

§571.123

(Authority: Delegation of authority at 38 FR 12147; secs. 102, 103, 119, Pub. L. 89-563, 80 Stat. 718 (15 U.S.C. 1391, 1392, 1407); delegations of authority at 49 CFR 1.50 and 49 CFR 501.8)

[37 FR 5034, Mar. 9, 1972, as amended at 37 FR 11974, June 16, 1972; 38 FR 14753, June 5, 1973; 39 FR 32914, Sept. 12, 1974; 39 FR 43075, Dec. 10, 1974; 41 FR 24593, June 17, 1976; 43 FR 9606, Mar. 9, 1978; 43 FR 46548, Oct. 10, 1978]

EFFECTIVE DATE NOTE: At 66 FR 42617, Aug. 14, 2001, §571.122 was amended by revising paragraphs S5.4.3, S5.7.2, adding S6., and revising the first sentence of S6.10, effective Aug. 14, 2002. For the convenience of the user, the revised and added text is set forth as follows:

§ 571.122 Standard No. 122; Motorcycle braking systems.

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S5.4.3 *Fade recovery.* Each motorcycle shall be capable of making five recovery stops with a pedal force that does not exceed 400 Newtons (90 pounds), and a hand lever force that does not exceed 245 Newtons (55 pounds) for any of the first four recovery stops and that for the fifth recovery stop, is within, plus 89 Newtons (20 pounds) and minus 44 Newtons (10 pounds) of the fade test baseline check average force (S7.6.3), but not less than 0 Newtons (0 pounds).

\* \* \* \* \*

S5.7.2 *Water recovery test.* Each motorcycle shall be capable of making five recovery stops with a pedal force that does not exceed 400 Newtons (90 pounds), and hand lever force that does not exceed 245 Newtons (55 pounds), for any of the first four recovery stops, and that for the fifth recovery stop, is within, plus 89 Newtons (20 pounds) and minus 44 Newtons (10 pounds) of the water recovery baseline check average force (S7.10.2), but not less than 0 Newtons (0 pounds).

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S6 *Test conditions.* The requirements of S5 shall be met under the following conditions. Where a range of conditions is specified, the motorcycle shall be capable of meeting the requirements at all points within the range.

\* \* \* \* \*

S6.10 *Brake actuation forces.* Except for the requirements of the fifth recovery stop in S5.4.3 and S5.7.2 (S7.6.3 and S7.10.2), the hand lever force is not less than 10 Newtons (2.3 pounds) and not more than 245 Newtons (55 pounds) and the foot pedal force is not less

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than 25 Newtons (5.6 pounds) and not more than 400 Newtons (90 pounds). \* \* \*

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§ 571.123 Standard No. 123; Motorcycle controls and displays.

S1. *Scope.* This standard specifies requirements for the location, operation, identification, and illumination of motorcycle controls and displays, and requirements for motorcycle stands and footrests.

S2. *Purpose.* The purpose of this standard is to minimize accidents caused by operator error in responding to the motoring environment, by standardizing certain motorcycle controls and displays.

S3. *Application.* This standard applies to motorcycles equipped with handlebars, except for motorcycles that are designed, and sold exclusively for use by law enforcement agencies.

S4. *Definitions.* *Clockwise* and *counterclockwise* mean opposing directions of rotation around the following axes, as applicable.

(a) The operational axis of the ignition control, viewed from in front of the ignition lock opening;

(b) The axis of the right handlebar on which the twist-grip throttle is located, viewed from the end of that handlebar;

(c) The axis perpendicular to the center of the speedometer, viewed from the operator's normal eye position.

S5. *Requirements.*

S5.1. Each motorcycle shall be equipped with a supplemental engine stop control, located and operable as specified in Table 1.

S5.2 Each motorcycle to which this standard applies shall meet the following requirements:

S5.2.1 *Control location and operation.* If any item of equipment listed in Table 1, Column 1, is provided, the control for such item shall be located as specified in Column 2, and operable as specified in Column 3. Each control located on a right handlebar shall be operable by the operator's right hand throughout its full range without removal of the operator's right hand from the throttle. Each control located on a left handlebar shall be operable by the operator's left hand throughout its

full range without removal of the operator's left hand from the handgrip. If a motorcycle with an automatic clutch is equipped with a supplemental rear brake control, the control shall be located on the left handlebar. If a motorcycle is equipped with self-proportioning or antilock braking devices utilizing a single control for front and rear brakes, the control shall be located and operable in the same manner as a rear brake control.

S5.2.2 *Display illumination and operation.* If an item of equipment listed in Table 2, Column 1, is provided, the display for such item shall be visible to a seated operator under daylight conditions, shall illuminate as specified in Column 2, and shall operate as specified in Column 3.

S5.2.3 *Control and display identification.* If an item of equipment in Table 3, Column 1, is provided, the item and its operational function shall be identified by:

(a) A symbol substantially in the form shown in Column 3; or

(b) Wording shown in both Column 2 and Column 4; or

(c) A symbol substantially in the form shown in Column 3 and wording shown in both Column 2 and Column 4.

(d) The abbreviations "M.P.H.", "km/h", "r/min", "Hi", "Lo", "L", "R", and "Res" appearing in Column 2 and Column 4 may be spelled in full. Symbols and words may be provided for equipment items where none are shown in Column 2, Column 3, and Column 4. Any identification provided shall be placed on or adjacent to the control or display position, and shall appear upright to the operator.

S5.2.4 *Stands.* A stand shall fold rearward and upward if it contacts the ground when the motorcycle is moving forward.

S5.2.5 *Footrests.* Footrests shall be provided for each designated seating position. Each footrests for a passenger other than an operator shall fold rearward and upward when not in use.

TABLE 1—MOTORCYCLE CONTROL LOCATION AND OPERATION REQUIREMENTS

Equipment control—Column 1	Location—Column 2	Operation—Column 3
1. Manual clutch or integrated clutch and gear change.	Left handlebar .....	Squeeze to disengage clutch.
2. Foot operated gear change .....	Left foot control .....	An upward motion of the operator's toe shifts transmission toward lower numerical gear ratios (commonly referred to as "higher gears"), and a downward motion toward higher numerical gear ratios (commonly referred to as "lower gears"). If three or more gears are provided it shall not be possible to shift from the highest gear directly to the lowest gear, or vice versa.
3. Headlamp upper-lower beam control	Left handlebar .....	Up for upper beam, down for lower beam. If combined with the headlight on-off switch, means shall be provided to prevent inadvertent actuation of the "off" function.
4. Horn .....	.....do .....	Push to activate.
5. Turn signal lamps .....	Handlebars.	"Off"—counterclockwise from other positions.
6. Ignition .....	.....do .....	Rotate to operate. "On" and "Off" are separated by 90 degrees of rotation. "Off" and "Reserve" (if provided) are separated by 90 degrees of rotation. Sequence order: "On"—"Off"—"Reserve".
7. Manual fuel shutoff control .....	.....do .....	Self-closing to idle in a clockwise direction after release of hand.
8. Twist-grip throttle .....	Right handlebar .....	Self-closing to idle in a clockwise direction after release of hand.
9. Supplemental engine stop .....	.....do.	Squeeze to engage.
10. Front wheel brake .....	.....do .....	Depress to engage.
11. Rear wheel brakes .....	Right foot control <sup>1</sup> ..... Left handlebar permissible for motor-driven cycles.	Depress to engage.

<sup>1</sup> See S5.2.1 for requirements for vehicles with a single control for front and rear brakes, and with a supplemental rear brake control.

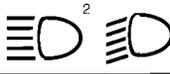
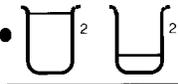
TABLE 2—MOTORCYCLE DISPLAY ILLUMINATION AND OPERATION REQUIREMENTS

Display—Column 1	Illumination—Column 2	Operation—Column 3
1. Speedometer .....	Yes .....	The display is illuminated whenever the headlamp is activated.

TABLE 2—MOTORCYCLE DISPLAY ILLUMINATION AND OPERATION REQUIREMENTS—Continued

Display—Column 1	Illumination—Column 2	Operation—Column 3
2. Neutral indication .....	Green display lamp .....	The display lamp illuminates when the gear selector is in neutral position.

**Table 3**  
**Motorcycle Control and Display Identification Requirements**

No.	Column 1 <i>Equipment</i>	Column 2 <i>Control and Display Identification Word</i>	Column 3 <i>Control and Display Identification Symbol</i>	Column 4 <i>Identification at Appropriate Position of Control and Display</i>
1	Ignition	Ignition	—	Off
2	Supplemental Engine Stop (Off, Run)	Engine Stop		Off, Run
3	Manual Choke or Mixture Enrichment	Choke or Enrichener		—
4	Electric Starter	—		Start <sup>1</sup>
5	Headlamp Upper-Lower Beam Control	Lights		Hi, Ho
6	Horn	Horn		—
7	Turn Signal	Turn		L, R
8	Speedometer	km/h <sup>5</sup> M.P.H.	—	km/h <sup>5</sup> M.P.H. <sup>4</sup>
9	Neutral Indicator	Neutral		—
10	Upper Beam Indicator	High Beam		—
11	Tachometer	R.P.M. or r/min.	—	—
12	Fuel Tank Shutoff Valve (Off, On, Res.)	Fuel		Off, On, Res.

- 1 Required only if electric starter is separate from ignition switch.
- 2 Framed areas may be filled.
- 3 The pair of arrows is a single symbol. When the indicators for left and right turn operate independently, however, the two arrows will be considered separate symbols and may be spaced accordingly.
- 4 M.P.H. increase in a clockwise direction. Major graduations and numerals appear at 10 mph intervals, minor graduations at the 5 mph intervals. (37 F.R. 17474–August 29, 1972. Effective: 9/1/74)
- 5 If the speedometer is graduated in miles per hour (MPH) and in kilometers per hour (km/h), the identifying words or abbreviation shall be MPH and km/h in any combination of upper or lower case letters.

[37 FR 7207, Apr. 12, 1972, as amended at 37 FR 17475, Aug. 29, 1972; 39 FR 32915, Sept. 12, 1974; 48 FR 42819, Sept. 20, 1983; 49 FR 35381, Sept. 7, 1984; 49 FR 35504, Sept. 10, 1984; 56 FR 61387, Dec. 3, 1991; 63 FR 28933, May 27, 1998; 63 FR 51001, Sept. 24, 1998]

**§ 571.124 Standard No. 124; Accelerator control systems.**

S1. *Scope.* This standard establishes requirements for the return of a vehicle's throttle to the idle position when the driver removes the actuating force from the accelerator control, or in the event of a severance or disconnection in the accelerator control system.

S2. *Purpose.* The purpose of this standard is to reduce deaths and injuries resulting from engine overspeed caused by malfunctions in the accelerator control system.

S3. *Application.* This standard applies to passenger cars, multi-purpose passenger vehicles, trucks, and buses.

S4. *Definitions.*

S4.1 *Driver-operated accelerator control system* means all vehicle components, except the fuel metering device, that regulate engine speed in direct response to movement of the driver-operated control and that return the throttle to the idle position upon release of the actuating force.

*Fuel metering device* means the carburetor, or in the case of certain engines the fuel injector, fuel distributor or fuel injection pump.

*Throttle* means the component of the fuel metering device that connects to the driver-operated accelerator control system and that by input from the driver-operated accelerator control system controls the engine speed.

*Idle position* means the position of the throttle at which it first comes in contact with an engine idle speed control appropriate for existing conditions according to the manufacturers' recommendations. These conditions include, but are not limited to, engine speed adjustments for cold engine, air conditioning, and emission control, and the use of throttle setting devices.

*Ambient temperature* means the surrounding air temperature, at a distance such that it is not significantly affected by heat from the vehicle under test.

S4.2 In the case of vehicles powered by electric motors, the words *throttle*

and *idle* refer to the motor speed controller and motor shutdown, respectively.

S5. *Requirements.* The vehicle shall meet the following requirements when the engine is running under any load condition, and at any ambient temperature between -40 degrees Celsius and +52 degrees Celsius after 12 hours of conditioning at any temperature within that range.

S5.1 There shall be at least two sources of energy capable of returning the throttle to the idle position within the time limit specified by S5.3 from any accelerator position or speed whenever the driver removes the opposing actuating force. In the event of failure of one source of energy by a single severance or disconnection, the throttle shall return to the idle position within the time limits specified by S5.3, from any accelerator position or speed whenever the driver removes the opposing actuating force.

S5.2 The throttle shall return to the idle position from any accelerator position or any speed of which the engine is capable whenever any one component of the accelerator control system is disconnected or severed at a single point. The return to idle shall occur within the time limit specified by S5.3, measured either from the time of severance or disconnection or from the first removal of the opposing actuating force by the driver.

S5.3 Except as provided below, maximum time to return to idle position shall be 1 second for vehicles of 4536 kilograms or less GVWR, and 2 seconds for vehicles of more than 4536 kilograms GVWR. Maximum time to return to idle position shall be 3 seconds for any vehicle that is exposed to ambient air at -18 degrees Celsius to -40 degrees Celsius during the test or for any portion of the 12-hour conditioning period.

[38 FR 2980, Jan. 31, 1973; as amended at 60 FR 13645, Mar. 14, 1995]