SLOVENSKI STANDARD
SIST ISO 3789-1:1995

01-september-1995

Traktorji, kmetijski in gozdarski stroji, gnana vrtna oprema - Namestitev in delovanje krmilnih elementov - 1. del: Splošni krmilni elementi

Tractors, machinery for agriculture and forestry, powered lawn and garden equipment -- Location and method of operation of operator controls -- Part 1: Common controls

Tracteurs, matériels agricoles et forestiers, matériel à moteur pour jardins et pelouses -- Emplacement et mode de fonctionnement des commandes de l'opérateur -- Partie 1: Commandes communes

Ta slovenski standard je istoveten z: **ISO 3789-1:1982**

ICS:

65.060.01	Kmetijski stroji in oprema na splošno	Agricultural machines and equipment in general

SIST ISO 3789-1:1995 **en**

International Standard 3789/1

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

Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Location and method of operation of operator controls — Part 1: Common controls

Tracteurs, matériels agricoles et forestiers, matériel à moteur pour jardins et pelouses — Emplacement et mode de fonctionnement des commandes de l'opérateur — Partie 1: Commandes communes

First edition — 1982-08-01

UDC 631.3-51 **Ref. No. ISO 3789/1-1982 (E)**

Descriptors : agricultural machinery, tractors, self-propelled machines, mode of operation, control devices, positioning, direction (of movement), specifications.

Price based on 4 pages

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 3789/1 was developed by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, and was circulated to the member bodies in March 1981.

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

Australia	India	Romania
Austria	Iran	South Africa, Rep. of
Belgium	Iraq	Spain
Canada	Italy	Sweden
China	Korea, Dem. P. Rep. of	Switzerland
Czechoslovakia	Korea, Rep. of	Turkey
Denmark	Mexico	United Kingdom
Egypt, Arab Rep. of	New Zealand	USSR
France	Poland	
Germany, F.R.	Portugal	

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

Finland
USA

International Standards ISO 3789, Parts 1 to 4 cancel and replace International Standard ISO 3789-1976, of which they constitute a technical revision.

Printed in Switzerland

Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Location and method of operation of operator controls — Part 1 : Common controls

0 Introduction

This document forms part of a series dealing with operator controls, location and method of operation.

Other parts in the series will be as follows :

Part 2 : Controls for agricultural tractors and machinery.

Part 3 : Controls for powered lawn and garden equipment.

Part 4 : Controls for forestry machinery.

1 Scope and field of application

This part of ISO 3789 specifies the type, location and method of operation (including direction of motion) of common operator controls relating to all types of agricultural, forestry tractors and machinery, and powered lawn and garden equipment. The common operator controls are divided into two categories :

a) ride-on (riding machines) machinery;

b) pedestrian-operated machines.

The controls included in this International Standard are those which are located at the operator's normal working position.

The common operator controls given in this part of ISO 3789 are not required on all machines, but when provided on a machine, they shall conform to the requirements specified herein.

2 References

ISO 3767, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays — Part 1 : Common symbols.*

ISO 3789, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Location and method of operation of operator controls —*

Part 2 : Controls for agricultural tractors and machinery.

Part 3 : Controls for powered lawn and garden equipment.

3 General

The movement of the control, in appropriate circumstances, shall be clearly indicated (see ISO 3767/1).

4 Type, location and operation of controls

The type, location and method of operation of the operator controls for ride-on (riding) machines are laid down in the table.

Table — Ride-on (riding) machines — Common controls

No.	Control	Location	Operation
1	**Engine**		
1.1	**Starting**	For particular machine requirements, see ISO 3789/2 and ISO 3789/3.	
1.2	**Speed**		
1.2.1	Foot-operated	For particular machine requirements, see ISO 3789/2 and ISO 3789/3.	
1.2.2	Hand-operated	Within easy reach and preferably in front of, or to the right side of, the operator.	The recommended direction of motion of the control is in a plane generally parallel to the longitudinal axis of the propelling vehicle. The direction of motion shall be away from the operator (generally forward or upward) to increase engine speed.
1.3	**Stop**	For particular machine requirements, see ISO 3789/2 and ISO 3789/3.	
2	**Steering**	Forward of the operator.	When a steering wheel control is provided, a clockwise rotation shall effect a right turn, and a counter-clockwise rotation shall effect a left turn.
		For additional steering requirements, see ISO 3789/2 and ISO 3789/3.	
3	**Brakes**		
3.1	**Service**		
3.1.1	Foot-operated	The brake pedal(s) shall be located convenient to the operator's right foot.	The direction of motion shall be generally forward and/or downward for engagement. Where separate brake pedals are provided on wheeled tractors for the independent right-hand and left-hand brake control, it shall be possible to obtain combined control such that there is no undue deviation from a straight path of travel.
3.1.2	Hand-operated	For particular machine requirements, see ISO 3789/2.	
3.2	**Parking**	For particular machine requirements, see ISO 3789/2 and ISO 3789/3.	
3.3	**Braking of trailers or towed equipment**	For particular machine requirements, see ISO 3789/2.	
4	**Transmission**		
4.1	**Clutch** (includes combined transmission and P.T.O.) See also P.T.O. control	For particular machine requirements, see ISO 3789/2 and ISO 3789/3.	
4.1.1	Traction clutch	For particular machine requirements, see ISO 3789/3.	

Table (*continued*)

No.	Control	Location	Operation
4.2	**Combination ground speed and direction** (continuously variable combined control)		
4.2.1	Foot-operated — one control	Convenient to the operator's right foot.	The control shall have the effect of a pedal being pivoted under the operator's foot and shall remain at rest in the neutral position. Forward and/or downward motion of the front of the pedal shall cause forward motion and increasing forward speed; downward motion of the rear of the pedal shall cause reverse motion and increasing reverse speed. Where the control can pass directly from forward to reverse through the neutral position, provision shall be made for a secondary motion. A positive "neutral" location shall be provided.
		For particular machine requirements, see ISO 3789/3.	
	Foot-operated — two control (pedal)	For particular machine requirements, see ISO 3789/2.	
4.2.2	Hand-operated	Convenient to the operator.	Move control from neutral position forwards and/or upwards for forward motion and increasing forward speed; rearwards and/or downwards for reverse motion and increasing reverse speed. Where the selection control can pass directly from forward to reverse through the neutral position, provision shall be made for a secondary motion. A positive "neutral" location shall be provided.
4.3	**Gear selection**		
4.3.1	In-line operation (hand-operated)	Convenient to the operator.	From neutral position, move control progressively in an upward and/or forward direction to select gears giving increased forward speeds. From neutral position, move control progressively in a rearward and/or downward direction to select reverse gears giving increased reverse speeds. Where the selection control can pass directly from forward to reverse through the neutral position, a separate positive "neutral" location shall be provided. Provision shall be made for secondary motion when passing through neutral so as to prevent accidental movement of the control.
4.3.2	Non-in-line operation (hand-operated)	Convenient to the operator.	Shifting pattern shall be simple and clearly marked. In particular the neutral position shall be clearly identified and easy to select.
4.4	**Direction control** (forward-reverse non-variable speed) Hand-operated	Convenient to the operator.	Move control generally forward for forward vehicle motion and move generally rearward for rearward vehicle motion. If a neutral position is provided, provision shall be made to prevent accidental movement of the control from neutral.
4.5	**Master implement unit clutch** **Mower attachment clutch**	For particular machine requirements, see ISO 3789/2 and ISO 3789/3.	

Table (*concluded*)

No.	Control	Location	Operation
5	**Differential lock**	For particular machine requirements, see ISO 3789/2.	
6	**Power take off**		
6.1	**Clutch**		
6.1.1	Foot-operated	For particular machine requirements, see ISO 3789/2 and ISO 3789/3.	
6.1.2	Hand-operated	Convenient to the operator. For particular machine requirements, see ISO 3789/3.	Move control downward and/or rearward to disengage. Control should be operable only with the operator in the operator's station.
7	**Implements and auxiliaries**	For particular machine requirements, see ISO 3789/2 and ISO 3789/3.	