the exhaustion if there is no actual risk that the public may be led to believe that there is a commercial connection between the reseller and the trademark owner and advertising complies with the principles of truth and commercial fairness.[854] Ultimately, a similar interpretation complies with Recital 21 of the EUTMR, stating that '[T]he proprietor should not be entitled to prevent the fair and honest use of the EU trade mark for the purpose of identifying or referring to the goods or services as those of the proprietor. Use of a trade mark by third parties to draw the consumer's attention to the resale of genuine goods that were originally sold by or with the consent of the proprietor of the EU trade mark in the Union should be considered as being fair as long as it is at the same time in accordance with honest practices in industrial and commercial matters.'

As for the use of BMW's trademark for advertising repair and maintenance services of BMW's cars, the ECJ observed that the exhaustion principle did not apply because it does not deal with the further commercialisation of goods. However, such a use of the trademark may fall within Article 14(1)(c) EUTMR. Using the trademark to inform the public that the advertiser provides repair and maintenance services for products marked with that trademark constitutes a use indicating the products subject to the provided service, thereby identifying the intended purpose of the service offered.[855] It follows that the condition that the use of the trademark should be in accordance with fair industrial and commercial practices essentially reflects an obligation of fairness towards the legitimate interests of the trademark proprietor,

[851] ibid para 44.
[852] *BMW v. Deenik* para 51.
[853] ibid para 54.
[854] ibid paras 52-54.
[855] EUTRM Recital 21.

similar to that imposed on a reseller using the trademark to advertise the resale of products bearing that trademark.[856] As a result, using the trademark to announce to the public the repair and maintenance of products bearing that trademark is authorised under the same conditions as announcing the resale of products with that trademark.[857]

In relation to this second point, the German Federal Supreme Court held in a case involving an advertisement for vehicle inspections promoted by an independent garage that the use of the Volkswagen logo in a circle in the brochure was dishonest.[858] The judge held that the use of this mark/logo in the contested advertisement took unfair advantage of the brand's reputation.[859] Accordingly, 'It would have been possible and reasonable for the defendant to use the word mark 'VW' or 'Volkswagen' instead of the figurative mark to indicate its range of services.'[860] This second solution ' would have been less detrimental to the plaintiff's interests, as the figurative mark has a special attention value that goes beyond verbal symbols.'[861]

The so-called 'referential use' of the trademark comes into play not only concerning the services provided but also to indicate the intended use of products available in the market, particularly in terms of compatibility with others. Consider, for instance, coffee capsules labelled as 'compatible with coffee machine X' or razor heads. Beyond the mere presence of the owner's trademark, ensuring compliance in these cases requires attention to the type of information conveyed on the packaging. So, for example the ECJ held that advertising products as 'second-hand' does not raise significant concerns as long as such use of the trademark does compromise any of the functions of the trademark itself.[862]

With regard to the sale of compatible components, in the aforementioned Nespresso case, the Italian Court of Cassation stated that, in order to be considered lawful, the use of the proprietor's trademark to indicate the origin of the products marketed must take all measures to avoid both the risk of confusion and simple association between the signs.[863] In this case, the third party did not reproduce the

[856] ibid paras 61-62.
[857] ibid paras 63.
[858] BGH, 14 4 2011 - I ZR 33/10 - Markenrechtsverletzung durch Inspektionsarbeitenwerbung mit bekannter Bildmarke eines Automobilherstellers 2011 GRUR 1135 (BGH 2011).
[859] ibid para 24.
[860] ibid para 25.
[861] ibid.
[862] *Portakabin* paras 28-29.
[863] See *Nestec S.A. and Nespresso Italiana s.p.a. v Casa del Caffè Vegnano s.p.a.*.

owner's trademark in its figurative version and explicitly indicated the independence between the two companies.[864] This prevented any risk of confusion between the signs. However, the Court found that the risk of commercial association was not excluded due to the appealing party's failure to provide crucial information about the commercial name of the coffee machines and the destination of the capsules.[865]

The examples discussed so far can provide insight into how the owner's trademark should be used to present a repaired and refurbished product or component to the public. In summary, in order to avoid any damage to the trademark's owner, it should be indicated not only that the product or component has been repaired, but also that there is no connection with the trademark owner. From the perspective of a fair balance of interests, the figurative mark should not be used. Conversely, the use of the verbal elements of the trade mark appears to be permissible.

3.2.5. The Conditions of the Goods Have Been Changed or Impaired

As mentioned earlier, the trademark owner can oppose the further commercialisation of the goods when their conditions have been changed or impaired after it has been lawfully put on the market. Actually, all of the situations examined above involved some modification of both the packaging and the product itself. However, this section focuses on actions that involve manipulation of the product as a result of the repair activities it has been subjected to. It is not clear how this rule applies in the repair sector, specifically regarding the extent to which a trademarked product can be modified and reintroduced into the market without the owner's consent. This applies to both if the owner's trademark is removed and if it is left intact. Case law on the matter is somewhat limited.

A pivotal case examined by the Benelux Court of Justice (BCJ) dates back to 1992.[866] As there are apparently no English translations of the case, an attempt will be made to outline the main points, including an English rendition of the procedural history.[867] The dispute was initiated by Valeo, the owner of the registered trademarks VERTO and VALEO within the Benelux area which are used in connection with

[864] ibid.
[865] ibid.
[866] BCJ, *Automotive products v. Valeo* [1992] ECLI:NL:XX:1992:AB9577.
[867] Any inaccuracies in the translation are therefore the responsibility of the author.

clutches and vehicle components. The company AP was involved in the reconditioning and refurbishment of old and worn clutches, including those originally marketed by Valeo. Specifically, AP disassembled the clutches, cleaned and reconditioned the usable parts, and replaced the unusable parts with new or exchange parts of various makes, provided they had the same shape and fit. AP then assembled these refurbished or non-refurbished parts into a 'refurbished clutch.[868] These were then packaged with AP's logo along with assembly instructions. Parts bearing Valeo's trademark were marked with an indelible white marker as 'AP-recon' to indicate that the clutch had been reconditioned, or 'AP FECS' for Factory Exchange Service, without however removing the owner's trademark. These reconditioned clutches were then placed on the market.

The Dutch Supreme Court [Hoge Raad] asked BCJ the following questions: (1) Whether AP's conduct consisting in marketing reconditioned goods still bearing the holder's trademark constituted a use of the trademark within the meaning of Article 13 A of the Uniform Benelux Law on Marks ('UBLM')[869]; (2) Whether the doctrine of exhaustion as per Article 13 A of UBLM[870] applies to the sale of used or reconditioned products, in particular whether they should be regarded as the same products as those put on the market by the owner or its licensee, or as entirely 'new' products. Alternatively, whether the decisive factor is the false impression that these products come directly from the proprietor; (3) More specifically with reference to the wording of the provision (a) Whether the condition that 'the goods has not been altered' as expressed in Article 13A refers only to alterations which are detrimental to the reputation of the mark; (b) If the answer to (a) is in the negative, whether the exhaustion rule can still be invoked after the alteration of the condition of the goods if

[868] ibid para 7.

[869] *Uniform Benelux Law on Marks of March 19, 1962, as amended on November 10, 1983* (1983): 'A. Without prejudice to the possible application of ordinary civil law in matters of civil liability, the proprietor of a mark may, by virtue of his exclusive right, oppose: 1. any use made of the mark or of a like symbol for the goods or services in respect of which the mark is registered, or for similar goods or services; 2. any other use, in economic intercourse, of the mark or of a like symbol made without a valid reason under circumstances likely to be prejudicial to the proprietor of the mark.'

[870] 'The exclusive right to the mark shall not, however, include the right to oppose the use of the mark for goods or the right to oppose the use of the mark for goods or services brought into circulation under the said mark by the proprietor or his licensee, provided, however, that the condition of the goods or services has not been altered.'

the reputation of the mark is not or cannot be affected; (c) Whether to answer (a) and (b) it makes any difference whether the goods are used or reconditioned.[871]

The BCJ first observed that the marketing of a product bearing someone else's trademark should be regarded as use 'for the goods', meaning that the third party involved in the sale or marketing of the product uses the trademark in such a way as to distinguish the specific product from others on the market.[872] With regard to the applicability of exhaustion, the BCJ clarified that certainly Article 13 A refers to changes in the product caused by external factors, excluding changes caused by the passing of time and the natural use of the product.[873] Whereas in the case of repair/refurbish, in order to determine whether exhaustion applies it is necessary to assess the extent of that external intervention. In essence, if the intervention is such that the product is no longer the original one but belongs to a different category of products, exhaustion does not apply.[874] In the assessment, it is acknowledged that the processing of products inherently involves a change in their condition. However, if the trademark proprietor could potentially oppose any alteration, it would be able to monopolise the market for reconditioned products,[875] thus upsetting the balance of interests inherent in the provision in question.

The BCJ then observed that if the trademark is removed, the proprietor has no reason to oppose the marketing of reconditioned products, unless this causes damage to the reputation of the trademark.[876] Moreover, as highlighted also in the previous paragraphs, it is not always possible to remove the trademark: in some cases, the removal may compromise the technical integrity or practical usability of reconditioned and/or regenerated products.[877] In such cases, the question arises whether the commercialisation is permissible if the third party leaves the trademark, while taking all necessary measures to inform the public that it is selling a reconditioned product and not the original.[878] Based on these considerations, the Court held:[879]

[871] ibid para 8.
[872] ibid paras 18-19.
[873] ibid paras 21-22.
[874] ibid.
[875] ibid para 27.
[876] ibid para 24.
[877] ibid para 25.
[878] ibid para 26.
[879] ibid paras 43-45.

1) Unless the reconditioning/refurbishment results in a change of such a nature and extent that the reconditioned/refurbished products no longer belong to the category of goods for which the trademark is registered or to similar products, it is a use of another's trademark when a company markets the reconditioned/refurbished products without removing the owner's trademark, even if the products are sufficiently marked to indicate that they have been reconditioned/refurbished by that company;
2) In order to determine the applicability of exhaustion, the decisive factor is whether the intervention results in a change in the condition of the products which is of secondary relevance;
3)
    a) The condition 'if the state of the products has not been altered' does not only refer to changes which affect the reputation of the trademark in question;
    b) The trademark proprietor may oppose the further commercialisation of the goods even if the reputation of the trademark has not been damaged;
    c) The trademark owner may not oppose the use of its trademark for goods put on the market by themselves or their licensees and subsequently refurbished/ reconditioned by others:

- If, despite the refurbishment/reconditioning it must be assumed that the goods are still the ones placed into circulation by the trademark proprietor or its licensee;
- If the third party placing the refurbished/reconditioned products on the market demonstrates that it is not possible to remove the trademark without impairing the technical integrity or practical usability of the products, or that it would otherwise be unreasonable to do so, and, when putting the products on the market, takes all reasonable steps to make it clear to the public that it is not commercialising the original products of the trademark owner or its licensee, but rather a refurbished/reconditioned product.

A few years later, the Hoge Raad referred to ECJ for a preliminary ruling[880] making reference to indications set put in the BCJ case. This time, the case concerned paillettes marketed under the EPAL trademark, which had been reintroduced onto the market after being repaired by PHZ. EPAL argued that the repairs went beyond the

[880] Case C-133/20, *European Pallet Association v. PHZ BV* [2020] request for preliminary ruling.

‘minor’ intervention referred to in the VALEO case. The Dutch Court of Appeal [Gerechtshof] ruled against infringement.

Firstly, EPAL contended that the Gerechtshof erred in failing to recognise that EPAL had legitimate reasons to oppose further commercialisation even if the paillettes did not break down before repair. Accordingly, ‘any repair by PHZ should be regarded as a change of more than minor significance.’[881] Secondly, according to petitioner, the Appeal Court’s decision contains a legal error because it adopted as a criterion that a trademark owner can only oppose further commercialisation if (i) there is a legitimate reason and (ii) the further commercialisation may affect the functions of the trademark.[882] Accordingly, if the trademark owner has a legitimate reason to oppose further commercialisation of the goods, the commercialisation will also affect the functions of the trademark, so the two criteria should not be considered separately.[883] EPAL further argued that the Gerechtshof had ignored the obligation of those who market reconditioned goods to make it clear that they are indeed reconditioned products in order to prevent the public form mistakenly believe there is commercial link between the parties.[884] In this regard, EPAL claimed that, as suggested in *Viking Gas*, proper labelling could prevent such a risk.[885] Furthermore, EPAL contented that PHZ could easily have removed or obscured the trademark without significantly affecting the functionality of the product to make it clear that the paillettes were refurbished.[886] Finally, EPAL asserted that Court of Appeal failed to recognise that a trademark does not have to guarantee quality and origin functions in the aftermarket, especially given the nature of the contested goods which are interchangeable.[887] By not adhering to strict quality standards, PHZ took advantage of the EPAL system and engaged in unfair competition practices.[888]

The first question referred by the Hage Raad to the ECJ concerns the interaction between the function doctrine, now contained in Article 9 EUTMR, and the exhaustion principle of Article 15 EUTMR. It asks whether the function doctrine affects the interpretation of the ‘legitimate reasons’ requirement for the applicability of Article 15(2)

[881] ibid 2.2.3.
[882] ibid 3.1.1. – 3.1.2.
[883] ibid.
[884] ibid 3.2.7.
[885] ibid
[886] ibid 3.2.2.
[887] ibid 3.2.1.
[888] ibid 3.2.4.

or adds requirements for a trademark proprietor to oppose further commercialisation.[889] It also considers whether 'legitimate reasons' can always be found when one of the functions of the trademark is adversely affected during commercialisation.[890] The Hage Raad then sought clarification from the ECJ on the applicability of exhaustion in the repair and refurbishment sector, particularly asking whether the further commercialisation of products after repair or refurbish by a third party without the consent of the trademark proprietor constitutes a legitimate reason under Article 15(2) EUTMR.[891] The question sought also to clarify whether the answer depends on the nature of the goods and the extent of the intervention. It also examined whether it is not a legitimate reason if the trademark is used in a way that does not indicate a commercial link with the proprietor, such as by removing the trademark or adding an additional labelling.[892]

The request for a preliminary ruling has been withdrawn, so it is not known how the ECJ would have decided the case. However, as pointed out by Kur, the request highlights the current uncertainty about the conditions under which a trademarked product can be put back on the market after repair or refurbishment without infringing the trademark owner's rights.[893] Furthermore, except for the case decided by the BCJ, the few existing national cases on the matter lean towards protecting the interests of right holders over permitting the R activities.

In a case from 1990, the German Federal Supreme Court ruled that if a motor vehicle has been severely damaged as a result of an accident to such an extent that repair is only possible by replacing the parts constituting the passenger compartment, namely in the case of a self-supporting construction of the central body of the vehicle and a non-self-supporting construction of the central part of the frame-floor system and/or the superstructure of the vehicle, the character of the original motor vehicle identified by the manufacturer's trademarks is substantially impaired.[894] As a result, a vehicle 'constructed' in this way may not be marked with the ODM's trademarks without the OEM's consent, unless it has been produced on behalf of a customer for his own

[889] ibid 5.
[890] ibid.
[891] ibid.
[892] ibid.
[893] Kur (n 371) 228.
[894] *Herstellerkennzeichen auf Unfallwagen* [1990] Federal Supreme Court Case No. I ZR 198/88 in GRUR Internaional 678.See also Kur (n 371).

use or for the needs of the repairer.[895] The central aspect of the decision was based on the assertion that the modifications of the cars had substantially affected the 'individual character of the products.'[896] Consequently, these modified cars were no longer capable of identifying the product's origin from the proprietor and the guaranteed quality and reputation associated with the trademark.[897]

In a 1927 ruling, the Court of Appeal of Turin [Corte d'Appello di Torino] determined that the transformation of a vehicle from one type to another and its subsequent sale—specifically, the old Lancia Zetaiota chassis, modified by relocating the chassis and adapting the truck into a passenger stagecoach—constituted trademark infringement and unfair competition.[898] In drawing the line between lawful and unlawful activities, the Court highlighted that a distinction should be made between transformations or repairs intended for private use versus those intended for commercial activities and trade, which leads to legal concerns.

In a case involving light bulbs, the District Court of Naples [Tribunale di Napoli] ruled that the sale of refurbished burnt-out light bulbs bearing the Philips trademark constituted an act of unfair competition and trademark infringement.[899] Specifically, the Court found that by replacing the defective filament with a new one, the defendant effectively replaced an 'essential part' of the light bulb, creating a new light bulb different from the original Philips product. This action enabled the defendant to take unfair advantage of consumers' trust in the Philips brand, to the detriment of the company.[900] The Court also found that marketing the bulbs' caps as 'regenerated', even if the label was barely legible, did not sufficiently inform consumers that they were not genuine Philips products.[901] Nor it was enough to exclude trademark infringement: by keeping Philips trademark on regenerated lamps, the defendant could attract customers by using the appeal of the original brand.[902] Moreover, the packaging lacked

[895] ibid.
[896] ibid.
[897] ibid.
[898] *Della Beffa v Lancia* [1927] Court of Appeal of Turin in (1928) Monitore dei Tribunali 304 in 'Vecchie sentenze sempre nuove- Vendita sotto i vecchi segni altrui di cose rifatte, rinnovate, trasformate, sofisticate' with comment of Remo Franceschelli in (1952) Riv. Dir. Ind. 214-216.
[899] *Soc An It Philips v Sole and Vallese* [1933] District Court of Naples in (1934) Monitore dei Tribunali 315 in Vecchie sentenze sempre nuove- Vendita sotto i vecchi segni altrui di cose rifatte, rinnovate, trasformate, sofisticate' with comment of Remo Franceschelli in (1952) Riv. Dir. Ind. 217-222.
[900] ibid.
[901] ibid.
[902] ibid.

information and was very similar to that of original Philips light bulbs, increasing the risk of deception.[903] In its conclusions, the Court, once again, drew a distinction between 'private' repairs and those carried out for commercial purposes:

> While a purchaser of a patented article may carry out necessary repairs for personal use, the creation of an industry in which unusable patented articles are purchased, reconstructed and resold for profit, prominently displaying the original trademark, results in modified products containing many non-original essential parts. These products circulate under the protection of the original name, which guarantees quality and perfection, to the obvious detriment of the trademark owner.[904]

Subsequently, the Court of Appeal of Milan [Corte d'Appello di Milano] ruled in another case that selling refurbished and reconstructed ball bearings under the original trademark amounted to trademark infringement.[905] It is worth noting that the defendant's argument, asserting that regeneration of products at the end of their life-cycle leads to economic benefits by saving imported raw materials, was disregarded by the Court.[906] Accordingly, the issue does not lie in restoring or selling refurbished goods, but rather in reintroducing them into circulation with the original trademark.[907] With regard to the argument that the trademark could not be removed due to technical limitations, the Court affirmed that 'it is not a valid reason to violate the law' and is instead essential to prevent association with the trademark's proprietor.[908] To this extent, the trademark can be not only erased, but also transformed and modified to the extent that it becomes impossible to recognise the original trademark.[909]

In the context of gas meters, the Italian Court of Cassation [Corte di Cassazione] affirmed that the resale of devices following modifications and replacements of parts implied a complete reconstruction of such devices.[910] These devices were then

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[903] ibid.

[904] ibid.

[905] Court of Appeal of Milan (1935) in (1936) Foro It, I, 708 in Vecchie sentenze sempre nuove- Vendita sotto i vecchi segni altrui di cose rifatte, rinnovate, trasformate, sofisticate' with comment of Remo Franceschelli in (1952) Riv. Dir. Ind. 226-229.

[906] ibid.

[907] ibid.

[908] ibid.

[909] ibid.

[910] *Soc Internaional Harvester Co v Ditta Ghinassi* Court of Cassation (1936) in (1937) Foro It, I,306 in Vecchie sentenze sempre nuove- Vendita sotto i vecchi segni altrui di cose rifatte, rinnovate, trasformate, sofisticate' with comment of Remo Franceschelli in (1952) Riv. Dir. Ind. 229-230.

reintroduced into the market with a label bearing the manufacturer's trademark. Yet, the mere fact that repairs were carried out on behalf of third parties was not sufficient, according to the Court, to exempt them from trademark infringement.[911] This was because the respondent's activities had developed into a significant, large-scale business serving a diverse clientele, including electricity distributors, which went beyond the personal use typically allowed by the courts.[912] As a result, the respondent's activities posed similar risks to the distinctiveness of the trade mark as the resale or distribution of modified equipment.[913]

Trademark infringement has also been found in cases where a product has been updated adding new features and functionalities and then reintroduced to the market.[914] In a recent case,[915] the District Court of Munich [LG München] found that the principle of exhaustion did not apply to a trademarked WILAN router that had undergone several modifications, including the removal of the logo, the manipulation of the branch of use, the installation of the current firmware and the extension of functionality', so that the purpose of the devices has been altered.[916] Also in this case, the District Court of Munich recalled the concept of the 'individual character' of the product, emphasising that the German Federal Court of Justice has in some circumstances affirmed its link with material properties of the goods; conversely, in other instances, it has held that changes in the purpose (or functionality) of the goods, or other features related to the guarantee function of the trademark, could affect the individual character of the goods as well.[917] In the present case, the fact that the defendants have brought the version into a state corresponding to that of the standard version constitutes a change within the meaning of Article 15(2) EUTMR.[918] Accordingly, the relevant public expect that the function and purpose of the devices have not been substantially altered by a third party without the consent of the trademark proprietor after they have been put on the market.[919] Finally, the ECJ held that limitation under Article 14(2)(b) EUTMR was not applicable either, based on the

[911] ibid.
[912] ibid.
[913] ibid.
[914] Kur (n 371) 228.
[915] *Fritz!Box* [2020] LG München Case No 17 HK O 1703/20.
[916] ibid para 49.
[917] ibid paras 51-54.
[918] ibid para 57.
[919] ibid para 58.

assertion that that the distribution of non-exhausted goods cannot be justified under Article 14(1)(b) EUTMR on the grounds that the a third-party trademark merely 'describes' the commercial origin of the goods.[920]

The cases discussed, although mostly dated and concerning a wide variety of markedly different products, reveal a common realm of uncertainty concerning the delineation between lawful and unlawful activities involving trademarked products after their first commercialisation.[921] The first issue pertains to whether the trademark of the proprietor should be removed from the product to prevent any trademark violation concerns. Although most courts appear to favour this solution[922], as previously discussed, it is not always a feasible: not only due to technical and/or aesthetic constraints that often hinder the removal of the trademark, but also because certain national laws expressly prohibit the removal of trademarks.[923] Although its extension to independent repairers is uncertain, the possibility of removing the trade mark is certainly a drawback. On the other hand, it seems to be the most reasonable and feasible solution in cases where the product has undergone major and extensive interventions and radical changes. In this case, it could be argued that the manufacturer's legally protected interest in the distinctiveness of the original trademark has ceased.[924] However, it is not easy to define the boundaries between 'ordinary' and 'extraordinary' interventions.

Against this backdrop, the option of retaining the owner's trademark and affixing a disclaimer to the repaired product should be also taken into consideration. The disclaimer could represent a tool to prevent the infringement of the primary function of the trademark as an indication of origin, along with its secondary functions related to quality, investment, advertising and communication.[925] However, jurisprudence lacks clarity even in this area: at times, it seems to favour a solution where a comprehensive and appropriate disclaimer might theoretically exclude trademark infringement;[926] conversely, in other instances, it appears to assert that it would not be sufficient in any case, as the third party would still unfairly benefit from the unauthorised utilisation of

[920] ibid paras 64-68.
[921] Kur (n 371).
[922] See *e.g. Automotive products v. Valeo*, tending to leave the trademark only if dictated by technical reasons.
[923] See *above* section 3.
[924] Aghina (n 378) 120.
[925] *L'Oréal* para 58.
[926] In this sense, *Automotive products v. Valeo.*

the proprietor's trademark.[927] Another debated point highlighted by scholars concerns the nature of the allegations against the third parties, occasionally classified as trademark counterfeiting or infringement and at other times as unfair competition.[928] These are two distinct areas, the boundaries of which often intersect and are sometimes unclear.[929]

Ultimately, the main issue revolves around determining the extent to which a product can be repaired and refurbished while still considered the same product originally circulated by the proprietor. Here, courts seem to differentiate between 'ordinary repair' and interventions amounting to the total reconstruction of the product.[930] The distinction appears to be that minor repair interventions of an ordinary nature should be allowed, while more substantial interventions involving essential parts of the product should be considered beyond the scope of exhaustion. Assuming that among the considered R activities, repair, as defined by the Ecodesign Proposal[931], seems to pose fewer problems compared to refurbishing and remanufacturing, which by definition involve more significant changes affecting the safety, performance, purpose, or type of the product,[932] the boundaries as drawn by the courts are unclear. German courts, for example, refer to the 'individual character' of the product, Italian

[927] *Philips* case. See also Tonon (n 554) 112.

[928] Tonon (n 554) 111.

[929] With specific regard to Italian regulations, Mansani emphasised that in instances of *look-alike* products, they have sometimes fallen under the purview of trademark law, while at other times, they have been considered within the realm of unfair competition, particularly concerning the appropriation of merits. This implies that the absence of a risk of confusion does not automatically exclude the possibility of unfair competition. He also notes that, although at the EU level, rules have been harmonised through the Paris Convention, specifically Article 10 *bis*, which defines the scope of application of unfair competition, with the implementation of the European trademark system since the 1980s, there has been a prevalence of rules governing distinctive signs over those related to unfair competition. This predominance is particularly noticeable in the regulations governing signs with a reputation, which receive protection irrespective of the risk of confusion. See Luigi Mansani, 'Look Alike', *Impresa e mercato. Studi dedicati a Mario Libertini* (Giuffrè Editore 2015) 1022-1025. Di Cataldo, asserts that the prohibition to engage in unfair competition acts based on confusion has an integrating function with regard to the rules on distinctive signs. This is because it makes it possible to classify as unlawful cases of confusion which may not be covered by typical distinctive sign rules. In this sense, the unfair competition rules function as a general rule, while the typical distinctive sign rules serve as a specific rule. See Vincenzo Di Cataldo, *I Segni Distintivi* (2nd edn, Giuffrè Editore 1993) 20.

[930] Tonon (n 554) 112.

[931] Ecodesign Proposal, Article 2(20).

[932] See *above* section 3.

courts mention the ‘essential part of the product’[933] and the BCJ distinguishes between ‘changes of secondary/primary relevance.’

In summary, it is evident that these criteria, similar to ‘the essential element of the invention’ concept for patents, are largely arbitrary and not sufficient on their own to clearly distinguish between lawful and unlawful activities. Moreover, the judgments under discussion should be considered in their historical and economic context. Most of these judgments were made in the first half of the 1900s when needs and priorities were different, and climate change was not a concern. Within this context, it is crucial to re-examine these judgments with the lenses of the current historical and economic landscape, which emphasises principles such as circularity and sustainability. When public interests clash with private interests, these aspects must be taken into account. This framework requires a revaluation of competing interests, taking into account all instances of protection, including consumers' access to repaired, refurbished, and reconditioned products. This balancing act requires excluding the applicability of exhaustion only in cases where there are tangible risks of damages to the trademark owners’ interests. It also calls for an interpretation in this vein of the function doctrine, as we will be discussed in the last part of this work.

4. Exhaustion, Patents and Repair

As with trademarked products, concerns arise also in relation to patents and the determination of permissible repair.

Distinction has been made between ‘repair’ and ‘reconstruction’: repairing a protected innovation is lawful, as far as it does amount to the reconstruction of the product as described by the patent.[934] Yet, some jurisdictions refer to ‘making’, others to ‘manufacturing’ the invention, but the underlying concept remains the same: ‘the rights of ownership do not include the right to construct an essentially new product based on the template of the original, for the right to make the article remains with the patentee.’[935] Such a distinction finds its inception -again- in the doctrine of exhaustion, which indeed does not cover the new version of the product resulting from

[933] Auteri attributes this distinction either to the fact that modifying the essential elements of the product breaks its link with the manufacturer or renders it different from the product originally conceived by the holder. See Auteri (n 598) 55-56.
[934] Ballardini and others (n 709) 964.
[935] Götting and Hetmank (n 523) 486.

manufacturing by a third party, not authorised by the owner or carried out without their consent.[936]

4.1. Legislative Framework

Patent rights, like other forms of IP rights, are exhausted once patented goods are placed on the market with the consent of the owner. Subsequently, the patent holder loses control of these goods and has no authority over their future disposition after the initial sale.[937] As stated, the lawful purchaser has the right to use and resell the item to third parties without interference from the patent owner, and to carry out any necessary maintenance or repairs, provided these do not infringe the existing patent rights.[938]

Similarly to the trademarks, the exhaustion principle for patents found a regulatory basis. At the EU level, it was codified by Article 29 of the UPCA, which essentially reproduces the provisions laid down in trademarks law. It established that:

> The rights conferred by a European patent shall not extend to acts concerning a product covered by that patent after that product has been placed on the market in the European Union by, or with the consent of, the patent proprietor, unless there are legitimate grounds for the patent proprietor to oppose further commercialisation of the product.

Then the question is whether the patent rights of the holder are still exhausted after repair interventions have been carried out.[939] Yet, drawing the boundaries between permissible repair and prohibited reconstruction or making is particularly challenging. As far back as earlier times, scholars attempted to draw lines, highlighting that while mere repair falls within the rights of the purchaser of the patented product, this does not extend to activities involving the 'renewal' of a product that has reached the end of its life cycle.[940] Nor does it include those activities exceeding the need to maintain the patented product's functionality and good condition, requiring the

[936] Tonon (n 554) 125.
[937] Götting and Hetmank (n 523) 489.
[938] Mohri (n 514) 779–780. See also Thomas Hays, 'The Exhaustion of Patent Owners' Rights in the European Community' in Toshiko Takenaka (ed), *Patent Law and Theory: A Handbook of Contemporary Research* (Edward Elgar 2008).
[939] AIPPI, 'Resolution Question Q205 Exhaustion of IPRs in Cases of Recycling or Repair of Goods' (2008)<https://www.aippi.fr/upload/Boston%202008%20Q202%20203%20204%20205/rs205english.pdf> accessed 18 October 2023.
[940] Tonon (n 554) 124.

reconstruction of components or parts.[941] Such an approach was summarised by a document released after the WIPO Standing Committee on the Law of Patents held in Geneva from September 26 to 30, 2022:[942]

> In general, the effect of the exhaustion is that the legitimate purchasers of the patented product can use or resell the product in question without permission from, or control of the patentee. The legitimate purchasers are also, in principle, allowed to repair the purchased product so that it can continue serving its initial utility. However, […] the concept of exhaustion is not generally applicable in cases of manipulation of the product in so far as such modification would be considered 'making' of a patented product.

Similarly to indirect infringement, following the emergence of disputes related to product repair and potential direct patent infringements, whether they concern individual patented components or the invention considered as a whole, national judges have attempted to establish distinguishing criteria.

4.2. Repair as Direct Patent Infringement

While replicating a patented invention undoubtedly constitutes infringement, the issue is to establish to what extent a purchased patented product can be lawfully repaired.[943] Such uncertainty is not confined to the EU boundaries but it spans across the majority of jurisdictions.

In *Laufkranz*[944] German Federal Supreme Court determined that replacing worn parts does not constitute creating a new patented product, as long as the replacement maintains the identity of the original patented product and does not replicate its key features.[945] Consistently with previous caselaw, factors like regular lifespan and the replaced part's technical significance were taken into account in determining permissible repairs versus making a new patented product.[946] The decision stressed

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[941] ibid.

[942] Wipo, 'Draft Reference Document on the Exception Regarding the Exhaustion of Patent Rights'' (2022).

[943] Rosa Maria Ballardini, Marcus Norrgård and Timo Minssen, 'Enforcing Patents in the Era of 3D Printing' (2015) 10 Journal of Intellectual Property Law & Practice 850, 865.

[944] *Verschleißersatz als bestimmungsgemäßer Gebrauch einer patentgeschützten Vorrichtung* [2006] Federal Supreme Court Case No. X ZR 45/05 in (2006) GRUR International 837.

[945] ibid 837.

[946] ibid 838-839.

the need for a fair balance between the patent holder's rights and the user's need to maintain the patented product's functionality.[947]

The principle stated in *Laufkranz* and *Pipettensystem* was further elaborated in *Palettenbehälter II*,[948] whereby the Federal Supreme Court faced an infringement action of to a patent concerning a pallet container, described as 'a flat pallet, an exchangeable inner container mounted thereon, and an outer sleeve consisting of vertical and horizontal lattice bars.'[949] The central question was whether the third-party replacement of the plastic containers should be considered a direct violation of the patent. The Court of Appeal had found that there was no infringement because the container was not considered to be an essential part of the invention.[950] Therefore, its replacement was clearly covered by the principle of exhaustion, which allows the use of the invention, including its repair.[951] Yet, the German Federal Court emphasises that the decisive factor is not just the exchangeability of the component according to the patent; rather, it also includes whether the replacement is a common maintenance practice accepted by the industry and does not alter the product's identity.[952] In other words[953]:

> [W]hether containers put into circulation with the consent of the patent holder can usually be expected to require a replacement of the inner container during the working life of the device as a whole […] depends on whether the replacement of the inner container is, in the opinion of the trade, to be regarded as a usual maintenance measure that does not call into question the identity of the pallet container as a marketable commodity. This depends primarily on the legitimate expectations of the purchasers of such containers.

In essence, whether the replaced parts reflect the original inventive concept becomes relevant if there was a prior understanding or assumption that these parts would be replaced during the useful life of the products.[954] To ascertain this, it should

[947] ibid.
[948] *Palettenbehälter II* [2012] Federal Supreme Case No Case X ZR 97/11. For an English translation of the case, see '"Pallet Container II" (Palettenbeha::lter II)' (2013) 44 IIC 351–360.
[949] ibid para 2.
[950] ibid para 10.
[951] ibid.
[952] ibid para 29.
[953] ibid.
[954] Heath (n 539) 448.

be determined whether these replacements are viewed within the commercial circles as routine maintenance measures that do not affect the product's identity.[955]

The German Federal Supreme Court returned on the repair/reconstruction dichotomy in the *Drum Unit*[956] involving the selling of recycled cartridges. The patented device comprised of a process cartridge, an electrophotographic image-forming apparatus, and an electrophotographic photosensitive drum unit. The defendant was selling recycled used cartridges originally put on the market by the plaintiff. Within the recycling process, the defendant had replaced the image drum and, if necessary, the flange with new parts that served the same function but did not originate from the plaintiff. Again, the Court held that the replaced parts did not reflect the technical result of the invention.[957] Therefore, their replacement as part of the recycling did not constitute manufacturing of a new product.[958]

The difference with *HP* Italian case mentioned above lies in the nature of the cartridges involved. The Italian case involved the unauthorised replication of patented cartridges, deemed as (direct) patent infringement. However, *Drum Unit* concerned recycled cartridges that were initially circulated by the patent holder. The central issue in this second instance pertains to exhaustion, questioning whether these recycled cartridges qualify under exhaustion, meaning that their reprocessing constitutes 'making' the invention anew, thereby leading to patent infringement, or the patent rights can no longer be enforced against the third party. German courts have ruled in favour of this second solution.

Similarly, both Italian doctrine and jurisprudence affirm as general principle that repairing a patented product is permissible as long as it falls under the scope of 'normal maintenance' without resulting in a complete reconstruction or remaking of its most significant parts.[959] When all or a significant portion of a product's components are repaired or replaced by either the same entity or multiple collaborating entities, it leads to the realisation of the invention, thereby constituting infringement.[960]

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[955] ibid.

[956] *Drum Unit* [2017] Federal Supreme Court Case No. X ZR 55/16. For an English translation of the case, see '"Drum Unit" (Trommeleinheit)' (2018) IIC 972.

[957] ibid para 63-65.

[958] Ibid.

[959] Adriano Vanzetti, 'Commento All'Articolo 6 CPI', *Codice della proprietà industriale* (Giuffè Editore 2007) 834-835.

[960] *VM s.p.a. v Annovi s.r. [2011]* District Court of Bologna in (2013) Giur.Ann.Dir.Ind. 123.

In a case involving the rubber coating of isostatic moulds for ceramic production, the District Court of Bologna [Tribunale di Bologna] determined it as counterfeit regeneration, akin to reconstruction.[961] However, as highlighted in the commentary accompanying the judgment, the Court's decision lacked an explicit rationale explaining its basis. The note suggests that the distinction between the refilling of cartridges as discussed in the *HP* case[962] and the current one lies in the fact that while in the previous cartridge case the ink itself did not constitute an inventive element, although crucial to work the invention.[963] Whereas, in the case at stake, the rubber coating directly affected a defining aspect of the invention, considering that the action constituted the final phase of a complete reconstruction of the mould.[964] Furthermore, it could be added that in the case of refilling, the product remained unaltered, thus allowing the exhaustion principle to apply. Conversely, in this current case, replacing the rubber coating subjects the mould to an intervention that may prevent the exhaustion principle from applying.

Article 5 of the CPI on exhaustion, originally conceived only for trademarks, has been later extended by legislator also to patents.[965] Consistently with Article 29 UPCA, it states that the limitations of the powers of the holder derived from the exhaustion of industrial property rights with the first placing on the market of the product do not apply when legitimate reasons exist for the patent holder to oppose the further commercialisation of the products, particularly when their state is modified or altered after their placement on the market. Similarly to trademarks, the issue has been raised regarding defining which modification constitutes an alteration of the patented product justifying the non-application of the exhaustion principle. In doctrine, it has been observed that a typical scenario justifying the opposition of the holder would be when a modified version of a patented product or machinery is used, or when a part of it, whose characteristics embody the teachings of the patent, is employed.[966]

In another case involving the disassembly of a patented product and the subsequent reuse by the purchaser of some components incorporated into another

[961] ibid.
[962] See *above* section 3.
[963] See VM s.p.a.
[964] ibid.
[965] See Selvaggia Segantini, 'L'esaurimento' in Massimo Scuffi and Mario Franzosi (eds.) *Diritto Industriale Italiano* (Cedam 2014) vol I, 3, 79.
[966] ibid.

product they own, the Court of Cassation [Corte di Cassazione] ruled in favour of exhaustion.[967] It affirmed that this principle extends to parts of the patented product lawfully put into circulation by its holder within the State's territory, allowing the holder the right to resell or reuse it in its entirety or only with regard to its individual components.[968] The commentary accompanying the mentioned judgment emphasizes that, following the legislator's intervention extending the principle contained in Article 5 CPI, there arises the question of which manipulations of the patented product fall within the legitimate reasons preventing the extension of exhaustion.[969] However, the note highlights that, concerning patents, extending the exhaustion principle in domestic law as stipulated for trademarks cannot find justification based on a corresponding distinctive function.[970] Ohly also noted that it cannot be justified by the intention to protect the proprietor's reputation.[971] While this principle has been extended to patents also at the European level, specifically in Article 29 of the UPCA, which essential reproduces Article 15 EUTMR and 15 TMD, case law has not interpreted it so far, nor identified the potential additional interests of the patent holder deserving protection which may constitute 'legitimate reasons.'

4.3. Considerations on Direct and Indirect Patent Infringement, Replacement Parts and Exhaustion

Case-law on repair and patent infringement is more extensive in Germany than in other European countries. Regardless of whether it is a direct or indirect infringement, German courts have tried to establish criteria to distinguish between lawful repair and unlawful manufacturing, as analysed in the previous paragraphs and summarised by Kühnen. In both scenarios, it is imperative to strike a balance between the purchaser's right to continue to use the product and the owner's right to properly exploit the invention.

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[967] *Z Bevelloni v Bottero s.p.a* [2010] Court of Cassation Case No. 1392 in (2010) Giur. Ann. Dir. Ind. 54.

[968] ibid.

[969] ibid.

[970] ibid.

[971] Ansgar Ohly, 'The European Perspective: Exhaustion, the Right to Repair and the UPC' (Workshop on 'Patent Exhaustion, the Right to Repair and the Circular Economy, Ludwig-Maximilians-Universität, Ludwig-Maximilians, Munich, 30 October 2023).

Accordingly, the starting point is to assess whether replacement of the specific part is expected during the life of the patented product and how that replacement is in line with industry standards.[972] According to Ohly, the replacement of a wearing part, which typically requires multiple replacements over the expected life of a machine, typically does not amount to the creation of a new product.[973] Whether the replacement of a particular component, as mentioned in the patent claims, is considered standard maintenance depends, among others, on consumer expectations. If consumers generally expect this replacement to be a routine part of maintaining the product and it does not significantly change the identity or value of the product, then the exhaustion principle applies.[974] In simpler terms, if the replacement is something that consumers would reasonably expect and does not fundamentally alter the product, the exhaustion principle is likely to apply. Such an assessment requires – again – a careful balance of the different interests at stake.[975]

In this latter regard, as stated, it has been observed that if exhaustion principle allows the lawful purchaser to use a patented product for repair and maintenance, it logically extends to the replacement of individual parts, those supplied by third parties.[976] This perspective implies an evaluation of the extent to which rights arise from the exhaustion of the patent.[977] On the other hand, it also entails that that selling or providing typical wearing parts or consumables could potentially be considered contributory patent infringement.[978] In the ruling of the waste hooking case, the Italian Court of Cassation observed that although the patent rights for individual containers had expired and had been transferred to third parties, this did not grant unauthorised entities the right to produce equipment that would infringe upon the patent.[979] In *Kaffee-Fikterpads* on contributory infringement, the Dusseldurf Court highlighted that the purchaser's rights of patented device include using operating materials and repairing it but not reconstructing the device.[980] The distinction lies in preserving the original

[972] Kühnen and Peterreins (n 549) 502.
[973] Ohly (n 971).
[974] Kühnen and Peterreins (n 549) 502–503.
[975] '"Impeller Flow Meter" (Flügelradzähler)' (n 529).
[976] Hölder (n 516) 894.
[977] Kühnen and Peterreins (n 549) 143.
[978] ibid.
[979] *Nord Engineering s.r.l. v Farid Industrie s.p.a. and Palvi S.L.* (n 553).
[980] See *Kaffee-Filterpads*.

product's identity versus creating a new one.[981] It involves balancing the patent holder's economic interests and the buyer's freedom to use the product.[982] Consideration is given to whether the replaced parts are typically exchanged during the device's lifespan and to what extent these parts reflect the technical effects of the invention.[983]

Indeed, exhaustion applies only if the replaceable part does not embody the crucial aspects of the invention, i.e. it achieve the invention's technological or economic advantages.[984] Specifically, this requirement is met when the part 'is able to cooperate functionally with such an element in realising the protected invention.'[985] This cooperation happens when the part either a) significantly contributes to the innovation's success or b) showcases the innovation's benefits.[986] Ohly further noted that it should be evaluated also if c) the component in question was not part of the state of the art before the patent was granted d) if the product and replaceable component combination plays a significant role in distinguishing the invention from existing technologies or innovations.[987] If, as a result of an analysis of these factors, the replaceable part appears to embody the essential element of the patented invention, its replacement constitutes unlawful manufacturing. In such instances, courts have noted it cannot be argued that the patent holder has already reaped the benefits of the invention solely by initially introducing the entire device into circulation.[988]

Kühnen concludes that if, conversely, the common trade considers replacement as contributing to the creation of the entire patented item through the use of a replacement part, it is considered as manufacturing, regardless of whether the advantages of the invention are contained within that specific part.[989] To assess this, one approach is to consider the value of the component in relation to the entire device.[990]

One of the most problematic aspects seems to be the situation where reviving a machine that has reached the end of its functional life, which is deemed reconstruction and consequently prohibited.[991] This also extends to individual parts: restoring

[981] ibid.
[982] ibid.
[983] ibid.
[984] Kühnen and Peterreins (n 549) 502–503.
[985] ibid 140.
[986] ibid 503.
[987] Ansgar Ohly (n 971).
[988] '"Impeller Flow Meter" (Flügelradzähler)' (n 529).
[989] Kühnen and Peterreins (n 549) 504.
[990] ibid.
[991] See Luzzatto Enrico, *Trattato generale delle privative industriali,* vol II (Pilade Rocc ed 1924) 205 f.

patented parts that are no longer in use is viewed as infringement.[992] The reasons for this may be attributed to the doctrine of exhaustion, where restoring a product to function is considered equivalent to creating a new product, which by definition does not fall under exhaustion. Alternatively, as in the case of trademarks, it may stem from the need to protect the patentee's interests against potential product defects, which falls within the legitimate reasons set out in Article 29 of the UPCA that justify the patentee's opposition.

4.4. A Look Abroad

Outside the EU, the approach to patent exhaustion has been shaped by a number of legal decisions. For the sake of completeness, and in order to draw some final conclusions, the main lines of the jurisprudence are briefly summarised in this section.

In the United States, the *Wilson v. Simpson*[993] case represents one of the very first cases interpreting the repair/reconstruction dichotomy. The Supreme Court established that if a component of a machine is intended for temporary use and requires periodic replacement, the patent owner cannot object to the purchaser of the machine.[994] In the case at hand, the replacement of machine knives which usually expires after sixty to ninety days does not change the identity of the machine, but it rather preserves it.[995] The Court held it was permissible repair.[996]

This principle was further elaborated in the *Aro*[997], case where the Supreme Court held that the mere replacement of non-patented parts constitutes a lawful repair. The defendant sold replacement fabrics designed to fit car models equipped with hoods embodying the plaintiff's patent, consisting of a combination of a car body, a flexible upper fabric, support structures and a mechanism for sealing the fabric against the side of the car to prevent rain from entering. The key legal question was whether

[992] ibid.
[993] *Wilson v. Simpson*, 50 U.S. 109 (1850).
[994] ibid.
[995] ibid para 26.
[996] See also *Heyer v. Duplicator Mfg. Co*., 263 U.S. 100, 44 S. Ct. 31, 68 L. Ed. 189 (1923) (holding that the replacement of temporary gelatine bands for durable copying machine constituted permissible repair).
[997] *Aro Manufacturing Co. v. Convertible Top Replacement Co.,* 365 U.S. 336, 81 S.Ct. 599, 5 L.Ed.2d 592 (1961).

the sale felt within permissible replacement of a part with a shorter life than the combination protected by the patent; or, conversely, whether it was an unauthorised reproduction of the patented combination. The Supreme Court, in overturning the District court and Appeal rulings on contributory infringement, affirmed that 'Mere replacement of individual unpatented parts, one at a time, whether of the same part repeatedly or different parts successively, is no more than the lawful right of the owner to repair his property.'[998]

As opposed to *Wilson* and *Aro*, in *Cotton-Tie*[999], the Court held that the refurbishment of the spent item amounted to impermissible reconstruction. The case concerned a cotton bale tie consisting of a band and a buckle. The original purchaser cut the strap and the defendants later acquired the scrap and reassembled the cut pieces with the original buckle. The Supreme Court found that this action was a reconstruction rather than a proper repair, emphasising that the band's function was voluntarily terminated when it was severed at the cotton mill, having served its purpose of transporting cotton from the plantation or gin to the mill.[1000]

By contrast, In *Jazz Photo Corp*[1001]the US Court of Appeals for the Federal Circuit hold that the refurbishing of a 'single use' camera was permissible repair. Although the court recognised that the intended function of the camera is considered to be complete after a single use, it considered the defendants' actions - collecting used cameras, loading new film, sealing the back with tape and repackaging the single-use cameras under their own trademark - as a permissible repair.[1002] The reasoning was that these actions restored some functionality to the broken or used cameras.

In *Lexmark*[1003] the Supreme Court ruled on the applicability of the doctrine of exhaustion with respect to Lexmark cartridges filled with toner and then resold by the defendant. In this case, the Court ruled in favour of the exhaustion, stating that 'Once a patentee decides to sell -whether on its own or through a licensee- that sale exhausts

[998] ibid para 346. For a comment of the case, see James C. Bageman, 'Contributory Infringement and the Repair Doctrine' (1965) 38 S Cal L Rev 363.
[999] *American Cotton-Tie Co. v. Simmons*, 106 U.S. 89, 1 S. Ct. 52, 27 L. Ed. 79 (1882).
[1000] ibid para 94, stating that '[i]ts capacity for use as a tie was voluntarily destroyed,' so 'it could not be used again as a tie.'
[1001] *Jazz Photo Corp. v. U.S. International Trade Commission* 264 F.3d 1094 (Fed. Cir. 2001).
[1002] ibid para 1099.
[1003] *Impression Prods., Inc. v. Lexmark Int'l, Inc.* 581 U.S.(2017)

its patent rights, regardless of any post-sale restrictions the patentee purports to impose, either directly or through a license.'[1004]

As opposed to Germany and US, UK courts adopted a different approach. Accordingly, the pivotal inquiry is not whether the defendants have repaired the protected product or not, but rather whether, having regard to the nature of the claimed product, the defendants have effectively 'made' it.[1005] This distinction becomes apparent in the leading case *United Wire*[1006], where the court scrutinised the refurbishment of a patented sifting screen in the oil industry. In the case at stake, the patentees hold two patents relating to oil rig components used to clean drill bits during retraction. The defendants, in turn, sold refurbished worn-out screens originally manufactured by the defendant by installing a new mesh to frames. The Court found that while the defendants extended the usefulness of the frame, the act of removing the mesh and reducing it to bare metal transformed the patented product: this change was considered to be a making rather than a repairing. In supporting the House of Lords decision, Lord Hoffmann addressed the true nature of the right to repair: 'The owner's right to repair is not an independent right conferred upon him by licence, express or implied. It is a residual right, forming part of the right to do whatever does not amount to making the product.'[1007]

The principle was later applied to the *Schütz* case[1008], whereby where the English courts examined the same issues addressed by the German courts concerning

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[1004] ibid.

[1005] See page 14 of the transcript of the Court of Appeal judgment: 'It follows that acts as prohibited by section 60[(1)(a) of Patents Act 1977] are infringing acts whether or not they can be categorised as repairs. It is therefore better to consider whether the acts of a defendant amount to manufacture of the product rather than whether they can be called repair, particularly as what could be said to be repair can depend upon the perception of the person answering the question. Even so, when deciding whether there has been manufacture of the product of the invention, it will be necessary to take into account the nature of the invention as claimed and what was done by the defendant.'

[1006] *United Wire Limited v. Screen Repair Services (Scotland) et al*.[2000] English House of Lords.

[1007] *United Wire Limited v. Screen Repair Services (Scotland) et al*. [2000] English House of Lords, opinion of Lord Hoffmann, available at https://publications.parliament.uk/pa/ld199900. /ldjudgmt/jd000720/wire.htm#:~:text=The%20owner%27s%20right%20to%20repair,amount%20to%20 making%20the%20product >, accessed 17 October 2023. ('Repair is one of the concepts (like modifying or adapting) which shares a boundary with 'making' but does not trespass upon its territory. I therefore agree with the Court of Appeal that in an action for infringement by making, the notion of an implied licence to repair is superfluous and possibly even confusing. It distracts attention from the question raised by section 60(1)(a), which is whether the defendant has made the patented product. As a matter of ordinary language, the notions of making and repair may well overlap. But for the purposes of the statute, they are mutually exclusive.').

[1008] *Schutz (UK) Limited v Werit (UK) Limited* [2013] Supreme Court of the United Kingdom.

the intermediate bulk container (IBC) used for liquid transportation, subject to replacement before marketing the refurbished product.[1009] However, the UK courts criticized the German approach, which scrutinizes whether the advantages of the patented innovation are evident in the replaced part.[1010] They diverged from considering the balance between the interests of the patent holder and the user or evaluating the customary replacement frequency of parts during the device's operational lifespan. The primary disparity between the UK and German courts lay in the perspective on whether users perceive part replacement as a routine maintenance measure.[1011] While German courts consider consumer expectations when the replaced part lacks embodiment of the innovation, the UK courts do not attribute significance to this aspect in their assessment.[1012] Ultimately, the UK High Court ruled in favour of the defendant, finding that it was repairing rather than manufacturing. Two key factors supported this decision: firstly, the plastic container, although essential to the invention, played a secondary role in the context of the entire article; and secondly, the defendant's actions were limited to replacement and did not involve any additional work beyond ordinary repairs.[1013]

From the jurisprudential analysis conducted so far, it is evident that despite differences in laws from one state to another, the courts typically follow an approach that permits simple repairs of a patented product, including maintenance and minor interventions, as they fall within the scope of exhaustion; conversely, activities

[1009] See *Palettenbehälter II*.

[1010] See *Schutz (UK) Ltd v Werit UK Limited* [2010] England and Wales High Court (Patents Court), para 199:' I do not think any of the ways in which the test is formulated in the German cases really solve the difficulty. To ask whether the advantages of the invention are reflected in the part replaced is a test which is difficult to apply. If an inventive propeller is claimed in combination with a boat, no doubt the advantages are enjoyed by the boat, but it cannot seriously be suggested that an owner of a patented propeller could not rebuild the boat to which it was attached, or transfer it to a new one. I would reject any reliance on a balancing exercise involving the respective interests of the patentee and the user: this would be to revert to considerations of implied licence […]. A monopoly right should have clear boundaries, and the boundaries should not be forced backward by considerations derived from implied licence. Likewise the notion of whether the part is one which is likely to be replaced in the lifetime of the device: this again seems to me to rely on the notion of an implied licence and, as the German cases recognise, does not answer the question of whether there is "making" when the part itself embodies the inventive concept. Furthermore I do not find it useful to ask whether the identity of the patented product is preserved, unless by that one means whether parts embodying the whole of the inventive concept are retained.'

[1011] Heath (n 539) 448.

[1012] ibid.

[1013] See, 'Press Summary' (*The Supreme Court of the United Kingdom*, 13 March 2013) available at <https://www.supremecourt.uk/cases/docs/uksc-2011-0159-press-summary.pdf>.

involving the alteration or replacement of essential components are restricted to the extent that they constitute 'reconstructing' or 'making' the product.[1014] The same criteria seem to apply to recycling.[1015]

What differs is the way in which the courts arrive at this conclusion. As seen, Dutch and German courts, unlike non-EU courts, apply the criterion of the 'essential element of the invention,' which, however, does not seem to depend on whether individual components are themselves patented. What matters is whether they incorporate the innovative function of the invention. It is now clear that the analysis must be conducted on a case-by-case basis. However, it cannot be ignored that, in the absence of uniform criteria, jurisprudence is not always consistent. An emblematic example is the case of coffee capsules discussed above, in which the same case analysed by two different courts resulted in opposite outcomes.

[1014] See AIPPI Resolution (n 939).
[1015] ibid.

CHAPTER IV
INDUSTRIAL PROPERTY RIGHTS IN CIRCULAR ECONOMY: PROPOSALS FOR A MORE FLEXIBLE AND CONSISTENT APPROACH

TABLE OF CONTENTS: 1. The Notion of 'Abuse' of Industrial Property Rights in the Context of Repair – 2.Trademark Protection for Spare Part: a Long-Standing and Unresolved Issue - 2.1. More Space for the Limitations – 2.2. Addressing the Root Issue: Non-Registrability Due to Bad Faith – 3. A More Flexible and Consistent Interpretation of the Exhaustion – 4. Patents and Repair: A Throwback of the 'Doctrine of Equivalence'? – 4.1. Towards a Better Balance of Interests

The analysis conducted so far has highlighted a series of unresolved issues both concerning the spare parts sector and in the field of repairs considered as service.

With reference to the spare parts sector, it has been observed that the non-extensibility of the repair clause for design to trademarks requires an in-depth analysis of the scope of applicability of the limitations provided for in Article 14 EUTMR. In this context, it should be distinguished when the reproduced mark on spare parts serves to indicate their destination as an accessory or spare part, allowing for the limitation of referential use of the trademark contained in Article 14(1)(c). Alternatively, if it is perceived as a product characteristic, it should be considered whether the use of the sign may fall within the limitation on indications concerning product features contained in Article 14(1)(b). The reproduction of a mark which represents an essential element of the spare part as it also performs a technical function would belong to this second option.

On the other hand, uncertainties also arise regarding the extent to which an IP-protected product can be repaired without infringing upon IP rights. This applies both to products covered by trademarks and those covered by patents, albeit obviously with different nuances stemming from the varying scope of protection. These difficulties have been highlighted in the AIPPI resolution of 2008[1016] and summarised as follows:

> Repair of a patented product, including maintenance work and minor interventions, should not constitute infringement. If patent rights in such product are exhausted before repair they are exhausted after repair; Reconstruction of a patented product, which involves changing or reproducing an essential component

[1016] AIPPI (n 939).

> of such product should constitute infringement. The principle of exhaustion does not apply to such reconstructed product; Recycling of a patented product (where this involves acts whereby products that have served the use for which they were conceived are reused without being reduced to their constituent ingredients) should be addressed within the context of whether such recycling constitutes repair or reconstruction of such product.
>
> […] As for trademarks, the same principles should apply as are set out above for patents, but the issue of exhaustion should be addressed by applying the principle that the trade mark proprietor may oppose further commercialisation of the goods under the trade mark for legitimate reasons only, such as where the condition of the goods is changed or impaired after they have first been put on the market.

In this context, it has then been emphasised in the previous chapters that the boundaries between unlawful reproduction/lawful repair in the case of patents and lawful repair/unlawful alteration or modification leading to a legitimate ground for opposition in the case of trademarks are predominantly determined by largely arbitrary criteria and uncertain boundaries within jurisprudence. These uncertainties have been exacerbated by the introduction into the patent system of an exhaustion provision which mirrors that in trademark law.[1017] This provision allows the patentee to oppose further commercialisation of the product due to 'legitimate reasons,' especially when the product's conditions have changed and been impaired after being placed on the market by the patentee. This rule might greatly impact the ability to repair products. However, it is uncertain which goals of the patent holder should be supported by this provision, given the inherent differences and the distinct protected interests between trademarks and patents.[1018]

The spare parts and repair sectors share a commonality in the criteria adopted by jurisprudence and doctrine to distinguish lawful repair from actions that result in an infringement, which were formulated during periods when needs and prerogatives were different. These criteria now contrast with the new imperatives imposed by the objectives of circularity pursued by European laws and policy documents. It is within this evolving framework that the proposed solutions below find relevance.

[1017] Article 29 UPCA.
[1018] Ansgar Ohly (n 971).

1. The Notion of 'Abuse' of Industrial Property Rights in the Context of Repair

At the outset, it could be assessed whether the issues addressed in this study could be seen through the lens of potential abuse of IP rights by their holders. Notably, the abuse of IP rights is typically viewed from a competition perspective, in particular when examining the market behaviour of companies whose dominant position is linked inter alia to the ownership of intangible assets.[1019] This perspective has been extensively applied also in spare parts' field, especially within the automotive sector, as mentioned at the beginning of the second chapter.[1020]

Specifically, it has been observed that the design protection of spare parts can lead to monopolistic scenarios for products by excluding competition from other body parts, directly impacting on pricing.[1021] There is no room for a comprehensive analysis of all the various potentially abusive behaviours that may be carried out by OMEs within this domain: it is sufficient to highlight that this include not only cases where OEMs arbitrarily refuse to supply independent repairers, but also situations where unfair pricing is applied or premature product termination occurs.[1022]

Yet, a competition-based approach might not sufficiently cover all abusive conducts that may arise withing the repair market. This is primarily because, as observed by Govaere, such approaches sanction abusive exercises of IP rights but might not address normal, non-abusive uses that deviate from the intended function.[1023] Hence, evaluating an *ex-ante* approach at the time of granting IP rights becomes necessary, especially when holders aim to secure market share at the expense of potential competitors.[1024]

Moreover, the competition-based approach relies on rigid cumulative requirements, as seen in cases like *Maxicar* and *Volvo*, which might not apply to all instances. These requirements typically involve establishing (i) a dominant position in the market for car

[1019] See Emanuela Arezzo, 'Intellectual Property Rights at the Crossroad between Monopolization and Abuse of Dominant Position: American and European Approaches Compared' (2006) 24 J Marshall J Computer & Info L 455, 458.
[1020] See *above* section 2.
[1021] Inge Govaere, 'EC Law, Intellectual Property Rights and the Market for Spare Parts in the Automobile Sector' (Eropean Institute Department of Law 1994).
[1022] ibid section IX.4.3.
[1023] ibid section V.3.3.1.
[1024] See *infra* section 4.

bodywork components (ii) the abuse of this position (iii) affecting trade between Member States.[1025] Therefore, a broader concept of IP rights abuse deserves to be explored, encompassing all situations whereby the enforcement of IP rights hinder beneficial market activities.

Within this framework, greater emphasis can be placed on the idea that prohibiting the production of spare parts by third party suppliers or repairing by independent repairers is justified only when there is a concrete risk that the third party involved might not technically provide an equivalent quality product or service. In such instances, the rights holder's response to third-party activities is legitimate. Otherwise, exploiting IP would be unjustified and, thus, abusive.

In this regard, a parallel can be drawn regarding how the development policy of generic drugs has influenced the protection regime and the exploitation arising from IP. Particularly, it relates to the prolonged issue that led to the full legitimations of generic drug production, which was initially hindered by concerns about the potential inferior quality of products made by entities other than the patent holder. The issue extended beyond patents to encompass also trademark rights, primarily due to the specific function of safeguarding the reputation of the holder, which ensured a monopoly beyond the patent on the main drug.[1026]

In the context of generics' commercialisation, Larrieu and Houin highlighted a study on psychological factors influencing drug prescription, where brand reputation holds paramount importance.[1027] The study emphasised that professionals naturally tended to choose the branded product over the generic one, linked to the reputation of the brand owner.[1028] The study concluded that ensuring the success of generics required not only knowing them, but also regulating their production and, notably, their designation as a crucial part of the commercial strategy essential for their market entry. The designation of generics became the subject of specific regulation, requiring, in compliance with trademarks' principles, that the chosen sign for the generics should not be deceptive and must not deceive the public as to the quality of the products.[1029]

[1025] Govaere (n 1021) section IX.4.
[1026] Jacques Larrieu and Georges Houin, 'Médicament Générique et Propriété Industrielle' (2000) Brevets Pharmaceutiques, Innovations et Santé Publique 174-176.
[1027] ibid.
[1028] ibid.
[1029] ibid.

Once the initial suspicion was overcome and the pro-competitive effects of generic drug commercialisation were acknowledged, they became the focus of legislative interventions. Most recently, new rules on the supplementary protection certificate for medical products aimed at eliminating the competitive disadvantages faced by EU-based generic manufacturers, enabling them to compete on equal terms with non-EU manufacturers, have been approved.[1030]

Hence, the question arises as to whether a similar approach could be applied to the repair sector. Implementing a more precise and consistent regulation within the sector, ensuring adequate quality and safety standards, might prove instrumental in preventing abusive behaviors by holders of IP rights. This regulation could particularly address and overcome any quality concerns that might justify actions taken by the IP holders. Similar to the initial hesitation surrounding the production and acceptance of generic drugs due to concerns about their quality compared to patented ones, the repair sector might face similar reservations. These concerns relate to the reluctance towards non-original parts or services due to uncertainties regarding their quality and safety. Establishing such regulations could potentially resemble the measures adopted in the generic drug sector. This would facilitate fair competition while upholding product quality and safety standards within the repair market.

In any case, whether referring to the doctrine of abuse of rights or limitations, the solution must be sought within the IP system, as it will be further explored in the following sections.

2. Trademark Protection for Spare Part: a Long-Standing and Unresolved Issue

As mentioned, the protection of intellectual property for spare parts is an longstanding issue that is far from new,[1031] and it has only been partially addressed

[1030] See Regulation (EU) 2019/933 of the European Parliament and of the Council of 20 May 2019 amending Regulation (EC) No 469/2009 concerning the supplementary protection certificate for medicinal products [2019] O JL 153/1. See also 'EU Adopts Measures in Support of Generic Pharmaceuticals Producers' (*European Council*, 14 May 2019) <https://www.consilium.europa.eu/en/press/press-releases/2019/05/14/eu-adopts-measures-in-support-of-generic-pharmaceuticals-producers/> accessed 10 January 2024].

[1031] See Aghina (n 378) 6, discussing already the issue as to whether using someone else's trademark, especially for parts or spares that identify the main product, is lawful or unlawful according to doctrine and case law.

with the new Design Package through the harmonisation of the repair clause.[1032] However, it leaves open the question of trademarks. The ECJ has indeed affirmed in *Ford Motor* that the presence of a repair clause for designs does not imply an exemption for trademark rights, even if reproducing the trademark is the only way to restore the overall appearance of the product.[1033]

Firstly, it should be noted that the absence of an explicit 'repair clause' in the EU legislation for trademarks and patents cannot be taken as a definite reason to exclude the extension of the repair clause set for designs and models to these other two sectors by way of interpretation. Analogy is an institution present in EU law, and its premise relies precisely on the absence of a written rule.[1034] For instance, in the *Dior* case the ECJ applied the trademark exhaustion principles to copyright law by analogy.[1035] However, it is believed that for an analogical interpretation to occur, there must be sufficient space for this expansive interpretation, which, by definition, exists when, in essence, the cases subject to analysis share similarities that outweigh their differences.[1036]

The *Audi* case differs from *Ford Motor* because in the latter the trademark did not primarily serve a technical function but an aesthetic one. It appears that this difference is the rationale behind the design repair clause.[1037] One avenue that could have been explored - but was overlooked by the ECJ - is whether, in similar cases, there might indeed be scope for an analogous interpretation of the repair clause, taking into account the technical requirements involved in reproducing the Audi logo. This approach does not rule out the possibility to apply the limitations provided within trademark laws to spare parts instead, particularly where the trademark serves as an element for fixing a car accessory.

[1032] See *above* section 2.

[1033] *Ford Motor* paras 43-45.

[1034] See Katja Langenbucher, 'Argument by Analogy in European Law' (1998) 57 Cambridge Law Journal 481.

[1035] See Annette Kur, Ersatzteilfreiheit zwischen Marken- und Designrecht, 1 (2016) GRUR International 24. See also Jane C. Ginsburg and Irene Calboli, 'Intellectual Property in Transition: The Several Sides of Overlapping Copyright and Trademark Protection' in Ansgar Ohly and others (eds), *Transition and Coherence in Intellectual Property Law: Essays in Honour of Annette Kur* (Cambridge University Press 2021) <https://www.cambridge.org/core/books/transition-and-coherence-in-intellectual-property-law/ip-overlaps/46CBEB6DC427E0B4E7B1A95A17BE8EE4> accessed 10 January 2024, section 33.3., commenting that 'It seems that in the *Ford* case the Court was focused on the internal order in the system of intellectual property rather than on the essence and aim of this exceptional limitation.'

[1036] See John H. Farrar, 'Reasoning by Analogy in the Law' (1997) 9 Bond L Rev 149, 151.

[1037] See *above* section 2.

However, the AG in her conclusions established *a priori* that there is no space for the limitation under Article 14(1)(c) EUTMR based on the fact that the sign in question in the main procedure might not be understood as an indication of the intended use of the radiator grille, specifically as an accessory or spare part.[1038] The ECJ followed this approach.[1039] Instead, it is considered that the applicability of this limitation should be explored in similar cases, particularly in the light of the objectives of the Right to Repair proposal and in order to be consistent with its objectives. In addition, the applicability of the limitation set out in Article 14(1)(b) EUTMR, which refers to indications relating to the characteristics of the product, should also be considered.

2.1. More Space for the Limitations

In future cases involving the reproduction of OME's trademarks for alternative spare parts, the ECJ should afford greater consideration to the limitations set forth in Article 14(1) letter b) and c) of the EUTMR. In doing so, it should assess the precise circumstances under which these limitations may be applied, with particular focus on the evaluation of the necessity for fair commercial practices.

With regard to the limitation set out in point (c), following the *Gillette* case, which integrates the necessity requirement with the 'indication of intended purpose'[1040], the analysis should consider whether the technical purpose of the spare parts can satisfy the interpretation of the necessity requirement, in addition to that of fair and honest practices, emphasising the informational intent. In other words, the evaluation of necessity should be influenced by determining whether the trademark is crucial to ensuring the proper functionality of the accessory within the automobile context. If the trademark plays an essential role in the installation or operation of the accessory, its presence might be considered necessary to indicate the product's destination. Or, the same result can be achieved by expanding the range of situations in which the use of the trademark might be considered necessary to include also instances in which the sign in question also performs a technical function. In such cases, its reproduction is necessary in so far as it allows to restoration of the appearance of the complex product.

[1038] *Audi* opinion of AG Medina paras 57-59.
[1039] *Audi* para 57.
[1040] *Gillette* paras 39-41.

Moreover, Ricolfi highlights that the legitimacy of using the OME's trademark in the context of limitations relies on principles unrelated to how the subsequent sign is used.[1041] Instead, it depends on the effects that such usage has on the functions carried out by the earlier trademark.[1042] Accordingly, it is possible that using someone else's trademark in similar instances does not cause harm to the interests protected by the trademark owner, and therefore does not constitute infringement.[1043] Such an approach seems in line the ECJ statement in *Opel,* according to which if the relevant public does not perceive the identical sign as an indication of the products' origin from the owner or an economically connected enterprise, its use on toy models by unauthorised third parties does not undermine the essential function of the registered trademark.[1044] Translated in the field of spare parts, it can be argued, as pointed out by Kur, that a trademark which appears on spare parts necessary for repair purposes may be regarded as part of a legitimate reproduction rather than as an indication of commercial origin.[1045]

In this perspective, it should be evaluated whether the OEM's trademark, when reproduced on spare parts, is perceived as an essential feature of the product itself rather than a source identifier, thereby justifying the applicability of Article 14(1)(b) EUTMR. In this context, the trademark becomes a fundamental aspect of the spare part, impacting how consumers perceive and choose between different options available to them.[1046] This can be particularly true especially when the trademark serves a technical function, such as in the assembly of another part of the car. In these instances, the trademark becomes an integral part for the integrity and functionality of the product: its presence becomes crucial for the proper assembly or operation of other components of the automobile, thereby giving it a more technical and functional significance overriding its classic origin function. This would exclude the risk of causing harm to the origin's function of the trademark.

Ultimately, an application of the limitations outlined in Article 14 EUTMR that safeguards the interests of trademark holders while simultaneously preventing their power from establishing a monopoly in the spare parts market aligns with the

[1041] Ricolfi (n 381) section 143.3.
[1042] ibid section 143.3.
[1043] ibid section 143.3.
[1044] *Opel* paras 21-25.
[1045] Kur and Senftleben (n 366) section 6.1.2.3.
[1046] Tischner and Stasiuk (n 447) 40.

underlying rationale of the regulation as derived from ECJ jurisprudence. Particularly, in *Gillette* the ECJ stated that the limitations under Article 14 EUTMR seek to 'reconcile the fundamental interests of trademark protection with those of free movement of goods and freedom to provide services in the common market in such a way that trade mark rights are able to fulfil their essential role in the system of undistorted competition which the Treaty seeks to establish and maintain.'[1047] In this perspective, Ricolfi's position suggesting that atypical uses of the mark may still be considered lawful, even if they do not fall within the list of limitations in Article 14 of the EUTMR, provided they do not impair the functions of the mark, should be endorsed.[1048]

All these reflections seem to lead to a general principle that would apply across all limitations: the use of a trademark should be considered lawful as long as it aligns with the fair and honest business practices clause. This is a crucial general clause that is common to all limitations specified in Article 14 EUTMR, translating into the principle that the use of the trademark should not imply an association between the parties, nor should it negatively impact the reputation or distinctive nature of the mark, discredit, or denigrate it.[1049] In this context, the presentation of the spare part to the public becomes of primary importance, whether the exception stated in letter b) or in letter c) is applied.

However, an extended interpretation of the limitations in question would probably still be challenging in several other respects. First, as highlighted by Ohly, the function theory still applies in the case of the limitations of Article 14 EUTMR. It means that even if the trademark is used in a non-distinctive way, infringement might still be found if it undermines one of the trademark's ancillary functions.[1050] In the case of spare parts, the potential harm to the trademark holder should therefore be carefully assessed in relation to the specific case in question, considering the rights of the holder that might be at risk in concrete terms. This analysis requires distinguishing the relevant public: whether it involves professional retailers or repairers or consumers. It is essential to consider that the former are generally more informed than the latter and therefore less likely to be confused.[1051]

[1047] *Gillette* para 29.

[1048] Ricolfi (n 381) section 143.3.

[1049] Max Planck Institute for Intellectual Property and Competition Law and Munich, 'Study on the Overall Functioning of the European Trade Mark System' (15 February 2011) section 2.265.

[1050] Ansgar Ohly, 'Limitations of Trade-Mark Protection- the New Regime' [2017] AIDA 105 118.

[1051] It has been observed that if the end-users of the spare parts are the consumers they must be able to identify the origin of the part once it has been installed. See Paola A.E. Frassi, 'La Protezione Delle

Moreover, Sarti brings attention to the challenge of aligning the limitations with the expanded protection of trademarks with reputation, as established in prior cases like *L'Oréal*.[1052] In this respect, Di Cataldo's view that the limitations set out in Article 14 of the EUTMR should apply to all marks, regardless of whether they enjoy a reputation or not, as a general rule, must be supported.[1053] Ultimately, he concludes that these limitations should not be interpreted narrowly merely because they are addressed as 'limitations': they are not intended to be exceptions to the general rule, but rather provisions aimed at delimiting the scope of exclusivity.[1054] They should therefore be read in this light.

In addition, if sign in question is a non-'normal' trademark but enjoys the extended protection granted to reputed marks, greater attention should be given to the phrase 'without due cause.' Article 9 of the EUTMR indeed stipulates that the use of a trademark with reputation is unlawful if used 'without due cause.' Di Cataldo emphasises that, although explicitly provided as a negative condition in the regulation, this clause is often disregarded by the Courts, leading to an extensive protection of the scope of exclusivity at the expense of third-party interests.[1055] Di Cataldo then argues that the 'due cause' clause should be interpreted in two main directions: it can be found within the trademark law itself, as in the case of the discussed limitations, or in other laws indirectly related to trademarks.[1056] Therefore, it is worth exploring a potential interpretation of this clause considering the interests of third parties stemming from the Right to Repair Proposal and the Ecodesign Directive. These interests might justify a reduction in the monopolistic powers of a reputed trademark holder in light of the needs to ensure market dynamics.

It follows that if the exception outlined in Article 14(2)(c) EUTMR is intended to limit the monopolistic power of trademark holders against third-party referential uses, encompassing also non-distinctive uses,[1057] the current interpretation of the limitation

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Parti Staccate Di Autovettura Fra Brevetto per Modello Ornamentale e Disciplina Antimonopolistica' (1995) II Rivista di diritto industriale 65,85.

[1052] Davide Sarti, 'Usi non distintivi, usi referenziali e funzionali del marchio' (2019) Riv. Dir. Ind. 547,553.

[1053] Vincenzo Di Cataldo, 'The Trade Mark with a Reputation in EU Law. Some Remarks on the Negative Condition: "Without Due Cause"' (2011) 7 <https://www.orizzontideldirittocommerciale.it/wp-content/uploads/2021/04/14_di_cataldo.pdf>.

[1054] ibid 5.

[1055] ibid 2-3.

[1056] ibid 5.

[1057] Sarti (n 1052) 555.

falls short of achieving this objective, particularly in the context of spare parts. On the basis of these premises, it might be worth considering, in parallel, a more radical solution that would resolve the issue comprehensively, namely the non-registrability of spare parts as trade marks on the basis of bad faith, provided that certain conditions are met.

2.2. Addressing the Root Issue: Non-Registrability Due to Bad Faith

Article 59(1)(b) EUTMR includes bad faith of the trademark's applicant as an absolute ground for invalidity. Accordingly, 'An EU trade mark shall be declared invalid on application to the Office or on the basis of a counterclaim in infringement proceedings […] where the applicant was acting in bad faith when he filed the application for the trade mark.' [1058] Article 4(2)TMD provides that bad faith may constitute not only an absolute ground for invalidity, but also an absolute ground for refusal. Specifically, it provides that 'A trademark shall be liable to be declared invalid where the application for registration of the trademark was made in bad faith by the applicant.' Moreover, it states that 'Any Member State may also provide that such a trademark is not to be registered.'

The provision was for instance implemented in Italy by Article 19(2) of the CPI stating that a trademark may not be registered if the application has been made in bad faith.[1059] There has been a debate on the scope of application of Article 19(2) CPI, considering it as an independent ground for invalidity, applicable beyond the scenarios already covered by grounds for refusal or invalidation based on other provisions.[1060] Particularly relevant for the issues of spare parts, it has been observed that this provision could be applicable precisely in cases of distorted and anti-competitive behaviour, whereby trademarks are registered for the sole purpose of restricting their availability to others, thereby hindering the position of competitors.[1061] It follows that it could constitute bad faith filing if a trademark is registered with a generic anti-

[1058] Article 59 (3) EUTMR then provides for the partial invalidity of a trademark: 'Where the ground for invalidity exists in respect of only some of the goods or services for which the EU trade mark is registered, the trade mark shall be declared invalid in respect of those goods or services only.'
[1059] 'A registration for trademark cannot be obtained if the application was made in bad faith.'
[1060] Vanzetti, Di Cataldo and Spolidoro (n 380) 224-225. See also Giulio Enrico Sironi, 'Commento all'Articolo 21 CPI' in Adriano Vanzetti (ed.) *Codice della proprietà industriale* (n 343) 289 ff.
[1061] ibid.

competitive intent, thus without a genuine intention to use it for its products or services, but rather to prevent its availability to other entrepreneurs in the industry.[1062]

Consistently with this approach, in the leading case *Lindt*[1063] a company filed a legal action to invalidate Lindt's registration of the well-known chocolate bunny shape with a red ribbon as a trademark. They alleged that Lindt had acted in bad faith at the time of the trademark registration. Specifically, they claimed that Lindt was fully aware that competitors were already using the trademark, suggesting that Lindt manipulated the application solely to eliminate competition. The ECJ observed that:[1064]

> [T]he intention to prevent a third party from marketing a product may, in certain circumstances, be an element of bad faith on the part of the applicant [particularly] when it becomes apparent, subsequently, that the applicant applied for registration of a sign as a Community trademark without intending to use it, his sole objective being to prevent a third party from entering the market.

Given that the case concerned a shape trademark, the ECJ has further observed that:[1065]

> [I]n a case where the sign for which registration is sought consists of the entire shape and presentation of a product, the fact that the applicant is acting in bad faith might more readily be established where the competitors' freedom to choose the shape of a product and its presentation is restricted by technical or commercial factors, so that the trade mark proprietor is able to prevent his competitors not merely from using an identical or similar sign, but also from marketing comparable products.

Such a ruling is particularly relevant to address the issue of spare parts registered as shape trademarks. As stated, in the automotive sector certain parts made by third-party manufacturers must replicate the original parts' shape and specifications to ensure compatibility.[1066] However, if the specific shape of those parts is protected by IP rights, it limits the availability of alternatives in the market.

In this context, it should be emphasised that trademarks serve as a fundamental tool to ensure market transparency and the effective operation of markets.[1067]

[1062] Vanzetti, Di Cataldo and Spolidoro (n 380) 225.

[1063] Case C-529/07 *Chocoladefabriken Lindt & Sprüngli A v Franz Hauswirth GmbH* [2009] ECLI:EU:C:2009:361.

[1064] ibid paras 43-44.

[1065] ibid para 50.

[1066] Beldiman and others (n 714) 674-675.

[1067] Kur (n 369) section 1.2.3.

However, trademark protection should be carefully balanced with other interests, particularly the need for fair competition within the market.[1068] As highlighted by Annette Kur, achieving a balanced approach is an inherent aspect of trademark regulations.[1069] This implies that the conferment of a trademark right should not inherently provide a competitive advantage beyond establishing an exclusive connection with a sign used to distinguish goods and services in the market and build a reputation.[1070] This balance is especially crucial for trademarks like the shape trademark, which, unlike conventional ones, has limited availability.[1071] Consequently, their protection entails the potential to create obstacles to competition.[1072] It is in this situation that the law plays a fundamental role.[1073]

The ECJ subsequently broadened the instances in which bad faith can be alleged against a trademark application to encompass scenarios where the application is not connected to a third-party's prior use, as in *Lindt* case, but is part of the trademark owner's dishonest practices.[1074] In *Kokoton*[1075] the ECJ indeed held that:[1076]

> [T]he absolute ground for invalidity […] applies where it is apparent from relevant and consistent indicia that the proprietor of an EU trade mark has filed the application for registration of that mark not with the aim of engaging fairly in competition but with the intention of undermining, in a manner inconsistent with honest practices, the interests of third parties, or with the intention of obtaining, without even targeting a specific third party, an exclusive right for purposes other than those falling within the functions of a trade mark, in particular the essential function of indicating origin.[1077]

[1068] ibid.

[1069] ibid.

[1070] ibid.

[1071] Annette Kur, Thomas Dreier, and Stefan Luginbuehl, *European Intellectual Property Law. Text, Cases and Materials* (2nd edn, Elgar 2019) 183.

[1072] ibid.

[1073] ibid.

[1074] Joanna Sitko, 'The Significance of Bad-Faith Premises for the Strategy of Trade Mark Protection in the Light of the Latest EU Case-Law' (2023) 54 IIC - International Review of Intellectual Property and Competition Law 1381.

[1075] Case C-104/18, *Koton Mağazacilik Tekstil Sanayi ve Ticaret AŞ v. European Union Intellectual Property Office (EUIPO)* [2019] ECLI:EU:C:2019:724.

[1076] ibid para 46.

[1077] Attorney General Kokott highlighted the need to evaluate bad faith using both objective and subjective criteria. Objectively, it is essential to prove that despite meeting EU regulations, the intended goal was not attained. Subjectively, it must be shown that the main purpose of those actions is to gain

Subsequently, in the *Monopoly* case, the EU General Court extended the considerations outlined in the *Lindt* case for establishing bad faith similar instances.[1078] This encompassed: (i) the knowledge that competitors were already using similar marks; (ii) the that the use of those marks enjoyed a degree of protection under competition or trademark law; (iii) the intention to prevent the continued use of those marks, and (iv) the reputation and protection enjoyed by the trademark applicant's own mark.[1079] Additionally, it included: (v) the origin of the contested sign; (vi) its use since its creation, the commercial logic underlying the filing of the application for registration of that sign as an EU trade mark, and (vii) the chronology of events leading up to that filing.[1080] These new criteria, added to the previously rather vague ones outlined in the *Lindt* case, aim to provide a more comprehensive and detailed framework but fail to address one of the main obstacles: the lack of a clear regulatory definition of bad faith.

Annette Kur then distinguishes applications filed in bad faith into two categories: those by the applicant aiming to appropriate a distinctive sign already in use by a third party and those seeking an unjustified monopoly not specifically targeting an individual but rather obstructing overall competition.[1081] The second category includes situations whereby the successful registration of the trademark through dishonest motives would secure the holder a monopoly position, leading to a distortion of competition.[1082] Within this second category, there appear to be cases where the registration of a trademark could have a negative impact on third parties because the applicant intends to use the exclusive rights in an anti-competitive manner, mainly to hinder competitors, which is contrary to the very essence of trademark rights as well as professional honest practices.[1083] The act of submitting multiple national registration applications for numerous trademarks, whether to establish prior national priority over others seeking

an unfair advantage. See Case C-104/18 Koton Mağazacilik Tekstil Sanayi ve Ticaret AŞ v. European Union Intellectual Property Office (EUIPO) [2019] ECLI:EU:C:2019:287 opinion AG Kokott para 31.

[1078] ibid.

[1079] *Lindt* para 61.

[1080] *Monopoly* para 38.

[1081] Kur (n 366) section 9.5.1.2.2.

[1082] ibid.

[1083] Aldo Laudonio and Tobias Malte Müller, 'La Mala Fede Nella Registrazione Dei Marchi' (2012) Riv. Dir. Ind. 40, 53.

similar signs or to avoid proving the sign's actual use after 5 years from registration, falls within this category.[1084]

There is a further distinction that should be made and which relates to the motives behind the intention to register a trademark in bad faith. In fact, on the one side, there are those who apply for registration with the intention of actively using the mark in trade, as seen in the *Lindt* case, in order to prevent competitors from continuing to use it. On the other side, there are those who seek to register the mark without any intention of making use of it on the market, but solely to prevent others from using it.

A notable example is the case of *Banksy*, the famous street artist, who applied for the registration of the 'flower thrower' as a trademark in order to circumvent copyright protection, considering it to be something 'for losers', thus seeking indefinite protection through trademark application.[1085] The applicant sought invalidity of a trademark based on bad faith (Article 59(1)(b) EUTMR) and absence of intention to use the mark commercially (Article 59(1)(a) EUTMR). They argued that the proprietor lacked genuine intent to use the image as a trademark, registering it solely to sidestep other IP rights.[1086] The EUIPO declared the trademark invalid due to the proprietor's initial lack of commercial intent, followed by a subsequent attempt to circumvent trademark laws, ultimately aiming to secure exclusive rights beyond the genuine scope of commercial use.[1087] Furthermore, in the *Sky* case,[1088] the ECJ ruled that 'trademark application made without any intention to use the trade mark in relation to the goods and services covered by the registration constitutes bad faith, within the meaning of those provisions, if the applicant for registration of that mark had the intention either of undermining, in a manner inconsistent with honest practices, the interests of third parties, or of obtaining, without even targeting a specific third party, an exclusive right for purposes other than those falling within the functions of a trademark.[1089] These last two cases must be distinguished from *Lindt.* It appears that seeking a trademark without intending to use it in the market creates a conflict, leading to a seemingly contradictory outcome - a registration that, in essence, does not qualify as a true

[1084] See Case T-663/19, *Hasbro, Inc., v European Union Intellectual Property Office* (EUIPO) [2021] ECLI:EU:T:2021:211 in (2021) Giur.Ann.Dir.Ind. 1455 ff ('Monopoly').
[1085] *Full Colour Black Limited v Pest Control Office Limited* (Case Cancellation No 33843 C) [2020] EUIPO.
[1086] ibid 3.
[1087] ibid 15.
[1088] Case C-371/18 *Sky plc v. Sky UK Ltd* [2020] ECLI:EU:C:2020:45.
[1089] ibid para 88.

registration. Nevertheless, Luxembourg judges consider even these situations as potential instances of registering a trademark in bad faith. It is therefore necessary to define what constitutes 'bad faith.'

As a general principle, good faith is presumed.[1090] This means that, *ex post*, the trademark, if registered, continues to be effective and used in the market unless challenged, thereby constraining competitive options until proven that that mark was registered in bad faith.[1091] *Ex ante*, for those national rules that consider bad faith as a hypothesis of an absolute ground for refusal, the competent office can intervene to enforce the impediment if bad faith is evident already from the application.[1092]

Yet, the absence of a consistent definition of bad faith,[1093] along with the lack of a definitive list of behaviours falling under this category in cases of trademark registration, poses a challenge. As discussed, the ECJ has established some criteria for its assessment,[1094] but its determination left to national judges, leading to varying definitions shaped by different legal traditions.[1095] Subjective intent guides bad faith in Italian trademark law, yet the absence of a clear regulatory framework results in inconsistent definitions influenced by case-specific factors.[1096] In German case law, the critical line for establishing bad faith is when the applicant's intention, upon objectively assessing case-specific circumstances, primarily aims to hinder competitors rather than enhance their competitive stance.[1097]

Bad faith must be evaluated from both subjective and objective points of view. Attorney General Sharposton in *Lindt* case observed that defining bad faith in trademark applications should not be confined to specific situations but should

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[1090] See 'Bad Faith in Relation to Trademarks' (*European Commission* 28 May 2021) https://intellectual-property-helpdesk.ec.europa.eu/news-events/news/bad-faith-relation-trademarks-2021-05-28_en accessed 12 December 2023.

[1091] Tamar Khuchua, 'Facing the "Bad Faith": The Challenges and Tools to Combat the Blocking Strategies of the Firms in the EU Trade Mark Law' (2020) 3 Nordic Journal of European Law 1, 107,124.

[1092] In this sense, with reference to Italian law, Ricolfi (n 381) section 35.3.

[1093] This absence had already been noted in the Max Planck study of 2011. See Max Planck Institute's Study on the Overall Functioning of the European Trade Mark System 84. On the concept of 'bad faith' within the EU see also Michal Bohaczewski, 'Abusive Trade Mark Filings: Some Recent Applications of the Concept of Bad Faith in the Case Law of the Court of Justice and General Court' (2023) 54 IIC - International Review of Intellectual Property and Competition Law 1203.

[1094] *Lindt* para 61.

[1095] See Case C-371/18 *Sky plc v. Sky UK Ltd* [2020] ECLI:EU:C:2020:45 in (2020) in *Giur.Ann.Dir.Ind*. 1261 ff.

[1096] Laudonio and Müller (n 1083) 47 f.

[1097] ibid 69 and caselaw cited.

consider the applicant's subjective motivation, often evaluated using objective criteria.[1098]

Objective bad faith imposes absolute duties of conduct on market players. One example of these absolute duties is the duty to act in compliance with fair competition rules, which can be summarised in the general statement that in competitive relationships everyone must respect each other.[1099] This rule is not vague and it does not merely result in a good policy duty, but rather, it finds explicit normative acceptance: it is referred to 'honest practices in industrial or commercial matters' within both the TMD[1100] and the Paris Convention.[1101] This rule comes closest to the concept of absolute bad faith as an absolute bar to trademark registration, i.e., when the application for registration goes against fair and commercial practice.

In the case of spare parts, an objective definition of bad faith translates into an absolute obligation to adhere to fair and honest practices in industrial or commercial matters. It follows that applying for registration of a spare part as a trademark solely to prevent third parties from trading compatible parts would indeed be considered a registration made in bad faith and subject to refusal by the EUIPO.

3. A More Flexible and Consistent Interpretation of the Exhaustion

As mentioned above, the doctrine of exhaustion is a principle that cuts across all industrial property rights. Likewise, the rule of its exclusion for legitimate reasons is inherent in the principle of exhaustion[1102] and applies to both trademarks and patents, finding its regulatory basis within the EU respectively, in Article 15(2) of the EUTMR and Article 29 of the UPCA. For both categories of IP rights, the limitations in its current interpretation concerning the manipulation of IP-protected products and their

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[1098] Case C-529/07, *Chocoladefabriken Lindt & Sprüngli A v Franz Hauswirth GmbH* [2009] ECLI:EU:C:2009:148 opinion of AG Sharpston para 60.

[1099] See Carlo Emanuele Mayr, 'La Malafede Nella Registrazione Come Marchi Delle Opere Dell'Ingegno' (1993) AIDA 63,76, aligning with a definition of bad faith in an objective sense, identifying it as dishonest or unfair conduct causing harm to others.

[1100] Article 14(2) TMD.

[1101] 'Paris Convention for the Protection of Industrial Property' (first published 1883, 20 March 1883), Article 10*bis.*

[1102] Joanna Sitko, 'The Significance of Bad-Faith Premises for the Strategy of Trade Mark Protection in the Light of the Latest EU Case-Law' (2023) 54 IIC - International Review of Intellectual Property and Competition Law 1381.

subsequent circulation have been highlighted as conflicting with the objectives pursued by the European legislator in terms of circularity and the implementation of R activities.

As noted by Galli, these legitimate reasons against exhaustion following modification of a product after it has been placed on the market must obviously be determined in the light of the specific subject matter of the rights involved.[1103] In the case of trademarks, they should be evaluated on the basis of their communication function, while in the case of patents, they should be assessed in relation to their function as incentives to innovate resulting from the exclusivity granted.[1104]

However, some authors have expressed reservations about equating the assessment of exhaustion for patents and trademarks, overlooking the differences between the two sectors that would warrant a differentiated regime.[1105] Moreover, in the context of the evaluation of the legitimate reasons one could ask whether they should be interpreted in the same way in the context of cross-border trade (as a limit or exception to the exhaustion principle with regard to the re-importation of the product into the country of origin) and in the domestic context, where the issue of product repair arises.

3.1. Trademarks and Repair: Towards a (Re)-Evaluation of the Function Theory

With reference to trademarks, it has been assessed by courts and part of the scholars that the principle of exhaustion does not apply when products are modified or altered and then reintroduced into commerce by an unauthorised third party.[1106] However, as extensively discussed, it is not always straightforward to establish which modifications or alterations justify the application of the aforementioned exception to exhaustion.[1107]

With particular reference to the repair of a trademark-protected product, the cited EU case-law appears to tend to exclude the applicability of the exhaustion based on mostly blurred criteria, such as ‘the essential character of the invention' or the repair ‘of primary relevance’, as opposed to minor repairs or ‘of secondary relevance.’ Moreover, where the EU courts did not found harm to one of the primary origin function

[1103] Galli (n 741) 9.
[1104] ibid.
[1105] See Macrì (n 638) 990.
[1106] Ricolfi (n 381) section 152.
[1107] ibid.

of the trademark, it has recognised that one of its secondary functions - related to investment, advertising, and communication - has been compromised.

This framework raises at least three considerations. The first consideration revolves around the criteria used to define the ‘essential character of the product’ and the elements distinguishing between repairs of ‘secondary’ or ‘primary’ significance, which are entirely left to the discretion of national judges. A product undergoing repair inevitably undergoes modifications, either through restoration to its original state or by addressing faults and malfunctions to ensure proper functioning. It follows that a strict and literal interpretation of the exhaustion has the potential to circumvent any manipulation of a trademark-protected by third parties. This irrespective of the nature of the activity involved - whether referred to as repair or reconditioning/refurbishing - focusing instead on the effects these activities have on the original product. Such an approach runs contrary to the very principle of exhaustion, whether we support both the theory of trade certainty or the rewards theory. The trade certainty theory suggests that exhaustion ensures predictable product circulation by limiting the IP owner's control. This prevents abusive behaviours that might disrupt smooth trade. A narrow interpretation of exhaustion might impede further product commercialisation, conflicting with the goal of trade certainty. The second theory implies that the patent holder, and the IP holders in general, has already gained monopolistic profit from the initial product introduction. Therefore, imposing additional restrictions on product circulation after the exclusivity period seems unjustified under this theory, as the benefits or profits from exclusivity have already been obtained.

The second observation involves the function theory’s role in the assessment of exhaustion's applicability. In essence, as noted by Ricolfi, in evaluating the legitimate reasons the ECJ basically ‘recycle’ the criteria used to evaluate infringement.[1108] This is probably why national judges face uncertainty in assessing the relationship between Article 9 and Article 15 of the EUTMR when evaluating the applicability of exhaustion.[1109] Ultimately, Annette Kur clarified that ‘the final outcome does not depend upon which route is taken’ - whether the conflict is analysed through the double identity test or the lenses of the exhaustion doctrine.[1110] That does not change the fact that, as observed by Spolidoro, the ‘expanded function theory’ is essentially an

[1108] Ricolfi (n 381) section 152.
[1109] See *Automotive products v. Valeo.*
[1110] Kur (n 371) 229.

unnecessarily complicated rule[1111] as it will be demonstrated, particularly in relation to the repair sector.

The third observation is related, precisely, to the function theory and extends beyond the repairs. The functional theory, as elaborated by the ECJ, enables the inclusion of every interest, even those less deserving of protection, within the said 'function of the trademark.'[1112] Spolidoro notes that this approach grants the trademark owner extensive leeway, overshadowing interests beyond those equally relevant to the trademark's distinctive function.[1113] These include antagonistic interests (those of competitors)[1114], interests partially coinciding with the owner's (consumer interests), and notably, the collective interest.[1115] This holds particularly true within the repair sector, where this hyper-protection of the mark comes at the expense of the owner's competitors, encompassing retailers of used products and individuals exercising repair rights. This affects consumers, limiting their access to alternative services and refurbished products at lower prices than the originals. Ultimately, it impacts the collective interest, which undoubtedly encompasses also environmental concerns.

In *Soda Setram* the Advocate General Pitruzzella, at the beginning of his opinion, made reference to the Circular Economy Action Plan, as part of 'the context in which this preliminary reference arises', which it provides the ECJ 'with the opportunity to clarify the conditions under which the necessary reconciliation must take place between the legitimate interests of these trademark owners and the interests of third parties who reuse and resell their products.'[1116] This reconciliation of interests becomes crucial in light of the recent policy documents of the EU on circular economy designed to promote the reparation, reuse and recycling of products. Yet, the considerations of the Advocate General were not reflected in the ECJ's decision.

[1111] Marco Saverio Spolidoro, 'L'unitarietà Del Marchio Europeo e i Suoi Limiti' (2017) AIDA 147,160.

[1112] Ibid. Mangini referred to the 'spiritualisation of the trademark', highlighting how trademarks are losing their distinctive role and shifting toward an intangible or spiritual value. This transition positions the mark less as a source identifier and more as a 'client collector.' See Vito Mangini, 'Logo, No Logo? Ovvero La Perduta Innocenza Della Proprieta' Intellettuale' in *Studi di diritto industriale in onore di Adriano Vanzetti* (Giuffrè Editore 2004) vol II, 927, 934.

[1113] Ghidini suggested that the expansion of the legal monopoly due to the extension the contents of exclusive rights arising from trademark protection has coincided with a reduction of competition. See Gustavo Ghidini, *Profili Evolutivi Del Diritto Industriale - Proprietà Intellettuale e Concorrenza* (Giuffrè 2011) 15 ff.

[1114] Spolidoro (n 1111) 160 f.

[1115] ibid.

[1116] *Soda Stream* opinion of AG Giovanni Pitruzzella, para 1.

Similarly, at national level the sustainability arguments raised by the independent repairer in the case involving the import of phones bearing Apple logo were overlook by the Norway Supreme Court.[1117]

In trademark infringement cases, sustainability arguments should play a role in balancing the prerogatives of the right holders and socio-economic interests, also encompassing circularity goals.[1118] The imperative to integrate principles of the circular economy and sustainability does not stem from theoretical or idealised concepts but is substantiated by tangible policy and legislative frameworks[1119], encompassing initiatives like the Ecodesign and the Right to Repair Proposal. Upon adoption, these frameworks will necessitate a balanced assessment considering legal aspects alongside socio-economic factors. However, as highlighted by Calabrese in a recent article, the current approach focusing on rigidly protecting the rights of the trademark owner clashes with the objectives pursued by the new paradigm of the circular economy.[1120] It is further believed to conflict with the principle of free movement of goods that the exhaustion principle itself aims to achieve, as it effectively creates barriers to further circulation of products legitimately placed on the market.

As a general principle, the ECJ stated that the possibility for the trademark proprietor to oppose further commercialisation 'must be interpreted narrowly', considering that the proprietor has already realised 'the economic value inherent in the trademark in relation to those goods.'[1121] Article 15 of the EUTMR should therefore be interpreted to include repair, as well as the R activities, under the umbrella of the

[1117] See *Huseby*.

[1118] In this sense, Pihlajarinne (n 582) 10: 'In general, traditional property right perspectives seem to guide the courts towards having a tendency to follow old traditions rather than open their argumentation for sustainability. It seems that the courts are not inclined to use arguments relating to sustainability in their interpretations of repair and reconstruction.'

[1119] See e.g. Recital 21 of the Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (Text with EEA relevance) [2016] O JL 157/1, according to which measures, procedures and remedies intended to protect trade secrets 'should not jeopardise or undermine fundamental rights and freedoms or the public interest, such as public safety, consumer protection, public health and e*nvironmental protection*, and should be without prejudice to the mobility of workers.'

[1120] Bernardo Calabrese, 'Economia Circolare e Principio Di Esaurimento: Una Sfida "Sostenibile" per La Proprietà Industriale?' (2023) Orizzonti del Diritto Commerciale 461, 477.

[1121] Case C-324/09, *L'Oréal SA, Lancôme parfums et beauté & Cie, Laboratoire Garnier & Cie, L'Oréal (UK) Limited v eBay International AG eBay Europe SARL, eBay (UK) Limited* [2010] ECLI:EU:C:2010:757 opinion of AG Jääskinen para 73.

exhaustion, both when the modified products are returned to the consumer and when they are resold and continue circulating in the market.

In this context, the non-removal of the owner's trademark by the third party carrying out the repair would ensure that the primary function of the trademark as a guarantee of origin remains unaffected. Indeed, it has been outlined in the previous section that the removal of the trademark is not always a viable option, as the ECJ has established that it may constitute a use in the course of trade that would undermine the primary function of the trademark as a guarantee of the origin.[1122] Moreover, certain national laws include the removal of the trademark in certain circumstances among the activities expressly prohibited.[1123] In addition to that, it has been highlighted that it is not always possible to remove the trademark for technical or functional reasons.[1124] Therefore, the addition of the third party's sign to the trademark holder's should be assessed.

In this perspective, Ricolfi notes affixing the third party's trademark to the product represents a positive duty of loyalty to the trademark owner and may sometimes materialise as a duty to distinguish the services from those of the trademark owner.[1125] In this sense, it could be argued that the proprietor's mark is being used in an atypical way, namely in a descriptive manner, rather than in its traditional distinctive function. In this respect, Di Cataldo observes that, in the absence of the third-party atypical use, there may be the risk that the proprietor's mark is indeed be perceived as fulfilling a distinctive function indicating the origin of the product.[1126] Calabrese further observes that co-branding could protect the quality function of the trademark owner's brand by making the third party responsible for potential defects in the repaired product.[1127] In *Viking Gas*, the Advocate General Kockott observed that Article 4 of Directive 85/374/EEC[1128] concerning liability for defective product requires the injured party to prove the defect and the causal link between the defect and the damage.[1129] The third

[1122] *Portakabin.*
[1123] See *above* section 3.
[1124] See *above* section 3.
[1125] Ricolfi (n 381) section 142.3.
[1126] Vincenzo Di Cataldo, *I Segni Distintivi* (2nd edn, Giuffrè Editore 1993) 128.
[1127] Calabrese (n 1120) 475.
[1128] Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products [1985] OJ L 210/29.
[1129] *Viking Gas* opinion of AG Kockott para 27.

party would be liable for any damage caused to the defective product by the repair.[1130] Furthermore, the repaired product is not the same as the original, so consumers may expect a slightly lower quality from an item that has undergone modifications, that may eventually result also in reduced performance. However, this does not automatically imply that the trademark's quality function will be jeopardised, as long as consumers are able to recognise that the repair has been carried out by an unaffiliated third party.

In the context of reselling used and worn products, noted that buyers have different expectations compared to new items.[1131] They understand that these products do not come directly from the manufacturer and that their value may have decreased due to previous use.[1132] As a result, purchaser will not attribute usage-related defects to the OEM.[1133] It is believed that similar considerations should apply even if the product has undergone repairs, as long as buyers are aware they are purchasing a repaired product.[1134]

From this standpoint, alongside the repairer's mark, a disclaimer could be added to offer details about the entity performing the repair while confirming no commercial association with the trademark owner. This approach could safeguard against harm to both the primary and secondary functions of the trademark.[1135]

Notably, the way the public perceives trademarks and signs is the pivotal factor in determining whether infringement has occurred.[1136] The risk of confusion must be assessed in relation to the 'average consumer', namely the consumer 'reasonably well-informed and reasonably observant and circumspect.'[1137] However, such a general principle should be tailored to the context and the products or services concerned.[1138] For example, it is estimated that the average consumer pays more attention when

[1130] Calabrese (n 1120) 475. Conversely, Tonon argues that in cases of repair, as the product being marketed is still the one originally placed on the market by the owner, the causal link with the manufacturer would remain. Danilo Tonon (n 554) 120.
[1131] Auteri (n 598) 59-60.
[1132] ibid.
[1133] ibid.
[1134] Yet, Auteri explicitly states that the retention of the proprietor's trademark is only legitimate if the buyer is aware that he is buying a used product and if the product has not been altered in its essential elements. See ibid.
[1135] In this sense also Kur (n 371) 234.
[1136] Pier Luigi Roncaglia and Giulio Enrico Sironi, 'Trademark Functions and Protected Interests in the Decisions of the European Court of Justice' (2011) 101 The Trademark Reporter 147, 165.
[1137] Case C-342/97 *Lloyd Schuhfabrik Meyer & Co. GmbH contro Klijsen Handel BV* [1999] ECLI:EU:C:1999:323 para 26.
[1138] Ricolfi (n 381) section 43..

buying durable goods, such as electronics, than when buying fast-moving consumer goods.[1139] With particular reference to the aftermarkets, the ECJ in both *SodaStream* and *Viking Gas* held that one of the criteria to be taken into consideration in the evaluation of the new labelling on the public's perception is whether consumers are used to having refilled containers by third entities.[1140] In *Portakabin*, the ECJ evaluated the sale of second-hand items bearing a trademark as a familiar practice among consumers.[1141] In the case of repairs, the evaluation should consider that consumers are increasingly becoming accustomed to third-party repair practices and the purchase of second-hand goods.[1142] If the market widely acknowledges the sale of second-hand or repaired goods, consumers are less likely to confuse such products with new or original ones. It is expected that the adoption of the new Ecodesign Proposal, aimed at improving product durability and spare parts availability, will raise consumer awareness, while the Right to Repair Proposal, targeting reduced barriers to repair, will further impact consumers' perception of repaired, recycled and remanufactured products, ultimately influencing also consumers behaviours.[1143]

If there is no likelihood of confusion, there is also no risk of association, as the latter is part of the likelihood of confusion.[1144] However, commercial association seems to be the greater risk in the aftermarket sector, as consumers might mistakenly believe that repair services or refurbishment were carried out by a business commercially linked to

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[1139] ibid.

[1140] *SodaStream* para 48; *Viking Gas* para 40.

[1141] *Portakabin* para 94.

[1142] See Glen Cardoza, 'Refurbished iPhone Volumes Grew 16% YoY Globally in 2022 (*Counterpoint*, 24 April 2023) <https://www.counterpointresearch.com/insights/apple-refurbished-smartphone-volumes-grew-16-yoy-globally-in-2022/> accessed 29 November 2023; James Roberts, 'Used-Car Sales Grow in Four of Europe's Big Five Markets' (*Autovista24*, 23 August 2023) <https://autovista24.autovistagroup.com/news/used-car-sales-grow-europes-big-five-markets/> accessed 29 November 2023; Subhrojit Mallick, 'As Demand for Refurbished IT Hardware Surges, Laptop Companies Click on Reboot Plan to Sell Used Devices', *The Economic Times* (22 October 2023) <https://economictimes.indiatimes.com/industry/cons-products/electronics/asus-opening-more-exclusive-stores-hp-ties-up-with-certified-partners-to-sell-such-old products/articleshow/104614841.cms> accessed 29 November 2023.

[1143] See Aaron Perzanowski (ed), 'Repair and Intellectual Property', *The Right to Repair: Reclaiming the Things We Own* (Cambridge University Press 2022) 361, 379.

[1144] Jeroen Muyldermans and Paul Maeyaert, *Likelihood of Confusion in Trade Mark Law: A Practical Guide to the Case Law of EU Courts* (Wolters Kluwer 2019) section 2.03. See also Case C-251/95 *SABEL BV v Puma AG, Rudolf Dassler Sport* [1995] ECLI:EU:C:1997:221 opinion AG Jacobs para 47: '[T]the concept of confusion is not limited to confusion in the sense that a consumer mistakes one product for another, but extends also to the other types of confusion', including the likelihood of association.

the trademark owner. Similarly, they might assume that the repaired or refurbished product originates from the OEM or an authorised retailer. This applies to advertising practices, both with reference to repair services and the resale of used products.[1145] Therefore, the disclaimer, in addition to the third-party trademark, would serve as a tool to exclude the connection in consumers' minds between the third party's sign and the entity producing or supplying the goods or services.[1146]

With regard to the ancillary advertising function, as reflected in the cases discussed and highlighted by Ricolfi, the problem arises from the potential risk of harm to the legally protected advertising function even in cases of undue advantage derived from the distinctive character and the reputation, and therefore in the absence of harm to the corresponding interests of the proprietor.[1147] However, this does not establish an absolute principle, but requires a balancing of the interests involved in each specific case. Thus, accepted uses should include not only descriptive uses of the mark, as in the advertising of repair services, but also scenarios where a 'valid reason' supports the third party use of the trademark.[1148] Such reasons may be found in repair cases under the freedom of economic initiative and the openness of markets to competition.

In conclusion, if the functions of the trademark are not impaired, the doctrine of exhaustion should apply. The addition of a disclaimer may help to reach this conclusion by excluding both trademark counterfeiting and potential unfair competition claims. Indeed, in countries such as Italy, where judges are more inclined to find unfair competition on the basis that leaving the owner's trademark unchanged constitutes an appropriation of the benefit derived from the trademark, the disclaimer would mitigate any risk if the trademark is not removed but consumers are informed of the product manipulation.

However, this requirement should not be too burdensome for the third-party repairer and should correctly balance the duty to inform consumers and communication needs. Therefore, the disclaimer should contain only the information which is strictly necessary for the circulation of the product: it should be concise, taking into account the need for effective communication, which requires particular *brevitas*.

[1145] See *above* section 3.

[1146] On the risk of association see Case C-252/07 *Intel Corporation Inc. v. CPM United Kingdom Ltd*. [2008] ECLI:EU:C:2008:655 para 29.

[1147] Ricolfi (n 381) section 136.

[1148] ibid.

For example, the disclaimer cannot be expected to state precisely which parts of the product may have been replaced, as this would be contrary to the good practices of commercial communication.

Ultimately, it should be emphasised that that the principle of exhaustion is currently under scrutiny from various perspectives other than those examined in this study. For instance, Di Cataldo highlighted its limitations in the pharmaceutical sector, especially when it comes to the circulation of unlabelled unpackaged products or the circulation of components rather than the entire final product – such as bulk drugs and active ingredients.[1149] Di Cataldo's analysis suggests that the continuous evolution of trade in Europe necessitates an ongoing evolution of rules capable of addressing new issues.[1150] These considerations undoubtedly apply to the challenges exhaustion faces in the domain of products' repair. This insight might imply the necessity of reevaluating its overall scope.

4. Patents and Repair: A Throwback of the 'Doctrine of Equivalence'?

The lack of clarity surrounding the boundaries of the doctrine of exhaustion also extends to patents, generally resulting in the dichotomy of repair (permissible) and reconstruction (prohibited). Specifically, it has been established that the repair, including replacement of parts is allowed, as far as it does not constitute the manufacturing of an essential part of the invention. [1151]

At the time, Marchetti had already highlighted the inadequacy of the criterion that distinguishes lawful repair from unlawful reconstruction relying on the assumed implementation of the 'inventive idea.'[1152] Particularly, he noted that even an ordinary repair, which may involve the disassembly and reassembly of the invention, or the replacement of some non-patented parts, could amount to the process of

[1149] Vincenzo Di Cataldo, 'Trade Mark Rights and Parallel Imports Vis-à-Vis the Never-Ending Evolution of the Behavior of Firms: Transition and Coherence Put to a Test' in Niklas Bruun and others (eds), *Transition and Coherence in Intellectual Property Law* (1st edn, Cambridge University Press 2021); availabe as integrated version in Vincenzo Di Cataldo, 'Importazioni Parallele Di Farmaci Confezionati, Farmaci Sfusi, Principi Attivi. Vale Anche in Questi Casi Il Principio Di Esaurimento Del Marchio?' [2022] Giurisprudenza Commerciale 20.

[1150] ibid 30.

[1151] Agostino Ramella, *Trattato Della Proprietà Industriale* (2nd edn, 1927) 214.

[1152] Marchetti (n 619) 153.

'implementation the inventive idea.'[1153] Such approach seems to be rooted in an ontological-spiritualistic perspective of invention, centered around the abstract notion of the 'product of the spirit', which lacks strong persuasiveness. More importantly, it introduces a certain level of uncertainty regarding third-party activities, reminiscent of the theory of equivalents.

Notably, the doctrine of equivalents is a principle developed in common law that allows courts to extend the scope of a patent beyond its literal claims.[1154] However, the precise delineation of this doctrine remains a topic of strong debate due to its lack of a clear normative foundation.[1155] Traditionally, the doctrine of equivalents has been justified as a means to prevent individuals from circumventing patent infringement by exploiting the same inventive concept underlying the patent making minor alterations to the technology described in the claims.[1156] In particular, the doctrine of equivalents requires to determine whether the third party has copied the essential elements of the patented invention.[1157] Guglielmetti's examination of the historical backdrop and confines of this doctrine sheds light on legislative endeavours aimed at reconciling the rights of patent proprietors while defining these rights for the broader societal benefit.[1158] Nonetheless, the allowance for interpretations extending beyond literal claim language introduces ambiguities for third parties' activities.[1159]

[1153] ibid. Based on these criteria, the author proposes a shift in approach, distinguishing between so-called 'typical' uses of the patented product and 'atypical' ones, which may justify action by the patent holder. The latter category would encompass activities that result in a different or greater utility compared to that for which the monopoly price was initially established. According to Marchetti, these would include repair activities whose cost exceeds the monopoly price reasonably recoverable throughout the average lifespan of the asset. See ibid.

[1154] Michael J. Meurer & Craig Allen Nard, 'Invention, Refinement and Patent Claim Scope: A New Perspective on the Doctrine of Equivalents' (2005) 93 Geo LJ 1947, 1948-1949. See also John R. Allison & Mark A. Lemley, 'The (Unnoticed) Demise of the Doctrine of Equivalents' (2007) 59 Stan L Rev 955.

[1155] Meurer & Allen Nard (n 1168) 1948.

[1156] ibid. See also Vanzetti, Di Cataldo and Spolidoro (n 380) 460–461 and Allan M Soobert, 'Analyzing Infringement by Equivalents: A Proposal to Focus the Scope of International Patent Protection' (1996) 22 Rutgers Computer & Tech. L.J 189, 225.

[1157] Vanzetti, Di Cataldo and Spolidoro (n 380) 460–461.

[1158] Giovanni Guglielmetti, 'La Contraffazione Del Brevetto per Equivalenti' (2000) *Riv. Dir. Ind.* 112.

[1159] ibid. In particular, Guglielmetti draws this interpretation from the combined reading of Article 69 EPC, stating that 'The extent of the protection conferred by a European patent or a European patent application shall be determined by the claims. Nevertheless, the description and drawings shall be used to interpret the claims', and the Protocol on the Interpretation of Article 69 EPC, according to which 'Article 69 should not be interpreted as meaning that the extent of the protection conferred by a European patent is to be understood as that defined by the strict, literal meaning of the wording used in the claims, the description and drawings being employed only for the purpose of resolving an ambiguity found in the claims. Nor should it be taken to mean that the claims serve only as a guideline and that the actual

Moreover, the distinction made by Guglielmetti in the field of equivalence between the overarching German approach, which seeks to ensure effective protection for the patent applicant, and the Anglo-Saxon approach, which prioritises a clear delimitation of the scope of the patent in the interest of third parties,[1160] also seems to reflect the approaches taken by different jurisdictions to repair and reconstruction issues.

It follows that similar considerations related to the protection of third parties raising by the interpretation of doctrine of equivalents are also shared in connection with the repair. Both present considerable challenges in delineating the scope of patent protection and in defining the concept of 'inventive step', which often goes beyond the literal language of patent claims. The concern that the abstract concept of the inventive idea, which might have a broad definition of equivalence, could encompass inventions unrelated to the assumed 'inventive idea' has resulted in a restricted application of the doctrine of equivalence.[1161] While with distinct nuances, the necessity to safeguard third parties should also be taken into account within the repair sector, particularly when evaluating infringement in cases involving the replacement of non-patented components.

4.1. Towards a Better Balance of Interests

The starting point is to distinguish between the patented organism as a whole considered as a technological unit and the individual components within machine[1162] These components can either represent an original solution, thereby expressing the inventive idea.[1163] If so, their replacement may constitute direct infringement, whereas their supply may represent indirect infringement.

Indirect infringement is a form of advanced protection that was born with the scope to go beyond the norm. It allows a combined patent holder to enforce their rights against the supplier, avoiding the need to pursue a series of companies for direct

protection conferred may extend to what, from a consideration of the description and drawings by a person skilled in the art, the patent proprietor has contemplated. On the contrary, it is to be interpreted as defining a position between these extremes which combines a fair protection for the patent proprietor with a reasonable degree of legal certainty for third parties.'

[1160] Guglielmetti (n 1172) 116.

[1161] Vanzetti, Di Cataldo and Spolidoro (n 380) 460–462.

[1162] Tonon (n 554) 124.

[1163] ibid.

infringement.[1164] Efforts have been made to limit its scope, due precisely to its anticipatory function. Initially, attention was directed toward the subjective element, namely the supplier's awareness of the part's intended use, and subsequently, the part's essentiality in relation to the patented device as a whole. However, such an approach failed to provide increased certainty for third parties.

To establish indirect infringement more objectively, it may be necessary to establish more objective criteria rather than relying solely on subjective evaluations. In this context, it is important to note that the purpose of indirect counterfeiting is to facilitate direct counterfeiting. Therefore, determining indirect counterfeiting requires an assessment of the potential for direct counterfeiting. This implies that the supply of the means could result in indirect patent infringement 'based on its actual constitution, effect and usability.'[1165]

Given these premises, it might be worthwhile evaluating whether to adopt a probabilistic approach when assessing the potential facilitation of counterfeiting. This method may involve a statistical judgment about the probability of counterfeiting. It would include analysing the target audience and channels of commercial communication, such as online or other platforms. If the communication is consumer-oriented, it might suggest no intent to disrupt commercial use. Additionally, it would comprise examining how the third party presents itself, whether as a supplier or repairer, and whether, based on an objective analysis, it is foreseeable that the purchaser would use the supplied means for uses that infringe patents.[1166] Ultimately, it should not be overlooked that, even in the case of indirect infringement, the essential point is to comply with honest and fair commercial practices. This means ensuring that all actions, including the supply of components or tools, are carried out in accordance with the principles of fairness and honesty.

It is believed that these considerations should also apply to cases of direct infringement. Indeed, it is not clear why the revival of a machine or its individual components which have reached the end of their functional life should be considered unlawful manufacturing, and thus infringing, as long as consumers are aware that they are buying a repaired/reconditioned product. In this cases, exhaustion should apply because the patented product has already been put on the market by its owner, who

[1164] Kühnen and Peterreins (n 549) 136.
[1165] ibid 143.
[1166] ibid 144.

has therefore already obtained the monopoly profit. Moreover, similarly to trademarks, the alteration of products as result of R activities should not be considered as a legitimate reason to oppose further commercialisation of the product subject to manipulation if such commercialisation does not result in concrete harm to the owner's interests. Adherence to professional and commercial standards can prevent this. Perhaps it is precisely in this direction that the provision on patent exhaustion provided by Article 29 UPCA should be interpreted.

Ultimately, it is crucial to note that whether the patent infringement is direct or indirect, it is always a matter of balancing the interests at stake. This balancing cannot disregard the consideration of interests, including political ones, especially in view of the priority given by the European legislator to the recent legislative framework on the circular economy.

CONCLUSIONS

The study closely examined issues surrounding the scope of protection of IP rights within the spare parts and repair aftermarkets. This has been the subject of a lively doctrinal and legal debate for decades, which has recently gained prominence as a result of EU legislative interventions on the circular economy and the green transition. The legislative and policy proposals on circular economy have given substance to principles that might otherwise have remained abstract, and which now find precise legislative recognition within, inter alia, the Ecodesign Directive and the Right to Repair Proposal. The paradigm shift from linear to circular economy requires a reassessment of the different interests at stake: on the one hand, there are private interests that arise from IP rights; on the other hand, there are objectives of circularity, including the repairability of products and the need to ensure access to compatible spare parts and replacement components.

Against this framework, the work examined various IP-related potential obstacles related to spare parts and repair aftermarkets, both of which represent key related sectors for the effective implementation of the right to repair. However, the jurisprudence and doctrinal interpretations analysed so far on this issue share the commonality of having been developed in a socio-economic context where the prerogatives and priorities were different. This calls for re-examination of old issues through fresh lenses, which may require the incorporation of circularity as a guiding principle serving as a fundamental concept. Such incorporation should take place both in the assessment of the limitations already present in our system, as in the case of the referential use of the trademark in the spare parts market, and in the assessment of the so-called legitimate reasons in the application of the doctrine of exhaustion to patented or trademarked products subject to repair.

On top of that, the study argues for an interpretation of the general clause on honest practices in industrial or commercial matters which takes into account not only the prerogatives of right holders but also those of third parties, including repairers, spare parts producers and, ultimately, consumers. Notably, general clauses are often controversial in legal doctrine due to their inconsistency and vague nature. Nevertheless, given their existence within the legal system and their flexibility of interpretation, they deserve consideration as a tool for balancing conflicting interests. Within this framework, the analysis conducted so far lays the groundwork for

reconciling the interests of right holders with the broader and more general clause of honest and fair industrial and commercial matters. In particular, although unfair competition and IP infringement actions are distinct and based on different premises, the assessment of IP also encompasses this aspect of professional fairness.

However, this is not the forum for an exhaustive exploration of this vast and complex subject. Nevertheless, through the analysis of circularity issues, the present work has laid the groundwork for a comprehensive reflection on the harmonisation of the IP discipline with professional fairness. This endeavour seeks to unify the subject by positioning unfair competition not merely as an isolated norm but as a principle of overarching importance.

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