REVIEW AND RECOMMENDATIONS ON THE ESPR
THE DIGITAL PRODUCT PASSPORT AND THE AUTOMOTIVE REMANUFACTURING INDUSTRY

A position paper of the Automotive Parts Remanufacturers Association Europe.

The purpose of this paper is to:

1 Revise the ongoing steps towards the introduction of the ESPR and the DPP.

2 Analyse the implications for the remanufacturing industry.

3 Provide recommendations for an increased acceptance of the DPP by the European remanufacturing industry.

Introduction

On the 30th of March 2022 the European Commission has launched a wide-scope Ecodesign for Sustainable Products Regulation (ESPR), titled "Proposal for a Regulation establishing a framework for setting ecodesign requirements for sustainable products and repealing Directive 2009/125/EC" [Brussels, 30.3.2022, COM(2022) 142 final, 2022/0095 (COD)]. According to Page 9 of the ESPR document: "The proposal also includes the creation of a Digital Product Passport to electronically register, process and share product-related information amongst supply chain businesses, authorities and consumers. This is expected to increase transparency, both for supply chain businesses and for the general public, and increase efficiencies in terms of information transfer. In particular, it is likely to help facilitate and streamline the monitoring and enforcement of the regulation carried out by EU and Member State authorities. It is also likely to provide a market-intelligence tool that may be used for revising and refining obligations in the future".

Article 2 presents a list of definitions, among which 'product passport' means a set of data specific to a product that includes the information specified in the applicable delegated act adopted pursuant to Article 4 and that is accessible via electronic means through a data carrier in accordance with Chapter III. Articles 8 to 13 (pg. 54-58) are specifically focused on Digital Product Passports (DPP).

In general, the ESPR's objectives are to reduce negative life cycle impacts of products and improve the functioning of the internal market. It also contributes to EU industrial policy objectives to foster sustainable production, promote supply and demand for sustainable products, and ensure a level playing field for products sold on the internal market. ESPR lays down a framework for setting ecodesign requirements based on product sustainability and circularity for a broad range of products, creating digital product passport and prohibiting the destruction of unsold consumer products. ESPR takes into consideration other regulations to ensure it is consistent with existing policy provisions

and other Union policies (e.g., the European Green Deal, Industrial Strategy for Europe, CEAP, EU strategy for sustainable and circular textiles, Green Claims, Corporate Sustainable Due Diligence, Market Surveillance Regulation, Union legislation on waste, chemical and food safety). It also provides information on delegated act developments, regulation exemption rules, obligations of actors along the supply chains / value chains, regulation enforcement and compliance, policy and standard harmonization among state members and with national policies, and SME implications.

By analyzing the document in detail, more features of the Digital Product Passport can be extracted:

// The DPP will not replace but complement non-digital forms of transmitting information such as information in the product manual or on a label.

// The DPP should offer free access to data to actors along the entire value chain including customs authorities. This information must be based on open standards and inter-operable formats and be machine readable, searchable and structured.

// To balance accessibility and IP protection, DPP will allow differentiated access depending on the type of information and typology of stakeholders. It is expected that actors may introduce or update information in the DPP, including, where needed, the creation of a new DPP.

// To support SME's in filling the digital divide gap, it is expected that DPP-as-a-Service operators will offer low-cost DPP data storage and access facilities but will not be allowed to sell, re-use or process data beyond what is necessary.

// A DPP will be specific to the item, batch or product model, depending on the complexity of the value chain, the size and nature or impacts of the product considered. A DPP can be assigned to intermediate goods or materials.

// When applicable, the DPP should be easily accessible by scanning a data carrier, such as a watermark or a QR code. The data carrier should be on the product itself to ensure the information remains accessible throughout its life cycle.

// To ensure interoperability, the types of permitted data carriers, the data carrier, the unique product identifier, and unique operator and facility identifiers will be standardized to guarantee compatibility with external components such as scanning devices.

// The Commission will set up and maintain a product passport registry to, at minimum, store a record of all data carriers and unique identifiers linked to products placed on the market or put in service. This registry will be interconnected with the EU Customs Single Window Certificates Exchange. However, the DPP itself should be based on a decentralized data system set up and maintained by economic actors.

The document provides concepts and guidelines. It does not, however, detail the type of data that should be contained in the DPP for different product categories: 'To take account of the nature of the product and its market, the information to be included in the product passport should be carefully examined on a case-by-case basis when preparing product-specific rules'.

As part of the initiatives to increase the level of formalization of the Digital Product Passport, the Horizon Europe Coordinated and Support Action (CSA) CIRPASS - Collaborative Initiative for a Standards-based Digital Product Passport for Stakeholder-Specific Sharing of Product Data for a Circular Economy - was funded and launched in October 2022. CIRPASS has the objective to prepare the ground for a gradual deployment of DPPs, with an initial focus on the electronics, batteries and textile sectors. A technical formalization of the main components of the DPP can be found within CIRPASS – Deliverable D3.1. A DPP System, the cross-sectoral information system on which all DPPs will be based, is composed of (i) A unique persistent ID for the product (including batch and/or serialization as necessary); (ii) A persistent data carrier (RFID, QR Code, digital watermark, Bluetooth tag, etc.), (iii) A Digital connector between physical product and the digital place of information on the product (e.g., URI address); and (iv) An IT architecture for facilitating the data exchange composed of standardized vocabulary, standardized data exchange protocols and formats, standardized stakeholder-dependent access mechanisms (read/edit rights), distributed storage of information (in connection with EU dataspaces), a stakeholder-dependent interaction layer.

Analysis

Within the ESPR document, remanufacturing is mentioned among the circular business cases potentially gaining benefits from the introduction of the DPP. In particular, at page 17 the following is stated: "This Regulation will contribute to making products fit for a climate-neutral, resource-efficient and circular economy, reducing waste and ensuring that the performance of frontrunners in sustainability progressively becomes the norm. It should provide for the setting of new ecodesign requirements to improve product durability, reusability, upgradability and reparability, improve possibilities for refurbishment and maintenance, address the presence of hazardous chemicals in products, increase their energy and resource efficiency, reduce their expected generation of waste materials and increase recycled content in products, while ensuring their performance and safety, enabling **remanufacturing** and high-quality recycling and reducing carbon and environmental footprints".

At page 44, a definition of 'remanufacturing' is found: "remanufacturing means 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". This definition is not aligned with

general business meaning of the term “remanufacturing”, and, in particular, it does not define properly the post-use product returning from the market that is considered in input within remanufacturing operations. Indeed, the post-use product is not classified as “waste” but traditionally called “core” in the remanufacturing business. This analysis gives origin to recommendation R1 in the next section.

In the following, an analysis of the expected major implications and benefits for the remanufacturing industry, that could potentially be brought by the introduction of the DPP, is reported.

// Increased availability of product design data: in particular in the case where remanufacturing operations are carried out by independent remanufacturers, the availability of reliable data about the product design within the DPP can potentially be beneficial due to (i) reduced reverse engineering needs, transparent cross-references on component level, disassembly planning times and efforts, (ii) knowledge about the utilized materials, including substances of concern, (iii) knowledge about functional testing protocols and quality control procedures, (iv) knowledge about production date and usage data to better evaluate residual life of components as well as timewise aging effects on used materials. However, these and additional benefits may strongly depend on the type and granularity of the information/data that will be contained in the DPP.

// Increased traceability: for both independent remanufacturers and for Original Equipment Suppliers (OESs) performing remanufacturing, the existence of a DPP at individual item level may increase the traceability of the product data along the multiple product life-cycles. The increased traceability can potentially contribute to add value to the remanufactured product and increase customer willingness-to-buy and loyalty thanks to the fact that the high-quality remanufacturing operations and the testing procedures applied to the product are traced. As a result, a new updated DPP may be released for the individual remanufactured item before it is placed on the market as a high-quality remanufactured part, thus increasing the competitiveness of high-standard remanufacturing operations against competing lower quality circular economy business options.

// Reduction of business risks related to IP right infringement: One of the major, time-consuming, activities for independent remanufacturers is related to the verification of the existing IP rights, including software rights, on the product to be remanufactured. This issue originates business risks that are difficult to predict and properly handle. If the DPP included information on existing patents acting on parts under remanufacturing, including software rights, business risks as well as the legal costs related to the connected implications would considerably be reduced.

// Positive implications on logistics, especially trans-boundary core acceptance by customs. Similarly to other sectors, a positive implication is foreseen by facilitating cross-border transfer of cores and the compliance checks performed by customs. Indeed, cores to be remanufactured are not classified as waste and this simplifies cross-boundary transport and acceptance procedures. If such information would be directly readable through the persistent product data carrier on the transported core, considerable time and cost would be saved at the customs, also increasing the reliability and reducing false alarms.

Recommendations

In line with the analysis reported in the previous section, this paragraph reports a set of recommendations that APRA Europe would propose with the objective to support the achievement of the highlighted benefits and to increase the acceptance of the Digital Product Passport within the European Remanufacturing Industry.

R1: Revise the definition of the term "remanufacturing" reported in the ESPR document and keep it compliant with the definition in the DIN SPEC standard[1], also shared by six European associations in 2016, i.e. APRA Europe, CLEPA, MERA, FIRM, ANRAP, CPRA, and reported below[2]:
Remanufacturing process: Remanufacturing is a standardized industrial process by which cores are returned to same-as-new, or better, condition and performance. The process is in line with specific technical specifications, including engineering, quality and testing standards. The process yields fully warranted products. An industrial process is an established process, which is fully documented, and capable to fulfil the requirements established by the remanufacturer.
Core: A core is a previously sold, worn or non-functional product or part, intended for the remanufacturing process. During reverse logistics, a core is protected, handled and identified for remanufacturing to avoid damage and to preserve its value. A core is not waste or scrap and is not intended to be reused before remanufacturing.
Remanufactured part: A remanufactured part fulfills a function which is at least equivalent compared to the original part. It is restored from an existing part (CORE), using standardized industrial processes in line with specific technical specifications. A remanufactured part is given the same warranty as a new part and it clearly identifies the part as a remanufactured part and states the remanufacturer.

R2: Keep the DPP concept and implementation clear and simple.

R3: Keep the DPP valid for all stakeholders in the remanufacturing business, including independent remanufacturers, OES, car makers, core dealers, workshops, fleets, etc..

R4: Clearly define the components in the product Bill of Materials (BOM) that are interested and affected by the DPP.

R5: In support of increased traceability in remanufacturing, identify the right level of DPP data as remanufacturing will be executed on sub-component level, thus leading to a potential n to m relationship between cores and remanufactured products.

R6: Take in consideration the resilience and durability of the product data carrier as well as the continuous management of the product data stored in the DPP system for sufficient number of years after the product is placed on the market for the first time. For example, the average age of a core can easily be 9 years where the product was exposed to heavy environmental impacts (e.g. air disc brake on the bottom of a commercial vehicle).

R7: Clarify the rights to produce, maintain and modify the DPP assigned to different actors in the circular value-chain.

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[1] DIN SPEC 91472 „Remanufacturing (Reman) – Qualitätsklassifizierung für zirkuläre Prozesse".

[2] The European Association of Automotive Suppliers (CLEPA), Motor & Equipment Remanufacturers Association (MERA), Automotive Parts Remanufacturers Association (APRA), Automotive Parts Remanufacturers National Association (ANRAP), European Organization for the Engine Remanufacture (FIRM) and Remanufacture Committee of China Association of Automobile Manufactures (CPRA), all aligned on a common set of descriptions which define the industry.

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