
International Standard



7095

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Earth-moving machinery — Crawler tractors and crawler loaders — Operator's controls

Engins de terrassement — Tracteurs à chenilles et chargeuses à chenilles — Commandes du conducteur

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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 7095 was developed by Technical Committee ISO/TC 127, *Earth-moving machinery*, and was circulated to the member bodies in June 1980.

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

Australia	Finland	South Africa, Rep. of
Austria	France	Sweden
Belgium	Germany, F. R.	United Kingdom
Brazil	India	USA
Bulgaria	Italy	USSR
Chile	Japan	
Egypt, Arab Rep. of	Romania	

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

Czechoslovakia
Poland

Earth-moving machinery — Crawler tractors and crawler loaders — Operator's controls

1 Scope

This International Standard specifies the requirements, movement directions and actuating forces for the operator's controls on crawler tractors and crawler loaders as they relate to the operator and his position on the machine.

2 Field of application

This International Standard applies to crawler tractors and crawler loaders as defined in ISO 6165 and is intended as a guide when designing operator controls on these machines.

The range of sizes of operators considered in this document is that established in ISO 3411.

3 References

ISO 3411, *Earth-moving machinery — Human physical dimensions of operators and minimum operator space envelope.*

ISO 6165, *Earth-moving machinery — Basic types — Vocabulary.*

ISO 6682, *Earth-moving machinery — Zones of comfort and reach for controls.*

4 Controls

4.1 General requirements

The minimum normal operating space envelope around the operator for operator enclosures (cabs, ROPS, FOPS) and the clearance between the operator enclosure and controls are defined in ISO 3411.

4.2 The operator's controls shall be located as specified in 5.1 which takes seat adjustment into account.

5 Location of controls

5.1 The controls listed in table 1 shall be located with their neutral position and, if possible, all other positions in the zones of comfort. All positions that they may occupy shall be at least within the zone of reach. See ISO 6682.

Table 1 — Controls

Controls
Steering
Accelerator (speed)
Decelerator
Service brake
Transmission
Tool movement
Clutch (flywheel)

All controls frequently used and not specified above shall be located so that all positions they may occupy are within the zone of reach. The combining of controls is permissible.

5.2 The controls should be of reliable design and construction and so arranged that they can be operated from the operator's seat within the force limits of table 2.

5.3 Controls, control linkages, hoses and tubes, and connections shall be arranged in such a manner that they are unlikely to be damaged by external foreseeable forces (i.e. used as a step; maximum hand or foot force exerted) and are easily accessible for inspection.

5.4 The distance between control levers, adjacent foot pedals, handles, knobs and other machine parts shall be sufficient to allow operation without unintentional actuation of adjacent controls.