

ICS 91.220

CCS P 97



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

**GB/T 26546-2011**

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**Construction machinery - Guide to reducing environmental  
burden**

工程机械减轻环境负担的技术指南

**Issued on: June 16, 2011**

**Implemented on: January 1, 2012**

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**Issued by: General Administration of Quality Supervision, Inspection and  
Quarantine;  
Standardization Administration of the PRC**

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### Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. The standard reference Japan Construction Mechanization Association standards JCMASH016.2002 "Construction Machinery reduce the environmental burden of technical means Needle ", the Japanese construction machinery industry will be amended in 2008 promulgated the" new machine can be re-utilization of definition and calculation of manual "," parts and Criteria and measures to improve the possibility of re-use of goods "and 2007 promulgated the" construction mechanical disintegration manual. " The standard proposed by China Machinery Industry Federation. This standard by the national construction machinery and construction equipment Standardization Technical Committee (SAC/TC328) centralized. This standard was drafted. Beijing Institute of Architectural mechanization, Xugong Group Construction Machinery Co., Ltd. Construction Machinery Branch, Shenzhen City, measuring Detection Co., Ltd., Beijing CIB Mechanical Technology Limited. Drafters of this standard. Tianguang Fan, Lu Chuan, Xin snow, Zhu Ping, Zhao Bin, Wangzhen Li, Jiang Hui. Construction Machinery reduce the environmental burden of technical guidelines

### 1 Scope

China's national guide to reducing the environmental burden of construction machinery. It provides the principles, the considerations and the methods by which the environmental impact of an earthmoving or construction machine is reduced across its life. The guide takes the position that the impact of a machine is decided when it is designed and not when it is operated, and that it has to be counted over the whole life rather than at the exhaust pipe. That reframing is the point of the document. Emissions legislation addresses one stage of one impact, and a manufacturer who optimises only for it can produce a machine that is worse overall - heavier, shorter-lived, harder to repair, built of materials that cannot be separated at the end. So the guide works through the stages. In design: the fuel consumption per unit of work rather than per hour, which is what a construction machine's efficiency actually is; the noise and vibration at source; the choice of materials and the avoidance of substances that constrain disposal; the hydraulic fluid and the consequences of the leaks that machines on sites inevitably have. In manufacture and in service: the

maintainability, the length of life, the reparability and the availability of parts, since a machine that is rebuilt twice has a third of the embodied impact per hour worked. And at the end: the design for dismantling, the separation of materials and the reuse of components. It also covers the information the manufacturer must give the user, because much of what determines a machine's real burden - how it is operated, how it is maintained, when it is idled - is decided on site by someone who needs to be told. Issued on 16 June 2011 and in force since 1 January 2012.

This standard specifies the mechanical engineering and supplies to alleviate the burden on the environment and shall comply with the requirements of a given product development and reduce time to improve Technical Guide burden on the environment. This standard applies to the following construction machinery and equipment.

- Construction machinery and equipment (including foundation construction equipment, concrete machinery, road construction and maintenance equipment, aggregate processing machinery provided Equipment, steel processing equipment and templates, improvement and maintenance of equipment, operations basket height and gondola, commonly used in other construction machinery And equipment, etc.);
- Moving machinery (including backhoe loaders, bulldozers, dump trucks, excavators, motor graders, horizontal directional drilling, landfill compactors, loader Machine, pipelayer, Pipelayer Rotary, rollers, scrapers, trenchers);
- Mobile cranes, tower cranes;
- Construction lifts, construction hoist;
- Elevating work platforms;
- Rock drilling machine, shredder;
- Industrial vehicles;
- Shield tunneling machines, tunnel boring machine;
- Other construction machinery.

## 2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 1844.1 Plastics - Symbols and abbreviations - Part 1. Basic polymers and their special characteristics

GB/T 1844.2 plastic symbols and abbreviations - Part 2. Fillers and reinforcing materials

GB/T 1844.3 plastic symbols and abbreviations - Part 3. Plasticizers

GB/T 1844.4 Plastics - Symbols and abbreviations - Part 4. Flame Retardant

### 3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Environmental burden environmentalburden It is due to the impact of human activities on the environment, and to become hinder environmental preservation factors. Of a product or material, refers in its Resources consumed during production, use and waste disposal, as well as how much energy from waste discharges into the environment (gaseous, solid and liquid sum) The number of synthesis.

3.2 Lifecycle lifecycle From raw material acquisition or recovery of natural resources to the final disposal of the many continuous and interrelated phases. For a production