

Queensland Code of Practice: Vehicle Modifications (QCOP)

Code LH14: Light Vehicle Modifications for Chassis Alteration (Modification
Certification)

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CODE LH14

Light Vehicle Modifications for Chassis Alteration (Modification Certification)

1.0 Scope

The LH14 modification code specifies requirements for certifying modifications for chassis alterations of light vehicles, that being vehicles having a Gross Vehicle Mass (GVM) rating that does not exceed 4,500 kg.

This code covers modifications to eligible light vehicles under the following Australian Design Rule (ADR) categories: MB, MC, MD1, MD2, MD3, NA and NB1. The code covers chassis modifications, not already covered in the *National Code of Practice (NCOP) – Light Vehicle Modifications (VSB 14)*, that are required to support other modifications. This code does not cover the modifications related to changing of the original wheelbase, fitting of components that are not compatible with the original vehicle components and chassis modifications that does not meet the requirements of VSB 14.

The original vehicle manufacturer (OVM) refers to the entity holding the first stage Identification Plate Approval (IPA). An entity holding the Second Stage Manufacture (SSM) Approval or Registered Automotive Workshop Scheme (RAWS) Approval is not deemed as the OVM.

In cases where the OVM has not specified a GVM rating, the maximum laden mass at which the OVM has shown compliance with the ADRs is to be taken as the original GVM rating. This information must be obtained from a reliable and traceable source.

This code is not to be used for certifying modifications to new light vehicles before being provided to market in Australia. To certify modifications to heavy vehicles, that being vehicles that exceed 4,500 kg GVM or Aggregate Trailer Mass (ATM), refer to the *National Code of Practice for Heavy Vehicle Modifications (VSB 6)*.

1.1 Modifications permitted under Code LH14

Modifications that may be certified under LH14 code are:

- Chassis alterations based on a design under a Code LH13 design certification issued for the same make/model/variant/chassis series;
- Cross-member alterations based on a design under a Code LH13 design certification issued for the same make/model/variant/chassis series.

1.2 Modifications not permitted under Code LH14

Modifications that must not be certified under LH14 code are:

- Modifications other than those described in Section 1.1.
- Modifications to vehicles that are not mentioned in Section 1.3.

1.3 Vehicle categories permitted to be certified under Code LH14

Modifications that may be permitted as described in Section 1.1 must be in one of the vehicle categories as specified by Table LH14-1.

Table LH14-1 List of permitted vehicles for LH14 modification

Vehicle Category	Category Code
Forward-control passenger vehicle	MB
Off-road passenger vehicle	MC
Light omnibus up to 3.5 tonnes GVM and up to 12 seats up to 3.5 tonnes GVM and more than 12 seats over 3.5 tonnes and up to 4.5 tonnes GVM	MD1 MD2 MD3
Light goods vehicle	NA
Medium goods vehicle over 3.5 tonnes and up to 4.5 tonnes GVM	NB1

2.0 General Requirements

All work must also comply with the requirements contained in sub-section 2 *General Requirements* of Section LH of VSB 14. Specific requirements in this code take precedence over any general instructions in VSB 14.

Extensive modifications to a vehicle may affect the warranty provided by the OVM. It is the responsibility of the certifying Approved Person (AP) to consider the effect of the modification on warranty and clarify this point to the modifier and vehicle operator prior to modification, if affected. Consideration of the effect this modification may have on product warranty is outside the scope of this code. The certifying AP must clarify this point to the modifier and the vehicle operator.

For audit purposes, sufficient documentary and photographic evidence of the modification must be retained by the certifying AP.

2.1 Compliance with applicable vehicle standards

- 2.1.1** The modified vehicle must continue to comply with the ADRs that apply to it.
- 2.1.2** If different or additional ADRs apply to the modified vehicle due to the modifications, the vehicle must comply with those ADRs that apply to it after modification.
- 2.1.3** A modified vehicle must comply with the applicable in-service requirements of the *Transport Operations (Road Use Management—Vehicle Standards and Safety) Regulation 2021* (the VSS regulation).
- 2.1.4** A pre-ADR modified vehicle must continue to comply with the VSS regulation.
- 2.1.5** Specific requirements, if listed in Section 3.0 of this code, take precedence over the requirements in Section 2.0.
- 2.1.6** Outlined in Table LH14-2 are areas of the vehicle that may be affected by the modifications and may require re-certification, testing and/or data to show compliance of the modified vehicle.

Table LH14-2 List of items and likely affected ADRs

DETAIL	REQUIREMENTS
Side Door Latches and Hinges	ADR 2/..
Seat and Seat Anchorages	ADR 3/..
Seatbelts and Seatbelt Anchorages	ADR 4/.., 5/..
Child Restraints and Child Restraint Anchorages	ADR 5/.., 34/..
Additional Windows	ADR 8/..
Steering Columns	ADR 10/..
Rear Vision Mirrors	ADR 14/..
Side Impact Protection	ADR 29/.., 72/.., 85/..
Braking System	ADR 31/.., 35/.., 88/..
General Safety Requirements	ADR 42/..
Vehicle Configurations and Dimensions	ADR 43/..
Specific Purpose Vehicles	ADR 44/..
Omnibuses for Hire and Reward Requirements	ADR 58/..
Omnibus Rollover Strength	ADR 59/..
Occupant Protection in Buses	ADR 68/..
Front Impact Protection	ADR 69/..

Note: This is not an exhaustive list and compliance to other ADRs may also be affected.

The ADR applicability is according to the vehicle's category and date of manufacture. It is the responsibility of the certifying AP to verify compliance to the applicable ADRs. The certification must include the vehicle date of manufacture in addition to the date of modification.

Sections 2.2 to 2.5 relate to the general requirements applying to different areas of the modifications under LH14 code.

2.2 Modification details

2.2.1 The modifications must be carried out in accordance with the requirements of the design certified under Code LH13 and as outlined in the design specification and drawings. Replacement parts must conform to the design package.

2.3 Fabrication

2.3.1 Requirements and guidance are contained within the following sections of VSB 14 Section LZ Appendices:

- for the use of fasteners, *Appendix A Fasteners*;
- for the use of foam padding, *Appendix B Foam Padding for Occupant Protection*;
- for welding techniques and procedures, *Appendix C Heating and Welding of Steering Components*; and
- for electroplating, *Appendix D Electroplating*.

2.3.2 The workmanship must be in accordance with the requirements of the design certified under Code LH13 and of sub-section 2 *General Requirements* of Section LH of VSB 14.

2.4 Testing and inspection

2.4.1 Testing and inspection specified in the design package must be completed and the evidence of the same must be held by the LH14 certifier. This includes completing the checklist(s) that came with the LH13 design package. Such checklist(s) must not be confused with the LH14 checklist provided at the end of this code. The LH14 checklist at the end of this code must also be completed correctly.

2.5 Vehicle eligibility

2.5.1 Before carrying out the modifications and certification under Code LH14, the vehicle details (make/model/variant/chassis series) and the in-service condition of the vehicle must be checked, as specified in the LH13 design package, to ensure the vehicle is eligible and suitable for the modifications.

Checklist LH14

CODE LH14: Modification for Chassis Alteration (Modification Certification)

Form No: LH14

Provide an answer to each of the following (N/A=Not Applicable, Y=Yes, N=No)

Modification Certificate Number:	_____	
1	Design	
1.1	Insert the LH13 Design Approval Package Number (the Design) LH13 Approval Package Design Number: _____ Note: If you do not have a LH13 design approval package number, the modifications cannot be certified under LH14 unless the vehicle is also being certified under the LH13 code.	
1.2	Does the vehicle meet the eligibility criteria as specified in the LH13 design package? If the vehicle is being certified under LH13 code, check Y(Yes).	<input type="checkbox"/> Y <input type="checkbox"/> N
1.3	Has the vehicle been modified exactly in accordance with the plans and specifications issued under the LH13 Design Approval Package specified above? If the vehicle is being certified under LH13 code, check Y(Yes).	<input type="checkbox"/> Y <input type="checkbox"/> N
2	Workmanship	
2.1	Is all work, including welding, of satisfactory quality and has all work been performed in accordance with recognised engineering standards?	<input type="checkbox"/> Y <input type="checkbox"/> N
2.2	Do all bolts or fasteners meet the applicable requirements of <i>VSB 14 Section LZ Appendices - Appendix A Fasteners</i> and the overriding requirements of Section 3.0 of LH13 or the Design?	<input type="checkbox"/> Y <input type="checkbox"/> N
2.3	Does the quality of welding meet the applicable requirements of <i>VSB 14 Section LZ Appendices - Appendix C Heating and Welding of Steering Components</i> and the overriding requirements of Section 3.0 of LH13 or the Design?	<input type="checkbox"/> Y <input type="checkbox"/> N
2.4	Does all work meet the requirements of Section 3.0 of Code LH13, including all additional holes being either drilled or punched?	<input type="checkbox"/> Y <input type="checkbox"/> N
3	Design Approval Package requirements (if applicable)	
3.1	Is(Are) the checklist(s) required in the LH13 design package completed?	<input type="checkbox"/> Y <input type="checkbox"/> N

[Continued on the following page]

3.2	Are all the inspections and tests as required in the LH13 design package completed?	<input type="checkbox"/> Y <input type="checkbox"/> N
3.3	Have you kept all supporting documents you used to certify this modification and photos of the modified vehicle for future audit?	<input type="checkbox"/> Y <input type="checkbox"/> N
4	Additional modifications	
4.1	Are all additional modifications to the vehicle, including a change in ADR category, assessed separately and certified under the appropriate modification codes?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
5	Electronic Stability Control (ESC)	
5.1	If fitted, is it ensured that the ESC system is not disabled?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
5.2	If fitted, is it ensured that the ESC system is not made less effective due to modifications carried out under this code?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
6	ADR Compliance	
6.1	Does the modified vehicle continue to comply with all affected Australian Design Rules (ADRs)?	<input type="checkbox"/> Y <input type="checkbox"/> N

Note: If the answer to any question is **N (No)** the design cannot be certified under LH14 code.

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CERTIFICATION DETAILS																
Make						Model						Year of Manufacture				
VIN																
Chassis Number (If applicable)																
Brief Description of Modification/s																
Vehicle Modified By																
Certificate Number (If applicable)																
Vehicle Certified By (<i>Print</i>)																
Signatory's Employer (If applicable)																
Signatory's Signature											Date					