

24-1 Driver operated controls

Refer to: R60 00-S5

24-1.1 Effective date and Scope:

Effective date from 2017/1/1, the new vehicle variants of power-driven vehicles of category symbols L1, L2, L3 and L5 shall comply with this regulation. Category symbols L1, L2, L3 and L5 which were confirmed to "24 Driver operated controls" regard as conform to this regulation.

24-1.2 Definitions:

- 24-1.2.1 "Control" means any part of the vehicle or a device directly actuated by the driver which changes the state or functioning of the vehicle or any part thereof.
- 24-1.2.2 "Device" means an element or an assembly of elements used to perform one or more functions.
- 24-1.2.3 "Handlebars" means any part of the bar or bars connected to the head of the forks (steering head) by means of which the vehicle is steered.
- 24-1.2.4 "Handlebars: right side" means any part of the handlebars which, when facing the direction of forward movement, lies on the right side of the longitudinal median plane of the vehicle.
- 24-1.2.5 "Handlebars: left side" means any part of the handlebars which, when facing the direction of forward movement, lies on the left side of the longitudinal median plane of the vehicle.
- 24-1.2.6 "Handlebars: forward" means any part of the handlebars lying on the side furthest from the driver when seated in a driving position.
- 24-1.2.7 "Handgrip" means that part of the handlebars, furthest from the centre, by which the handlebars are held by the driver of the vehicle.
- 24-1.2.8 "Rotating handgrip" means a handgrip, operating some functional mechanism of the vehicle, which is free to rotate around the handlebar when so turned by the driver of the vehicle.
- 24-1.2.9 "Frame" means any part of the frame, chassis or cradle of the vehicle, to which is attached the engine and/or transmission unit,

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and/or the engine and transmission unit itself.

24-1.2.10 "Frame: left side" means any part of the frame which, when facing the direction of forward movement, lies on the left side of the longitudinal median plane of the vehicle.

24-1.2.11 "Frame: right side" means any part of the frame which, when facing the direction of forward movement, lies on the right side of the longitudinal median plane of the vehicle.

24-1.2.12 "Lever" means any device consisting of an arm turning on a fulcrum, by means of which some functional mechanism of the vehicle is operated.

24-1.2.13 "Hand lever" means a lever operated by the hand of the driver;

Note: Unless otherwise stated, a hand lever is operated by compression, (that is, movement of the apex of the lever towards the supporting structure), e.g. to engage a brake mechanism or to disengage the clutch mechanism.

24-1.2.14 "Foot lever" means a lever operated by contact between the foot of the driver and a spur projecting from the arm of the lever.

24-1.2.15 "Pedal" means a lever operated by contact between the foot of the driver and a pad on the lever, so placed as to allow pressure to be applied to the arm of the lever.

Note: Unless otherwise stated, a pedal is operated by depression, for example to engage a brake mechanism.

24-1.2.16 "Riding pedals" means those devices which are linked to some form of transmission and may be used to propel a moped.

24-1.2.17 "Rocker arm" means a lever, pivoted at or near its centre and having a pad or spur at each end, operated by contact between the foot of the driver and the said pads or spurs.

24-1.2.18 "Clockwise" means the direction of rotation around the axis of the part considered, following the motion of the hands of a clock when viewed from the upper or the outer side of the part considered.

24-1.2.19 "Anticlockwise" has the inverse meaning of "Clockwise".

24-1.2.20 "Combined service brake" means a system of operation (by hydraulic action or mechanical linkage, or both) whereby both the front

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and the rear brakes of the vehicle are brought into operation at least partially by the use of only one control.

24-1.2.21 "Indicator" means a device which presents information on the functioning or situation of a system or a part of a system, for example a fluid level.

24-1.2.22 "Tell-tale" means an optical signal which indicates the actuation of a device, correct or defective functioning or condition, or failure to function.

24-1.2.23 "Symbol" means a diagram from which to identify a control, a tell-tale or an indicator.

24-1.2.24 "Optical warning device" means a headlamp where the beam can be flashed to give signals to the oncoming or preceding traffic, e.g., when a vehicle is about to overtake a slower preceding vehicle.

24-1.2.25 "Adjacent", with respect to a symbol identifying a control, tell-tale or indicator, means that the symbol is in close proximity to the control, tell-tale or indicator and no other control, tell-tale, indicator, identification symbol or source of illumination appears between an identification symbol and the control, tell-tale, or indicator which that symbol identifies.

24-1.2.26 "Common space" means an area on which more than one tell-tale, indicator, identification symbol, or other message may be displayed but not simultaneously.

24-1.3 Driver operated controls shall according to suitable types and range of principle are as below :

24-1.3.1 The same vehicle category symbol.

24-1.3.2 The same brand and vehicle type series.

24-1.4 General provisions:

A vehicle, if fitted with a control, tell-tale or indicator identified in Table 1, shall comply with the requirements of this Regulation with respect to the location, identification, operation, illumination, and colour of that control, tell-tale or indicator.

For functions for which no symbol is available in Table 1, the manufacturer may use a symbol following the appropriate standards. Where no symbol is available, the manufacturer may use a symbol of its own conception. Such a symbol shall not cause confusion with any symbol

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specified in Table 1.

24-1.4.1 Location

24-1.4.1.1 The controls, listed in Table 1, shall be located so that they are operable and within reach of the driver when seated in the driving position. The controls for "Manual Choke" and "Manual Fuel Tank Shutoff Valve" shall be located so that they are operable and within reach of the driver when seated.

24-1.4.1.2 The tell-tales and indicators listed in Table 1, and their identification symbols shall be located so that they are visible to the driver when seated in the driving position, during daylight and night-time driving. Tell-tales, indicators and their identification symbols need not be visible when not activated.

24-1.4.1.3 The identification symbols for controls, tell-tales, and indicators shall be placed on or adjacent to the controls, tell-tales or indicators that they identify except as provided in paragraph 24-1.4.1.5 below.

24-1.4.1.4 Controls for hazard warning lamps, passing and driving beam headlamps, direction indicators, supplemental engine stop, audible warning device, brakes and clutch shall be always accessible to the driver as the primary function of the corresponding control without the removal of the driver's hands from the respective handgrips.

24-1.4.1.5 Paragraph 24-1.4.1.3. does not apply to multifunction controls, if the control is associated with a multitask display that:

24-1.4.1.5.1 Is visible to the driver, and

24-1.4.1.5.2 Identifies the control with which it is associated, and

24-1.4.1.5.3 Identifies all of the vehicle systems for which control is possible from the multifunction control. Sub-functions of those systems need not be shown on the top-most layer of the multi-task display, and

24-1.4.1.5.4 Does not display tell-tales listed in Table 1.

24-1.4.2 Identification

24-1.4.2.1 Each control, tell-tale and indicator listed in Table 1, shall be identified by the relevant specified symbol.

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24-1.4.2.1.1 It shall be ensured that no deviations in the shape and orientation of the provided symbols are permitted, notably that any customised appearance of the provided symbols shall be prohibited.

24-1.4.2.1.2 Small irregularities concerning line thickness, the marking application and other relevant tolerances shall be accepted, as provided in paragraph 4 of ISO 2575:2010/ amd1:2011 (design principles).

24-1.4.2.2 Supplementary symbols, words or abbreviations may be used at the manufacturer's discretion in conjunction with any symbol, word or abbreviation specified in Table 1.

24-1.4.2.3 Each additional or supplementary symbol, word or abbreviation used by the manufacturer shall not cause confusion with any symbol specified in this Regulation.

24-1.4.2.4 If the control, indicator or tell-tale for the same function are combined, one symbol may be used to identify that combination.

24-1.4.2.5 All identification symbols for the tell-tales, indicators and controls provided on the handle bar or the instrument cluster shall be positioned so as to appear to the driver to be perceptually upright except the symbol for an audible warning device control. For rotating controls that have an "off" position, this requirement applies to the control in the "off" position.

24-1.4.2.6 When fitted, each control that regulates a system function over a continuous range shall have identification provided for the limits of the adjustment range.

24-1.4.3 Illumination

24-1.4.3.1 At the manufacturer's option, any control, indicator and their respective identification symbols may be capable of being illuminated.

24-1.4.3.2 A tell-tale shall emit a light when the malfunction or vehicle condition it is meant to indicate occurs. It shall not emit light at any other time, except during a bulb check.

24-1.4.4 Colour

24-1.4.4.1 The light of each tell-tale shall be of the colour as specified in Table 1.

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24-1.4.4.2 The colour of tell-tales not listed in Table 1 can be selected by the manufacturer in accordance with paragraph 24-1.4.4.3. The colour selected shall not mask or interfere with the identification of any tell-tale, control or indicator specified in Table 1.

24-1.4.4.3 Colours are recommended in accordance with the following colour code:

24-1.4.4.3.1 Red: danger to persons or very serious damage to equipment is immediate or imminent;

24-1.4.4.3.2 Amber (yellow): caution, outside normal operating limits, vehicle system malfunction, damage to vehicle likely, or other condition which may produce hazard in the longer term;

24-1.4.4.3.3 Green: safe, normal operating condition (except if blue or amber is required by Table 1.).

24-1.4.4.4 Each symbol used for the identification of a tell-tale, control or indicator shall be in a colour that stands out clearly against the background.

24-1.4.4.5 The filled-in part of any symbol may be replaced by its outline and the outline of any symbol may be filled in.

24-1.4.5 Common space for displaying multiple messages

A common space may be used to show information from any source, subject to the following requirements:

24-1.4.5.1 The tell-tales and indicators displayed in the common space shall meet the requirements for paragraphs 24-1.4.5.3.,

24-1.4.5.4. and 24-1.4.5.5. above and shall illuminate at the initiation of the condition they are designed to identify.

24-1.4.5.2 The tell-tale and indicators that are listed in Table 1 and are shown in the common space shall illuminate at the initiation of any underlying condition.

24-1.4.5.3 Except as provided in paragraphs 24-1.4.5.4., 24-1.4.5.5. and 24-1.4.5.6. below, when the condition exists for actuation of two or more tell-tales, the information shall be either:

(a) Repeated automatically in sequence, or

(b) Indicated by visible means and capable of being selected for viewing by the driver when seated in the driving position.

24-1.4.5.4 The tell-tales for the brake system malfunction, headlamp driving beam and direction indicator shall not be shown in the same

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common space.

24-1.4.5.5 If condition of activation exists for the following tell-tales: brake system malfunction, headlamp driving beam and direction indicator being displayed on a common space with other tell-tales, they shall have priority over anything else in the common space.

24-1.4.5.6 Information displayed in the common space may be cancellable automatically or by the driver, except the tell-tales for brake system malfunction, headlamp driving beam, direction indicator and those for which the colour red is required by Table 1 shall not be cancellable, if the condition occurs for their activation.

24-1.5 Applicants apply for certification test shall provide at least one representative vehicle (or the essential part of vehicle for test) and submit the documents as below:

24-1.5.1 Specification documents for paragraph 24-1.3 and the vehicle's drawings and / or photographs.

24-1.5.2 The related driver-operated controllers' and / or photographs and necessary vehicle's drawings and / or photographs for coordinated description.

Table 1: Symbols identifying controls, tell-tales and indicators

No.	Column 1 Item	Column 2 Symbol	Column 3 Function	Column 4 Location	Column 5 Colour	Column 6 Definition	Column 7 Operation
1	Supplemental engine stop control (OFF)		Control	Located on the handlebars: right side			As a means of stopping the engine, alternative to the main switch or a decompression valve control, the vehicle may be equipped with an engine electrical power supply cut-out (Supplemental engine stop).
2	Supplemental engine stop control (RUN)						
3	Ignition Switch		Control			The device that enables the engine to run, and may also allow operation of other electrical systems on a vehicle.	In the case of a rotary switch, the direction of motion shall be clockwise from the ignition "off" position to the ignition "on" position.
4	Electric Starter		Control				
5	Manual Choke		Control	The control need not be visible from the rider's position			
			Tell-Tale		Amber		
6	Neutral (Gearbox Selection)		Tell-tale		Green		The tell-tale is illuminated when the gear selector is in neutral position.

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No.	Column 1 Item	Column 2 Symbol	Column 3 Function	Column 4 Location	Column 5 Colour	Column 6 Definition	Column 7 Operation
7	Manual Fuel Tank Shutoff Valve (OFF)	●	Control	The control need not to be visible from the rider's position			The control shall have separate positive positions for "OFF", "ON" and "RESERVE" (where a reserve supply is provided).
8	Manual Fuel Tank Shutoff Valve (ON)						The control shall be in the ON position when it is in the direction downstream of the flow of fuel from the tank to the engine: in the OFF position when it is in a direction perpendicular to the flow of fuel, and in the RESERVE position (where applicable) when it is in the direction upstream of the flow of fuel.
9	Manual Fuel Tank Shutoff Valve (RES)						In case of a system in which the fuel flow is stopped when the engine is switched off, and if equipped with a control, the symbols and control positions shall be the same as identified for Manual Fuel Shut-Off Control.
10	Speedometer		Indicator				The display shall be illuminated whenever the position lamp (if available) or headlamp is activated.
11	Audible warning device (Horn)		Control	On the handlebars: left side for vehicles with a gear selection control operated independently of a hand operated clutch or for vehicles without gear selection control. Alternatively, on the handlebar: right side for vehicles with gear selection located on the handlebars: left side and operated in conjunction with the hand operated clutch.			Push to activate.

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No.	Column 1 Item	Column 2 Symbol	Column 3 Function	Column 4 Location	Column 5 Colour	Column 6 Definition	Column 7 Operation
12	Driving-beam (Main, high or upper beam) - (Hi)		Control	On the handlebars: left side for vehicles with a gear selection control operated independently of a hand operated clutch or for vehicles without gear selection control. Alternatively, on the handlebars: right side for vehicles with gear selection located on the handlebars: left side and operated in conjunction with the hand operated clutch.			
			Tell-Tale		Blue		
13	Passing-Beam (Dipped, low or lower Beam) - (Lo)		Control	On the handlebars: left side for vehicles with gear selection control operated independently of a hand operated clutch or for vehicles without gear selection control. Alternatively, on handlebars: right side for vehicles with gear selection located on the handlebars: left side and operated in conjunction with the hand operated clutch.			
			Tell-Tale		Green		
No.	Column 1 Item	Column 2 Symbol	Column 3 Function	Column 4 Location	Column 5 Colour	Column 6 Definition	Column 7 Operation
14	Optical warning device		Control	adjacent to the Driving-Beam/ Passing-Beam Control.			May be an additional function of the Driving-Beam/Passing-Beam Control. When control is released, the beam shall go back to the previous state.
15	Fog lamps - front		Control				
			Tell-Tale		Green		
16	Fog lamps - rear		Control				
			Tell-Tale		Amber		

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No.	Column 1 Item	Column 2 Symbol	Column 3 Function	Column 4 Location	Column 5 Colour	Column 6 Definition	Column 7 Operation
17	Direction indicators		Control	Control(s) is/are to be located on the handlebar in clear view from the operator's seat and shall be marked clearly.			The control shall be so designed that, when viewed from the rider's seat, operation of the left hand portion or movement to the left of the control actuates the left side indicators and vice versa for the right side indicators.
			Tell-Tale			Green	
No.	Column 1 Item	Column 2 Symbol	Column 3 Function	Column 4 Location	Column 5 Colour	Column 6 Definition	Column 7 Operation
18	Hazard warning signal		Control				
			Tell-Tale		Red	Represented by either the direction indicator tell-tale(s) flashing (simultaneously), or by the given triangle symbol.	
			Tell-Tale		Green		
19	Position Lamp		Control			Represented by the given symbols for position lamps, master lamp control and parking lamp but if all lamps are automatically lit when vehicle is in operation, no position or master lamp control symbol need appear.	In the case of a rotary switch, operation of the switch in a clockwise direction shall engage, progressively, the vehicle's position lights and then the vehicle's main lights. This shall not prevent the inclusion of additional switch positions provided that they are clearly indicated.
			Tell-Tale		Green		
20	Master Lamp		Control				The light control switch may be combined with the ignition switch if so desired.
			Tell-Tale		Green	The tell-tale function may be provided by means of instrument cluster illumination.	

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No.	Column 1 Item	Column 2 Symbol	Column 3 Function	Column 4 Location	Column 5 Colour	Column 6 Definition	Column 7 Operation
21	Parking Lamp		Control				
			Tell-Tale		Green	If the Parking Lamp function is incorporated in the ignition switch, identification is optional.	
No.	Column 1 Item	Column 2 Symbol	Column 3 Function	Column 4 Location	Column 5 Colour	Column 6 Definition	Column 7 Operation
22	Fuel Indicator		Indicator				
			Tell-Tale		Amber		
23	Engine coolant temperature		Indicator				
			Tell-Tale		Red		
24	Electrical charging		Indicator				
			Tell-Tale		Red		
25	Engine Oil		Indicator				
			Tell-Tale		Red		
26	Engine Speed Control		Control	On the handlebars: right side			Hand operated control. Rotating Handgrip Anticlockwise rotation increases speed. The control shall be self-closing to idle in a clockwise direction after release of the hand unless a vehicle speed control device is activated.
No.	Column 1 Item	Column 2 Symbol	Column 3 Function	Column 4 Location	Column 5 Colour	Column 6 Definition	Column 7 Operation
27	Front wheel brake		Control	On the handlebars: right side forward			Hand lever The front wheel brake may operate with the rear wheel brake in the case of a combined brake system.

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No.	Column 1 Item	Column 2 Symbol	Column 3 Function	Column 4 Location	Column 5 Colour	Column 6 Definition	Column 7 Operation
28	Foot rear wheel brakes control		Control	On the frame: right side			Pedal The rear wheel brake may operate with the front wheel brake in the case of a combined brake system.
29	Hand rear wheel brake control		Control	On the handlebars: left side forward			Hand lever Not allowed for vehicles with hand operated clutch. The rear wheel brake may operate with the front wheel brake in the case of a combined brake system.
30	Parking brake		Control				Hand lever or pedal
31	Clutch		Control	On the handlebars: left side			Hand lever Squeeze to disengage clutch. Shall not prohibit the use of devices on the left side of the vehicle that combine operations of a clutch and gear selector.

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No.	Column 1 Item	Column 2 Symbol	Column 3 Function	Column 4 Location	Column 5 Colour	Column 6 Definition	Column 7 Operation
32	Foot selector Manual gear shift Control		Control	On the frame: left side			<p>Foot lever or rocker arm</p> <p>Moving the forward part of the foot lever or rocker arm shall progressively select the gears: upward movement of the forward part for shifting to a higher gear position and downward movement for shifting to a lower gear position. If a separate, positive "neutral" position is provided, it shall be in either the first or second position in the gear selection order (i.e. 1-N-2-3-4- ... or N-1-2-3-4- ...).</p> <p>Alternatively for vehicles with an engine capacity of less than 200cc, transmissions with the following shift patterns may be fitted:</p> <ul style="list-style-type: none"> - Rotary pattern (i.e. N-1-2-3-4-5-N-1.) - Reverse pattern, where moving the forward part of the foot lever or rocker arm shall progressively select the gears: <ul style="list-style-type: none"> - upward movement of the forward part for shifting to a lower gear position, and - downward movement for shifting to a higher gear position.
33	Hand Selector Manual gear shift Control		Control	On the handlebars: left side			<p>If the operation of the control is through rotation of the handgrip, the anticlockwise rotation shall progressively select gears giving an increased forward speed and conversely for a reduced forward speed. If a separate, positive "neutral" position is provided it shall be either in the first position or the second position in the gear selection order (i.e. N-1-2-3-4- ... or 1-N-2-3-4-...).</p>
34	Anti-lock Brake System Malfunction		Tell-Tale		Amber		

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No.	Column 1 Item	Column 2 Symbol	Column 3 Function	Column 4 Location	Column 5 Colour	Column 6 Definition	Column 7 Operation
35	Malfunction Indicator Lamp		Tell-Tale		Amber	Shall be used to convey power-train related failures which may affect emissions.	

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