

# INTERNATIONAL STANDARD

**ISO**  
**3789-3**

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

**Part 3:**  
**Controls for powered lawn and garden equipment**

*Tracteurs, matériels agricoles et forestiers, matériel à moteur pour jardins et  
pelouses — Emplacement et mode de fonctionnement des commandes de  
l'opérateur —*

*Partie 3: Commandes pour matériel à moteur pour jardins et pelouses*

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 3789-3 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*.

This second edition cancels and replaces the first edition (ISO 3789-3 : 1982), and incorporates draft Addendum 1 of 1986.

ISO 3789 consists of the following parts, under the general title *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Location and method of operation of operator controls*:

- *Part 1: Common controls*
- *Part 2: Controls for agricultural tractors and machinery*
- *Part 3: Controls for powered lawn and garden equipment*
- *Part 4: Controls for forestry log loaders*

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

## Part 3: Controls for powered lawn and garden equipment

### 1 Scope

This part of ISO 3789 specifies the type, location and method of operation (including direction of motion) of the operator controls for powered rotary mowers, including ride-on (riding) types, ride-on (riding) lawn tractors, and lawn and garden tractors with mower attachments, designed primarily for use at and around the home, and having a width of cut greater than 300 mm.

The operator controls location and method of operation specified in this part of ISO 3789 are supplementary to the requirements established in ISO 3789-1.

The operator controls are divided into two categories:

- a) ride-on (riding) machines;
- b) pedestrian-operated machines.

The controls included in all parts of this International Standard are those which are located at the operator's normal working position and are readily accessible and convenient to the operator.

The common operator controls given in ISO 3789-1 and the 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 and in ISO 3789-1.

### 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 3789. At the time of publication, the editions indicated

were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 3789 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3767-1 : 1982, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays — Part 1: Common symbols*.

ISO 3767-3 : 1988, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays — Part 3: Symbols for powered lawn and garden equipment*.

ISO 3789-1 : 1982, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Location and method of operation of operator controls — Part 1: Common controls*.

### 3 General

The movement of the control, in appropriate circumstances, shall be clearly indicated, in accordance with ISO 3767-3.

### 4 Type, location and operation of controls

The type, location and method of operation of the operator controls are laid down in table 1 for ride-on (riding) machines and in table 2 for pedestrian-operated machines.

Table 1 — Ride-on (riding) machines

| No.   | Control   | Location  | Operation   |
|-------|---|---|---|
| 1     | <b>Engine</b>   |   |   |
| 1.1   | <b>Starting</b>   |   | <p>It shall be impossible for the engine to be started unless:</p> <ul style="list-style-type: none"> <li>a) the traction transmission is in neutral or disengaged, and the attachment drive is in neutral or disengaged, or</li> <li>b) the traction clutch is disengaged and the attachment drive is in neutral or disengaged, or</li> <li>c) the operator is in the operator's seat (station).</li> </ul> <p>The above method of operation shall apply to machines with electric and manual start; it is optional on manual start only machines. For manual start machines, a durable warning label shall be provided.</p> |
| 1.2   | <b>Speed</b>  |   |   |
| 1.2.1 | Foot-operated   | Shall be readily accessible to the operator's right foot. | Push pedal forward and/or downward to increase engine speed.  |
| 1.2.2 | Hand-operated   | See ISO 3789-1 : 1982, subclause 1.2.2.                   |   |
| 1.3   | <b>Stop</b>   |   |   |
| 1.3.1 | Battery-powered engine starting units                         | Easily accessible from the operator's seat.               | A control with a removable component to prevent unauthorized use of the unit.   |
| 1.3.2 | Manual start  | Easily accessible from the operator's seat.               | A means that does not depend on sustained manual pressure.  |
| 2     | <b>Steering</b>   | Forward of the operator.                                  | <p>When a steering wheel control is provided, a clockwise rotation shall effect a right turn, and a counterclockwise motion shall effect a left turn.</p> <p>A ride-on mower shall not have a steering control mechanism which requires lateral motion of a handle or a lever in a direction opposite to the direction of turn in such a manner as to cause the operator to move in a direction resulting in decreased vehicle stability during a turn on a slope.</p> <p>Steering control mechanisms should not have sharp protrusions.</p>  |
| 3     | <b>Brakes</b>   | See ISO 3789-1 : 1982, subclause 3.1.1.                   |   |
| 3.1   | <b>Service</b>  |   |   |
| 3.1.1 | Foot-operated (except when combined with a clutch: see 4.2.1) |   | When separate brake pedals are provided for the independent right-hand and left-hand brake control, means shall be provided to lock the pedals together.  |