

Low Volume Vehicle Technical Association Incorporated
Low Volume Vehicle Standard
200-30(01)
(Rear-view Mirrors)

This Low Volume Vehicle Standard corresponds with: Land Transport Rule 32012/1 (Glazing, Windscreen Wipe Wash, and Mirrors 1999)

1st Amendment – effective from: 1 August 2018

| | |
|---|---|
| Signed in accordance with clause 1.5 of the Low Volume Vehicle Code, on.....by: | |
| on behalf of the New Zealand Transport Agency: | on behalf on the Low Volume Vehicle Technical Association(Inc): |

LVV Standard 200-30 Amendment Record:

| No: | Detail of amendments: | Version: | Issue date: | Effect date: |
|-----|----------------------------------|------------|---------------|---------------|
| 1 | Initial issue – original version | 200-30(00) | 3 April 2000 | 3 April 2000 |
| 2 | 1 st Amendment | 200-30(01) | 1 August 2018 | 1 August 2018 |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |

Note that highlighted text shows amendments that have been made subsequent to the document’s previous issue. A grey vertical stroke to the left of the text denotes that the highlighted change or addition is of a technical or legal nature (rather than just of an administrative, grammatical, or formatting nature).

Overview

Background

The Low Volume Vehicle Technical Association Incorporated (LVVTA) represents nine specialist automotive groups who are dedicated to ensuring that vehicles, when scratch-built or modified, meet the highest practicable safety standards. The information in these standards has stemmed from work undertaken by LVVTA founding member organisations that commenced prior to 1990 and has been progressively developed as an integral part of NZ Government safety rules and regulations by agreement and in consultation with the New Zealand Transport Agency. As a result, the considerable experience in applied safety engineering built up by LVVTA and the specialist automotive groups over the past thirty years can be of benefit to members of the NZ public who also wish to build or modify light motor vehicles.

Availability of low volume vehicle standards

Low volume vehicle standards are developed by the LVVTA, in consultation with the New Zealand Transport Agency, and are printed and distributed by the LVVTA. The standards are available to the public free of charge from the LVVTA website; www.lvvt.org.nz

Further information on the availability of the low volume vehicle standards may be obtained by contacting the LVVTA at info@lvvt.org.nz.

Copyright

The content of this document remains the property of the Low Volume Vehicle Technical Association (Inc.), and no part of it may be reproduced without the prior written consent of the copyright holder.

Associated information

Other associated information relevant to the subject matter contained in this low volume vehicle standard, which in the interest of comprehensiveness, should be read in conjunction with this standard, includes:

| Document | Page #/Section/Chapter |
|-------------------------------------|--|
| • LVVTA Information Sheet # 01-2000 | Issue of LVV Standards: External Projections, Door Retention Systems, Head Restraints, & Rear-view Mirrors |
| • NZ Car Construction Manual | Chapter 15 Glazing & Vision |
| • NZ Car Construction Manual | Chapter 16 Interior Equipment |
| • | |

Note that all documents referred to in this table, with the exception of the NZ Car Construction Manual, can be accessed from www.lvvt.org.nz free of charge. For information on obtaining the NZ Car Construction Manual, contact info@lvvt.org.nz

Note also that paper copies of documents can become out of date and as such should not be relied upon, therefore LVVTA advises users of this standard to check to ensure that the Associated Information listed here is current, by going to www.lvvt.org.nz/standards.html

Contents

Purpose of this standard

Page 4

| | | |
|------------------|---|----------|
| Section 1 | Scope and application of this standard | 4 |
| 1.1 | Scope of this standard | 4 |
| 1.2 | Application of this standard | 4 |
| Section 2 | Technical requirements of this standard | 5 |
| 2.1 | General safety requirements | 5 |
| 2.2 | Technical requirements | 5 |
| Section 3 | Exclusions to this standard | 7 |
| 3.1 | Interior rear-view exclusions | 7 |
| 3.2 | C-zone mirror positioning exclusions | 8 |
| 3.3 | Original equipment exclusions | 8 |
| Section 4 | Vehicles not required to be certified to this standard | 8 |
| 4.1 | Vehicles not covered by this standard | 8 |
| 4.2 | Vehicles that pre-date legal requirements | 8 |
| 4.3 | Modifications that do not require certification | 9 |
| Section 5 | Terms and definitions within this standard | 9 |

Rear-view Mirrors

(200-30[01])

Purpose of this standard

The purpose of this low volume vehicle standard is to specify requirements for rear-view mirrors, so as to provide the driver with as unobstructed a view, as is practicable, to the rear of the vehicle.

Section 1 Scope and application of this standard

1.1 Scope of this standard

1.1(1) This low volume vehicle standard applies to all light vehicles, other than those specified in 1.1(2), which are scratch-built on or after 1 January 1996.

NOTE 1: A low volume vehicle that is a 'modified production' low volume vehicle is only required to comply with the relevant requirements of the Vehicle Inspection Requirements Manual (for Warrant and Fitness and Certificate of Fitness inspections) for rear-view mirrors.

NOTE 2: A 'modified production' low volume vehicle which meets the requirements of this low volume vehicle standard will also meet the requirements of the Vehicle Inspection Requirements Manual for rear-view mirrors.

1.1(2) This low volume vehicle standard does not apply to:

- (a) powered bicycles of Class AB; or
- (b) motorcycles of Class LA, LB, LC, LD, or LE; or
- (c) light trailers of Class TA or TB; or
- (d) those vehicles specified in *section 4*.

1.2 Application of this standard

1.2(1) A light vehicle that is scratch-built as in 1.1(1) becomes a low volume vehicle, and must:

- (a) be certified in accordance with the procedures specified in *chapter 2* of the *Low Volume Vehicle Code*; and
- (b) unless *section 3* applies, comply with all applicable technical requirements contained in *section 2* of this standard.

NOTE 1: Where a light vehicle is required to be certified to the *Low Volume Vehicle Code*, but the modification date precedes the date upon which this standard takes effect (1 January 1996), an LVV Certifier must ensure that the vehicle meets the general safety requirements contained in 2.1 of this standard, and should use the applicable technical requirements of *section 2* of this standard as a guideline upon which to base his judgements on the safety of the vehicle.

NOTE 2: A light vehicle that is to be operated as a Passenger Service Vehicle (PSV) must also comply with any applicable requirements of the *Land Transport Rule: Passenger Service Vehicles 1999 (Rule 31001)*.

Section 2 Technical requirements of this standard

2.1 General safety requirements

2.1(1) A low volume vehicle must:

- (a) be designed and constructed using materials and components that are fit for their purpose; and
- (b) be safe to be operated on the road.

NOTE: The requirements specified in 2.1(1) are selected from 2.3 of *Part 2* of the *Low Volume Vehicle Code*, reproduced here in the interest of convenience, and are over-riding requirements which make it clear that, regardless of what technical requirements are or are not in place, every vehicle certified to the *Low Volume Vehicle Code* must be fit for its purpose, and must be safe.

2.2 Technical requirements

Required rear-view mirrors

2.2(1) A low volume vehicle must be fitted with:

- (a) one interior rear-view mirror; and
- (b) one exterior rear-view mirror on the side of the vehicle nearest the driver; and
- (c) in the case of a left-hand drive low volume vehicle, one exterior rear-view mirror on the side of the vehicle opposite the driver; and
- (d) in the case of a Class-MA low volume vehicle which has aftermarket transparent overlay applied to glazing directly behind, or to the left or right of the rear of, the driver's seatback in its rearmost and upright position, an exterior rear-view mirror on each side of the vehicle.

NOTE 1: The requirement for an exterior rear-view mirror to be fitted to each side of a vehicle as specified in 2.2(1)(d) does not apply in the case of a stretched limousine or a body transfer vehicle.

NOTE 2: An aftermarket transparent overlay, as referred to in 2.2(1)(d), means that which is commonly referred to as 'tint film'.

Design, positioning, and attachment

2.2(2) A rear-view mirror fitted to a low volume vehicle must be designed and positioned, and be of such dimensions, so as to:

- (a) be capable of reflecting to the driver, as far as practicable, a clear view to the rear of the vehicle; and
- (b) not unreasonably obstruct the driver's forward vision.

NOTE: The requirements specified in 2.2(2)(a) include any load being carried by the vehicle, and if towing a trailer, the trailer and its associated load.

2.2(3) A rear-view mirror fitted to a low volume vehicle must:

- (a) be able to be adjusted, and maintain its adjusted position; and
- (b) be mounted in such a way so as to ensure against the driver's vision through the rear-view mirror being obscured by vibration; and
- (c) incorporate secure bonding of the glass to the mounting surface.

Rear-view mirrors from production vehicles

2.2(4) A rear-view mirror sourced from a production motor vehicle may be fitted to a low volume vehicle, provided that:

- (a) the rear-view mirror is unmodified; and
- (b) the rear-view mirror is mounted so as to replicate the location and installation method used by the donor vehicle manufacturer; and
- (c) the vehicle to which the rear-view mirror was originally fitted was manufactured for and sold into either:
 - (i) the United States of America on or after 1 January 1976; or
 - (ii) Europe or the United Kingdom on or after 1 January 1971; or
 - (iii) Japan on or after 1 January 1983; or
 - (iv) Australia on or after 1 January 1988.

Rear-view mirrors from other sources

2.2(5) An interior rear-view mirror from a source other than that specified in 2.2(4) must:

- (a) have a radius of no less than 3 mm (1/8") on all edges and corners of the mirror and its attachment structure which face toward the occupant compartment of the vehicle; and
- (b) be designed and attached in such a way as to collapse, break off, bend away, or swing away upon impact, leaving no sharp edges, rigid mounting points or dangerous protrusions facing the occupants in doing so.

2.2(6) An exterior rear-view mirror from a source other than that specified in 2.2(4) must have a radius of no less than 3 mm (1/8") on all edges and corners of the mirror and its attachment structure which face toward the front of the vehicle.

Compliance with other requirements

2.2(7) A low volume vehicle which is required to comply with this standard must also meet the applicable requirements of:

- (a) LVVTA Low Volume Vehicle Standard 100-30 (External Projections); and
- (b) LVVTA Low Volume Vehicle Standard 110-00 (Glazing).

Section 3 Exclusions to this standard

3.1 Interior rear-view mirror exclusions

3.1(1) A low volume vehicle which is designed in such a way that an interior rear-view mirror would not provide to the driver sufficient vision to the rear of the vehicle for safe operation, is not required to comply with 2.2(1)(a), provided that the vehicle is fitted with an exterior rear-view mirror on each side of the vehicle.

NOTE 1: The exclusion specified in 3.1(1) would typically apply to a mid-engined vehicle where there is little or no rearward vision behind the driver, due to the presence of the rear bulkhead in front of the engine.

NOTE 2: This exclusion specified in 3.1(1) would also apply to a vehicle with transparent overlay applied to the rear or rear side windows, as specified in 2.2(1)(d).

3.2 C-zone mirror positioning exclusions

3.2(1) An interior rear-view mirror fitted to a low volume vehicle is not required to comply with 2.2(5), provided that it is positioned within the C-zone, as defined in section 3 of LVVTA Low Volume Vehicle Standard 155-40 (Interior Impact).

NOTE: This exclusion would typically apply to a sports car that uses a centrally-positioned dashboard-mounted interior rear-view mirror.

3.3 Original equipment exclusions

3.3(1) A rear-view mirror fitted to a modified production low volume vehicle is not required to comply with 2.2(5) or 2.2(6) provided that the mirror is either:

- (a) a standard or optional item supplied by the vehicle manufacturer, or an item which is an authentic reproduction of such equipment; or
- (b) an item which was available as after-market equipment at the time the vehicle was manufactured.

Section 4 Vehicles not required to be certified to this standard

4.1 Vehicles not covered by this standard

4.1(1) A light vehicle is not required to be certified to this low volume vehicle standard if the vehicle is modified for the purposes of law enforcement or the provision of emergency services.

4.1(2) A light vehicle is not required to be certified to this low volume vehicle standard if the vehicle is identified as having been modified by a second-stage vehicle manufacturer, and complies with an approved overseas standard that is listed in Annex 6 of the Low Volume Vehicle Code.

4.2 Vehicles that pre-date legal requirements

4.2(1) A light vehicle is not required to be certified to this low volume vehicle standard, if the vehicle was either:

- (a) modified before 1 January 1996 in such a way that any rearward vision may, directly or indirectly, be affected, and the rear-view mirrors fitted to the vehicle are the same as those fitted at the time of the vehicle's modification; or

- (b) scratch-built before 1 January 1996, and the rear-view mirrors fitted to the vehicle are the same as those fitted at the time of the vehicle's construction.

4.3 **Modifications that do not require certification**

4.3(1) The addition or substitution of a rear-view mirror is not required to be certified to the Low Volume Vehicle Code, provided that:

- (a) the safe performance of the vehicle is not compromised, and
- (b) in-service requirements for condition and performance of the rear-view mirrors are met.

Section 5 **Terms and definitions within this standard**

MA-Class relates to Table-A classes from the Land Transport Rule 35001, as defined in the Low Volume Vehicle Code.

Modified production is as defined in the Low Volume Vehicle Code.

Production vehicle means a mass-produced motor vehicle.

Scratch-built is as defined in the Low Volume Vehicle Code.

NOTE: The terms and definitions found in section 5 are limited to those terms and definitions that are unique to this low volume vehicle standard, and are not necessarily contained within the terms and definitions section of the *Low Volume Vehicle Code*.