

Modified or individually constructed vehicles -

means to demonstrate compliance with Third Edition Australian Design Rules

This document outlines the alternatives that Roads and Maritime Services (RMS) will accept for demonstrating compliance with certain Australian Design Rules (ADRs) for modified ADR-complying vehicles or individually constructed vehicles. It is not to be considered to serve as an exemption from any part of an applicable ADR, except where an exemption is explicitly noted, eg ADR 81/01, nor does it diminish the requirements specified in the ADRs. Typically, the alternatives apply to those ADRs that require destructive testing, or unrealistic tests for an individual vehicle, for their verification. Where alternatives are provided for testing, all other requirements of the ADR still apply. Where alternatives are not provided to an ADR, the full extent of the ADR applies. This document does not state specific means to demonstrate compliance with ADRs. Instead, guidance can be obtained in certain documents, including national Vehicle Standards Bulletins, and Vehicle Standards Information, Vehicle Inspector's Bulletins, Signatory Information Bulletins, Technical Specifications and other documents issued by RMS.

The document is intended to provide guidance to licensed certifiers registered on the Vehicle Safety Certification Compliance Scheme assessing and certifying vehicles for compliance with the Road Transport (Vehicle Registration) Regulation 2007 (the Regulation).

The table on the following pages lists the Third Edition ADRs, which is the current edition, and the alternatives allowed for demonstrating compliance with them. The alternatives may also be applied to vehicles manufactured to other editions and versions of the ADRs. Vehicles manufactured prior to the introduction of ADRs need only comply with the vehicle standards applicable to them at their date of manufacture, except where legislation or established policies require compliance with a specified ADR (eg VSB 5B *Construction and Installation of Additional Seats By Individuals* requires that when new seats are put into a vehicle, it must have seatbelts fitted in accordance with the applicable ADRs).

Roads and Maritime Services

The following abbreviations are used in the table:

- **VSI** means 'Vehicle Standards Information', issued by RMS to provide guidance and direction on means to comply with the Regulation.
- **VSB** means 'Vehicle Standards Bulletin', issued by the [Commonwealth] Department of Infrastructure & Transport (DIT), or its predecessor, on behalf of the Australian Motor Certification Board, as a code of practice relating to a particular subject, and which is an acceptable means of demonstrating compliance with ADRs.

NB: This is a live document and will be amended in response to practical feedback and changes to the ADRs.

MEANS TO DEMONSTRATE COMPLIANCE WITH THIRD EDITION AUSTRALIAN DESIGN RULES

3 rd Edition ADR No. & Title	Means to demonstrate compliance These may also be applied to vehicles manufactured to other editions and versions of the ADRs
1/00 Reversing lamps	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.
2/01 Side door latches & hinges	Can be sourced from a production vehicle known to comply with this Rule. Must be connected in a manner that will support the applied loads – calculations are sufficient to verify the connections.
3/03 Seats and seat anchorage points	The certificate issued by the licensed certifier must include an assessment of the host vehicle and the condition of the seats and anchorage points. All seats must comply with ADR 3/03 or be shown to have been sourced from a vehicle known to comply with this Rule. The following are acceptable means for determining compliance with ADR 3/03: <ul style="list-style-type: none"> • tests specified in ADR 3/03 done on the host vehicle, a representative sample vehicle or a test-rig facsimile – a Master Report is acceptable, or • detailed assessment or calculation in accordance with Schedule 1 – see page 13. The tests, assessment and calculation, as appropriate, must incorporate the seats and anchorage points. A simple comparison or opinion without the necessary supporting evidence is not acceptable.
4/04 Seatbelts	Must be new seatbelts that comply with ADR 4/04.

3rd Edition ADR No. & Title	Means to demonstrate compliance These may also be applied to vehicles manufactured to other editions and versions of the ADRs
5/05 Anchorages for seat belts	The certificate issued by the licensed certifier must include an assessment of the host vehicle and the condition of the anchorage points. The following are acceptable means for determining compliance with ADR 5/05: <ul style="list-style-type: none"> • tests specified in ADR 5/05 done on the host vehicle, a representative sample vehicle or a test-rig facsimile – a Master Report is acceptable, or • detailed assessment or calculation in accordance with Schedule 1. A simple comparison or opinion without the necessary supporting evidence is not acceptable.
6/00 Direction indicator lamps	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.
8/01 Safety glazing material	No allowance given – must comply with ADR 8/01.
10/02 Steering column	Steering columns installed in ICVs may comply with ADR 10/01. Evidence of compliance to ADR 10/01 or ADR 10/02 as applicable will be required for the steering column as installed in the vehicle. This may be by calculation or detailed assessment with the equivalent steering column installed in a standard production vehicle – refer to Schedule 1.
11/00 Internal sun visor	Full test to ADR 11/00, or Compliance can be demonstrated by way of comparison with a production vehicle, or Use a sun visor sourced from a production vehicle known to comply with this Rule.
13/00 Installation of lighting & light-signalling devices on other than L-group vehicles	No allowance given – the type, number, location and operation of the lights and light-signalling devices must be verified in accordance with ADR 13/00.

3rd Edition ADR No. & Title	Means to demonstrate compliance These may also be applied to vehicles manufactured to other editions and versions of the ADRs
14/02 Rear vision mirrors	No allowance given – must comply with ADR 14/02.
18/03 Instrumentation	Full compliance with ADR 18/03 except the maximum test speed may be 110km/h. A GPS device may be used to check the speedometer providing its accuracy has been verified and is within the tolerances permitted by the ADR. Evidence of accuracy may be requested.
19/02 Installation of lighting & light-signalling devices on L-group vehicles	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.
21/00 Instrument panel	Compliance can be verified by comparison with a standard production vehicle – refer to Schedule 1, or Vehicle Standards Bulletin 14 <i>National Code of Practice for Light Vehicle Construction and Modification</i> , Section LZ, Appendix B may be used, viz: <ul style="list-style-type: none"> • semi-rigid moulded polyurethane (approximate density 300 kg/m³), 25mm thick; • self-skinning rigid moulded polyurethane (approximate density 300 kg/m³), 25mm thick; • closed-cell polyethylene foam (approximate density 300 kg/m³), 25mm thick; and • closed-cell EVA foam (approximate density 300 kg/m³), 25mm thick, or Flexible cellular materials with compression deflection specifications within the range 250 to 500 kPa, when tested to Suffix D of ASTM D 3575 <i>Standard Test Methods for Flexible Cellular Materials Made from Olefin Polymers</i> .

3rd Edition ADR No. & Title	Means to demonstrate compliance These may also be applied to vehicles manufactured to other editions and versions of the ADRs
22/00 Head restraints	The certificate issued by the licensed certifier must include an assessment of the host vehicle and the condition of the installed head restraints; the head restraints must be compatible with the seats. Except for head restraints on seats that comply with the head restraint requirements of ADR 3/03, all head restraints must comply with ADR 22/00. Head restraints on seats that comply with the head restraint requirements of ADR 3/03 do not need to comply with ADR 22/00. The following are acceptable means for determining compliance with ADR 22/00: <ul style="list-style-type: none"> • tests specified in ADR 22/00 done on the host vehicle, a representative sample vehicle or a test-rig facsimile – a Master Report is acceptable, or • detailed assessment or calculation in accordance with Schedule 1. A simple comparison or opinion without the supporting evidence is not acceptable.
23/02 Passenger car tyres	No allowance given – must comply with ADR 23/02.
25/02 Anti-theft lock	Compliance can be verified by comparison with a standard production vehicle, and assurance is given to this effect – see Schedule 1.
29/00 Side door strength	The door must be sourced from a standard production vehicle that complies with ADR 29/00 and fitted accordingly, or <ul style="list-style-type: none"> • where fitted, intrusion bars must be fabricated; after which the door and its frame must be tested, or • detailed assessment or calculation in accordance with Schedule 1.
31/01 Hydraulic brake systems for passenger cars	Use the brake test applicable to the modification or ICV as specified in <i>Brake tests for modified and individually constructed vehicles*</i> to determine compliance with performance requirements. * September 2012: Currently being prepared. No assessment will be accepted in lieu of the Brake Test. Construction requirements must be to ADR 31/01.
33/00 Brake systems for motor cycles and mopeds	Use the brake test applicable to the modification or ICV as specified in <i>Brake tests for modified and individually constructed vehicles - motorcycles*</i> to determine compliance with performance requirements. * September 2012: Currently being prepared. No assessment will be accepted in lieu of the Brake Test. Construction requirements must be to ADR 33/00. Note: Transport for NSW is developing a brake test for motorcycles.

3rd Edition ADR No. & Title	Means to demonstrate compliance These may also be applied to vehicles manufactured to other editions and versions of the ADRs
34/01 Child restraint anchorages and child restraint anchor fittings	Child restraint anchorages and child restraint anchor fittings may be installed in accordance with the RMS publication <i>Guide to the Correct Installation and Use of Seat Belts and Child Restraint</i> , or <ul style="list-style-type: none"> • tests specified in ADR 34/01 done on the host vehicle, representative sample vehicle or a test-rig facsimile – a Master Report is acceptable, or • detailed analysis or examination in accordance with Schedule 1. A simple comparison or opinion without the supporting evidence is not acceptable.
35/02 Commercial vehicle brake systems	Must comply with ADR 35/02, or Vehicles up to 4.5 tonnes may use the brake test specified in <i>Brake tests for modified and individually constructed vehicles – commercial vehicles*</i> . * September 2012: Currently being prepared.
38/03 Trailer brake systems	Use VSB 1 <i>Building small trailers</i> and VSB 6 <i>National Code of Practice for Heavy Vehicle Modifications</i> . Note: VSB 6 is currently under review.
42/04 General safety requirements	Compliance may be by visual inspection.
43/04 Vehicle configuration & marking	No allowance given – must comply with ADR 43/04.
44/02 Specific purpose vehicle requirements	No allowance given – must comply with ADR 44/02.
45/01 Lighting & light-signalling devices not covered by ECE regulations	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.

3rd Edition ADR No. & Title	Means to demonstrate compliance These may also be applied to vehicles manufactured to other editions and versions of the ADRs
46/00 Headlamps	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.
47/00 Reflex reflectors	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.
48/00 Rear registration plate illuminating devices	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.
49/00 Front & rear position (side) lamps, stop lamps and end-outline marker lamps	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.
50/00 Front fog lamps	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.

3rd Edition ADR No. & Title	Means to demonstrate compliance These may also be applied to vehicles manufactured to other editions and versions of the ADRs
51/00 Filament globes	The lights must be verified as installed in the vehicle.
52/00 Rear fog lamps	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.
53/00 Position & stop lamps, direction indicators & rear plate lamps for L-group vehicles	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.
54/00 Passing beam headlamps for mopeds	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.
55/00 Headlamps for L-group vehicles other than mopeds	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.
57/00 Special requirements for L-group vehicles	No allowance given – must comply with ADR 57/00.

3rd Edition ADR No. & Title	Means to demonstrate compliance These may also be applied to vehicles manufactured to other editions and versions of the ADRs
58/00 Requirements for omnibuses designed for hire and reward	Apart from stretched limousines (see below), the vehicles must comply with ADR 58/00. Stretched limousines that carry up to 12 people, including the driver, are subject to a number of exemptions detailed in VSI No. 42 <i>Stretched limousines – exemption from aspects of ADR 58/00</i> . Note: ADR 58/00 is being revised.
59/00 Omnibus rollover strength	VSB No. 7 <i>Design parameters necessary for compliance with ADR 59/00</i> Parts A & B, may be used.
60/00 Centre high-mounted stop lamp	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.
61/02 Vehicle marking	No allowance given – must comply with ADR 61/02.
62/02 Mechanical connections between vehicles	No allowance given – must comply with ADR 62/02. Note: VSI No. 23 <i>Fifth wheel mountings</i> gives guidance for installing fifth wheel coupling.
63/00 Trailers designed for use in Road Trains	No allowance given – must comply with ADR 63/00.
64/00 Heavy goods vehicles designed for use in Road Trains & B-doubles	No allowance given – must comply with ADR 64/00.
65/00 Maximum road speed limiting for heavy goods vehicles and heavy omnibuses	No allowance given – must comply with ADR 65/00.

3rd Edition ADR No. & Title	Means to demonstrate compliance These may also be applied to vehicles manufactured to other editions and versions of the ADRs
66/00 Seat strength, seat anchorage strength and padding in omnibuses	Evidence that the seat(s) and their respective anchorages has/have been installed in accordance with the [Australian] National Transport Commission (NTC) guidelines <i>Voluntary Modification of Existing Buses & Coaches Guidelines to Improve Occupant Protection (1995)</i> is acceptable.
67/00 Installation of lighting and light-signalling devices on three-wheeled vehicles	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light; • function; • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.
68/00 Occupant protection in buses	Evidence of compliance with the <i>Voluntary Modification of Existing Buses & Coaches Guidelines to Improve Occupant Protection (1995)</i> is acceptable.
69/00 Full frontal impact occupant protection	The vehicle is exempted from crash-test requirements of ADR 69/00. A label warning passengers that the vehicle has not been crash tested must be affixed on the dashboard in front of the passenger seat. The label should state: 'This vehicle has not been tested to Australian Design Rule No. 69/00 Full Frontal Impact Occupant Protection, ADR No. 72/00 Dynamic Side Impact Occupant Protection, and ADR No. 73/00 Offset Front Impact Protection. The vehicle may not provide the level of occupant protection required by the Rules.'
72/00 Dynamic side impact occupant protection	The vehicle is exempted from crash-test requirements of ADR 72/00, A label warning passengers that the vehicle has not been crash tested must be affixed on the dashboard in front of the passenger seat. The label should state: 'This vehicle has not been tested to Australian Design Rule No. 69/00 Full Frontal Impact Occupant Protection, ADR No. 72/00 Dynamic Side Impact Occupant Protection, and ADR No. 73/00 Offset Front Impact Protection. The vehicle may not provide the level of occupant protection required by the Rules.'
73/00 Offset frontal impact protection	The vehicle is exempted from crash-test requirements of ADR 73/00. A label warning passengers that the vehicle has not been crash tested must be affixed on the dashboard in front of the passenger seat. The label should state: 'This vehicle has not been tested to Australian Design Rule No. 69/00 Full Frontal Impact Occupant Protection, ADR No. 72/00 Dynamic Side Impact Occupant Protection, and ADR No. 73/00 Offset Front Impact Protection. The vehicle may not provide the level of occupant protection required by the Rules.'

3rd Edition ADR No. & Title	Means to demonstrate compliance These may also be applied to vehicles manufactured to other editions and versions of the ADRs
74/00 Side marker lamps	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.
75/00 Headlamp cleaners	No allowance given – must comply with ADR 75/00. Note: Reference to photometric measurements means that when the headlamp cleaner is not in use, it must not affect the original photometric values, where applicable, by more than 5%.
76/00 Daytime running lamps	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.
77/00 Gas discharge headlamps	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.
78/00 Gas discharge light sources	To establish compliance with the colorimetric and photometric requirements, the lights must be verified as installed in the vehicle, namely: <ul style="list-style-type: none"> • colour of emitted light • function • clear - visible from prescribed positions and not confused with any other light • brightness - sufficient to be seen and no excessive glare.

3rd Edition ADR No. & Title	Means to demonstrate compliance These may also be applied to vehicles manufactured to other editions and versions of the ADRs
79/02 Emission control for light vehicles	Modified vehicles must continue to comply with ADR 79/02. Testing may be done in accordance with the IM240 test cycle providing it is done at an RMS emission testing facility or an equivalent NATA approved facility. It is acceptable for ICVs to meet the emissions levels specified in ADR 37/01 <i>Emission Control for Light Vehicles</i> . Note: September 2012 – an alternative five-gas test is being prepared that will provide greater access to test facilities across NSW.
80/03 Emission control for heavy vehicles	Documentation provided by the engine manufacturer that indicates the emissions meet the levels specified in ADR 80/03 is acceptable.
81/02 Fuel consumption labelling for light vehicles	The vehicle is exempted from fitting a label.
82/00 Engine immobilisers	An engine immobiliser sourced from a production vehicle known to comply with this Rule is acceptable providing it has been properly installed. After-market immobiliser must comply with AS/NZS 4601 <i>Engine Immobilizers</i> .
83/00 External noise	Compliance to ADR 83/00 required. Note: Some vehicles covered by conditional registration schemes (eg rally cars) may be given concessions to the noise levels specified in ADR 83/00.
84/00 Front underrun impact protection	Must comply with ADR 84/00, or Detailed analysis or examination in accordance with Schedule 1.

Alternative means for demonstrating compliance with certain ADRs

SUMMARY

This Schedule establishes alternative means to physical tests that can be used to demonstrate compliance with Australian Design Rules (ADRs) as specified in the table *Means to Demonstrate Compliance with Third Edition Australian Design Rules* (the Table). It applies to modified vehicles originally manufactured to ADRs and individually constructed vehicles (ICVs). It applies only to those ADRs that are unrealistic to perform on an individual vehicle.

The alternative procedures listed below are based on the document *New Vehicle Low Volume Scheme: Evidence Examination Procedures Manual*, Version 2.2 (the Manual), published by the [Commonwealth] Department of Infrastructure and Transport or its predecessor.

INTRODUCTION

The Road Transport (Vehicle Registration) Regulation 2007 (the Regulation) requires all new vehicles to comply with the applicable standards current at their date of manufacture, and for all registered vehicles, including modified vehicles, to continue to comply with these standards. For vehicles manufactured prior to 1969, the vehicles standards were specified in the Consolidated Draft Regulations; while for vehicles manufactured after 1968, the standards are the ADRs. The Second Edition ADRs were introduced on 1 January 1969, and the Third Edition on 1 July 1988 and are still current. Individually constructed vehicles (ICV)s and modified vehicles must be assessed by a person registered as a licensed certifier on the Roads and Maritime Services' (RMS's) Vehicle Safety Compliance Certification Scheme for compliance with these standards, and be certified accordingly.

Some ADRs require evidence of compliance to be obtained through testing. In most cases, this does not present a problem, although the tests can be expensive to perform. Some, however, require potentially destructive tests that cannot be done without high risk of damaging the subject vehicle; or it may not be reasonably practicable to do the tests on a test rig or another vehicle, such as a written-off vehicle or a manufacturer's representative sample; or it may be prohibitively expensive to do the test on an individual vehicle with no discernible safety benefit.

Although the [Commonwealth] *Motor Vehicles Standards Act 1989* (the Act) requires all vehicles supplied for sale to the Australian market, or used in transport in Australia, to comply with the applicable ADRs current at their date of manufacture, the DIT, which administers the Act and ADRs, acknowledges that it may not be reasonably practicable to insist on subjecting certain vehicles to potentially damaging or excessively costly tests, and has introduced alternative procedures that may be used to demonstrate compliance with the ADRs. These alternative procedures do not apply to standard vehicle models supplied for sale in Australia, but to those covered by the Low Volume Vehicle Scheme.

As this is the primary legislation pertaining to the design and supply of motor vehicles in Australia, it is reasonable to apply similar allowances to vehicles either not covered by the Act – ie ICVs – or vehicles modified after they were supplied to the market or used in transport that are covered in NSW by the Regulation, which is subordinate to the Act.

An important difference between this schedule and the Manual is that the latter allows a direct comparison between the vehicle subject to the assessment and a standard production vehicle. However, this direct comparison is based on the premise that the subject vehicle already complies with a set of standards, and is offered for general sale in another region. As the vehicles covered by the Table are ICVs or vehicles modified outside the scope of the manufacturer's recognised variants, there are no standard vehicles against which such a direct comparison can be made. As a consequence, this Schedule does not allow the direct comparison allowed by the Manual, but instead requires a more detailed assessment of the item under consideration.

USE OF ALTERNATIVE TYPES OF EVIDENCE

The Manual states that alternative types of evidence allowed are intended to provide a concessional basis for compliance with the applicable ADRs for the vehicle being certified. There are no concessions against meeting the ADRs themselves. All evidence relied upon must be readily available for examination by RMS.

The Table allows three types of evidence that may be submitted instead of testing to indicate a vehicle's or component's compliance with an ADR. The type of alternative evidence used to demonstrate compliance with a particular ADR must be allowed for that ADR.

Note: The term 'component' includes an item or a system.

When relying on alternative types of evidence to determine compliance with an ADR, the licensed certifier must:

- verify that the component is compatible with the host vehicle
- assess the condition of the subject vehicle to confirm its suitability for properly accommodating the component
- verify that the component was installed in accordance with the component manufacturer's specifications where provided.

The certificate produced by a licensed certifier must be vehicle specific and refer to these items. The use of general descriptions and references to nominal standards will only be accepted as background advice and not as the principal evidence. Detailed records of the evidence used in determining a vehicle's compliance with ADRs must be kept and made available to RMS if requested.

Types of evidence

Assurance:

Where permitted, evidence may be provided in the form of a definite assurance and not as a general statement that the applicant stands aside from.

Note: This is only allowed as an alternative to ADR 25.

An example of a properly worded formal assurance is, 'I hereby give an assurance that the requirements of ADR XX/YY are met', and be signed by the licensed certifier. It should not be of the form, 'the widget has been built to comply with ADR XX/YY'.

Detailed assessment:

Where permitted, evidence may be based on a detailed assessment involving a direct comparison with other components from another vehicle relating to the ADR. This may be by showing that the part number/s are the same as for a standard, production vehicle that complies with the ADR, or that a substantial comparison of the physical dimensions of the parts, and including a reference to their source, shows they are the same as in the vehicle under consideration.

The detailed assessment must include physical observations and measurements of all main parts on the reference vehicle and the subject vehicle with, if there is any doubt, some assessment of the relative physical properties of the materials used.

Calculation:

Where permitted, evidence may be provided by calculation based on a comprehensive stress analysis incorporating the forces specified in the ADR and which includes a professional analysis of all the likely modes of failure. The calculations must have a proper regard to the interaction and combination of shear and bending forces. Overly simplistic assumptions about the behaviour of sheet metal must not be made where thin metal sections are involved in combination with high local stresses. The calculations must take into account the condition of the vehicle in which the item is being installed, and confirm that it is capable of withstanding the forces specified in the ADR.

The calculations must show, that in practical engineering terms, the item and subject vehicle meet the requirements of the ADR. Calculations that are not substantial (ie simple calculations for a complex matter) or which neglect to include an appraisal of the host vehicle will not be accepted.