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Item 5.5. and B.2.8. of the provisional agenda

PROPOSAL TO DEVELOP A GLOBAL TECHNICAL REGULATION CONCERNING UNIFORM PROVISIONS FOR LOCATION AND IDENTIFICATION OF MOTORCYCLE CONTROLS, TELL-TALES AND INDICATORS

Submitted by the representative of Italy

Note: This document contains a proposal to develop a global technical regulation (gtr) concerning the uniform provisions for location and identification of motorcycle controls, tell-tales and indicators under the 1998 Agreement Concerning the Establishing of Global Technical Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles. It is based on the text of informal document No. WP.29-138-11 distributed during the one-hundred-and-thirty-eighth session (TRANS/WP.29/1050, para. 102).

Objective of the proposal
Many vehicle collisions result from driver distraction. One identifiable source of such distraction is diversion of drivers' attention from the driving task by confusing information displayed in the drivers' field of vision and unclear identification of the controls necessary for vehicle's operation.

People purchasing new vehicles in countries allowing motorcycles certified in different jurisdictions are faced with different tell-tales and means of identifying controls. Drivers need time to learn their dashboard messages and to identify their vehicle controls. During this time these vehicle operators have to divide their attention between the increasingly difficult task of driving, the identification of controls and the comprehension of tell-tales provided to "ease" the driving task.

There is, therefore, a need to harmonize the way in which the motorcycle controls, tell-tales and indicators are installed and identified.

The proposed global technical regulation would apply to all on-road motorcycles. It would specify requirements for the location, identification, colour, and illumination of motorcycle tell-tales, indicators and controls. It would be designed to ensure the visibility of tell-tales and indicators and to ensure the accessibility of vehicle controls to facilitate their selection under daylight and night-time conditions.

Description of the proposed regulation
The document attached as Annex 1 is a table which compares the content of the texts listed below and includes a draft proposal for the technical content of the global technical regulation.

Existing regulations and directives
Though there are no regulations currently contained in the Compendium of Candidates, the following regulations were taken into account during development of the new global technical regulation regarding controls, tell-tales and indicators:

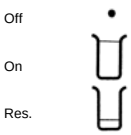
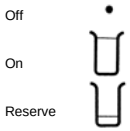
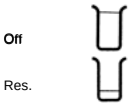
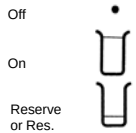
- Canada Motor Vehicle Safety Regulation No. 101 – Location and identification of controls and displays.
- EC Directive 93/29/EEC – Identification of controls, tell-tales and indicators
- Japan: Article 10/Article 46.
- UNECE Regulation No. 60: Controls, tell-tales and indicators
- U.S.A Federal Motor Vehicle Standard 123: Controls and displays.

International Voluntary Standards
- ISO 6727-1981 "Motorcycles: Symbols for control indicators and tell-tales
- 9021-1988 "Motorcycles - Controls - Types, positions and functions

Item	Source	FMVSS	ISO	ISO	JAPAN	EU	ECE	IMMA Proposal	
No.	Contents	123	6727-1981	9021-1988	Article 10 / Article 46	93/29/EEC	R. 60	GTR	Comments
Subject	Contents	Motorcycle Controls and Displays	Rode Vehicles - Motorcycles - Symbols for controls, indicators and tell-tales	Motorcycles - Controls - Types, positions and functions	Control Systems (Article 10) Speedometer (Article 46)	Requirements concerning the component type-approval of two or three-wheel vehicles in respect of the identification of their controls, tell-tales and indicators.	Uniform Provisions concerning the approval of two-wheeled motor-cycles and mopeds with regards to driver operated controls including the identification of controls, tell-tale and indicators.	Motorcycle Controls, Displays and Symbols	
Vehicle Application	Source		2	1			1		
	Contents	Motorcycle equipped with handlebars, except law enforcement motorcycles.	Motorcycles as defined in ISO 3833. Controls that are fitted to the instrument panel or are in the immediate vicinity of the motorcycle driver.	Two-wheeled motorcycles as defined in ISO 3833.	Motor vehicles	Two or three wheeled motor vehicles.	Two wheeled motorcycles and two wheeled mopeds	Motorcycles used on Public Roads	This is to be addressed at a later date, once the category definitions are further agreed upon
General Requirements	Source	S3.		4.2.	Article 10-1		5.1.		
	Contents	Any identification provided shall be placed on or adjacent to the control or display position, and shall appear upright to the operator.		Controls shall be within the driver's reach while in normal driving position. Controls on the handlebars shall be placed so that the driver's hand does not leave the respective handgrip. All controls shall be reachable without any other controls or parts of the structure being in the way.	Control devices that are necessary for operating a motor vehicle shall be located 500 mm or less to the left and right of the center of the steering wheel and be constructed so that the driver, in normal driving position, may easily operate them:		Controls shall be within the driver's reach while in normal driving position. Controls on the handlebars shall be placed so that the driver's hand does not leave the respective handgrip. All controls shall be reachable without any other controls or parts of the structure being in the way.	Controls used during normal operations shall be within the operator's reach while in the normal operating position. Controls on the handlebars shall be placed so that when used, the operator's hand does not leave the respective handgrip. Symbols or displays for controls viewed by the operator while in the normal operating position shall stand out clearly against the background, either bright against dark or dark against bright. Symbols must be placed on or adjacent to the control or display to be identified. Where this is not possible, the symbol and the control or display must be joined by a continuous line as short as possible.	
	Source		4.1.		Article 10-2	2.1.			
	Contents		Symbols must be such that, when viewed by the driver, from his normal seat position, they are recognizable.		Identification shall be placed on or nearby so as to be easily recognized by the driver in his seat.	The controls, tell-tales and indicators referred to in section 2.1.5. shall be identified in accordance with the following requirements when they are fitted to a vehicle.			
	Source		4.2.			2.1.1.			
	Contents		Symbols on controls and tell-tales shall have a good contrast with their background.			These symbols shall stand out clearly against the background, either bright against dark or dark against bright.			
	Source		4.3.			2.1.2.			
	Contents		Symbols must be placed on, or adjacent to, the control or tell-tale to be identified. Where this is not possible, the symbol and the control or tell-tale must be joined by a continuous line as short as possible.			The symbols shall be placed on the control or control tell-tale to be identified or in immediate proximity thereof. Where this is not possible the symbol and the control, or tell-tale, shall be joined by a continuous dash that is as short as possible.			

Item	Source	FMVSS	ISO	ISO	JAPAN	EU	ECE	IMMA Proposal	
No.	Contents	123	6727-1981	9021-1988	Article 10 / Article 46	93/29/EEC	R. 60	GTR	Comments
	Source		4.4.						
	Contents		If, in a symbol, a motorcycle or parts of a motorcycle are shown in a side view, a motorcycle driving from right to left shall be assumed.						
Colour of Tell-Tale Lights	Source	----------	4.6.	----------	----------	2.1.4.	Annex 4 8.		
	Contents	----------	Red: Danger Yellow: Caution Green: Safe Blue: Upper beam	----------	----------	Red: Danger Amber: Caution Green: Safety Blue: Driving beam only	Red: Danger Yellow (Amber): Caution Green: Safe Blue: Driving beam	Red: Danger Amber: Caution Green: Safe or In Use Blue: Driving or upper headlight beam only	
Symbols		Harmonized	Harmonized	N/A	Harmonized	Harmonized	Harmonized	If a symbol is used, it's harmonized with ISO 6727	
Supplemental Engine Stop Control	Source	S5.1. & Table 3 No. 2	----------	5.1.3.1. & 5.1.3.2.	----------	2.1.5., Fig. 13, Fig. 14	6.1.3.1.		
	Contents	Each motorcycle shall be equipped with it located on the right handlebar, represented by given symbols and the wording" off, run".	----------	May be equipped with an electrical power cut-out. Position: on handlebars, right side. Manual decompression control Position: on handlebars. Type: lever, or rotating handgrip, provided that it is combined with the speed control.	----------	Diesel engine ignition or cut-off control in 'out of use' position Diesel engine ignition or cut-off control in the 'operating' position	May be equipped. Alternative to the main switch or decompression valve control, located on the right side of the handlebars. Represented by given symbols for "off" and "run".	Located on the right handlebar, represented by given words and/or symbols for "off " and "on" or "run" positions.	
	Source	Table 3 No. 2	5.13.	----------	----------	Fig. 13 & Fig. 14	Fig. 15A, B		
	Symbol	Off Run or Engin stop	Off Run	----------	----------	out of use Operating	off run	Off On or Run	
	Colour of tell-tale	----------	----------	----------	----------	----------	----------		
Ignition Switch	Source	Table 1 No. 6 Table 3 No. 1	----------	5.1.1.1.	----------	----------	6.1.1.1.		
	Contents	Off - will appear when at appropriate position, counter clockwise from other positions	----------	For a rotary switch, motion shall be clockwise from the ignition "off" position to the "on" position.	----------	----------	For a rotary switch, motion shall be clockwise from the ignition "off" position to the "on" position.	Definition: Ignition Switch - The device that enables the engine to run, and may also allow operation of other electrical systems on a vehicle. For a rotary control, the "on" position shall be clockwise from the "off" position.	
	Symbol	Ignition	----------	----------	----------	----------	----------		
	Colour of tell-tale	----------	----------	----------	----------	----------	----------		
Electric Starter	Source	Table 3 No. 4	----------	5.1.1.2. & 5.1.1.3.	Article 10-1	2.1.5.	6.1.1.2. & 6.1.1.3.		

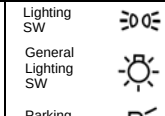
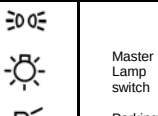
Item	Source	FMVSS	ISO	ISO	JAPAN	EU	ECE	IMMA Proposal	
No.	Contents	123	6727-1981	9021-1988	Article 10 / Article 46	93/29/EEC	R. 60	GTR	Comments
	Contents	Represented by a given symbol. The word start must appear when at appropriate position if separate from ignition switch.	----------	No special requirement. In the case of a rotary switch, motion shall be clockwise, passing from ignition "off" to ignition "on" and then to the starter energizing position.	Control devices that are necessary for operating a motor vehicle shall be located 500 mm or less to the left and right of the center of the steering wheel and be constructed so that the driver, in normal driving position, may easily operate them:	Represented by a given symbol.	No special requirement. In the case of a rotary switch, the direction of motion shall be clockwise, passing from the "off" position to the ignition "on" position to the starter energizing position.	Represented by a given symbol.	
	Source	Table 3 No. 4	5.16.	----------	----------	Fig. 19	Fig. 18		
	Symbol	 Start		----------	----------				
	Colour of tell-tale	----------	----------	----------	----------	----------	----------		
Manual Choke	**Source**	Table 3 No. 3	----------	5.5.1.	----------	2.1.5.	6.5.1. & 9.		
	Contents	Represented by a given symbol and the wording "Choke [or enricher] or the required symbol".	----------	Needs to be placed as to be reasonable and conveniently accessible to the driver.	----------	Represented by a given symbol.	The control shall be so placed as to be reasonably and conveniently accessible to the rider.	Represented either by the symbol on the control or an optional amber tell-tale with the symbol.	
	Source	Table 3 No. 3	5.4.	----------	----------	Fig. 5	Fig. 5		
	Symbol	 Choke or Enricher		----------	----------				
	Colour of tell-tale	----------	----------	----------	----------	Amber	Amber	Amber	
Neutral Indicator	**Source**	Table 3 No. 9 Table 2 No. 2	----------	----------	----------	2.1.5.	9.		
	Contents	Represented by a given symbol and the wording "Neutral" by a green display lamp that illuminates when the gear selector is in the neutral position.	----------	----------	----------	Represented by a given symbol.	Represented by a given symbol.	Represented by a given symbol, green tell-tale light.	
	Source	Table 3 No. 9	5.15.	----------	----------	Fig. 18	Fig. 17		
	Symbol	N Neutral	N	----------	----------	N	N	N	
	Colour of tell-tale	Green	Green	----------	----------	Green	Green	Green	
Fuel Tank Shutoff Valve	**Source**	Table 3 No. 12	5.12.	5.5.2.1.	----------	----------	6.5.2. & 9.		
Manual	**Contents**	Represented by the wording "Fuel" and given symbols for three positions, "on, off,	The framed areas may be solid. (On and Reserve)	The control shall have separate positions for "off", "on" and "reserve" (where a	----------	----------	The control shall have separate positions for "OFF", "ON" and	If so equipped, the "on" position shall be separated from the "off" position by 90 degrees of rotation. If equipped with a "reserve" position,	

Item	Source	FMVSS	ISO	ISO	JAPAN	EU	ECE	IMMA Proposal	
No.	**Contents**	**123**	**6727-1981**	**9021-1988**	**Article 10 / Article 46**	**93/29/EEC**	**R. 60**	**GTR**	**Comments**
		reserve", which are separated by 90 degrees of rotation. The framed areas may be solid. (On and Reserve)		reserve supply is provided). The control shall be "on" when the fuel-flow points downstream from the fuel-tank to the engine: it shall be "off" when it is perpendicular to fuel-flow: it shall be on "reserve" (when applicable) when it points upstream of the fuel-flow.			"RESERVE" (where a reserve supply is provided). 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.	it shall be separated from the "on" position by 180 degrees of rotation and the operator shall be able to switch to the "reserve" position while in the normal driving position. Optional: the switch may be represented by the words "On" "Off" and "Reserve" (or "Res" or "Res."), or by the given symbols.	
	Source	----------	----------	5.5.2.2.	----------	----------	6.5.2.1.		
	Contents	----------	----------	Where a reserve supply is provided, the driver shall be able to switch to it while seated in the driving position.	----------	----------	Where a machine is so equipped the rider must be able to switch to the reserve fuel supply when in the seated position.		
	Source	Table 3 No. 12	5.12.	----------	----------	----------	Fig. 13 & Fig. 14		
	Symbol			----------	----------	----------			
	Colour of tell-tale	----------	----------	----------	----------	----------	----------		
Automatic	**Contents**							Fuel shut-off control optional for systems in which the fuel flow is stopped when the engine is switched off. If equipped with a control, the symbols and control positions shall be the same as identified for Manual Fuel Shut-Off Control. No "Off" position is required. The control may include a "Prime" position which shall not conflict with any other defined position and shall be marked with the "PRI":	**There is currently no symbol for the "Prime" function. A new appropriate symbol could be discussed as a future work item, eg in ISO, etc.**
Speedometer	**Source**	Table 3 No. 8	----------	----------	Article 46 & Instruction	----------	----------		
	Contents	Illuminated whenever the headlamp is activated. M.P.H. increases clockwise with 10 mph intervals for numerals and major graduations, 5 mph intervals for minor graduations.	----------	----------	Shall be constructed so that the driver may easily confirm the speed while the motor vehicle is moving. Shall have a lighting device or be luminous or shall have luminous dial plate or pointer.	----------	N/A ECE R.39 200 km/h >= Interval 20 km/h >= >200 km/h Interval 30 km/h >=	The speedometer display must be located within the direct field of view of the driver and shall be legible day or night.	

Item	Source	FMVSS	ISO	ISO	JAPAN	EU	ECE	IMMA Proposal	
No.	Contents	123	6727-1981	9021-1988	Article 10 / Article 46	93/29/EEC	R. 60	GTR	Comments
					Shall be glare proof. Shall be shown in km/h. Motor driven two wheeled vehicles with speed over 30 km/h must have speed warning indicator lamp.				
	Symbol	----------	----------	----------	----------	----------	----------		
	Colour of tell-tale	----------	----------	----------	----------	----------	----------		
Horn	**Source**	Table 3 No. 6 Table 1 No. 4	----------	5.4.1.	Article 10-1	2.1.5.	6.4.1. & 9.		
	Contents	Represented by a given symbol or the wording "Horn "located on the left handlebar, push to activate.	----------	Button or switch located on the left handlebar. For vehicles with gear selection operated in conjunction with a hand - operated clutch, button or switch located on the right handlebar.	Control devices that are necessary for operating a motor vehicle shall be located 500 mm or less to the left and right of the center of the steering wheel and be constructed so that the driver, in normal driving position, may easily operate them:	Represented by a given symbol.	For gear selection independent of the clutch: button on the left handlebar. For gear selection in conjunction with the clutch: button on the right handlebar. Represented by a given symbol.	Represented by a given symbol, located on the left handlebar for vehicles with foot operated gear selection operated independently of the clutch and on the right handlebar for vehicles with gear selection operated in conjunction with the clutch.	
	Source	Table 3 No. 6	5.5.	----------	Article 10-2	Fig. 6	Fig. 6		
	Symbol	or  Horn		----------	Identification shall be placed on or nearby so as to be easily recognized by the driver in his seat. (JIS D0032 or ISO2575 as sample)				
	Colour of tell-tale	----------	----------	----------	----------	----------	----------		
Headlamps	**Source**	Table 3 No. 5 Table 3 No. 10 Table 1 No. 3	5.1.	5.4.2.2.		2.1.3. 2.1.5.	6.4.2.2.1. 9.		
	Contents	Represented by a given symbols and the wording" Hi, Low" located on the left handlebar, up for high beam and down for low beam. The framed areas may be solid.	The framed areas may be solid.	For vehicles with gear selection operated by a foot lever and/or independent of the clutch: located on the left handlebar. Located on the right handlebar for vehicle with gear selection operated in conjunction with the clutch.	Must be located within 500 mm to the center of the steering wheel and can be operated by the driver easily while driving.	Main beam headlights shall be represented by parallel horizontal rays of light and dipped beam headlamps by parallel rays of light angled downwards.	Vehicle with gear selection operated independently of the clutch: located on the left handlebar.	Located on the left handlebar for vehicles with gear selection operated independently of a hand operated clutch, on right handlebar for vehicles with gear selection is operated in conjunction with the hand operated clutch. Represented by given symbols for driving beam headlamp and passing beam headlamp. An indicator lamp shall show when the driving beam is in use.	
	Source	----------	----------	----------	----------	----------	6.4.2.2.2.		
	Contents	----------	----------	----------	----------	----------	Located on the right handlebar for the vehicle with gear selection operated in conjunction with the clutch.		

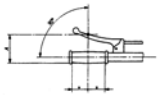
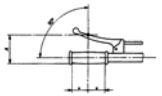
Item	Source	FMVSS	ISO	ISO	JAPAN	EU	ECE	IMMA Proposal	
No.	Contents	123	6727-1981	9021-1988	Article 10 / Article 46	93/29/EEC	R. 60	GTR	Comments
	Source	Table 3 No. 5, No. 10	5.1.	----------	----------	Fig. 1 & Fig. 2.	Fig. 1 & Fig. 2		
	Symbol Lights	Lights  or  High Beam	Main Beam  Dipped beam 	----------	----------	Main Beam  Dipped beam 	Driving beam  Passing Beam 	Driving beam  Passing Beam 	
	Colour of tell-tale	----------	Blue (Main beam)	----------	----------	Blue (Main beam) Green (Dipped beam)	Blue (Main beam) ----------	Driving or High Beam: Blue. Optional: Passing or Low Beam: Green.	
Optical Warning Device	**Source**	----------	----------	5.4.2.3.	----------	----------	6.4.2.3.		
	Contents	----------	----------	The control for this device, for which there is no special requirement as to type, shall be adjacent to the main-beam/dipped-beam switch or an additional function of it.	----------	----------	The control for this device shall be adjacent to the Driving Beam/Passing Beam Switch or shall be an additional function of the latter.	If so equipped, the control for this device shall be located on the same handlebar as the vehicle Driving Beam/Passing Beam Switch.	
	Colour of tell-tale	----------	----------	----------	----------	----------	----------		
Fog Lamps	**Source**	----------		----------	----------	2.1.5.	9.		
	Contents	----------	If one control is used for both, front fog lamp symbol is used. The framed areas may be solid. (Front)	----------	----------	Represented by a given symbols for front and rear fog lamps. If one control is used for both, front fog lamp symbol is used.	Represented by a given symbol for front and rear fog lamps. If one control is used for both, front fog lamp symbol is used.	Represented by given symbols for front and rear fog lamps. If one control is used for both, front fog lamp symbol is used.	
	Source	----------	5.10. & 5.11.	----------	----------	Fig. 10 & Fig. 11	Fig. 10 & Fig. 11		
	Symbol	----------	Front  Rear 	----------	----------	Front  Rear 	Front  Rear 	Front  Rear 	
	Colour of tell-tale	----------	Front: Green Rear: Amber	----------	----------	Front: Green Rear: Amber	Front: Green Rear: Amber	Front: Green. Rear: Amber. If one lamp is used for both: Green.	
Turn Signal	**Source**	Table 3 No. 7	5.2.	5.4.3.	Article 10-1	2.1.5.	6.4.3. & 9.		
	Contents	Represented by a given symbols or the wording "Turn, L, R". Control located on the handlebars. The framed areas may be solid.	The framed areas may be solid.	Position: on handlebars The control shall be so designed that, when viewed from the driver's seat, operation, of the left-hand portion, or movement to the left actuates the left side direction indicators and the inverse for the right side direction indicators. The control shall be clearly marked to show the side of the vehicle on which the	Control devices that are necessary for operating a motor vehicle shall be located 500 mm or less to the left and right of the center of the steering wheel and be constructed so that the driver, in normal driving position, may easily operate them:	Represented by given symbols.	The control shall be so designed that, when viewed from the rider's seat operation of the left hand position, or movement to the left of the control actuates the left side indicators and vice versa for the right side indicators. The control shall clearly be marked in such a manner as to indicate the side of the vehicle on which the control	Represented by given symbols. The left and right arrows on switches or tell-tales may be separated. Switch is to be located on the handlebar in clear view from the operator's seat and shall be marked clearly. The indicator lamp must be located within the clear view of the operator when the vehicle is in operation and may either flash to show that a turn signal is engaged or separate lamps may flash to show which side of the vehicle is being worked. If there are separate tell-tales, or controls, for the left and right direction indicators, the two arrows may also be used separately.	

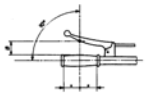
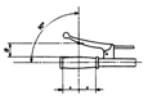
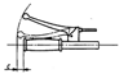
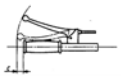
Item	Source	FMVSS	ISO	ISO	JAPAN	EU	ECE	IMMA Proposal	
No.	Contents	123	6727-1981	9021-1988	Article 10 / Article 46	93/29/EEC	R. 60	GTR	Comments
				indicators are working.			actuates the indicators.		
	Source	Table 3 No. 7	5.2.	----------	Article 10-4	Fig. 3	Fig. 3		
	Symbol	 Turn L, R		----------	Each direction of a direction indicator lamp control device shall have identification thereon or nearby so it can be easily recognized by the driver in his seat.				
	Colour of tell-tale	----------	Amber or Green	----------	----------	Green	Green	Green	
Hazard Warning Light	**Source**	----------	5.3.	----------	----------	2.1.5.	9.		
	Contents	----------	The framed areas may be solid.	----------	----------	Two possibilities: - identifying signal placed alongside or - simultaneous operation of direction indicators (both arrows in Fig. 3)	Represented by either arrows flashing simultaneously, or a triangle symbol.	Represented by either the turn signal indicator lamp(s) flashing simultaneously, or by a given triangle symbol.	
	Source	----------	5.3.	----------	----------	Fig. 4	Fig. 4		
	Symbol	----------	1. Simultaneous operation of both arrows of Turn signal or 2. 	----------	----------	1. Simultaneous operation of both arrows of Turn signal or 2. 	1. Simultaneous operation of both arrows of Turn signal or 2. 	1. If the tell-tale for a turn signal is the separate, individual arrow (not both arrows), the hazard warning tell-tale may be the simultaneous operation of both turn signal tell-tales or 2. 	
	Colour of tell-tale	----------	1. Amber or Green 2. Red	----------	----------	1 Green 2. Red	1. Green 2. Red	1. Green 2. Red	
Lighting Control Switch	**Source**	----------	5.14.	5.4.2.1.	Article 10-1	2.1.5.	6.4.2.1. & 9.		
	Contents	----------	Can be combined with ignition control.	Clockwise operation if rotary switch, position (side) lights then headlights. May be combined with ignition switch.	Control devices that are necessary for operating a motor vehicle shall be located 500 mm or less to the left and right of the center of the steering wheel and be constructed so that the driver, in normal driving position, may easily operate them:	Can be combined with ignition control. Represented by given symbols.	Can be combined with ignition control. Represented by given symbols. Clockwise operation if rotary switch, position (side) lights then headlights.	Can be combined with ignition control. Represented by the given symbols for position lamps, master lamp switch and parking lamp but if all lamps are automatically lit when vehicle is in operation, no position or master lamp switch symbol need appear. Clockwise operation if rotary switch, position lights then headlights.	
	Source	----------	5.14.	----------	Article 10-2	Fig. 15 & 16 & 17	Fig. 16A, B, C		
			Position lamp					Position lamp	

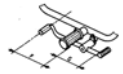
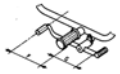
Item	Source	FMVSS	ISO	ISO	JAPAN	EU	ECE	IMMA Proposal	
No.	Contents	123	6727-1981	9021-1988	Article 10 / Article 46	93/29/EEC	R. 60	GTR	Comments
	symbol	----------		----------	Identification shall be placed on or nearby so as to be easily recognized by the driver in his seat. (JIS D0032 or ISO2575 as sample)				
	Colour of tell-tale	----------	----------	----------	----------	Position: Green Master Lamp: Green Parking Lamp: Green	Position: Green Master Lamp: Green Parking Lamp: -------	Tell-Tale Optional: Green	
Fuel Indicator	Source	----------	----------	----------	----------	2.1.5.	9.		
	Contents	----------	----------	----------	----------	Represented by a given symbol.	Represented by a given symbol.	(Indicator optional) Represented by a given symbol.	
	Source	----------	5.6.	----------	----------	Fig. 7	Fig. 7		
	Symbol	----------		----------	----------				
	Colour of tell-tale	----------	Amber	----------	----------	Amber	Amber	If so equipped: Amber	
Engine Cooling Temp	Source	----------	----------	----------	----------	2.1.5.	9.		
	Contents	----------	----------	----------	----------	Represented by a given symbol.	Represented by a given symbol.	(Indicator Optional) Represented by a given symbol.	
	Source	----------	5.7.	----------	----------	Fig. 8	Fig. 8		
	Symbol	----------		----------	----------				
	Colour of tell-tale	----------	Red	----------	----------	Red	Red	If so equipped: Red	
Battery Charging	Source	----------	----------	----------	----------	2.1.5.	9.		
	Contents	----------	----------	----------	----------	Represented by a given symbol.	Represented by a given symbol.	(Indicator Optional) Represented by a given symbol.	
	Source	----------	5.8.	----------	----------	Fig. 9	Fig. 9		
	Symbol	----------		----------	----------				
	Colour of tell-tale	----------	Red	----------	----------	Red	Red	If so equipped: Red	
Engine Oil	Source	----------	5.9.	----------	----------	2.1.5.	9.		
	Contents	----------	The framed areas may be solid.	----------	----------	Represented by a given symbol.	Represented by a given symbol.	Represented by a given symbol.	
	Source	----------	5.9.	----------	----------	Fig. 10	Fig. 10		
	Symbol	----------		----------	----------				
	Colour of tell-tale	----------	Red	----------	----------	Red	Red	Red	

Item	Source	FMVSS	ISO	ISO	JAPAN	EU	ECE	IMMA Proposal	
No.	Contents	123	6727-1981	9021-1988	Article 10 / Article 46	93/29/EEC	R. 60	GTR	Comments
Speed Control	**Source**	Table 1 No. 8	----------	5.1.2.1.	Article 10-1	----------	6.1.2.1.		
	Contents	Twist-grip throttle located on the right handlebar. Self-closing to idle in a clockwise direction after release of hand.	----------	The speed of the engine shall be adjusted by a hand-operated control. Position: on the handlebar, right side. Type: rotating handgrip. Direction of rotation: anticlockwise to increase speed.	Control devices that are necessary for operating a motor vehicle shall be located 500 mm or less to the left and right of the center of the steering wheel and be constructed so that the driver, in normal driving position, may easily operate them:	----------	The speed of the engine shall be controlled by a hand-operated control. Position: on the handlebar, right side. Type: rotating handgrip. Direction of rotation: anticlockwise to increase speed.	Rotating handgrip on the right handlebar. Anticlockwise manipulation increases speed. The control shall be self-closing to idle in a clockwise direction after release of the hand unless a speed control device is activated.	
Front Wheel Brake	**Source**	Table 1 No. 10	----------	5.2.1.	Article 10-1	----------	6.2.1.		
	Contents	Squeeze to engage on the right handlebar.	----------	Hand lever located on the right handlebar, forward.	Control devices that are necessary for operating a motor vehicle shall be located 500 mm or less to the left and right of the center of the steering wheel and be constructed so that the driver, in normal driving position, may easily operate them:	----------	Hand lever located on the right handlebar, forward.	Hand lever located on the right handlebar. However, in the case of vehicles equipped with a combined brake system, the front wheel brake may operate simultaneously with the rear wheel brake when the combined brake system is activated.	
Rear Wheel Brake	**Source**	Table 1 No. 11	----------	5.2.2.1.	Article 10-1	----------	6.2.2.1.		
Foot Rear Wheel Brake Control	**Contents**	Right foot control.	----------	Hand-operated clutch: pedal, frame, right side.	Control devices that are necessary for operating a motor vehicle shall be located 500 mm or less to the left and right of the center of the steering wheel and be constructed so that the driver, in normal driving position, may easily operate them:	----------	For vehicle with manually operated clutch: pedal on right side of the frame.	For L1 - L5 category vehicles EXCEPT L1 category vehicles with pedals usable for motive power [mopeds with bicycle type pedals]. A foot control located on the right side of the frame. Not allowed for L1 category vehicles with pedals usable for motive power.	
	Source	----------	----------	5.2.2.2.	----------	----------	6.2.2.2.1.		
Hand Rear Wheel Brake Control	**Contents**	----------	----------	Without hand-operated clutch: either hand lever left handlebar, forward or pedal on the frame right side.	----------	----------	No manual clutch: Hand lever located on the forward left handlebar is a must for vehicles equipped with riding pedal, optional for vehicles that contain platform or footrest integrated into a platform with a max design speed of 100km/h.	For L1 - L5 category vehicles WITHOUT hand operated clutch devices: A hand control on the left handlebar. Not allowed for vehicles with hand operated clutch.	
	Source	----------	----------		----------	----------	6.2.2.2.2.		
	Contents	----------	----------		----------	----------	No manual clutch:		

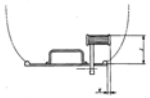
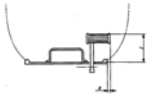
Item	Source	FMVSS	ISO	ISO	JAPAN	EU	ECE	IMMA Proposal	
No.	Contents	123	6727-1981	9021-1988	Article 10 / Article 46	93/29/EEC	R. 60	GTR	Comments
							All other vehicles: pedal frame right side.		
	Source	----------	----------	5.2.3.	----------	----------	6.2.3.		
	Contents	----------	----------	CBS: Position and type of control: as specified in 5.2.1. or 5.2.2.	----------	----------	CBS: Position and type of control: as specified in paragraphs 6.2.1. and 6.2.2.	For L1 - L5 category vehicles equipped with combined braking systems: The rear wheel brake may operate simultaneously with the front wheel brake when the combined brake system is activated.	
Parking Brake	**Source**	----------	----------	5.2.4.	Article 10-1	----------	6.2.4.		
	Contents	----------	----------	No special requirement for location or type of control.	Control devices that are necessary for operating a motor vehicle shall be located 500 mm or less to the left and right of the center of the steering wheel and be constructed so that the driver, in normal driving position, may easily operate them:	----------	Hand lever or pedal with no special requirement.	(Optional for three wheeled motorcycles or sidecar equipped motorcycles) Hand or foot control with no special requirements.	
Clutch	**Source**	Table 1 No. 1	----------	5.3.1.	Article 10-1	----------	6.3.1.		
	Contents	Located on the left handlebar, squeeze to disengage clutch.	----------	Manual operating clutch shall be a hand lever on the left handlebar, forward. Shall not prohibit the use of a combined foot lever for the clutch and gear selection.	Control devices that are necessary for operating a motor vehicle shall be located 500 mm or less to the left and right of the center of the steering wheel and be constructed so that the driver, in normal driving position, may easily operate them:	----------	Hand lever on the left handlebar, forward. Shall not prohibit the use of a combined foot lever for the clutch and gear selection.	If so equipped, a control on the left handlebar, forward. Shall not prohibit the use of devices on the left side of the vehicle that combine operations of a clutch and gear selector.	The IMMA proposal reflects the current and forward looking developments in this area. With the various new technologies being developed the IMMA proposal is intended to be less design restrictive while still meeting the intent of each of the current applicable regulations.
Hand Levers	**Source**	----------	----------	A.1.1.	Article 10-1	----------	1.1.		

Item	Source	FMVSS	ISO	ISO	JAPAN	EU	ECE	IMMA Proposal	
No.	Contents	123	6727-1981	9021-1988	Article 10 / Article 46	93/29/EEC	R. 60	GTR	Comments
	Contents	----------	----------	At maximum compression the outer end of the hand lever shall not exceed 30mm pass the edge of the handgrip. The distance between the forward face of the hand lever and the rearward face of the handgrip shall not exceed 135 mm or be less than 45 mm. The dimension may decrease inside the mid-point of the hand lever towards the fulcrum, but shall no case be less than 25 mm.	Control devices that are necessary for operating a motor vehicle shall be located 500 mm or less to the left and right of the center of the steering wheel and be constructed so that the driver, in normal driving position, may easily operate them:	----------	The maximum dimension between the forward face of the hand lever and the rearward face of the handgrip shall not exceed 120 mm measured perpendicularly to the axis of the handgrip at any point between the mid-point and the end thereof nearest the fulcrum of the hand lever. In the case of vehicles equipped with a gear selection control operated in conjunction with the clutch operating control, the maximum dimension shall not exceed 135 mm.	To be left out of this document and addressed as necessary with the appropriate systems. [These items can be identified by the shading in the Item and Source columns of this document]	ECE 60 items covering ergonomic issues (Hand Levers, Foot Rests, Foot Levers, Rocker Arms and Pedals) are not included in this document. It is the belief of IMMA that as these items are fairly design restrictive, they should be removed. As technology evolves, their designs should be governed by market forces and enable targeting specific market segments based on ergonomic efficiencies, or be included in specific system regulations as appropriate. [These items can be identified by the shading in the Item and Source columns of this document]
	Source	----------	----------	A.1.1.2.	----------	----------	1.2.		
	Contents	----------	----------	This dimension may increase beyond the mid-point of the handgrip towards the hand lever open end.	----------	----------	This dimension may increase beyond the mid-point of the handgrip and towards the open end of the hand lever.		
	Source	----------	----------	Fig. 1 a)	----------	----------	Fig. 1 (a)		
	Fig.	----------	----------		----------	----------			
	Source	----------	----------	A.1.2.1.	----------	----------	1.3.		
	Contents	----------	----------	The minimum dimension (clearance) between the hand lever rearward face and the handgrip forward face shall not be less than 45 mm at any point between the outer end and the mid-point of the handgrip.	----------	----------	The minimum distance (clearance) between the forward face of the hand lever and the forward face of the handgrip shall not be less than 45 mm at any point between the outer end and the mid-point of the handgrip.		
	Source	----------	----------	A.1.2.2.	----------	----------	1.4.		
	Contents	----------	----------	This dimension may decrease inside the mid-point of the handlever towards the fulcrum, but shall in no case be less than 25 mm.	----------	----------	This dimension may decrease beyond the mid-point of the handgrip and towards the fulcrum but must in no case be less than 25 mm.		
	Source	----------	----------	Fig. 1 b)	----------	----------	Fig. 1 (b)		

Item	Source	FMVSS	ISO	ISO	JAPAN	EU	ECE	IMMA Proposal	
No.	Contents	123	6727-1981	9021-1988	Article 10 / Article 46	93/29/EEC	R. 60	GTR	Comments
	Fig.	----------	----------		----------	----------			
	Source	----------	----------	A.1.3.	----------	----------	1.5.		
	Contents	----------	----------	The outer end of the hand lever shall not project beyond the outer end of the handgrip by more than 30 mm when the hand lever is at maximum compression.	----------	----------	The outer end of the hand lever shall not project beyond the outer end of the handgrip by more than 30 mm when the hand lever is in its position of maximum compression.		
	Source	----------	----------	Fig. 1 c)	----------	----------	Fig. 1 (c)		
	Fig.	----------	----------		----------	----------			
Footrest	Source	10994	----------	----------	----------	----------	----------		
	Contents	Shall be provided for each designated seating position. Passenger footrest shall fold rearward and upward when not in use.	----------	----------	----------	----------	----------		
Foot Lever	Source	----------	----------	A.2.1.1.	Article 10-1	----------	2.1.1.		
	Contents	----------	----------	The maximum distance between the rearward face of the foot lever spur and the rearward face of the footrest shall not exceed 200 mm at any point on the spur.	Control devices that are necessary for operating a motor vehicle shall be located 500 mm or less to the left and right of the center of the steering wheel and be constructed so that the driver, in normal driving position, may easily operate them:	----------	The maximum dimension between the rearward face of the spur of the foot lever and the rearward face of the corresponding footrest shall not exceed 200 mm at any point on the spur.		
	Source	----------	----------	A.2.1.2.		----------	2.1.2.		
	Contents	----------	----------	The minimum distance between the rearward face of the foot lever spur and the forward face of the footrest shall not be less than 105 mm at any point on the spur.		----------	The minimum distance between the rearward face of the spur of the foot lever and the forward face of the corresponding footrest shall not be less than 105 mm at any point on the spur of the foot lever.		
	Source	----------	----------	A.2.4.		----------	2.1.3.		
	Contents	----------	----------	When the footrest are adjustable, the dimensions shall be measured at the normal footrest adjustment points (or as stated in the "Owner's Manual") and with the foot lever, rocker arm or pedal in the position specified by the manufacturer.		----------	In case footrest are adjustable such dimensions shall be measured at the normal points of adjustment provided for the footrest, as stated in the instructions given by the manufacturer to the owner/user of the vehicle and with the foot lever in the position		

Item	Source	FMVSS	ISO	ISO	JAPAN	EU	ECE	IMMA Proposal	
No.	Contents	123	6727-1981	9021-1988	Article 10 / Article 46	93/29/EEC	R. 60	GTR	Comments
							prescribed by the manufacturer.		
	Source	---	---	Fig. A2		---	Fig. 2		
	Fig.	---	---			---			
Rocker Arms	Source	---	---	A.2.2.1.	Article 10-1	---	2.2.1.		
	Contents	---	---	For the front end of the rocker arm, the dimension between the pad rearward end, or the spur rearward face, and the footrest rearward face shall not be more than 200 mm nor less than 60 mm.	Control devices that are necessary for operating a motor vehicle shall be located 500 mm or less to the left and right of the center of the steering wheel and be constructed so that the driver, in normal driving position, may easily operate them:	---	The dimension (K) between the rearward part of the pad, or the rearward face of the spur, situated at the front of the rocker arm and the rearward face of the footrest shall not be more than 200 mm nor less than 60 mm.		
	Source	---	---	A.2.2.2.		---	2.2.2.		
	Contents	---	---	For the rearward end of the rocker arm, the dimension between the pad forward end, or the spur forward face, and the footrest rearward face shall not be more than 100 mm nor less than 50 mm.		---	The dimension (L) between the forward part of the pad, or the forward face of the spur, situated at the rear of the rocker arm and the rearward face of the footrest shall not be more than 100 mm nor less than 50 mm.		
	Source	---	---	A.2.4.		---	2.2.3.		
	Contents	---	---	When the footrest are adjustable, the dimensions shall be measured at the normal footrest adjustment points (or as stated in the "Owner's Manual") and with the foot lever, rocker arm or pedal in the position specified by the manufacturer.		---	In case footrest are adjustable such dimensions shall be measured at the normal points of adjustment provided for the footrest, as stated in the Owner's Manual, and with the foot lever in the position prescribed by the manufacturer.		
	Source	---	---	Fig. A3		---	Fig. 3		
	Fig.	---	---			---			
Pedals	Source	---	---	A.2.3.1.1.	Article 10-1	---	2.3.1.1.		

Item	Source	FMVSS	ISO	ISO	JAPAN	EU	ECE	IMMA Proposal	
No.	Contents	123	6727-1981	9021-1988	Article 10 / Article 46	93/29/EEC	R. 60	GTR	Comments
	Contents	----------	----------	The maximum dimension between the rearward end of the pedal pad and the footrest rearward face shall not exceed 170 mm at any point.	Control devices that are necessary for operating a motor vehicle shall be located 500 mm or less to the left and right of the center of the steering wheel and be constructed so that the driver, in normal driving position, may easily operate them:	----------	The maximum dimension between the rearward part of the pedal and the rearward face of the corresponding footrest shall not exceed 170 mm at any point.		
	Source	----------	----------	A.2.3.1.2.		----------	2.3.1.2.		
	Contents	----------	----------	The minimum dimension (clearance) between the rearward part of the pedal pad and the footrest forward face shall not be less than 50 mm at any point.		----------	The minimum dimension (clearance) between the rearward part of the pad of the pedal and the forward face of the corresponding footrest shall not be less than 50 mm at any point.		
	Source	----------	----------	A.2.4.		----------	2.3.1.3.		
	Contents	----------	----------	When the footrest are adjustable, the dimensions shall be measured at the normal footrest adjustment points (or as stated in the "Owner's Manual") and with the foot lever, rocker arm or pedal in the position specified by the manufacturer.		----------	In case footrest are adjustable such dimensions shall be measured at the normal points of adjustment provided for the footrest, as stated in the Owner's Manual, and with the pedal in the position prescribed by the manufacturer.		
	Source	----------	----------	Fig. A.4		----------	Fig. 4		
	Contents	----------	----------						
	Source	----------	----------	A.2.3.2.		----------	2.3.2.1.		
	Contents	----------	----------	The maximum dimension between the platform surface and the highest point of the pedal pad, measured perpendicular to the surface of the platform adjacent to the pedal, shall not exceed 105 mm.		----------	The maximum dimension between the surface of the platform and the highest point of the surface of the platform adjacent to the pedal, shall not exceed 105 mm.		
	Source	----------	----------	A.2.3.2.2.		----------	2.3.2.2.		
	Contents	----------	----------	The extreme outer edge of the pedal pad shall not project more than 25 mm beyond the platform outer edge.		----------	The extreme outer edge of the pad of the pedal shall not project more than 25 mm beyond the outer edge of the platform.		
	Source	----------	----------	Fig. A.5		----------	Fig. 5		

Item	Source	FMVSS	ISO	ISO	JAPAN	EU	ECE	IMMA Proposal	
No.	Contents	123	6727-1981	9021-1988	Article 10 / Article 46	93/29/EEC	R. 60	GTR	Comments
	Fig.	----------	----------			----------			
Gear Selection	Source	Table 1 No. 2	----------	5.3.2.1.1.	Article 10-1	----------	6.3.2.1.		
Foot Selector Manual Control	Contents	Left foot control, upward or downward motion of operator's toe shift transmission. Up for higher gears= lower numerical gears, Down for lower gears= higher numerical gears.	----------	In the case of vehicle equipped with a gear selection control operated by a foot lever either in conjunction with or independently of the clutch control, Position: on frame, left side. Type: foot lever or rocker arm. Method of operating control: movement of the foot lever or the forward part of the rocker arm upward shall, progressively, select gears giving an increased forward speed and conversely for the selection of gears giving a reduced forward speed. Within the range of movement between the lowest and the highest gear, a separate detent position shall be provided for neutral.	Control devices that are necessary for operating a motor vehicle shall be located 500 mm or less to the left and right of the center of the steering wheel and be constructed so that the driver, in normal driving position, may easily operate them:	----------	Vehicles with gear selection operated independently from the clutch: manual, Foot lever or Rocker arm on the left side of the frame.	If the vehicle is equipped with a manual clutch, and gear selection is performed independently from the clutch, the gear selector is a foot lever or rocker arm on the left side of the frame. 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. A separate, positive "neutral" position shall be provided 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.). For [PTW's less than 200cc] vehicles, transmissions with the following shift patterns may be fitted:- 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: upward movement of the forward part for shifting to a lower gear position and downward movement for shifting to a higher gear position.	
	Source	----------	----------		----------	----------	6.3.2.1.1.		
	Contents	----------	----------		----------	----------	Movement of the foot lever or the forwarding of the rocker arm in an upward direction shall progressively select gears giving an increased forward speed and conversely for the selection of gears giving a reduced speed.		
	Source	----------	----------		----------	----------	6.3.2.1.2.		
	Contents	----------	----------		----------	----------	Movement of the foot-operated gear selection control in a forward or a rearward direction is also permitted. In this case, movement of the foot lever in a rearward direction shall progressively select gears giving an increased speed and conversely for the selection of gears giving a reduced speed. A separate, positive "neutral" position shall be provided.		
	Source	----------	----------	5.3.2.1.2.	----------	----------	6.3.2.2.		

Item	Source	FMVSS	ISO	ISO	JAPAN	EU	ECE	IMMA Proposal	
No.	Contents	123	6727-1981	9021-1988	Article 10 / Article 46	93/29/EEC	R. 60	GTR	Comments
Hand Selector Manual Control	**Contents**	----------	----------	In the case of vehicle equipped with a gear selection control operated in conjunction with a hand operated clutch, Position: on handlebars, left side. Type: rotating handgrip. Method of operating control: rotating of the handgrip anticlockwise shall, progressively, select gears giving an increased forward speed and conversely for a reduced forward speed. Within the range of movement between the lowest and the highest gear, a separate detent position shall be provided for neutral.	----------	----------	In the case of vehicle equipped with a gear selection control operated in conjunction with the clutch operating control: manual rotating handgrip on the left handlebar	If the vehicle is equipped with a manual clutch, and gear selection is operated independently from the clutch, the gear selector shall be a control located on the left handlebar. 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. A separate, positive "neutral" position shall be provided 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...).	
	Source	----------	----------		----------	----------	6.3.2.2.1.		
	Contents	----------	----------		----------	----------	Rotation of the handgrip anticlockwise shall, progressively, select gears giving an increased forward speed and conversely for the selection of gears giving a reduced speed. A separate, positive "neutral" position shall be provided.		
Automatic or Semi-automatic Gear Selector Control	**Source**	----------	----------	5.3.2.2.		----------			
	Contents	----------	----------	In the case of vehicle equipped with automatic or semi-automatic transmission and/or gear-boxes, there shall be no specific requirements for the position, or the type of control (if any) used to engage the transmission or select the gears.		----------		If the vehicle is equipped with an automatic or semi-automatic transmission and/or gearbox, the control (if any) used to engage the transmission or select the gears shall be on the left side of the frame or on the left handlebar.	
Brake	**Source**				Article 12-1. (14)				
	Contents				ABS: shall be provided with a warning device to give warning to the driver in his seat when the device becomes liable to fail to operate normally.			Non ABS system, optional. ABS system: Required. 	
	Symbol				----------				
	Colour of tell-tale				----------			amber	

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