
INTERNATIONAL STANDARD



2261

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

Reciprocating internal combustion engines — Hand operated control devices — Standard direction of motion

First edition — 1972-05-01

UDC 621.434-34

Ref. No. ISO 2261-1972 (E)

Descriptors : internal combustion engines, reciprocating engines, manual controls, direction (of movement).

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 2261 was drawn up by Technical Committee ISO/TC 70, *Internal combustion engines*.

It was approved in July 1971 by the Member Bodies of the following countries :

Australia	India	South Africa, Rep. of
Austria	Ireland	Sweden
Belgium	Italy	Switzerland
Czechoslovakia	Japan	Turkey
Egypt, Arab Rep. of	Korea, Rep. of	United Kingdom
France	Netherlands	U.S.A.
Germany	New Zealand	U.S.S.R.

No Member Body expressed disapproval of the document.

Reciprocating internal combustion engines — Hand operated control devices — Standard direction of motion

0 INTRODUCTION

Standards regarding the direction of motion of operating devices are of particular value where stress is laid on a high degree of safety and/or a high operating speed. Often it is required that the operator has to move the operating device in the appropriate direction almost automatically. Therefore, standardization is important where a wrong operation would cause great inconvenience, damage or danger.

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the direction of motion of hand operated devices for speed regulation and reversing of reciprocating internal combustion engines, having particular regard to reciprocating internal combustion engines for marine and rail propulsion — irrespective of whether the operator's position is near the engine or remote from it.

Valves for the control of liquids and gases are excluded.

2 EFFECTS OF ACTUATING THE OPERATING DEVICE

2.1 Where separate operating devices for reversing and speed regulation are installed

- a) Actuating the operating device for reversing results in a forward movement or a backward movement.
- b) Actuating the operating device for speed results in a speed increase or decrease.

2.2 Where combined operating devices for reversing and speed are installed

- a) Actuating the operating device from the centre posi-

tion in one direction results in a forward movement with increasing speed.

- b) Actuating the operating device from the centre position in the opposite direction results in a backward movement with increasing speed.

- c) Actuating the operating device from the travelling position to the centre position results in a speed decrease to a full stop.

3 DESIGNATION OF OPERATIONS

Operating directions and effects caused by actuation of the control devices are co-ordinated in Tables 1 and 2.

4 PREFERRED POSITION OF OPERATOR ON INSTALLATIONS ON WHICH THE DIRECTION OF MOVEMENT OF THE VEHICLE IS VISIBLE TO OPERATOR

Operator positions should preferably be arranged in such a manner that the operator is looking towards the front of the vehicle.

If the operator's position is arranged parallel to the direction of travel of a vehicle (the operator looking sideways), the operator's position should be arranged in such a manner that the operating directions of the control devices correspond to the definitions given in this International Standard.

5 DESIGNATION

To indicate the effect resulting from the motion of an operating device, easily understandable symbols — instead of words — shall be placed next to the operating device (as shown in Table 3).

TABLE 1 – Operating directions and effects with separate operating devices for reversing and for speed regulation









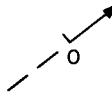
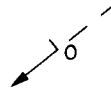


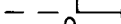
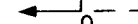
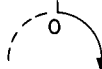





Designation of operation	Motion of operating device	Type of operating device	Direction of motion of operating device			
			Increase of speed or movement ahead		Decrease of speed or movement backward	
A ₁	linear or approximately linear	hand lever		away from the operator		towards the operator
B ₁				upwards		downwards
C ₁				to the right		to the left
D ₁	turning	handwheel or crank handle		clockwise		counter-clockwise

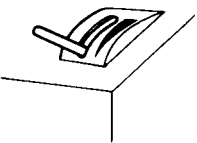
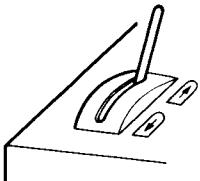
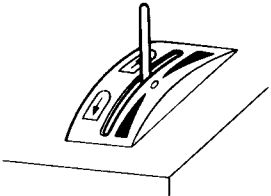
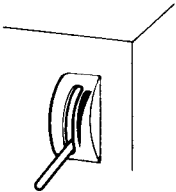
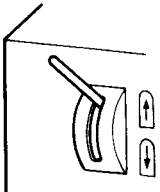
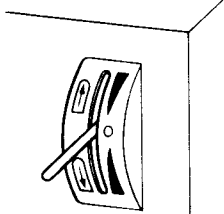
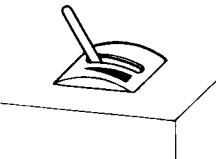
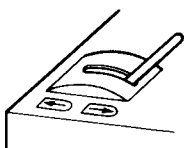
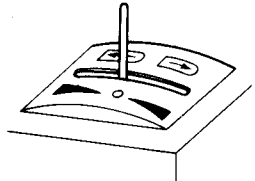
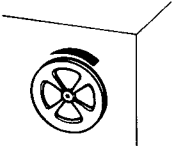
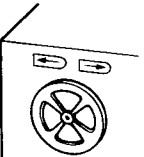
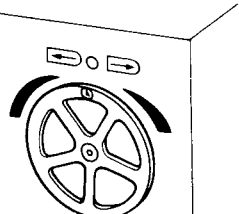
TABLE 2 – Operating directions and effects with a combined operating device for both reversing and speed regulation

Designation of operation	Motion of operating device	Type of operating device	Direction of motion of operating device			
			Movement ahead with increase of speed ¹⁾		Movement backward	
			from central (stop) position			
A ₂	linear or approximately linear	hand lever		away from the operator		towards the operator
B ₂				upwards		downwards
C ₂				to the right		to the left
D ₂	turning	handwheel or crank handle		clockwise		counter-clockwise

1) Decrease of speed in every case will be attained by actuation of the operating device in the direction towards the central (stop) position.

TABLE 3 – Symbols for speed regulation and vehicle direction

Designation of operation	Symbols for speed-progressive increase or decrease		Explanation
A/B/C			Motion of the operating device towards the wide end of the wedge results in an increase of speed. Motion of the operating device towards the point of the wedge results in a decrease of speed.
D			
Designation of operation	Symbols for vehicle direction		Explanation
A/B/C/D	forward movement	backward movement	With engines driving a vehicle – marine or rail – directly (without a reversing gear) the direction of rotation of the engine determines the direction in which the vehicle moves. Forward movement of the vehicle is indicated by a symbol representing the vehicle with an arrow pointing towards the front end (bow) of the vehicle. Backward movement of the vehicle is indicated by a symbol representing the vehicle with an arrow pointing towards the rear end (stern) of the vehicle.
			

Designation of operation	Vehicle speed	Vehicle direction	Designation of operation	Vehicle direction and speed
A ₁			A ₂	
B ₁			B ₂	
C ₁			C ₂	
D ₁			D ₂	

The actual design may differ from the illustration shown above.

The operating devices may be combined at random according to application.

FIGURE – Illustrations of typical operations

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 2262:1972

<https://standards.iteh.ai/catalog/standards/sist/50982f14-2ae6-4a3e-8040-87057861baf5/iso-2262-1972>