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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 28618-2012

**Remanufacturing - General technical requirements for
mechanical products**

机械产品再制造 通用技术要求

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1 Scope

China's national general technical requirements for the remanufacturing of mechanical products. It specifies the general rules and the general technical requirements for remanufacturing, applies to the remanufacturing of mechanical products, and may be used as a reference for the remanufacturing of other products. Remanufacturing is not repair and it is not recycling, and the standard's value begins with holding that line. Repair restores a product to working order; recycling destroys the product to recover its material. Remanufacturing dismantles a used product to its components, restores those components to as-new condition by industrial process, and reassembles them into a product that meets the performance and the warranty of a new one. The used product is the raw material, and the output is a product sold as a product. The economics are what make it worth standardising. A remanufactured engine, gearbox, pump or hydraulic cylinder embodies the energy and material already invested in the original casting and machining, so it costs a fraction of a new one in both money and carbon while performing identically. China has a very large installed base of machinery and a policy interest in exactly that arithmetic. What stands in the way is trust: a buyer has to believe that a remanufactured unit is not a cleaned-up used one. So the general rules require compliance with the resource and environmental legislation, and the technical requirements cover the whole route - the acceptance and assessment of the used core, the dismantling and cleaning, the inspection and classification of components, the restoration processes, the reassembly, the testing of the finished product against the requirements for a new one, and the marking that identifies it as remanufactured. Issued on 29 June 2012 and in force since 1 December 2012.

This standard specifies the general technical requirements for remanufacturing of

mechanical products. This standard applies to the remanufacturing of mechanical products, and can also be used as a reference for the remanufacturing of other products.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) is applicable to this standard.

GB/T 191 Packaging - Pictorial marking for handling of goods

GB/T 6388 Transport package shipping mark

GB/T 27611 General requirements and labeling for recycled and remanufactured products

GB/T 28619-2012 Remanufacturing - Terminology

3 Terms and definitions

The terms and definitions defined in GB/T 28619-2012 apply to this document.

4 General rules

4.1 The remanufacturing of mechanical products shall comply with relevant national laws and regulations on resource utilization, environmental protection, and the provisions of relevant national standards.

4.2 The quality characteristics and safety performance of remanufactured products shall not be inferior to those of new original products.

4.3 See Appendix A for the basic process of mechanical product remanufacturing.

4.4 The parts of mechanical products after disassembly shall be cleaned.

4.5 After being dismantled and cleaned, product parts shall be evaluated and classified according to remanufacturability.

4.6 Remanufacturable products shall be designed for remanufacturing, including formulating technical solutions for remanufacturing and technical bases for implementation.

4.7 Remanufactured products shall pass product performance inspection before leaving the factory.

4.8 Remanufactured products must clearly display the remanufactured label, and the label shall comply with the provisions of GB/T 27611.

4.9 The packaging and accompanying technical documents of remanufactured products shall be implemented in accordance with the requirements of new products of the same

kind.

5.1 Preliminary inspection of remanufacturing blanks

5.1.1 Before remanufacturing, the preliminary inspection shall be carried out for the remanufacturing blank to judge whether it meets the remanufacturing requirements.

5.1.2 For products that are preliminarily judged to have remanufacturing value, further remanufacturability assessment shall be done after dismantling or cleaning.

5.2 Dismantling of remanufacturing blanks

5.2.1 Before being dismantled, the functions or performance state of the remanufacturing blank shall be confirmed, and different dismantling schemes shall be selected according to the different functions, performance state, and model of the remanufacturing blank.

5.2.2 The remanufacturing blank shall generally be disassembled to the smallest non-disassembled unit, and damage to parts shall be avoided as much as possible during the disassembly process.

5.3 Cleaning of parts

5.3.1 The disassembled parts shall be classified, and the corresponding cleaning method for parts with different physical shapes and chemical properties shall be selected. characteristics and damage degree of the remanufacturable parts.

5.7.3 The functional and performance requirements for the repaired and processed remanufacturable parts shall not be lower than those for the original new products.

5.7.4 Remanufacturable parts shall be inspected and accepted according to the process, and they can be transferred to the next process for production only after they have passed the inspection of the previous process.

5.7.5 For the parts processed by the dimensional repair method, the main matching dimensions after processing shall comply with the process regulations.

5.7.6 The parts processed in pairs shall have pairing marks.

5.8 Remanufacturing assembly

5.8.1 The remanufacturing assembly shall refer to the requirements for the original new product assembly and related regulations.

5.8.2 The assembly environment such as temperature, humidity, dust fall quantity, lighting, and shockproof must comply with relevant regulations.

5.8.3 Product components (including updated parts) can only be assembled after passing the inspection.

5.8.4 During remanufacturing assembly, process inspection shall be carried out according to process requirements and assembly records shall be kept.

5.9 Labeling

5.9.1 The labeling of remanufactured products shall comply with relevant national laws, regulations, and standards, in addition, the remanufactured label shall be marked on a prominent position on the product, product manual, or product packaging (if applicable). The label marked on the remanufactured product shall be able to be permanently maintained.

5.9.2 The remanufactured product label shall contain the following contents:

- a) The name of the remanufactured product;
- b) The name of the remanufacturer;
- c) The model of the remanufactured product;
- d) The remanufacturing date.