

Draft Regulations

Draft Regulation

Highway Safety Code
(chapter C-24.2)

Low-speed vehicles — Special rules regarding equipment

Notice is hereby given, in accordance with section 10 of the Regulations Act (chapter R-18.1) and the transitional provisions of the Act to modify mainly the organization and governance of shared transportation in the Montréal metropolitan area (2016, chapter 8), that the Regulation respecting low-speed vehicles, appearing below, may be made by the Government on the expiry of 20 days following this publication.

The draft Regulation reflects the Act to modify mainly the organization and governance of shared transportation in the Montréal metropolitan area (2016, chapter 8) assented to on 20 May 2016 and further regulates low-speed vehicles so that they can travel safely on Québec public roads where the speed limit is 50 km/h or less. The draft Regulation provides additional standards for those vehicles in particular regarding braking systems, lighting and visibility devices, and seat belts and their anchorages.

Access to public roads is currently prohibited in Québec for low-speed vehicles. The coming into force of the provisions of the draft Regulation will have a positive impact for enterprises that wish to market that type of vehicles.

Further information may be obtained by contacting Mark Baril, Société de l'assurance automobile du Québec, 333, boulevard Jean-Lesage E-4-34, case postale 19600, Québec (Québec) G1K 8J6; telephone: 418 528-3503; fax: 418 643-0828; email: mark.baril@saaq.gouv.qc.ca

Any person wishing to comment on the draft Regulation is requested to submit written comments within the 20-day period to the Minister of Transport, Sustainable Mobility and Transport Electrification, 700, boulevard René-Lévesque Est, 29^e étage, Québec (Québec) G1R 5H1.

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and Transport Electrification*

Regulation respecting low-speed vehicles

Highway Safety Code
(chapter C-24.2, s. 214.0.2; 2016, chapter 8)

DIVISION I PURPOSE AND SCOPE

1. The purpose of this Regulation is to determine the special rules regarding equipment that must be met by low-speed vehicles in order to travel on public roads.

2. This Regulation applies to low-speed vehicles within the meaning of section 4 of the Highway Safety Code (chapter C-24.2), as amended by the Act to modify mainly the organization and governance of shared transportation in the Montréal metropolitan area (2016, chapter 8).

DIVISION II SPECIAL RULES

§1. *Lighting devices and warning lights*

3. Lights, lamps and reflectors with which every low-speed vehicle must be equipped in accordance with section 215 of the Highway Safety Code (chapter C-24.2) must be installed

(1) at least 560 mm and not more than 1,370 mm from the ground in the case of the headlights referred to in subparagraph 1 of the first paragraph of that section;

(2) at least 380 mm and not more than 1,370 mm from the ground in the case of lights, lamps and reflectors referred to in subparagraphs 2, 4 to 6 and 8 of the first paragraph of that section.

In addition, the stop lights with which such a vehicle must be equipped in accordance with section 221 of the Code must be installed at least 860 mm from the ground in the case of a vehicle designed for the transportation of goods.

All the lights, lamps and reflectors referred to in the first and second paragraphs must bear the marking recommended by SAE International in J759, Lighting Identification Code (February 2012).

4. Turn-signal lights of a low-speed vehicle must be connected with one another so as to come on together and intermittently, as hazard warning lights, where the hazard light control is activated.

5. In addition to activating the headlights, the headlight control of a low-speed vehicle must turn on the parking lights simultaneously, together with the lighting device for the registration plate and that in the dashboard.

6. The lighting device in the dashboard of a low-speed vehicle must come on only when the headlight control is activated.

7. The headlight receptacle of a low-speed vehicle must allow to adjust the light beam on the vertical and horizontal axes.

8. A low-speed vehicle that meets the requirements applicable to Category M vehicles (vehicle carrying passengers) and Category N vehicles (vehicle carrying goods), as the case may be, respecting performance and installation of lighting devices and warning lights provided for in Regulation No. 48 of the United Nations Economic Commission for Europe (UNECE) entitled “Uniform provisions concerning the approval of vehicles with regard to the installation of lighting and light-signalling devices” is deemed to meet the requirements of this subdivision.

§2. *Electrical circuit*

9. The electrical circuit of a low-speed vehicle must be such that the lighting devices and warning lights must not be rendered inoperative in case of failure of the powertrain battery.

§3. *Controls, warning lights and indicators*

10. Every low-speed vehicle must be equipped with the following controls, warning lights and indicators:

(1) a key-operated control to start the vehicle including 3 positions: “stop”, “accessories” and “motor”, the latter position allowing the concomitant supply of the accessories;

(2) a control to put the vehicle in drive, neutral or reverse and an indicator showing the control position;

(3) a single control for the headlights, parking lights, the lighting device for the registration plate and that in the dashboard;

(4) if applicable, a control for the high beam lights and a warning light showing when they are in use;

(5) a control for the turn-signal lights and a warning light showing when they are in use;

(6) a control for the hazard lights and a warning light showing when they are in use;

(7) a control for the windshield wiper and washer system;

(8) a control for the windshield defrosting and defogging system;

(9) a warning light for the motor operation;

(10) a warning light in case of pressure loss in the brake fluid or a decrease in the fluid level;

(11) a warning light showing when the parking brake is activated;

(12) a warning light showing when seat belts are not fastened;

(13) an indicator for the charge level of the powertrain battery;

(14) a speed indicator showing the vehicle’s speed in kilometres per hour, with a margin of error of less than 10%;

(15) a horn of an intensity ranging from 82 to 102 dB at a distance of 15 m; and

(16) a proximity and reverse warning system that

(a) is manual and emits an intermittent sound when the vehicle is moving in the vicinity of a pedestrian or cyclist so that he or she is warned of the vehicle’s presence;

(b) turns on automatically when the vehicle is in reverse;

(c) has a sound intensity lower than that referred to in paragraph 15, but is audible at 15 m in normal urban driving conditions.

11. Each control, warning light and indicator mentioned in section 10 must be identified by a symbol recognized internationally, if any.

12. The controls mentioned in section 10 must be located so that the driver may operate them easily while seated in the normal driving position and held by the seat belt.

13. The warning lights and indicators mentioned in section 10, as well as their means of identification, must be located so the driver can see them under the conditions described in section 12.

14. The lighting device in the dashboard of a low-speed vehicle must provide sufficient light for the controls, warning lights, indicators and their means of identification.

§4. *Braking and stopping systems*

15. Every low-speed vehicle must be equipped with a service brake system composed of at least 2 subsystems activated by a single control and designed so that the failure of a subsystem, other than the rupture of a sleeve common to a number of subsystems, cannot hamper the good working order of another subsystem.

A non-slip pedal must be used to activate the service brake system.

16. Every low-speed vehicle must be equipped with a friction parking brake system with a solely mechanical means to keep it in braking position.

The control for that braking system must be independent from the control for the service brake system.

An anti-slip pedal or lever must be used to activate the parking brake system.

17. Every low-speed vehicle not equipped with a device to immobilize the powertrain must be equipped with a warning sound and a warning light that are automatically activated when the key-operated control to start the vehicle is put in the “stop” position while the parking brake is not applied.

18. Every low-speed vehicle must meet all the requirements in sections 20 and 21 regarding the efficiency of its service brake system and parking brake system when tested in accordance with the methods prescribed by those sections and in the conditions provided for in section 19, without any rupture, severance or warping of one of their components and without brake fluid leakage.

19. All the tests are carried out in the following conditions:

- (1) they take place on a straight bitumen or concrete roadway that is dry, clean and without oil or grease;
- (2) the vehicle weighs its gross vehicle weight rating;
- (3) the tires are inflated at the pressure determined by the manufacturer.

In the following provisions relating to those tests, the letter “V” refers to the maximum speed of the vehicle in kilometres per hour. The calculation is made without taking into account units of measure and the result obtained corresponds to a braking distance in metres.

20. Tests are carried out in hot and cold conditions to check the efficiency of the service brakes. The vehicle must at least pass one test, out of a series of 3 tests carried out, for each of the situations described in the third and fourth paragraphs.

The cold and hot testing of the service brake system are carried out according to the following method:

- (1) they take place on a flat surface;
- (2) the vehicle is driven at its top speed;
- (3) the force applied to the pedal does not exceed 500 N;
- (4) before the tests, the friction components in the brake system have been broken in following 100 brakings from the vehicle’s top speed to a deceleration that does not cause the friction components to overheat.

The following cold testing of the service brake system are carried out when the system is at ambient temperature:

- (1) a first series of tests is carried out without rendering any subsystem inoperative. In that situation, the braking distance must not be greater than $0.1 V + 0.006 V^2$;
- (2) a second series of tests is carried out with a subsystem rendered inoperative. In that situation, the braking distance must not be greater than $0.1 V + 0.0158 V^2$;
- (3) in the case of a vehicle equipped with a braking assistance system, a third series of tests is carried out with that system rendered inoperative. In that situation, the braking distance must not be greater than $0.1 V + 0.0158 V^2$;
- (4) in the case of a vehicle equipped with a regenerative braking system, a fourth series of tests is carried out with that system rendered inoperative. In that situation, the braking distance must not be greater than $0.1 V + 0.0158 V^2$.

Only one series of hot tests of the service brake system is carried out within the minute that follows the warming up of the system by means of successive decelerations from the vehicle’s top speed down to half that speed. That series of tests is carried out from the vehicle’s top speed to its complete stop. In that situation, the braking distance must not be greater than $1.4 \times (0.1 V + 0.0060 V^2)$.

In addition, for all the tests prescribed by this section, the vehicle must not skid by more than 15° in relation to the longitudinal axis of the roadway when stopping and, if the wheels block, the rear wheels must not block before the front wheels.

21. Two tests are carried out to check the efficiency of the parking brake system. Those tests are carried out according to the following method:

- (1) they take place on a 30% slope;
- (2) the device to immobilize the powertrain, if any, is disengaged;
- (3) the force applied on the parking brake control does not exceed 400 N for a hand control and 500 N for a foot control.

The first test is carried out going forward, or up the slope, and the second test is carried out going backward, or down the slope. The parking brake system must keep the vehicle still for at least 5 minutes during each test.

22. Where a low-speed vehicle is designed for towing, additional tests similar to those provided for in sections 20 and 21 are carried out with a trailer bearing the maximum capacity certified by the manufacturer.

For all the cold tests on the service brake system, the braking distance must not be greater than $0.1 V + 0.0158 V^2$. As for hot tests, the braking distance must not be greater than $1.4 \times (0.1 V + 0.0158 V^2)$.

Should the trailer be required to have an independent brake system under section 244 of the Highway Safety Code (chapter C-24.2), additional cold tests on the service brake system are carried out with that system rendered inoperative. For those tests, the braking distance must not be greater than $0.1 V + 0.0158 V^2$.

§5. *Steering column*

23. Where the angle between the steering column of a low-speed vehicle and a horizontal plane is less than 60 degrees, the steering column must be capable of retracting by at least 100 mm in order to minimize the recoil of the steering wheel in case of frontal impact. That length may be shorter if other devices are installed in the vehicle to limit the risks of head injury in case of frontal impact, as for instance the installation of an air bag.

§6. *Doors*

24. Every low-speed vehicle must be equipped with rigid side doors that cannot be removed without using tools and that extend at least 300 mm above the base of the seats.

§7. *Fenders*

25. Every low-speed vehicle must be equipped with fenders to protect other road users from the projection, caused by the tread of the tires, of objects or matters that may be on the roadway.

§8. *Driver's seat and headrest*

26. The driver's seat and pedals of a low-speed vehicle must be adjustable lengthways without tools.

Once they are adjusted, the seat or the pedals, as the case may be, must remain in the chosen position.

27. Every front seat in a low-speed vehicle must be equipped with a headrest, removable or not, cushioned and adjustable in height. Once it is adjusted, the headrest must remain in the chosen position.

A headrest must be capable of reaching, in one of the adjustable positions, a minimum height of 770 mm measured along the backrest, from the base of the seat to the top of the headrest.

If the inside height of the vehicle at roof level makes it physically impossible for the headrest to reach the minimum height prescribed by the preceding paragraph, the distance between the top of the headrest and the roof must not exceed 25 mm.

Despite the first paragraph, a headrest may be fastened to the side wall of the passenger compartment. In such case, it must be fastened right above the back of the seat and meet the conditions provided for in the second and third paragraphs. It must also be adjustable lengthways.

§9. *Windows*

28. The windows of a low-speed vehicle must comply with the requirements applicable to vehicles with the same configuration provided by SAE International standard ANSI/SAE Z26.1, Safety Glazing Materials for Glazing Motor Vehicles and Motor Vehicle Equipment Operating on Land Highways (1996).

29. A low-speed vehicle that meets the requirements applicable to Category M vehicles (vehicle carrying passengers) and Category N vehicles (vehicle carrying goods), as the case may be, respecting composition and installation of windows provided for in Regulation No. 43 of the United Nations Economic Commission for Europe (UNECE) entitled “Uniform provisions concerning the approval of safety glazing materials and their installation on vehicles” is deemed to meet the requirements of this subdivision.

§10. Rearview mirrors

30. Rearview mirrors with which every low-speed vehicle must be equipped in accordance with section 262 of the Highway Safety Code (chapter C-24.2) must

(1) be flat and have a reflective surface of at least 80 cm², except for the rearview mirror placed outside on the right side of the vehicle which may be convex, in which case it must have a reflective surface of at least 64 cm²;

(2) reflect at least 35% of the incident light; and

(3) be adjustable from inside the vehicle on the vertical and horizontal axes and remain in the chosen position.

§11. Sun visor

31. Every low-speed vehicle must be equipped with

(1) an adjustable sun visor on the driver’s side and that remains in the chosen position; or

(2) a tinted film applied to the top part of the windshield.

§12. Windshield wiper and washer system

32. Every low-speed vehicle must be equipped with a front windshield wiper and washer system.

The wiper blades must make even contact with the windshield and sweep the area necessary for driving the vehicle.

The stroke frequency of the wiper system must range from 20 to 45 strokes per minute when the system has only one speed. When the system has more than one speed, it must have a stroke frequency of at least 20 strokes per minute and another of 45 strokes per minute, the difference between both speeds being at least 15 strokes per minutes.

§13. Heating system

33. Every low-speed vehicle with a closed passenger compartment must be equipped with a heating system for the passenger compartment.

§14. Windshield defrosting and defogging system

34. Every low-speed vehicle must be equipped with a windshield defrosting and defogging system with sufficient power to remove the frost or fog that may appear on the windshield over the area covered by the windshield wipers.

§15. Batteries

35. The batteries likely to emit gas that are installed in a low-speed vehicle must be installed in leakproof compartments ventilated by air from outside the passenger compartment.

§16. Seat belts and anchorages

36. Every low-speed vehicle must be equipped, for each seating position, with a seat belt that

(1) includes a pelvic restraint and an upper torso restraint that may not be detached from one another;

(2) is adjustable by means of an emergency-locking retractor; and

(3) may not be detached from the anchorages that attach it to the vehicle in accordance with section 37.

37. Anchorages that attach the seat belts to the low-speed vehicles must be installed for each seating position.

The anchorages must be able to withstand

(1) a force of 10,000 N applied simultaneously to the pelvic restraint and the upper torso restraint during a test carried out following the method provided for in section 210 of Schedule IV to the Motor Vehicle Safety Regulations (C.R.C., c. 1038); or

(2) a head-on collision at 40 km/h into a fixed barrier.

In both cases, the anchorages must not separate completely from the vehicle structure or seat structure. However, a deformation of the vehicle at the anchorage points is allowed during the test if the test shows that no part of the vehicle would have come into contact with the occupant of the seat seating in normal position (medium).

§17. Tires and rims

38. Every low-speed vehicle must be equipped with tires complying with the requirements applicable to passenger vehicles provided for in section 110 of Schedule IV to the Motor Vehicle Safety Regulations (C.R.C., c. 1038).

The requirements provided for in that section regarding the maximum load on the vehicle's tires and the information that must appear in the vehicle also apply.

39. Every low-speed vehicle must be equipped with rims of the dimension and capacity determined by the manufacturer of the tires fitted on the vehicle.

§18. Information notice and label

40. Every low-speed vehicle must be equipped with a 13 cm x 18 cm information notice complying with Schedule A to this Regulation, which must be installed inside the vehicle so it is visible to its occupants.

41. Every low-speed vehicle must be equipped with a label that includes the message provided for in Schedule B to this Regulation, which warns the first responders of the presence of high electrical voltage in the vehicle, which must be installed in the lower left corner of the windshield.

§19. Compliance of a low-speed vehicle

42. The manufacturer or importer of a low-speed vehicle must provide the Société de l'assurance automobile du Québec, before the vehicle is authorized to travel on public roads, with a complete record, including the testing reports on braking systems and seat belt anchorages, proving that the low-speed vehicle complies with the special rules regarding equipment provided for in this Regulation and with those provided for in the Highway Safety Code (chapter C-24.2).

43. The identification number of a low-speed vehicle must contain a character, chosen by the manufacturer, indicating that the vehicle complies with the special rules regarding equipment provided for in this Regulation and with those provided for in the Highway Safety Code (chapter C-24.2). The vehicle's manufacturer or importer must inform the Société de l'assurance automobile of that number.

DIVISION III FINAL

44. This Regulation comes into force on the date of its publication in the *Gazette officielle du Québec*.

SCHEDULE A (s. 40)



SCHEDULE B (s. 41)

