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

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**Hydraulic fluid power - Remanufacture of components - Part 2:
Hydraulic pump and motor**

液压传动 元件的再制造 第2部分：液压泵与马达

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Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020, Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents.

This document is Part 2 of GB/Z 181, Hydraulic fluid power - Remanufacture of components.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The issuing body of this document is not to be held responsible for identifying any or all such patent rights.

1 Scope

This document specifies the general technical requirements for the remanufacture of hydraulic pumps and motors.

This document applies to the remanufacture of hydraulic pumps and motors whose working medium is hydraulic oil or another hydraulic fluid of equivalent performance.

2 Normative references

The following documents contain provisions which, through normative reference in this text, constitute indispensable provisions of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document, including any amendments, applies.

GB/T 17446, Fluid power systems and components - Vocabulary

GB/T 40728, Remanufacturing - Methods for testing the quality of the repair layer of mechanical products

GB/Z 181.1, Hydraulic fluid power - Remanufacture of components - Part 1: General technical specification

JB/T 7041 (all parts), Hydraulic pumps

JB/T 8728, Low-speed high-torque hydraulic motors

JB/T 10206, Orbit hydraulic motors

JB/T 10829, Hydraulic motors

3 Terms and definitions

For the purposes of this document, the terms and definitions given in GB/T 17446 and GB/Z 181.1 apply.

4 Remanufacture of hydraulic pumps and motors

4.1 General requirements. The process, the general requirements, the painting, the marking, the packaging, the transport and the storage for the remanufacture of hydraulic pumps and motors shall meet GB/Z 181.1.

4.2 Preliminary inspection and assessment. The used hydraulic pumps and motors recovered are inspected preliminarily, and the core is determined by assessment. 4.3 Cleaning before dismantling shall follow GB/Z 181.1.

4.4 Dismantling. 4.4.1 A dismantling scheme is drawn up, and the residual oil shall be drained from the pump or motor before dismantling. 4.4.2 A dedicated container should be used to collect the residual oil during dismantling. 4.4.3 Dismantling shall follow the scheme, breaking the pump or motor down to the smallest units that need not be

dismantled further - the housing, the end cover, the shaft, the bearings, the seals and the fasteners. 4.4.4 The basic information of the parts should be recorded, at least the name, the quantity and the relative position of the important parts. 4.4.5 The following parts should be discarded, among others: a) bearings; b) fasteners; c) seals; d) springs; e) electronic components; f) hydraulic valves.

4.5 Cleaning. The cleaning of the parts after the dismantling of the pump or motor shall follow GB/Z 181.1.

4.6 Inspection of the parts. 4.6.1 A work instruction for the inspection of the used parts shall be drawn up, covering the inspection items, the inspection methods and the inspection instruments. 4.6.2 The methods for inspecting the parts, taking the axial piston pump and motor as the example, are given in Table A.1 of Annex A. 4.6.3 The surfaces of the seal grooves of parts that have them are examined for scratches, corrosion or deformation. 4.6.4 Other parts should be inspected according to the relevant requirements.

4.7 Assessment of remanufacturability and classification. 4.7.1 The remanufacturability of the used parts of the pump or motor is assessed, taking together the technical, economic and environmental factors. 4.7.2 From the inspection results and Table A.2, the parts are judged to be directly used parts, remanufacturable parts or disposed parts. 4.7.3 The parts should be marked after classification so that they can be told apart.

4.8 Remanufacturing design. 4.8.1 From the results of the remanufacturability assessment, a remanufacturing scheme for the pump or motor is drawn up; the scheme shall include the remanufacturing technical requirements and the quality requirements for the pump or motor and for the remanufacturable parts, the method of remanufacture and the painting requirements for the component. 4.8.2 The remanufacturable parts of the pump or motor are designed according to that scheme.

4.9 Machining and inspection of the remanufacturable parts. 4.9.1 Machining follows the design and process documents for the remanufacturable parts. 4.9.2 For remanufactured parts that have undergone surface repair, the quality of the repair layer shall be inspected and judged according to GB/T 40728. 4.10 The technical requirements and process documents for the replacement parts are drawn up, and the parts designed and manufactured or selected.

4.11 Remanufacturing assembly. Assembly process documents are drawn up, and assembly shall meet JB/T 7041 (all parts) or JB/T 8728, JB/T 10206 and JB/T 10829; the records shall be filed. 4.12 Testing and inspection. The test and inspection items and methods for a remanufactured hydraulic pump or motor shall follow JB/T 7041 (all parts) or JB/T 8728, JB/T 10206 and JB/T 10829.