

Compliant Auxiliary Driving Lamps

“Which lights are street legal?”

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United Nations



Type Approval



PREFACE

For much of the year, Canadian drivers operate in some of the most demanding driving conditions in the world. Extended hours of darkness combined with falling and blowing snow, ice-fog, slippery road surfaces and the unpredictable presence of large wildlife make our long highways seem even longer. Effective forward lighting has an enormous effect on your safety, comfort and level of fatigue when driving in these conditions. The distance that your lights allow you to see largely determines the amount of time that you will have to react to unexpected hazards. The colour and quality of the light greatly affects your ability to discern what may or may not be potential hazards on or near the road.

Many drivers do not realize that there are many compliant (road legal) forward-lighting products (driving lamps and fog lamps) with performance and light output that rival many of the popular non-compliant products. This information package has been prepared to help you distinguish between compliant and non-compliant forward lighting products and to provide examples of several of the BrightSource SAE/DOT and ECE compliant lamps that are available in Canada. All of our compliant lamps are marked and backed with certification. Consumers must be wary of the many lamps on the market with counterfeit markings and no documentation.

On the following pages you will find examples of high performance aftermarket lamps that can be used **legally** on roadways in Canada and the US.

Also included in the appendices at the back of this booklet, are excerpts from various provincial motor vehicle acts (British Columbia, Alberta, Saskatchewan, Manitoba, Ontario and Quebec) that will help you to correctly select and install compliant lighting products.

LED LIGHTING TECHNOLOGY

A light-emitting diode (LED) is an electronic light source. Applications of LEDs are diverse and for many years were limited in the automotive market to low-power lighting such as clearance, running, tail, marker, and interior lamps. Recent advances in LED technology have allowed LED's to be used for high-power forward lighting applications and driving and fog lamps. LED's offer several advantages including high efficiency, low current draw, unrivaled life expectancy and high durability (resistance to shock and vibration). LED's are not generally replaceable. Typically, if any electronic component of an LED lamp fails, the entire lamp must be replaced.

AUXILIARY DRIVING LAMPS

Quality headlamps are extremely important to safe and comfortable night driving, especially in areas with a steady flow of oncoming traffic. In areas where oncoming traffic is minimal, the use of high performance auxiliary driving lamps can provide a significant improvement in range of vision, comfort, fatigue, and your ability to react to unexpected hazards. Compliant driving lamps, when properly installed, can significantly and legally improve the safety and comfort with which you operate your vehicle. BrightSource SAE compliant lightbars are legal anywhere in the US and Canada. BrightSource 'E' Marked lightbars are compliant with the European Lighting Code and street legal in all areas of Canada except the provinces of Alberta, Saskatchewan and Manitoba. All of our compliant lights are certified and documented.

SAE and ECE compliant lamps must have markings on the lens as shown on page 5. Approved lamps that are mounted, operated and aimed properly do not require the use of opaque covers.

COMPLIANT DRIVING LAMPS

SAE/DOT

BrightSource single & double row driving lamps offer the latest LED lighting technology, stainless and alloy mounting hardware, and fully internal (enclosed) electronic components, all in an SAE compliant package.

20" Single Row LED Light Bar



- 1410 Raw Lumens
- Driving Pattern
- IP67 Rated
- 15 Osram LEDs
- Polycarbonate Lens
- SAE Y (J581) compliant and marked
- Part #76120

20" Double Row LED Light Bar



- 7068 Raw Lumens
- Driving Pattern
- IP67 Rated
- 40 Cree LEDs
- 120 Watt
- Polycarbonate Lens
- SAE Y (J581) compliant and marked
- Part #76220

E' Marked (ECE)

These BrightSource double row driving lamps offer the latest LED lighting technology, stainless and alloy mounting hardware, and fully enclosed electronic components, all in an ECE compliant package.

6" 12" 20" Double Row LED Light Bar



- 3240/6480/10800 Raw Lumens
- Driving Pattern
- IP67 Rated
- 12/24/40 Osram and Cree LEDs
- 36/72/120 Watts
- Polycarbonate Lens
- ECE 'E' Code Marking on lens
- Part #72006E/72012E/72020E

HEADLIGHT CONVERSION KITS

It is unlawful to put High Intensity Discharge bulbs in a housing marked with any other marking than HG or European equivalent for headlamps. There are many kits available, but if the housing is not marked to accommodate an HID light source, it is illegal and must contain a Halogen filament bulb. Housings designed for Halogen filament bulbs are not designed for the output of HID light sources (through reflection/refraction and aiming of light source); hence output is excessively bright.

Example of an HID kit:



It is unlawful to put Light Emitting Diode light sources in a housing marked with any other marking than HL or European equivalent for headlamps. Housings designed for Halogen filament bulbs are not designed for the output of LED light sources (through reflection/refraction and aiming of light source); hence output is excessively bright.

Example of an LED kit:



QUICK COMPLIANCY FACTS



HEADLIGHT BULBS

It is unlawful to use LED or HID bulbs in a headlamp that originally came with Halogen bulbs.

AUXILIARY FOG AND DRIVING LAMPS

Fog lamps and Driving lamps displaying an 'E' mark are street legal in all provinces except AB, MB and SK. Fog lamps and Driving lamps displaying a proper 'SAE' or 'DOT' marking are street legal everywhere in Canada and the US. If the SAE, DOT or 'E' marks are not present, the lamps must be concealed with an opaque cover while on the highway.

Street legal lamps that are mounted, operated and aimed properly do not require the use of covers.

OPERATOR'S RESPONSIBILITY

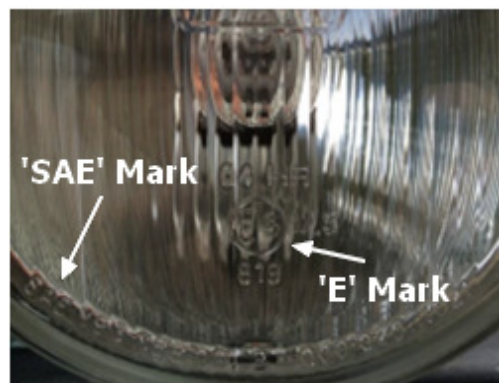
Installation requirements and operation of Driving and Fog Lamps may vary between regions. It is the responsibility of the individual who purchases, installs and operates the lamps to comply with local regulations.



(E₁) shows this lamp meets European Standards



'SAE Y' shows this lamp meets the SAE specification for Driving Lamps



Example of a lamp that carries both the SAE approval for an auxiliary high beam "driving" lamp and the European approval

Appendix A:

BC Motor Vehicle Act Excerpts

The following section is a summary of BC Lighting requirements. The BC Motor Vehicle Act regulations can be viewed in full:

www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/26_58/01 [includes amendments up to B.C. Reg. 113/2017, June 30, 2017]



BC Lighting Requirements Summary

BC Ministry of Transportation and Infrastructure
Commercial Vehicle Safety and Enforcement
January 2016

Division 4 of the Motor Vehicle Act Regulations (MVAR) sets out the requirements for lamps on vehicles. This summary document covers **Division 4.02 - General lighting requirements, 4.04 General maintenance, 4.09 Auxiliary driving lamps, 4.11 Fog lamps and 4.25 Off-road lamps** and includes each of the aforementioned divisions of the regulation along with tips and examples. This is intended as a guide only, review current legislation for verification of requirements. For the full list and more information please refer to the Motor Vehicle Act Regulations (BC) and Motor Vehicle Safety Act (Canada) (MVSA) at:

MVAR http://bclaws.ca/civix/document/id/complete/statreg/26_58_00

MVSA <http://laws-lois.justice.gc.ca/eng/acts/M-10.01/index.html>

All lamps must be authorized by Division 4 and be compliant for highway use (see markings list below). If a lamp is not approved they would be considered an Off-Road Lamp. Division 4 definition of an "**off-road lamp**" means a lamp designed for any use other than those specified in Division 4 of the regulations and must be concealed with an opaque cover while on the highway. Acceptable lamps in Division 4 will usually have a specified number permitted, colour, mounting, operation and aiming described.

The following is a list of SAE markings that shall appear on lamps, bulbs and reflectors:

North American SAE Lighting and Signalling Function Markings:

A Reflex reflectors
 A2 Wide angle reflex reflectors
 C Motorcycle auxiliary "passing" lamp
 D Motorcycle turn signal lamp
 E Side turn signals for vehicles at least 12m long
 E2 Side turn signals for vehicles shorter than 12m
 F Front fog lamp
 F2 Rear fog lamp (fog taillamp)
 G Cargo lamp
 H Sealed beam headlamp
 HG Xenon HID (High Intensity Discharge) headlamp
 HL LED (Light Emitting Diode) headlamp
 HR Halogen replaceable-bulb headlamp
 I Turn signal, front
I3 Turn signal, front, spaced from 75mm to 99mm from low beam headlamp
 I4 Turn signal, front, spaced from 60mm to 74mm from low beam headlamp
 I5 Turn signal, front, spaced less than 60mm from low beam headlamp
 I6 Turn signal, rear (also front for vehicles at least 2m wide)
 I7 Turn signal, front, spaced less than 100mm from the headlamp, for vehicles at least 2m wide
 K Front cornering lamp
 K2 Rear cornering lamp

L License plate lamp
 M Motorcycle headlamp
 N Moped headlamp
 O Spot lamp
 P Parking lamp
 P2 Clearance, Sidemarker, and Identification lamp
 P3 Clearance, Sidemarker and Identification lamp for vehicles at least 2m wide
 PC Combination clearance and sidemarker lamp (trucks)
 PC2 Combination clearance and sidemarker lamp for vehicles at least 2m wide
 R Reversing (backup) lamp
 S Stop (brake) lamp
 S2 Stop (brake) lamp for vehicles at least 2m wide
 T Tail (rear position) lamp
 T2 Tail (rear position) lamp for vehicles at least 2m wide
 U Supplemental high-mounted combination brake/turn lamp
 U2 Supplemental high-mounted brake lamp for vehicles at least 2m wide
 U3 Center high-mounted brake lamp (CHMSL) for passenger cars
 W2 Warning lamp for school buses
 Y Auxiliary high beam ("driving") lamp
 Y2 Daytime Running Lamp
 Z Auxiliary low beam lamp

DOT and European "E" approvals are accepted

Signal Lamp Markings, Front and Rear:

A Front position lamp (colloquially: "city light" or "standing lamp"; "side light" in British English, "parking lamp" in American English)
 AR Reversing (back-up) Lamp
 F or B Rear fog Lamp
 A Retro-reflector
 R Rear position (tail) Lamp
 S1 Stop (brake) lamp
 S3 Centre High Mount Stop Lamp (3rd stop light)
 1 Front turn indicator for use more than 40 mm away from low beam headlamp axis
 1a Front turn indicator for use more than 20 mm and less than 40 mm away from low beam headlamp axis
 1b Front turn indicator for use less than 20 mm away from low beam headlamp axis
 2a Rear turn indicator
 5 Side turn indicator (repeater)
 SM1 Side marker lamp, high performance (large vehicles)
 SM2 Side marker lamp, low performance (passenger vehicles)
 RL Daytime running lamp

Forward Illumination Lamp Function Markings:

B Front fog lamp
 F3 Front fog lamp (to updated & increased performance requirements)
 C Low (dip) beam headlamp, tungsten filament
 R High (main) beam headlamp or driving lamp, tungsten filament
 CR Low and high (dip and main) beam headlamp, Class-A (usually tungsten filament)
 C/R Low and high (dip and main) beam headlamp with low and high beams not to be operated simultaneously, Class-A (usually tungsten filament)
 HC Low (dip) beam headlamp, Class-B (usually halogen or LED)
 HR High (main) beam headlamp or driving lamp, Class-B (usually halogen or LED)
 HCR Low and high (dip and main) beam headlamp, Class-B (usually halogen or LED)
 HC/R Low and high (dip and main) beam headlamp with low and high beams not to be operated simultaneously, Class-B (usually halogen or LED)
 DC Low (dip) beam headlamp, gas discharge (HID, "Xenon")
 DR High (main) beam headlamp or driving lamp, gas discharge (HID, "Xenon")
 DCR Low and high (dip and main) beam headlamp, gas discharge (HID, "Xenon")
 DC/R Low and high (dip and main) beam headlamp with low and high beams not to be operated simultaneously, gas discharge (HID, "Xenon")
 A Front position lamp (colloquially "city light" or "standing lamp"; called "side light" in British English and "parking lamp" in American English),
 RL Daytime running lamp
 PL Plastic lens (may occur with any of above markings)

4.02 General lighting requirements [en. B.C. Reg. 476/98, s. 2; am. B.C. Reg. 135/2003, s. 1.]

- (1) A vehicle on a highway must only be equipped with and use lamps, reflectors or other illuminating devices authorized by this Division or authorized in writing by the director.
- (2) A vehicle on a highway must be equipped with lamps equivalent to those provided by the original manufacturer in accordance with the requirements that applied under the [Motor Vehicle Safety Act](#) (Canada), or a predecessor to that Act, at the time of vehicle manufacture.
- (3) All lamps, lamp bulbs and reflectors required or permitted by this Division must comply with
 - (a) the approved standards established by the [Motor Vehicle Safety Act](#) (Canada) and the applicable SAE standards,
 - (b) the conditions of use described in this Division, and
 - (c) the requirements of Table 1 of the Schedule to this Division.
- (4) The function of 2 or more lamps or reflectors may be combined if each function meets the following requirements:
 - (a) no turn signal lamp may be combined optically with a stop lamp unless the stop lamp is extinguished when the turn signal is flashing;
 - (b) a clearance lamp must not be combined optically with a tail-lamp or identification lamp.
- (5) The director may exempt vehicles or classes of vehicles from the requirements of this section.

4.09 Auxiliary driving lamps (SAE Y or ECE equivalent) [en. B.C. Reg. 476/98, s. 2.]

- (1) A motor vehicle may be equipped with 2 auxiliary driving lamps, mounted on the front of the vehicle at a height of not less than 40 cm and not more than 1.06 m, that are capable of displaying only white light.
- (2) An auxiliary driving lamp must be directed so that the high intensity portion of the beam is, at a distance of 8 m from the lamp, at least 12 cm below the height of the lamp and, at a distance of 25 m from the lamp, not higher than 1.06 m from the road surface.
- (3) An auxiliary driving lamp must operate so that it is illuminated only when the upper beam of a multiple beam headlamp is illuminated.

4.11 Fog lamps (SAE F or ECE equivalent) [en. B.C. Reg. 476/98, s. 2.]

- (1) A motor vehicle may be equipped with 2 fog lamps, mounted on the front of the vehicle below the headlamps, that are capable of displaying only white or amber light.
- (2) Each fog lamp must be
 - (a) mounted not more than 30 cm below the headlamps, and
 - (b) adjusted and aimed so that, at a distance of 8 m from the lamp, the centre of the beam is at least 10 cm below the height of the fog lamp.
- (3) The fog lamp wiring and switch must permit simultaneous operation of the parking lamps, tail lamps, licence plate lamp and, if required, clearance lamps.
- (4) The operator of a vehicle may use fog lamps instead of headlamps when atmospheric conditions make the use of headlamps disadvantageous.

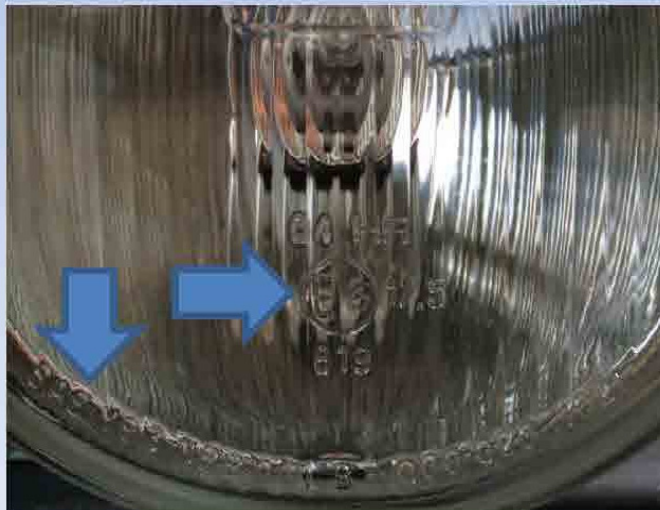
4.25 Off-road lamps [en. B.C. Reg. 476/98, s. 2.]

Despite section 4.04 (2) (c), a vehicle equipped with off-road lamps when on a highway must have the off-road lamps concealed with opaque covers.

Example of an off-road lamp; no SAE approval marking:



Example of a lamp that carries the SAE approval for an auxiliary high beam “driving” lamp as well as a European approval:



All lamps not SAE approved or permitted by the MVAR are considered off-road lamps and must be concealed with opaque covers while on the highway.

Appendix B:

Alberta Traffic Safety Act Excerpts

The following section is a series of excerpts from the **Alberta Traffic Safety Act, Vehicle Equipment Regulation** that can be viewed in full at:

www.qp.alberta.ca/documents/Regs/2009_122.pdf

Source: Government of Alberta, Queens Printer Website (With amendments up to and including Alberta Regulation 170/2012).

Part 1 - Vehicle Lamps Section 4

- General standards

- (1) The following standards respecting lamps on vehicles are adopted and apply to a light or lamp incorporated in or attached to a vehicle:
 - (a) section 108 of the Motor Vehicle Safety Regulations under the Motor Vehicle Safety Act (Canada), including Technical Standards Document No. 108;
 - (b) the alternative standards adopted by section 108.1 of the Motor Vehicle Safety Regulations under the Motor Vehicle Safety Act (Canada);
 - (c) SAE Standard J583 Revised June 1993 applies to fog lamps marked SAE F;
 - (d) SAE Standard J595 applies to warning lamps marked SAE W for emergency, maintenance and service vehicles;
 - (e) SAE Standard J845 applies to 360-degree emergency warning lamps marked SAE W3;
 - (f) SAE Standard J1318 applies to 360-degree gaseous discharge lamps marked SAE W5;
 - (g) SAE Standard J581 applies to driving lamps marked SAE Y.
- (2) A lamp on a vehicle, wherever it is located,
 - (a) must comply with the appropriate standard under the Motor Vehicle Safety Act (Canada) on the date it is incorporated in or attached to the vehicle, or
 - (b) must comply with the SAE standard applicable on the date on which the motor vehicle is manufactured.
- (3) A lamp or replacement lamp on a vehicle complies with this section if it
 - (a) meets the manufacturer's specification for the vehicle it is incorporated in or attached to, or
 - (b) has a mark or label on it that indicates in words or symbols that the appropriate standard has been met.
- (4) A person shall not drive or operate a vehicle that has a lamp unless the lamp is required or allowed by this Regulation or another regulation under the Act.

Division 1 - Headlamps

Section 6 - Location

- (1) A motor vehicle, other than a motor cycle or moped, must have at least 2 headlamps, one on each side of the front of the motor vehicle.
- (2) A headlamp must be mounted so that the centre of the headlamp is not more than 1.4 metres and not less than 560 millimetres above ground level when the motor vehicle is not loaded.
- (3) Subsection (2) does not apply to a snowplough truck with a front mounted plough.
- (4) The light from a headlamp must be white, and the lens and bulb of the headlamp must be made of clear, untinted glazing.

Division 5 - Other Lamps

Section 42 - Auxiliary driving lamps or fog lamps

- (1) In this section,
 - (a) "auxiliary driving lamp" means a SAE Standard J581 type Y lamp;
 - (b) "fog lamp" means a SAE Standard J583 type F lamp.

- (2) If a motor vehicle has auxiliary driving lamps or fog lamps, they must be mounted on the front of the motor vehicle and the centres of the auxiliary driving lamps or fog lamps must be lower than the centres of the headlamps.
- (3) Two auxiliary driving lamps may be mounted, one on each side of the vertical centre line.
- (4) Two fog lamps may be mounted, one on each side of the vertical centre line.
- (5) Auxiliary driving lamps on a motor vehicle must be used only at the same time the headlamp high beams are used.
- (6) Fog lamps on a motor vehicle must be used only at the same time the low beams on the headlamps are used.
- (7) Despite subsection (6), fog lamps may be used without headlamps if the weather and road conditions make the use of headlamps disadvantageous.
- (8) A person shall not drive or operate or own a motor vehicle that has a total of more than 2 auxiliary driving lamps and 2 fog lamps.
- (9) A person shall not drive a motor vehicle with both auxiliary driving lamps and fog lamps lit at the same time.
- (10) An auxiliary driving lamp or fog lamp on an unloaded motor vehicle must be adjusted and aimed so that none of the high-intensity portion of the light to the left of centre of the vehicle projects, at a distance of 8 metres ahead, higher than 100 millimetres below the centre of the lamp from which the light is projected.
- (11) Fog lamps on a motor vehicle may only emit amber or white light.

Appendix C: Saskatchewan Traffic Safety Act Excerpts

The following section is a series of excerpts from the Saskatchewan Traffic Safety Act, Vehicle Equipment Regulations that can be viewed in full at: <http://www.publications.gov.sk.ca/redirect.cfm?p=1588&i=2813>

Source: Government of Saskatchewan, Queens Printer Website (with amendments up to and including Saskatchewan Regulation 29/2012)

PART III - Type A Vehicles

Interpretation - s. 2(1)(oo) of the Act:

“type A vehicle” means a self-propelled vehicle designed for operation on highways and includes a car, truck, van, motorhome, multipurpose passenger vehicle, power unit and bus as defined in CMVSS and type A-1 to type A-3 vehicles, but does not include a vintage vehicle, all-terrain vehicle, motorcycle or special mobile machine.

Section 31 - Lamps general

All lamps required pursuant to this Part shall be securely mounted, meet SAE standards applicable at time of manufacture and, except for headlamps and instrument lamps, be visible from a distance of at least 200 metres on a clear night. [4 Sep 87 cV-2.1 Reg 10 s31.]

Section 32 - Headlamps

- (1) The vehicle shall have at least two headlamps that have both a high beam and a low beam and that are located at the front as far apart as practicable and, where practicable, at a height of not less than 535 millimetres and not more than 1400 millimetres from the ground, measured to the centre of the lamp unless impracticable because of the equipment or construction of the vehicle.
- (2) The headlamps shall, while on high beam or low beam, emit a white light visible from a distance of 500 metres.
- (3) The headlamps shall, while on high beam or low beam, illuminate a 1000 millimetres by 300 millimetres gray object with white light so that it is visible to the driver, on a clear night, from a distance of at least:
 - a) 150 metres in the case of the high beam;
 - b) 50 metres in the case of the low beam.

- (4) The headlamps shall have a control by which the driver is able to switch between the high and low beams without interruption of light.
- (5) The low beam of the headlamp shall be focused so that when the vehicle is unloaded and on level ground and the low beam is:
 - a) the left edge of the high intensity zone is not more than 100 millimetres right or left of straight ahead; and
 - b) the top edge of the high intensity zone is no more than 100 millimetres above or below the height of the lamp.
- (6) The vehicle shall have a lamp on the instrument panel that indicates to the driver when the beam is activated.
[4 Sep 87 cV-2.1 Reg 10 s32]

Section 33 Auxiliary lamps

- (1) If the vehicle is equipped with auxiliary headlamps, fog lamps or driving lamps, those lamps shall be:
 - a) focused at least as low and as far to the right as the low beam of the headlamps; or
 - b) connected so that they are switched off when the low beam is selected.
- (2) The auxiliary lamps shall be mounted no higher than the headlamps except where front mounted equipment makes that impracticable. [4 Sep 87 cV-2.1 Reg 10 s33]

Appendix D: Manitoba Highway Traffic Act Excerpts

The following section is a series of excerpts from the Manitoba Highway Traffic Act that can be viewed in full at:

<http://web2.gov.mb.ca/laws/statutes/ccsm/h060e.php>

Lighting equipment of vehicles

E35(1) Except as otherwise provided in this Act, every vehicle shall, at all times while it is upon a highway, be equipped with lamps and other equipment in good working order as in this section provided, namely:

- (a) Every motor vehicle other than a motorcycle, mobility vehicle or moped and special mobile machine shall carry
 - (i) at least two, but not more than four, headlamps, an equal number of which shall be on each side of the front of the vehicle and each of which shall cast a white light only,

Fog lamps

N37(11) Notwithstanding any other provision herein, but subject to subsection (12), a motor vehicle may be equipped with not more than two fog lamps of such type and design as may be approved by the traffic board, and

- (a) that are fixed to the front of the motor vehicle so that no part thereof is higher than the headlamps or lower than 310 millimetres below the lowest part of the headlamps;
- (b) that cast a light that is white or amber;
- (c) that has an intensity of light of not more than thirty-two candle power; and
- (d) the beam or beams of the light from which are so aimed and directed that no part of the main beam falls to the left of the centre of the roadway, and that at a distance of 8 m from the fog lamp, no part of the main beam is higher than 110 mm below the level of the centre of the fog lamp.

Use of fog lamps

T37(12) The lamps to which reference is made in subsection (11) may be lighted on a highway

- a) alone; or
- b) in conjunction with headlamps, on low beam, required under section 35 or 36.

Prohibited lamps

E38(1) Except as otherwise provided in this Act, the regulations or the Motor Vehicle Safety Act (Canada), or when authorized by permit under subsection 37(6) or (7), a motor vehicle on a highway shall not be equipped with

- a) more than five lamps of over four candle power (of which not more than four are headlamps) on the front of, or visible from in front of, the vehicle; or
- b) any search light or any lamp other than a stationary lamp; or
- c) any lamp
 - i. that casts a light of a colour other than white, or
 - ii. that lights intermittently or in flashes; or
- d) any lamp casting a light of over four mean spherical candle power unless it is so constructed, arranged, and adjusted, that no portion of the parallel beams of reflected light, when measured 25 metres or more ahead of the lamp, rises above 1.07 metres from the level surface on which the vehicle stands, as those heights are determined while the vehicle is fully loaded.

Appendix E: Manitoba Vehicle Standards & Inspection Handbook

ITEM AND METHOD OF INSPECTION:

Section 6: Lamps - 6-1 Lamps (page 15 of handbook)

- 1. All lamps mentioned below except a hazard lamp must be inspected with lights on.
- 2. All vehicle lighting must meet CMVSS, DOT or SAE standards for lights and signaling devices.

VISUALLY INSPECT:

- a. Headlamps
- b. tail lamp(s)
- c. stop lamps
- d. centre high-mounted stop lamp (if equipped) (required January 1, 1987 on passenger cars)
- e. turn signal lamps
- f. hazard warning lamps (where equipped)
- g. side marker lamps (where equipped)-NOTE: A lamp may be both side marker and clearance lamp if visible from side and end.
- h. front parking lamps
- i. backup (if equipped)
- j. fog lamps
- k. driving lamps
- l. roll-bar high-mounted lamps and off-road lamps
- m. other lamps
- n. clearance lamps (not required on vehicles under 2.05 m (81 in.) width)
- o. identification lamps (not required on vehicles under 2.05 m (81 in.) width)
- p. daytime running lamps

REJECT IF:

- 1. Auxiliary equipment is placed on, in, or in front of any lamp (except originally equipped with transparent covers).
- 2. Any lamp is missing or not securely mounted: fails to illuminate properly; any lens broken or cracked so as to impair its effectiveness; modified wiring in poor condition; water (not just moisture droplets) inside the lamp.

- a. not 2 or 4, not white, not facing front as far apart as practical; not proper filament
- b. not clearly visible, not the proper filament(s) lit; not red
- c. not clearly visible, not red, not the proper filament(s) lit
- d. not red, comes on with signal lights
- e. front: not white or amber; rear: not amber or red; not clearly visible, not proper filament lit, not flashing, indicator does not show correct turn direction
- f. all hazard warning lamps do not operate in unison
- g. not 4 located 2 on each side, front: amber, rear: red; not clearly visible
- h. not white or amber, not clearly visible
- i. more than 2, not white, not clearly visible, illuminated in forward gear
- j. more than 2 on front, (not white or yellow)
- k. more than 2 on front, not white
- l. opaque covers not in place
- m. red light showing toward front or white light showing toward rear
- n. (if equipped) does not have 4, not located at widest part of vehicle, front not amber, rear not red
- o. (if equipped) does not have 6, (3 amber on front, three red on rear), not as high and near centre as practical, not clearly visible
- p. not equipped on all vehicles manufactured after December 1, 1989; not located on front of vehicle; not white or yellow in colour; does not operate continually when engine operating and master lighting switch is not in the "ON" position

Appendix F:

Ontario Highway Traffic Act Excerpts

The following section is a series of excerpts from the Ontario Highway Traffic Act R.R.O. 1990, REGULATION 596 GENERAL that can be viewed in full at:

<https://www.ontario.ca/laws/regulation/900596> Last amendment: O. Reg. 406/09.

HIGHWAY TRAFFIC ACT 1990, REGULATION 596 GENERAL

HEADLAMPS

1. (1) In this section and in sections 2, 3 and 4, "beam" means the light projected from a pair of lighted headlamps.
O. Reg. 213/03, s. 1.

(2) In this section and in sections 2, 3, 4 and 4.1, "headlamp" means one of the lamps on the front of a motor vehicle required by subsection 62 (1) of the Act. O. Reg. 213/03, s. 1.
2. (1) Subject to section 3, the headlamps on a motor vehicle shall be capable of projecting at least two beams, so controlled that only one beam can be selected for use by the driver of the motor vehicle at any one time according to the requirements of traffic. R.R.O. 1990, Reg. 596, s. 2 (1).
(2) One beam shall be a lower or passing beam so aimed that none of the high intensity portion of the beam that is directed,
 - (a) to the left of the vehicle, is higher than 127 millimetres below; or
 - (b) to the right of the vehicle, is higher than, the horizontal line through the centre of the headlamp from which it comes, at a distance of 7.6metres ahead of the headlamp, when the vehicle is not loaded, and the high intensity portion of the lower or passing beam shall not rise higher than 1.07 metres above the level on which the vehicle stands at a distance of 22.9 metres ahead of the vehicle. R.R.O. 1990, Reg. 596, s. 2 (2). No lighting device of over four mean spherical candela shall be carried on a motor vehicle unless it is equipped with a device for the elimination of glare approved by the Minister.
 R.R.O. 1990, Reg. 596, s. 4.

The following section is a series of excerpts from the Ontario Highway Traffic Act Chapter R.S.O. 1990, CHAPTER H.8, that can be viewed in full at: <https://www.ontario.ca/laws/statute/90h08#BK118>

Highway Traffic Act R.S.O. 1990, CHAPTER H.8 PART VI – Section 62

EQUIPMENT

Strength of front lamps:

62 (9) No motor vehicle shall carry on the front thereof more than four lighted lamps that project a beam having an intensity of over 300 candela. R.S.O. 1990, c. H.8, s. 62 (9).

The following section is an excerpt from the National Safety Code Standard 11 Maintenance and Periodic Inspection Standards, which can be viewed in full at: <https://ccmta.ca/images/pdf-documents-english/CCMTA-PMVI-Report-Feb.pdf>

National Safety Code Standard 11 Maintenance and Periodic Inspection Standards – Page 33 COMMERCIAL VEHICLE

MAINTENANCE STANDARD

Section 6 Lamps

Item and Inspection Criteria:

1. General

- a) Each circuit shall light the filaments of all the lamps on that circuit when the appropriate switch is in the “ON” position, and each indicator light shall operate correctly.
- b) The operation of any lighting circuit shall not interfere with the operation of any other circuit.
- c) Each lens and reflex reflector shall be correctly and securely installed and shall not be discolored or missing in whole or in part, and comply with Canadian Motor Vehicle Safety Standards (CMVSS).

2. Headlamps

- a) A vehicle shall be equipped with two or four white in color headlamps mounted in the same location as the manufacturer’s design, and operate on both high and low beam and all diodes on an LED lamp must be functional.
- b) No headlamp shall be equipped with a tinted cover or coated with a color lacquer.
- c) No headlamp shall be modified by the attachment to the lamp or to the vehicle of any device that reduces the effective area of the lens or the brightness of the light.
- d) Each headlamp shutter or retracting headlamp shall operate over the full range of movement or shall be secured in the fully open position. All headlamps shall be properly aligned. All required headlamps shall meet CMVSS, DOT or SAE standards and shall not be broken, cracked, inoperative, loose or missing.

Note: At the time of this publication, the editors could find nothing in Ontario's Statutes or Legislation governing commercial vehicles or non-commercial vehicles, which contains any provision limiting the use of aftermarket fog lamps and/or auxiliary driving lamps.

Appendix G:

Quebec Highway Safety Code Excerpts

The following section is a series of excerpts from the HIGHWAY SAFETY CODE- Quebec, chapter C-24.2, that can be viewed in full at: <http://legisquebec.gouv.qc.ca/en/ShowDoc/cs/C-24.2>

215. Every motor vehicle, other than a motorcycle or a moped, must carry at least two single or double white headlights, at the same height, one on each side of the vertical centreline and as far apart as practicable;

222. The fog lights that may be mounted on a road vehicle must conform to the standards established by regulation and must be on the front of the vehicle and at the same height, which must not be higher than that of the white headlights. 1986, c. 91, s. 222.

621. The Government may by regulation

- (2) prescribe standards for the manufacture, sale, installation and use of fog lights, exhaust systems, tires and protective helmets;
- (6) prescribe standards respecting the number, colour, intensity, shape and dimensions of headlights, lights and reflectors;

Note: At the time of this publication, the editors could find nothing in Quebec's Statutes or Legislation governing commercial vehicles or non-commercial vehicles, which contains any provision limiting the use of aftermarket fog lamps and/or auxiliary driving lamps.

