



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

GB/T 25684.3-2021

**Earth-moving machinery - Safety - Part 3: Requirements for
loaders**

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foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents"

drafted:

This document is part 3 of GB/T 25684 "Earth-moving Machinery Safety": GB/T 25684 has released the following parts:

- Part 1: General requirements;
- Part 2: Requirements for bulldozers;
- Part 3: Requirements for loaders;
- Part 4: Requirements for backhoe loaders;
- Part 5: Requirements for hydraulic excavators;
- Part 6: Requirements for dump trucks;
- Part 7: Requirements for scrapers;
- Part 8: Requirements for motor graders;
- Part 9: Requirements for pipelayers;
- Part 10: Requirements for trenchers;
- Part 11: Requirements for backfill compactors;
- Part 12: Requirements for mechanical excavators;
- Part 13: Requirements for road rollers;

This document replaces GB 25684:3-2010 "Earth-moving Machinery Safety Part 3: Requirements for Loaders", and GB 25684:3-

Compared with:2010, in addition to structural adjustment and editorial changes, the main technical changes are as follows:

- a) Some terms and definitions have been changed (see 3:1~3:4, 3:1~3:4 of the:2010 edition);
- b) Deleted the term and definition of "hydraulic lifting capacity" (see 3:5 of the:2010 edition);
- c) Change "safety requirements and/or protective measures" to "safety requirements and protective measures" (see Chapter 4, Chapter 4 of the:2010 edition);
- d) The contents of "loader with front aisle" and "driver's seat" were deleted (see 4:2 and 4:3 of the:2010 edition);
- e) Changed the provisions of the rear window (see 4:2, 4:4 of the:2010 edition);
- f) Changed the general requirements for stability (see 4:4:1, 4:6:1 of the:2010 edition);
- g) The relevant requirements for rollover protection structures, falling object protection structures, fenders and restraint systems for machines with front access have been deleted (see:2010 4:5:1~4:5:3 and 4:5:6 of the year edition);
- h) Changed "guards for loaders with front access" to "guards for loaders" and added Note (see 4:3:2, :2010 version 4:5:5);
- i) Changed the table of stability factor for fork conditions (see Table 1, Table 1 of the:2010 edition);
- j) Deleted the contents of hydraulic lifting capacity, rated working load, fork size and handling attachments (see:2010 edition 4:6:3:3~4:6:3:5, 4:6:4:3, 4:6:4:4, 4:6:5:3~4:6:5:5, 4:6:6:3 and 4:6:6:4);
- k) The verification of safety requirements and/or protective measures has been deleted (see Chapter 5 of the:2010 edition):

This document is equivalent to ISO 20474-3:2017 "Safety of Earth-moving Machinery Part 3: Requirements for Loaders":

Please note that some content of this document may be patented: The issuing agency of this document assumes no responsibility for identifying patents:

Introduction

This document is a Type C standard defined by ISO 12100:

The scope of this document describes the machinery involved and the scope of the hazards, hazardous states or hazardous events involved:

Since the design and manufacture of the machine follow the requirements of Class C

standards, when the requirements of Class C standards are different from those of Class A or Class B standards

At the same time, the requirements of Class C standards take precedence over other standards:

GB/T 25684 "Earth-moving Machinery Safety" is a basic and universal standard that guides my country's earth-moving machinery products to meet relevant safety requirements:

allow: GB/T 25684 aims to establish general safety requirements applicable to earth-moving machinery products and special safety requirements for specific machine families

It is proposed to consist of 14 parts:

--- Part 1: General requirements: The purpose is to establish general safety requirements applicable to all machine types in the earthmoving machinery industry:

The foundational standard for a full range of standards:

--- Part 2: Requirements for bulldozers: The purpose is to propose specific products that meet the unique characteristics of bulldozer products:

Security Requirements Clause:

--- Part 3: Requirements for loaders: The purpose is to propose specific products that meet the characteristics of their own products according to the unique characteristics of loader products:

Security Requirements Clause:

--- Part 4: Requirements for backhoe loaders: The purpose is to propose a product that meets the unique characteristics of backhoe loader products:

Point-specific security requirements clause:

--- Part 5: Requirements for hydraulic excavators: The purpose is to put forward the unique characteristics of hydraulic excavator products that meet the characteristics of their own products:

Point-specific security requirements clause:

--- Part 6: Requirements for dump trucks: The purpose is to propose specific products that meet the unique characteristics of dump truck products:

Security Requirements Clause:

--- Part 7: Requirements for scrapers: The purpose is to propose specific products that meet the characteristics of their own products according to the unique characteristics of scraper products:

Security Requirements Clause:

--- Part 8: Motor grader requirements: The purpose is to propose specific products that meet the unique characteristics of motor graders:

Security Requirements Clause:

--- Part 9: Requirements for pipelayers: The purpose is to propose specific products that meet the unique characteristics of the pipelayer products:

Security Requirements Clause:

--- Part 10: Requirements for trenchers: The purpose is to propose special features that conform to the characteristics of the trencher products according to the unique characteristics of the trencher products:

Security requirements clauses:

--- Part 11: Requirements for backfill compactors: The purpose is to propose products that meet the unique characteristics of backfill compactor products:

Features specific security requirements clause:

--- Part 12: Requirements for mechanical excavators: The purpose is to propose products that meet the unique characteristics of mechanical excavators:

Features specific security requirements clause:

--- Part 13: Requirements for road rollers: The purpose is to propose special characteristics that meet the characteristics of the rollers according to the unique characteristics of the road roller products:

Security requirements clauses:

--- Part 14: Requirements for small implement carriers: The purpose is to put forward a proposal to meet the unique characteristics of small implement carrying machine products:

Specific safety requirements clauses for their own product features:

The safety requirements of Part 2 to Part 14 are used in conjunction with the general requirements of Part 1 to better meet the use requirements:

Earthmoving Machinery Safety

Part 3: Requirements for loaders

1 Scope

This document specifies the safety requirements for loaders as defined by ISO 6165; specifies requirements for earth-moving machinery for