



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

中华人民共和国国家标准

GB 20651.1-2006

**Reciprocating internal combustion engines—Safety—
Part 1: Compression ignition engines**

往复式内燃机 安全

第 1 部分：压燃式发动机

Issued on November 11, 2006

Implemented on March 01, 2006

**Issued by General Administration of Quality Supervision, Inspection
and Quarantine of the People's Republic of China**

**Standardization Administration of the People's Republic of
China**

Contents

Foreword.....	1
Introduction	1
1 Scope	1
2 Normative References	1
3 Terms and definitions	5
4 General	6
5 List of hazards.....	6
6 Safety requirements and/or measures	6
6.1 Starting systems	6
6.2 Normal stopping.....	7
6.3 Emergency stopping.....	7
6.4 Controls	8
6.5 Monitoring devices.....	9
6.6 Warning devices.....	10
6.7 Guarding	10
6.8 Guard design	11
6.9 Lighting	12
6.10 Handling.....	12
6.11 Fire protection	12
6.12 Protection against explosion	13
6.13 Pressure vessels.....	13
6.14 Hoses, pipes and electric harnesses.....	13
6.15 Electrical equipment	13
6.16 Operator platforms, walkways, and access systems.....	14
6.17 Access to service points	14
6.18 Noise	14
6.19 Exhaust emissions.....	14
6.20 Drainage.....	15

7	Operating and maintenance instructions	15
8	Special requirements.....	16
9	Marking.....	17
	Annex A (Normative) List of hazards.....	18
	Annex B (Informative) Bibliography	21
	Annex ZA (Informative) Relationship with EU Directives	22

Foreword

All text of this part of GB 20651 is mandatory.

This part will replace JB 8890-1999 *Reciprocating internal combustion engines - Safety requirement*. Comparison with JB 8890-1999, main changes of this part are as follows:

- Supplemented the “Normative references”;
- Added the terms and definitions;
- Completed the list of engines hazards;
- Changed the safety requirements and protection measures.

This part is identical to BS EN 1679-1: 1998 *Reciprocating internal combustion engines — Safety — Part 1: Compression ignition engines*. Considering that there are no corresponding national standard in previous normative references, for ease of use, following changes are recommended temporarily:

- Replaced EN 983: 1996 *Safety of machinery. Safety requirements for fluid power systems and their components-Pneumatics* by GB/T 3766-2001 *Hydraulic fluid power--General rules relating to systems* (eqv ISO 4413: 1998);
- Replaced pr1175: 1993 *Industrial vehicle safety—Electrical equipments* by GB 10827-1999 *Powered industrial trucks--Safety code* (eqv ISO 3691: 1980).

Annex A of this Standard is normative annex, annex B and ZA are informative annex.

This Standard is proposed by China Machinery Industry Federation.

This Standard is under the jurisdiction of National Technical Committee on Internal Combustion Engine of Standardization Administration of China.

The responsible drafting organizations are Shanghai Internal Combustion Research Institute, Guangxi Yuchai Machinery Company Limited and Shanghai Diesel Engine Co., Ltd.

The chief drafting staff of this standard includes Qu Junming, Zhong Yuwei, Xie Zhengliang, He Xupei, Wei Shanzhen, Xie Yaping, Chen Yunqing, Song Guochan.

Introduction

This part has been prepared under a mandate given to CEN by the Commission of the European Communities and the European Free Trade Association, and supports essential requirements of the EC Machinery Directive (89/392/EEC) and the associated EFTA regulations.

The extent to which hazards are covered is indicated in the scope of this standard. In addition, machinery shall comply as appropriate with GB/T 15706.1-1995 and GB/T 15706.2-1995 for hazards which are not covered by this standard.

The requirements of this standard concern the designers, manufacturers, suppliers, importers and installers of reciprocating internal combustion engines.

This standard also gives the information which the manufacturer shall provide to the user.

Reciprocating internal combustion engines—Safety—

Part 1: Compression ignition engines

1 Scope

This standard specifies the safety requirements for compression ignition engines and their essential auxiliaries used in all applications on land, underground and water, except engines used to propel road vehicles and aircraft. The special requirements needed to cover operation in potentially explosive atmospheres are not covered in this standard.

The engine, in terms of this standard, is understood as the prime mover up to its driving extremitie(s) for power take off(s).

The hazards relevant to compression ignition engines are identified in annex A.

This standard specifies the special safety requirements for compression ignition engines based on the general requirements laid down in GB/T 15706.1-1995 and GB/T 15706.2-1995.

This standard should be referred to in other standards wherever compression ignition engines are used.

2 Normative References

The articles contained in the following documents have become this part of GB 20651 when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB/T 1859-2000 Reciprocating internal combustion engines--Measurement of emitted airborne noise--Engineering method and survey method (idt ISO 6798:1995)

GB/T 1883.1-2005 Reciprocating internal combustion engines— Vocabulary— Part1: Terms for engine design and operation (ISO 2710-1:2000, IDT)



北京文心雕语翻译有限公司
Beijing Lancarver Translation Inc.

完整版本请在线下单

或咨询：

TEL: 400-678-1309

QQ: 19315219

Email: info@lancarver.com

<http://www.lancarver.com>

线下付款方式：

1. 对公账户：

单位名称：北京文心雕语翻译有限公司

开户行：中国工商银行北京清河镇支行

账 号：0200 1486 0900 0006 131

2. 支付宝账户：info@lancarver.com

注：付款成功后，请预留电邮，完整版本将在一个工作日内通过电子 PDF 或 Word 形式发送至您的预留邮箱，如需索取发票，下单成功后的三个工作日内安排开具并寄出，预祝合作愉快！



银联特约商户