
INTERNATIONAL STANDARD



5998

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Earth-moving machinery — Rated operating load for crawler and wheel loaders

Engins de terrassement — Charge utile nominale des chargeuses

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 5998 was developed by Technical Committee ISO/TC 127, *Earth-moving machinery*, and was circulated to the member bodies in December 1976.

It has been approved by the member bodies of the following countries :

Australia	Italy	Spain
Brazil	Japan	Sweden
Canada	Korea, Rep. of	Turkey
Chile	Mexico	U.S.A.
Czechoslovakia	Poland	U.S.S.R.
Finland	Romania	Yugoslavia
France	South Africa, Rep. of	

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Germany
United Kingdom

Earth-moving machinery – Rated operating load for crawler and wheel loaders

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the comparative rated operating load for both crawler and wheel loaders.

The rated operating load is based only on the machine's lifting capacity, static forward tipping load, and specified operating conditions.

NOTE – The actual operating load, practical on a specific job for a given machine, can vary from the rated operating load on the basis of the job conditions.

2 SPECIFICATIONS

The following items shall be determined¹⁾ and shall be recorded for the loader being rated :

2.1 Rated heaped volume and type of the bucket (disregarding any teeth).

2.2 Location(s) and mass of any counterweight ballast included in the machine mass.

2.3 Track shoe type and width for crawler loaders.

2.4 Tyre type, size, rating, and specified inflation pressure for wheel loaders.

2.5 Steering angle in fully turned position for articulated steer loaders.

2.6 Tipping load (in fully turned position for articulated steer loaders) at maximum outreach of a fully retracted bucket.

2.7 Lifting capacity which the loader can achieve in all bucket positions.

3 RATED OPERATING LOAD

3.1 Operating conditions

The rated operating load is a nominal value intended to represent normal loading in the following typical conditions :

3.1.1 The maximum travel speed :

- crawler mounted, 6 km/h;
- wheel mounted, 15 km/h.

3.1.2 The operating surface for wheel loaders is assumed to be hard, moderately smooth and level.

3.1.3 The operating surface for crawler loaders is assumed to be softer, less smooth or level, with resulting reduced percentage of tipping load applied.

3.2 Crawler loaders

The rated operating load of crawler loaders shall be 35 % of the tipping load (2.6) or 100 % of the lifting capacity (2.7), whichever is less.

3.3 Wheel loaders

The rated operating load of wheel loaders shall be 50 % of the tipping load (2.6) or 100 % of the lifting capacity (2.7), whichever is less.

1) International Standards specifying methods of measuring tool forces and tipping loads of front loading shovels, and volumetric rating of loader buckets, are in preparation.