

Low Volume Vehicle Technical Association Incorporated

Low Volume Vehicle Standard 200-30(00) (Rear View Mirrors)

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

Original version

effective from: 3 April 2000

Background

The Low Volume Vehicle Technical Association Incorporated (LVVTA) represents ten hobbyist and specialist groups who are dedicated to ensuring that their members' vehicles, when scratch-built or modified, meet the highest practicable safety standards.

The information in these standards has stemmed from work undertaken by founding member groups 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 Land Transport Safety Authority.

As a result, the considerable experience in applied safety engineering built up by LVVTA members over the past ten 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 prepared by the Low Volume Vehicle Technical Association (Inc.) in consultation with the Ministry of Transport and the Land Transport Safety Authority of New Zealand.

Low volume vehicle standards are printed and distributed by the Low Volume Vehicle Technical Association (Inc.). Information on the availability of the low volume vehicle standards and their amendments may be obtained by writing to the Low Volume Vehicle Technical Association (Inc.) at the address shown below.

Published by:

*The Low Volume Vehicle Technical Association (Inc.)
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Rear View Mirrors

(200-30(00))

Purpose of this standard

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

Section 1 Application

1.1 Scope of the standard

This standard applies to all low volume vehicles of the classes specified in 1.2, except for those vehicles specified in *section 4* that are modified in such a way that certification to the *Low Volume Vehicle Code* is not required.

1.2 Category, class, and date of application

1.2(1) Low volume vehicles of Classes MA, MB, MC, MD1, MD2, NA, and L-group must comply with 2.1 and 2.2.

1.2(2) Scratch-built and modified production low volume vehicles of Classes MA, MB, MC, MD1, MD2, and NA manufactured or modified on or after 1 January 1996 in such a way as to directly or indirectly affect any rear view mirrors must, in addition to 1.2(1), comply with either:

- (a) one or more of the approved standards, in the appropriate version as specified in 5.4(2) of *Land Transport Rule 32012/1: Vehicle Standards (Glazing, Windscreen Wipe and Wash, and Mirrors 1999)*; or
- (b) the low volume vehicle technical requirements specified in 2.3.

Section 2 Low volume vehicle general safety and technical requirements

2.1 Requirements for all low volume vehicles

Low volume vehicles must be certified in accordance with the procedures specified in *Chapter 2* of the *Low Volume Vehicle Code* and other applicable requirements in this section.

2.2 General safety requirements

- 2.2(1) Low volume vehicles must be properly designed and constructed using materials and components that are fit for their purpose, and that comply with all legal requirements applicable to low volume vehicles that relate to the construction and equipment on a motor vehicle, and which make the vehicle safe to operate on roads.

NOTE: The requirement specified in 2.2(1) is the roadworthiness requirement from 2.1 of *Chapter 2* of the *Low Volume Vehicle Code*, which is required as part of this low volume vehicle standard, and is reproduced here in the interest of convenience.

- 2.2(2) Low volume vehicles must comply with the following general safety requirements:

- 2.2(3) A rear view mirror must

- (a) provide, so as to enable a motor vehicle to be operated safely, a clear view to the rear of, as applicable:
 - (i) the motor vehicle itself;
 - (ii) the motor vehicle's load;
 - (iii) if towing a trailer, the trailer and its load; and
- (b) be securely attached to the motor vehicle so as to minimise the risk of injury to the motor vehicle's occupants, to pedestrians and to other road users in a crash involving the motor vehicle; and
- (c) be mounted on the motor vehicle in a position that will ensure the mirror is sufficiently isolated from vibrations to the extent possible for the class of motor vehicle, so as to enable the driver to have adequate vision as specified in 2.2(3)(a); and
- (d) be adjustable and able to maintain its adjusted position so as to allow the driver to use the rear view mirror as specified in 2.2(3)(a).

NOTE: The requirements specified in 2.2(3) are the applicable general safety requirements from 5.3(1) of the *Land Transport Rule 32012/1* which are required as part of this low volume vehicle standard, and are reproduced here in the interest of convenience.

2.3 Technical requirements for rear view mirrors

2.3(1) All low volume vehicles, except those specified in *section 3*, must comply with the applicable requirements in 2.3.

2.3(2) Low volume vehicles must be fitted with:

- (a) an interior rear view mirror; and
- (b) an 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, an exterior rear view mirror on the side of the vehicle opposite the driver, all of which must be designed and fitted and be of such dimensions so as to be capable of reflecting to the driver as far as practicable a clear view of the road to the rear of the vehicle, and of any approaching or overtaking vehicles.

2.3(3) All rear view mirrors fitted to low volume vehicles must:

- (a) have the glass securely bonded to the mounting surface; and
- (b) be positioned in such a way so as not to unreasonably obstruct forward view.

Rear view mirrors from production vehicles

2.3(4) Rear view mirror assemblies complete with their attachment structures sourced from production motor vehicles may be used in low volume vehicles, provided that:

- (a) the rear view mirror assemblies are unmodified; and
- (b) the rear view mirror assemblies are mounted so as to replicate the location and installation method employed by the donor vehicle manufacturer; and

- (c) the motor vehicle to which the rear view mirror assemblies were originally fitted were first registered in:
 - (i) the United States of America on or after January 1976; or
 - (ii) Europe or the United Kingdom on or after January 1971; or
 - (iii) Japan on or after January 1983; or
 - (iv) Australia on or after January 1988.

Rear view mirrors from other sources

2.3(5) Interior rear view mirrors from sources other than those specified in 2.3(4) must:

- (a) have a radius of no less than 3 mm 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 in doing so.

2.3(6) Exterior rear view mirrors from sources other than those specified in 2.3(4) must

- (a) have a radius of no less than 3 mm on all edges and corners of the mirror and its attachment structure which face toward the front of the vehicle; and
- (b) either:
 - (i) 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 in doing so; or

- (ii) be positioned in such a way that any part of the mirror which is not designed to swing away upon impact falls inside a line projected vertically from the widest point of the vehicle.

Other requirements

2.3(6) A low volume vehicle which is required to comply with this standard must also comply with the requirements of the:

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

Section 3 Exclusions

3.1 Interior rear view mirror exclusions

3.1(1) Low volume vehicles which are 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, are not required to comply with 2.3(2)(a), provided that the vehicle is fitted with an exterior rear view mirror on each side of the vehicle which meets the requirements specified in 2.3(2)(c).

3.1(2) Interior rear view mirrors which are positioned outside the 'head impact zone', as defined in *section 3* of the *LVVTA Low Volume Vehicle Standard 155-40 (Interior Impact)*, are not required to comply with 2.3(5).

3.2 Original equipment exclusions

Modified production low volume vehicles originally manufactured prior to the introduction of the *Transport (Vehicle Standards) Regulations 1990* are not required to comply with 2.3(5) if the rear view mirrors are:

- (a) standard or optional equipment supplied by the original vehicle manufacturer, or items which are authentic reproductions of such equipment; or

- (b) items which were available as after-market equipment at the time the vehicle was originally manufactured.

Section 4 Certification criteria

4.1 Modifications not requiring certification

A vehicle is not required to be certified to the *Low Volume Vehicle Code* where the fitment of non-standard mirrors, or the removal of mirrors is the sole modification, provided that they comply with the requirements specified for rear view mirrors within the *L TSA Warrant of Fitness Guide*, and that the safe performance of the vehicle is not compromised.
