

Light Vehicle Safety Check Standards

Section 2 of the AIS Rules

For use by AIS examiners when performing safety checks on light vehicles.

Transport for NSW (Transport) is reviewing the inspection rules used by Authorised Inspection Scheme (AIS) examiners for light vehicles under the Scheme.

The rules, issued under section 70 of the *Road Transport (Vehicle Registration) Regulation 2017*, guide the inspection and testing of registrable vehicles to ensure they are safe for use and comply with the *Road Transport Act 2013*.

As part of this review, Transport invites AIS examiners to share their feedback on the current format and content of the rules.

[Take this brief survey to share your feedback.](#)

Light vehicles

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Brakes

Rule 101

Light Vehicles

101.01 Check the operation of the brake controls

Reasons for rejection

- a) on rubber faced brake pedals, any metal is showing;
- b) on metal brake pedals, there is no anti-slip surface;
- c) missing or broken brake pedal or handle;
- d) when the service brakes are firmly applied, less than 20% of the pedal travel remains;
- e) when steady pressure is applied to the service brake pedal for 10 seconds, the pedal travels towards the floor;
- f) where ADR 31 or 35 applies:
 - i. the brake failure warning light does not operate when the ignition is turned on, and the engine is either not running or the starter motor is engaged, or
 - ii. in cases where the service brake failure warning light and the park brake indicator light are combined, the brake failure warning light fails to operate when the ignition is turned on and the park brake is engaged.
- g) the parking brake ratchet or locking device is not holding the parking brake lever in its applied position.
- h) (if fitted with ABS), the ABS self test/failure warning lamp does not operate when the ignition is turned on, and the engine is either not running or the starter motor is engaged;
- i) the ABS or brake fail warning lamp remains on when the engine is running or comes on when the brake is applied (with the engine running);

101.02 Inspect the condition of visible brake components.

NOTE: This includes the area underneath the vehicle.



Brakes

Rule 101

Light Vehicles

Reason for rejection

- a) where visible, any brake component is leaking or is not securely mounted
- b) any hydraulic brake hose where, if when the brake pedal is held depressed, the intermediate reinforcement fabric of the hose is exposed or the hose swells or bulges.

NOTE: Cracked or split outer casing on the hose is not reason for rejection.

101.03 Service brake test with a decelerometer

NOTE: i) Decelerometer standards should be read in conjunction with the equipment specifications in Appendix B1 and the equipment manufacturer's specification.

ii) On some vehicles with light axle loads, or when testing in wet weather, it might be difficult to obtain a brake test result because of wheel lockup. In these cases the pedal pressure should be reduced to a point where only the minimum specified deceleration rates are achieved.

Set up a suitable decelerometer in the vehicle cabin. With the vehicle unladen, drive it to at least 30 km/h. Put the transmission into neutral. With both hands on the steering wheel, bring the vehicle to a halt as rapidly as possible in a safe manner with one sustained and smooth braking action using the service brakes.

Reasons for rejection

- a) the application of the brakes causes the vehicle to swerve from a straight line path;
- b) the service braking system decelerates the vehicle at less than the performance requirement specified in Table 1 or 1a.



Brakes

Rule 101

Light Vehicles

Brake Requirement Categories

Type of Vehicle	Brake Requirement
Cars manufactured in 1960 or later	A
Cars manufactured before 1960 (with four wheel brakes)	B
All off-road passenger vehicles (four wheel drive)	B
All light commercial vehicles (less than 3.5t GVM)	B

NOTE: Vintage vehicles with service brakes on two wheels (on the same axle) see Table 1a. For parking brake see Table 2, requirement A.

c) pedal force exceeds 885N.

TABLE 1 Service Brake Performance

Brake Requirement	Decelerometer Category*	AVERAGE		PEAK	
		m/s ²	%g	m/s ²	%g
A	Aggregate weight less than 2.5 tonnes	4.6	47	5.9	60
B	Aggregate weight 2.5 tonnes or over	3.8	39	4.9	50

* Some decelerometers require a weight category to be selected, the categories shown in this column equate to the brake requirements A & B.



Brakes

Rule 101

Light Vehicles

TABLE 1a **Service Brake Performance**
(two wheel brakes only)

Type of Brake Mechanism	AVERAGE		PEAK	
	m/s ²	%g	m/s ²	%g
Mechanical external drum (ie. band around drum)	2.9	30	3.4	35
Mechanical internal expanding	2.9	30	3.4	35
Ford Model T transmission	2.9	30	3.4	35

101.04 **Parking brake test for vehicles not designed to ADR31, ADR 35 or vehicles not fitted with a tandem master cylinder/dual circuit brakes**

After installing a decelerometer, drive the vehicle to at least 15 km/h. Put the transmission into neutral. Bring the vehicle to a halt as rapidly as possible in a safe manner with one sustained and smooth braking action using the parking brake.

Reason for rejection

- a) the parking brake decelerates the vehicle at less than the performance requirement specified in Table 2.



Brakes

Rule 101

Light Vehicles

TABLE 2 Parking Brake Performance

Brake Requirement	Decelerometer Category*	AVERAGE		PEAK	
		m/s ²	%g	m/s ²	%g
A	Aggregate weight less than 2.5 tonnes	1.6	16	1.9	20
B	Aggregate weight 2.5 tonnes or over	1.3	14	1.7	18

* Some decelerometers require a weight category to be selected, the categories shown in this column equate to the brake requirements A & B.

101.05 Parking brake test for vehicles designed to ADR 31, ADR 35 or vehicles fitted with a tandem master cylinder/dual circuit brakes

Apply the park brake and attempt to drive off using a light throttle.

Reason for rejection

- a) the parking brake does not hold the vehicle stationary.

101.06 Brake testing with a skid-plate tester

NOTE: This section should be read in conjunction with the equipment specifications in Appendix B3 and the equipment manufacturers' instructions.

Using a skid-plate tester, check the deceleration rates and retardation forces on each axle. Drive the vehicle to the speed nominated by the equipment manufacturer and the transmission into "neutral". Bring the vehicle to a halt as rapidly as possible with one sustained braking action.



Brakes

Rule 101

Light Vehicles

Reasons for rejection

- a) there is more than 30% difference in the brake force between the wheels on any axle;
- b) the service braking system decelerates the vehicle at less than the performance requirements specified in Table 1;
- c) in other than ADR31 and 35 vehicles, the parking brake decelerates the vehicle at less than the performance requirements specified in Table 2;
- d) where ADR 31 or 35 applies, the parking brake does not provide any retardation.



Brakes

Rule 101

Light Vehicles

101.07 Brake testing with a roller brake tester

NOTE: This section should be read in conjunction with the equipment specifications in Appendix B4 and the equipment manufacturers' instructions

Using a roller brake tester, check the retardation forces on each wheel. Release all brakes, place transmission in "neutral" (not "park" for automatic transmission) and slowly apply a braking force until a maximum force is attained, or wheel slip occurs.

Reasons for rejection

- a) there is more than 30% difference in the brake force between the wheels on any axle;
- b) the minimum brake force on any wheel is less than the performance requirement specified in Table 3;
- c) with the brakes released, the average brake drag is more than the performance requirement specified in Table 4;
- d) the parking brake does not give a reading, or the vehicle does not lift out of the roller.

TABLE 3 Minimum Brake Force

TYPE OF VEHICLE	kN (minimum)
Less than 2.5 tonnes tare*	2.0
2.5 tonnes or over	4.0



Brakes

Rule 101

*Light Vehicles***TABLE 4 Maximum Brake Drag**

TYPE OF VEHICLE	kN (minimum)
Less than 2.5 tonnes tare	0.5 drive axle 0.25 other axle
2.5 tonnes or over	1.0 drive axle 0.5 other axle

** NOTE: On some light vehicles the brake force limit might not be reached as the vehicle will be lifted out of the rollers. Similarly, it might not be reached if a load proportioning valve is fitted to the rear axle. In both cases it is considered a pass if the brake balance is within the specified limit.*



Towing Attachment

Rule 102

Light Vehicles

102.01 Visually inspect the towbar and its mounting on the vehicle body.

Reasons for rejection

- a) any towing attachment such as a tow ball or pintle hook is loose, or is cracked;
- b) the towbar is not securely mounted, or is cracked;
- c) any mounting bolts, fasteners or weld beads have advanced corrosion;
- d) where ADR 62 applies, the towbar does not display the gross mass rating and manufacturer's name or trademark;
- e) where any part of the coupling or towbar is removable, the bolts, studs, nuts etc, fastening those parts do not have a locking device such as a U-clip, split pin, spring washer, or nylon lock nut.



Steering and Suspension **Rule 103**

Light Vehicles

103.01 With the engine running, check the operation of the steering by moving the steering wheel, or, on cycle type vehicles, the handle.

Reasons for rejection

- a) where a steering wheel is fitted, there is more than 50mm rotational free play;
- b) the steering wheel is not securely attached to the steering column;
- c) where steering linkages are fitted to cycle type vehicles, the rotational free play exceeds 10mm measured at the end of the handle bars.

103.02 Visually inspect all steering components under the bonnet and under the vehicle.

NOTE: Take care with spring-loaded and rubber-bush joints. These components might be designed to have a certain amount of allowable movement.

Reasons for rejection

- a) any steering component is missing;
- b) any steering component can be seen to have been repaired or modified by heating or welding;
- c) any nut, bolt or locking device is missing or insecure;
- d) the steering box or rack is not securely fixed to the vehicle



Steering and Suspension **Rule 103**

Light Vehicles

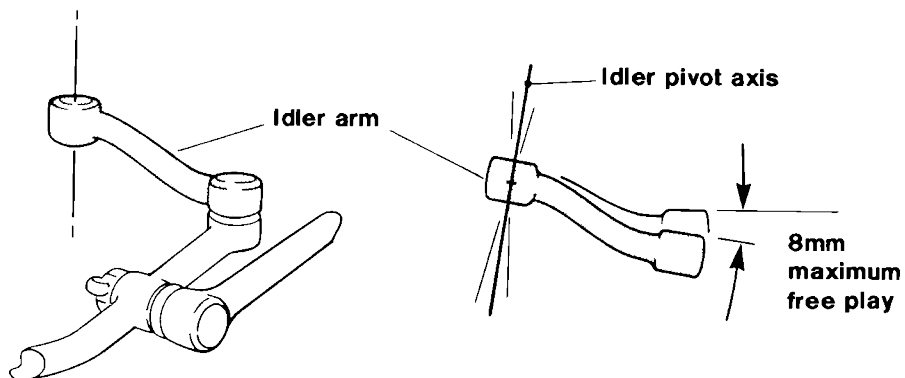
- e) there is any movement on the spline between Pitman arm and the steering box or between any thread or tapered joint
- f) free play due to wear in any steering component exceeds manufacturer's specification (if that specification is not known, free play exceeds 3mm).

103.03 Examine the idler arm

If fitted, attempt to move the idler arm in the direction of the pivot axis

Reason for rejection

- a) the play at the end of the idler arm exceeds 8mm.



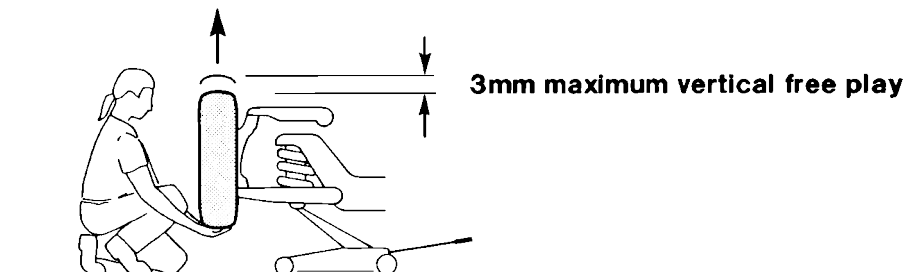
Steering and Suspension **Rule 103**

Light Vehicles

103.04 Visually inspect the suspension.

Reasons for rejection

- a) any suspension component is broken, insecure, cracked, cut, missing, or can be seen to have been repaired or modified by heating or welding;
- b) any shock absorber or strut is inoperative;
- c) any shock absorber or strut is not securely mounted;
- d) any nut, bolt or locking device is missing or not secure;
- e) with the wheels raised, the vertical free play of any wheel exceeds 3mm;



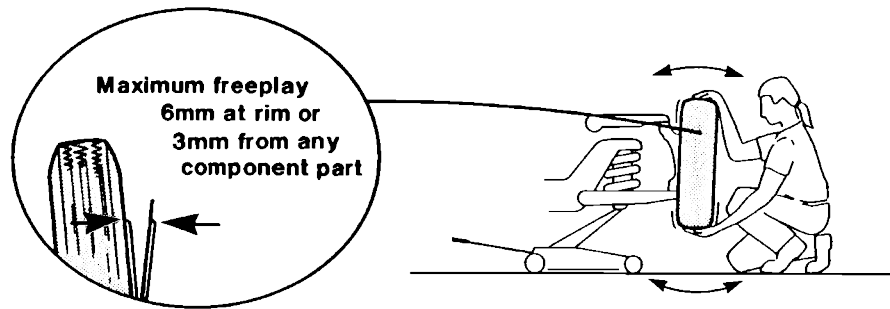
NOTE: Manufacturers' tolerances take precedence over specified free play measurements when performing these checks.



Steering and Suspension **Rule 103**

Light Vehicles

- f) with the wheels raised, the free play of the wheel measured at the rim exceeds 6mm in total or 3mm from any component.



NOTE: Manufacturers' tolerances take precedence over specified free play measurements when performing these checks.



Wheels and Tyres

Rule 104

Light Vehicles

104.01 Visually inspect the inside and outside of each road wheel.

Reasons for rejection

- a) any wheel or rim is cracked, has pieces of casting missing, or is buckled;
- b) the wheel nut does not engage the thread or the wheel stud for the full length of the nut, or the fitting of the wheel nut does not match the taper of the wheel stud hole (where these can be seen without removing hubcaps or wheel trims);
- c) any hub has missing or broken wheel mounting nuts, studs or bolts (where these can be seen without removing hubcaps or wheel trims);
- d) any spoked wheel has any missing, loose, broken or cracked spokes;
- e) the tyre or rim fouls any component at any point over the full range of suspension travel or steering movement.

104.02 Visually inspect each road tyre.

Reasons for rejection

- a) the tyre has less than 1.5mm tread depth on the surfaces which normally contact the road;
- b) the tyre has deep cuts, bulges, exposed cords or other signs of carcass failure;



Wheels and Tyres

Rule 104

Light Vehicles

- c) the tyre construction of all tyres on each axle is not the same (cross ply, radial ply or bias belted);
- d) the tyre has been re-grooved (except where indicated on the sidewall that the tyres are suitable for re-grooving).

104.03 Measure the wheel track, where modified from standard, taking measurement from the centre of the tyres.

Reason for rejection

- a) The vehicle manufacturer's specified wheel track measurement for the vehicle is exceeded by more than 25mm.



Body Condition

Rule 105

Light Vehicles

105.01 Check the operation of all doors, door locks and latches.

Reason for rejection

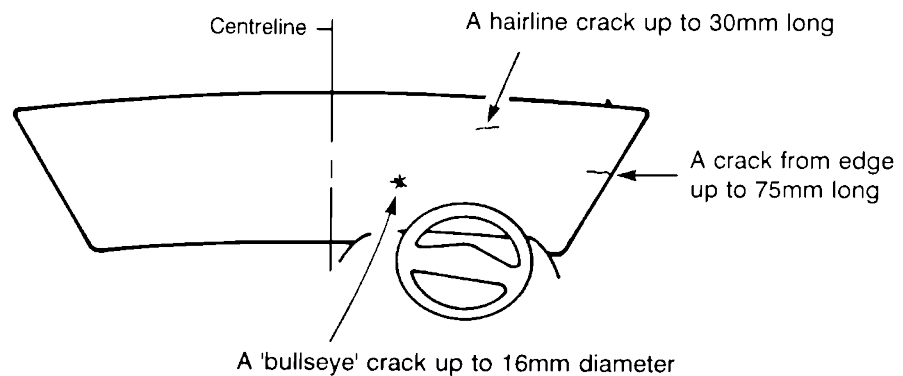
- a) any inside or outside door latch, control or hinge is not secure or functional.

105.02 Visually inspect the windscreen and front side windows.

Reason for rejection

- a) the area of windscreen from the centre of the vehicle in front of the driver has cracks or is deteriorated.

EXCEPTION: Any two of the following three types of damage are acceptable:



NOTE: This rule applies to windscreens repaired with clear resins. After repair, there must be no visible damage beyond the limits given above.



Body Condition

Rule 105

Light Vehicles

105.03 Test the light transmittance level of the windscreen, side and rear windows.

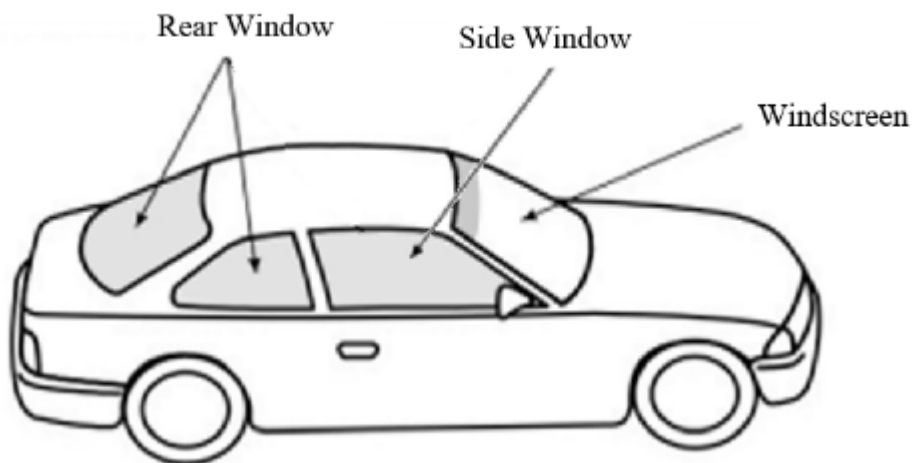
This section should be read in conjunction with the equipment specifications in Appendix 1A (1) and the light meter manufacturers' instructions.

The light meter may have up to a 5% measuring inaccuracy. A vehicle may be accepted if the readings are up to 5% lower than the minimum light transmittance.

The light transmission requirements do not apply to a tinted or opaque band at the top of the windscreen, provided they are above the arc swept by the windscreen wipers, or 10% of the depth of the windscreen, whichever is greater.

The light transmission requirements do not apply to glazing fitted as equipment by the vehicles manufacturer. This is often referred to as 'privacy glass'.

A rear window is any window positioned behind the drivers seating position.



Where any of the reasons for rejection below are found, you must fail the inspection.

Reasons for rejection

- a) The visible light transmittance of any windscreen or window (including any applied film) is less than that detailed below:
 - i) For vehicles with a compliance date of 08/1994 or later or for windscreens, windows or coating fitted from 1 August 1994 (regardless of vehicle compliance plate date)



Body Condition

Rule 105

Light Vehicles

For passenger vehicles:

Window Position	Minimum light transmittance	Vehicle NOT TO BE REJECTED unless light meter reads LESS than
Windscreen	70%	65%
Side windows	35%	30%
Rear windows*	20%	15%

*if the vehicle does not have a passenger side rear vision mirror, then the rear windows must have a minimum light transmittance of 35%

For goods vehicles:

Window Position	Minimum light transmittance	Vehicle NOT TO BE REJECTED unless light meter reads LESS than
Windscreen	70%	65%
Side windows	35%	30%
Rear windows*	No limit for the rear windows of goods vehicles with at least 4 wheels, or at least 3 wheels and a GCM of more than 1 tonne.	

*if the vehicle does not have a passenger side rear vision mirror, then the rear windows must have a minimum light transmittance of 35%

ii) [REPEALED]

iii) For vehicles with a compliance date before 08/1994

For all vehicles:

Window Position	Minimum light transmittance	Vehicle NOT TO BE REJECTED unless light meter reads LESS than
Windscreen	70%	65%
All other windows	No limit if the window or tint was fitted prior to 08/1994, otherwise see i).	

- b) Any film applied to a side or rear window is damaged or deteriorated in a way that significantly impairs the driver's vision.
- c) Any film applied to windscreen.

NOTE: does not apply to a tinted or opaque band at the top of the windscreen, provided it is above the arc swept by the windscreen wipers, or the top 10% of the windscreen, whichever is greater.



Body Condition

Rule 105

Light Vehicles

105.04 Visually inspect body panels, chassis and subframe for dangerous protrusions and rust.

Reasons for rejection

- a) exterior body work and fittings have sharp edges due to rusted panels;
- b) any structural member such as a subframe, floor panel, door sill, seat or seat belt anchorage, is cracked or has advanced rust;
- c) where ADR 29 applies, the doors of a vehicle have advanced rust;

NOTE: The above should be read in conjunction with Appendix A1.

- d) any body damage with protrusions that could cause injury to a person coming into contact with the vehicle;
- e) any after market fitting attached to the exterior of the vehicle that could cause injury to a person coming into contact with that part of the vehicle.

NOTE 1: Typical fittings attached to the exterior of a vehicle, or to the exterior of another fitting, include bull bars, aerials, fishing rod holders, lamps, and mounting brackets for such fittings. Of particular concern are items protruding forward of the bumper or bull bar.

NOTE 2 Rule 105.04 (e) is not applicable to vehicles built prior to 1 January 1965 where the fitting, such as a bonnet ornament, was fitted by the original vehicle manufacturer.



NOTICE

TINTING OF GLASS ON MOTOR VEHICLES

The Chief Executive of the RTA has introduced a moratorium on window tinting standards until 1 June 1994.

No action will be taken against any person whose vehicle has window tinting which exceeds the limits as set out in Rule 105.03 of the Rules for Authorised Inspection Stations. However, you are still required to examine the glazing of all vehicles in accordance with Rule 105.03.

When the results of the light transmittance test indicate the light transmittance level is less than that permitted, you must note the readings **from** the test in the "comment/repairs needed" field of the Safety Inspection Report. The owners of the vehicles must be informed that the window tinting does not comply with the standards. **However no car is to be failed due to excessive window tinting during the period up to 1 June 1994.**

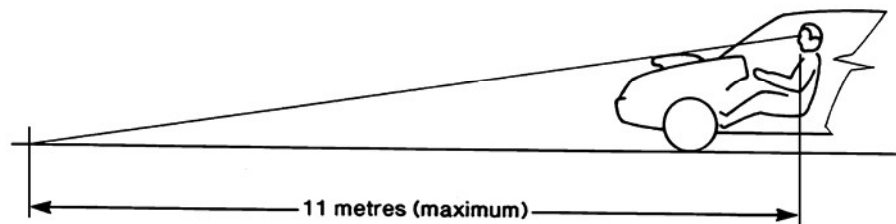
If you are asked about window tinting, please refer the person to the RTA for further advice.

Body Condition

Rule 105

Light Vehicles

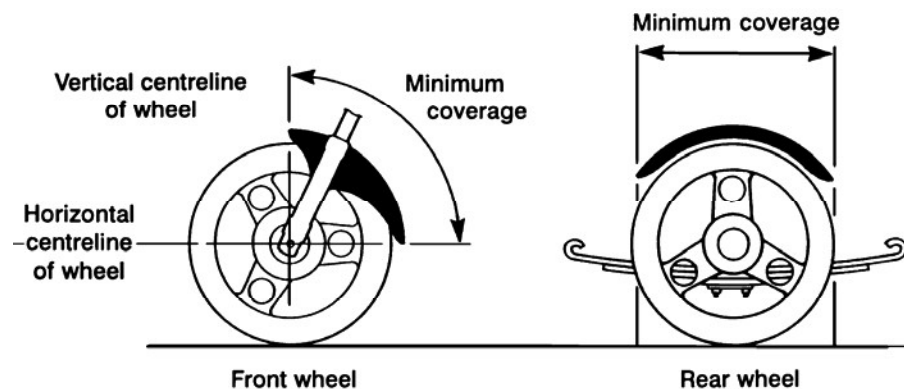
- f) Any bonnet scoop that prevents the range of vision shown in the diagram below. (Eye position can be taken as being a point 730mm above and 270mm forward of the junction of the seat cushion and squab with the seat in its lowest and rearmost position.)



105.05 Inspect the wheels, tyres and wheel arches, using a rule and straightedge if necessary.

Reasons for rejection

- any vehicle has a tyre protruding beyond the side of a mudguard;
- on cycle type and open wheeled vehicles, any mudguard does not meet the requirements below.



Body Condition

Rule 105

Light Vehicles

105.06 On vehicles fitted with automatic transmissions, try to start the engine with the gear selector control in each position other than "neutral" and "park".

NOTE: Before commencing this check ensure that the park brake or service brake is fully applied.

Reason for rejection

- a) the engine can be started in any gear position other than neutral or park.

105.07 Visually inspect rear vision mirrors

Reasons for rejection

- a) rear vision mirrors are missing, or do not provide a clear view of the road to the rear of the vehicle;
- b) where there is no effective rear vision provided by the internal rear vision mirror, the vehicle does not have an external rear vision mirror fitted to each side;
- c) any light commercial vehicle (except a station wagon) is not fitted with an external rear vision mirror on each side of the vehicle.



Body Condition

Rule 105

Light Vehicles

105.08 Check the operation of seats, seat belts, buckles and other restraints, and inspect webbing and metal stalks.

Reasons for rejection

- a) any seat or seat belt is not securely fastened to its mounting;
- b) any seat belt is missing or the webbing is knotted;
- c) any seat belt emergency locking retractor is inoperative;
- d) any seat belt buckle does not lock when the tongue is placed into it;
- e) the webbing, or the stitching of any webbing joint, is cut or severely deteriorated;

NOTE: Discolouring alone is not a reason for rejection.

- f) any metal stalk is missing or has broken wires
- g) in other than ADR 34 vehicles, where fitted, child restraint attachment points are loose or cracked
- h) where ADR 34 applies, child restraint attachment points are loose, cracked or missing.



Body Condition

Rule 105

Light Vehicles

105.09 Visually inspect and check the operation of the windscreen wipers.

Reasons for rejection

- a) windscreen wipers are missing, are not secured, or do not operate;
- b) windscreen wiper blades are missing, cracked, curled, frayed or torn.

105.10 Check the operation of the horn.

Reasons for rejection

- a) the horn is not working;
- b) the horn is of the following types: exhaust whistle, compression whistle, siren or alternating tone (reversing alarms are acceptable).

105.11 Visually inspect the front and rear number plates.

Reasons for rejection

- a) Any part of the number plate is more than 1300mm from the ground;
- b) The number plates are not substantially parallel to the vehicle's axles;
- c) Any number plate is obscured, for example by a towing attachment, gooseneck or tow ball;
- d) Any number plate cover is tinted, reflective, rounded or bubble like;
- e) Any number plate is not of RTA issue, is damaged or faded to the extent that the registration number is not visible;
- f) Characters on the number plate are not clearly visible from a distance of 20 metres at any point within an arc of 45 degrees from the surface of the number plate above or to either side of the vehicle.



Body Condition

Rule 105

Light Vehicles

105.12 Where ADR 25 applies, check the operation of the anti-theft/steering lock.

Reasons for rejection

- a) the ignition key can be removed in any position except the "anti-theft" (lock) position;
- b) when engaged, the anti-theft lock does not prevent at least one of the following actions:
 - i) steering the vehicle;
 - ii) engaging the forward drive gears;
 - iii) release of the brakes.

105.13 Check the operation of the windscreen demister, where ADR15 applies.

Reasons for rejection

- a) the demister unit is missing
- b) there is no air being blown onto the windscreen when the demister is operating.

105.14 Check the air bags

Reasons for rejection

- a) (if fitted with air bags), the air bag self test/failure warning lamp does not operate when the ignition is first turned on or does not extinguish when the engine starts;
- b) Airbags have been removed.



Body Condition

Rule 105

Light Vehicles

Note: Vehicles rejected under rule 105.14 must retain the original type steering wheel and dashboard componentry. Vehicles that have had these components changed to non airbag types must still be rejected.



Lighting

Rule 106

Light Vehicles

106.01 Visually inspect the compulsory reflectors fitted to the rear of the vehicle.

Reason for rejection

- a) reflector(s) are damaged, or are not fitted to the rear of the vehicle.

106.02 Visually inspect and check the operation of all lights fitted to the vehicle.

Reasons for rejection

- a) any of the following lights do not work:
 - i) headlight (high/low beam)
 - ii) front park or side lights
 - iii) tail lights
 - iv) brake light(s)
 - v) turn signal indicator lights
 - vi) clearance lights (trucks and cycle type vehicles only)
 - vii) number plate light
- b) any rear light other than a reversing light is damaged to the extent that white light shows to the rear of the vehicle;
- c) any amber clearance light or front turn signal is damaged so that it shows white light;
- d) the number plate light is not directing light onto the surface of the rear number plate.



Lighting

Rule 106

Light Vehicles

106.03 Visually inspect front and rear lights for the presence of tinted covers.

Reasons for rejection

- a) any light has a tinted cover over it;
- b) there is any other type of opaque cover over a headlight which cannot be readily removed without the use of tools.

106.04 Using a headlight tester, check the aim of the headlights.

Reasons for rejection

- a) the aim of the headlight is adjusted such that, when on high beam, the projected centre of the beam is to the right of the headlight centre and/or is above the headlight centre;
- b) when switched to low beam, the projected centre of the beam does not drop below and to the left of the correct high beam setting.

106.05 Visually inspect the headlights.

Reasons for rejection

- a) headlight reflector is tarnished or peeling to the extent that headlight performance is impaired;
- b) headlight lens is incomplete;
- c) headlight assembly is not secured.



Engine Compartment & Driveline

Rule 107

Light Vehicles

107.01 Visually inspect the engine, transmission and driveline.

Reasons for rejection

- a) there are oil leaks from the engine, gearbox or driveline which allow oil to drop onto the road surface, exhaust system or brake components;
- b) any engine or transmission mounting is not secured
- c) fasteners on couplings in the driveline are loose or missing.

107.02 Visually inspect the exhaust system.

Reasons for rejection

- a) any component of the exhaust system is not securely mounted;
- b) exhaust pipe outlet is not rearward of all rear passenger doors and opening windows;
- c) there is any leak in the exhaust system, excluding manufacturers' drain holes in the mufflers.

107.03 Where ADR 37 applies, check for the presence of a catalytic converter

Reason for rejection

- a) there is no catalytic converter fitted;
- b) the catalytic converter has been bypassed;



Fuel Systems

LPG/CNG Vehicles

Rule 108

Light Vehicles

108.01 Inspect for the presence of an approved Autogas compliance plate and number plate labels.

Vehicles with Autogas systems installed in NSW

The Road Transport (Vehicle Registration) Regulation 2007 prescribes the requirements for the installation of liquid petroleum gas (LPG) or compressed natural gas (CNG) Autogas fuel systems in motor vehicles in NSW. In accordance with the ADRs and national uniformity, the installation must comply with the relevant Australian standard, i.e. for current installations that is AS/NZS 1425-1999. A requirement of this standard is that an Autogas plate (an LPG/CNG compliance plate) must be fitted as part of this installation.

Vehicles with Autogas systems installed interstate

A vehicle fitted with an Autogas fuel system installed in another State or Territory, may be accepted for registration in NSW if:

1. a metal plate is fitted in a prominent position, near the installation, showing:
 - a statement that the installation complies with the Standards Australia code for the fuel type (i.e. AS.1425 or AS/NZS.1425 for LPG and AS.2739 or AS/NZS.2739 for natural gas - CNG)
 - the date the installation was commissioned
 - the State or Territory where the installation was made
 - the identification number of the suitably qualified installer.
 - the vehicle VIN/Chassis number
 - the container's serial number.
2. the installation passes a Safety Check Inspection conducted by an examiner authorised to examine LPG or CNG vehicles (also referred to as natural gas vehicles or NGVs).



Fuel Systems LPG/CNG Vehicles

Rule 108

Light Vehicles

Reasons for rejection

- a) vehicle does not have an approved LPG/CNG compliance plate in the following format (reflecting the most current installation, repair or modification to the system):

For systems installed since 1st October 1999;

	<p>LIQUEFIED PETROLEUM GAS COMPLIANCE PLATE</p> <p>The autogas installation to which this notice is affixed complies with the requirements of Australian/New Zealand Standard AS/NZS 1425</p> <p>INSTALLATION DATE.....STATE</p> <p>COMPLIANCE NO</p> <p>INSTALLED BY:</p> <p>NAME.....LIC NO</p> <p>WORKSHOP NO(REP NO)</p> <p>VIN NO</p> <p>CONTAINER SERIAL NO</p> <p>CONTAINER TEST STATION STAMP DATE</p>	
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	<p>CNG COMPLIANCE PLATE</p> <p>The CNG Installation to which this notice is affixed complies with the requirements of AS/NZS2739</p> <p>INSTALLATION DATE.....STATE INSTALLED.....</p> <p>CERTIFICATE OF COMPLIANCE NO</p> <p>INSTALLED BY:</p> <p>NAME.....LIC NO</p> <p>VEHICLE IDENTIFICATION NO.....</p>	
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Fuel Systems LPG/CNG Vehicles

Rule 108

Light Vehicles

For systems installed between 1st July 1983 and 1st October 1999;

WORKCOVER AUTHORITY (NSW)
This Autogas installation is designed for use with
LIQUID PETROLEUM GAS

Certificate of Compliance No. _____
Installed by _____ (Lic. No.)
Repairer/Workshop _____ (Rep. No.)
Date of Original Installation _____
Date of Re-test _____
Chassis No. _____
Engine No. _____

WorkCover Authority (NSW)
This autogas installation is designed for use with
NATURAL GAS

Certificate of Compliance No.: _____
Tested by: 46/ _____ (Certificate No.)
Repairer: 44/ _____ (License No.)
Date of Test: _____
Chassis No.: _____
Engine No.: _____

For systems installed before 1st July 1983;


DEPARTMENT OF INDUSTRIAL RELATIONS
THIS AUTO GAS INSTALLATION IS DESIGNED FOR USE WITH
LIQUID PETROLEUM GAS

CERTIFICATE OF COMPLIANCE NO. _____
TESTED BY _____ (CERTIFICATE NO.)
REPAIRER _____ (LICENCE NO.)
DATE OF TEST _____
CHASSIS NO. _____
ENGINE NO. _____

DEPARTMENT OF INDUSTRIAL RELATIONS
This autogas installation is designed for use with
NATURAL GAS

Certificate of Compliance No. _____
Tested by _____ (Certificate No.)
Repairer _____ (License No.)
Date of Test _____
Chassis No. _____
Engine No. _____

For systems installed by the original vehicle manufacturer;

 **Tickford**
VEHICLE ENGINEERING

THE LPG SYSTEM COMPLIES WITH ADR44/01 & AS1425-1989
INSTALLED BY LICENCED WORKSHOP No. AFR 00050
V.I.N. _____
ENGINE No. _____ DATE / /
LPG SERIAL No. _____

NISSAN MOTOR CO. AUSTRALIA PTY LTD.
CERTIFICATION PLATE

THE LPG INSTALLATION IN THIS VEHICLE
COMPLIES WITH THE FOLLOWING APPROVALS

VIC	V447-80	SA
NSW	NO255Q	NT
QLD		ACT
WA		TAS

**LPG INSTALLATION HOLDEN COMMODORE
MODEL VS STYLE SEDAN**

INSTALLATION REFERENCE No. _____
DATE OF INSTALLATION ____/____/____ STATE/TERRITORY ____

THIS INSTALLATION COMPLIES WITH ADR44/01, AS1425-1989 AND
☐ GM HOLDEN'S AUTOMOTIVE INSTALLATION REQUIREMENTS ☐

ODOMETER _____
V.I.N. _____
ENGINE No. _____
WORKSHOP _____ (LICENCE No.)
FITTER _____ (CERTIFICATE No.)



Fuel Systems

LPG/CNG Vehicles

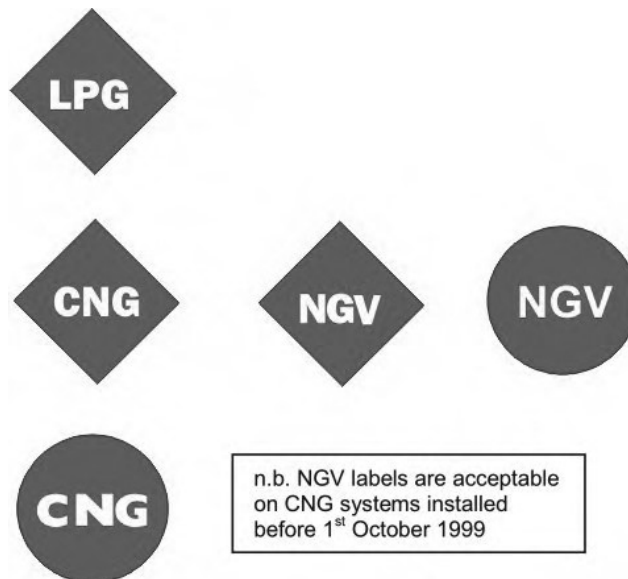
Rule 108

Light Vehicles

For early LPG systems installed by licensed installer;

DEPARTMENT OF INDUSTRIAL RELATIONS	
THE LPG INSTALLATION IN THE VEHICLE WAS CARRIED OUT BY	
LICENSED INSTALLER No.	_____
TO COMPLY WITH SAA CODE 1.25	
CHASSE No.	_____
DATE FITTED	_____

- b) labels (in the following format) are not fitted to the vehicle's front and rear number plates indicating it is LPG or CNG fuelled.



White lettering on red background

- c) on systems installed since 1st October 1999, these labels are not affixed to a metal plate (fitted on the front and rear number plates) that is:
- for LPG systems, a 25mm square at least 1mm thick and mounted as a diamond on the number plate
 - for CNG systems, a 35mm disc at least 1mm thick.



Fuel Systems

LPG/CNG Vehicles

Rule 108

Light Vehicles

108.02 Inspect the LPG or CNG container

Reasons for rejection

- a) The container can be removed without the use of tools from a vehicle other than those specified below;
 - i) fork lift trucks;
 - ii) vehicles which are not powered by LPG or CNG;
 - iii) vehicles fitted with diesel engine enhancement system using LPG/CNG;
- b) The container has;
 - i) advanced corrosion or fire damage;
 - ii) cuts or dents which penetrate the surface of the container;
 - iii) any dent on the container which is deeper than 10% of the width of the dent, or which is located on a weld and exceeds 6.5mm in depth;
 - iv) any dent or crease on the container which is longer than 75mm;
- c) the statutory life of the container has expired;

NOTE: It is a statutory requirement for an Autogas container to be checked for continued service life:

LPG every ten years

CNG steel containers every five years

fibreglass reinforced plastic containers every three years.



Fuel Systems

LPG/CNG Vehicles

Rule 108

Light Vehicles

- d) the boot lid torsion bars, coil springs or hinges contact the container;
- e) the container and its surface mounted fittings are not protected from damage that may be caused by the failure of a drive/tail shaft which is less than 200mm from the container or its fittings;
- f) where mounted within a cargo space, the container is not protected from the impact of any object carried in that area, i.e. the container is not installed within an enclosed protective compartment. (NB the boot of a passenger car is not considered to be a cargo space for this purpose);
- g) the container or its fuel carrying components are located within:
 - i) 150mm of an unshielded heat source; or
 - ii) 40mm from a heat source if the component is fitted with a sheet metal heat shield at least 15mm from the component;
- h) the container is incorrectly aligned so that it impedes access to the container service valve;
- i) the container is incorrectly aligned so that it impairs the operation of the ullage valve or the automatic fill limiter (AFL);
- j) Where containers installed on or after 1st July 1988 have a wall thickness marked to be less than 2.2mm;
 - i) the container is mounted externally;
 - ii) the container is not installed within a protective compartment (the boot of a passenger car is considered to be a protective compartment for this purpose);



Fuel Systems

LPG/CNG Vehicles

Rule 108

Light Vehicles

- iii) the container is located less than 75mm from the inner side panels of the vehicle;
 - iv) the container is not stamped or fitted with a permanent durable warning label "This vessel shall be installed within a compartment inside the vehicle".
- k) Any CNG container is located less than 100mm inboard from the front, rear or side outer body panels of the vehicle;



Fuel Systems

LPG/CNG Vehicles

Rule 108

Light Vehicles

108.03 Inspect the container anchorages and straps

Reasons for rejection

- a) any anchorage strap allows the container to move;
- b) there is only one anchorage strap used to secure the container;
- c) any anchorage strap is cut, has advanced rust or is otherwise deteriorated;
- d) the anchorage straps are smaller than the sizes shown in Table 5;
- e) the anchorage bolts or studs do not have locking devices fitted (such as spring washers, split pins, lock nuts, etc);
- f) the anchorage bolts or studs are smaller than the sizes shown in Table 5;

TABLE 5 Dimensions of Container Attachment Devices

LPG/CNG container size (litres)			Minimum anchorage strap dimensions (mm)	Bolt or stud diameter for anchorage strap mountings (mm)
Over	-	Up to		
0	-	100	30 x 3	10
100	-	150	50 x 6	12
150			Engineering certification required to specify minimum strap, bolt/stud dimensions	



Fuel Systems

LPG/CNG Vehicles

Rule 108

Light Vehicles

- g) for any LPG/CNG container exceeding 150litres, a report from a professional engineer specifying the minimum strap, bolt/stud dimensions, is not supplied for the installation.
- h) there are less than four (4) points of attachment to the vehicle structure.
- i) reinforcement plates are missing or not shaped to the contours of the sheet metal panel on which the container is mounted;
- j) reinforcement plates attached to sheet metal panels are not at least 75mm square and 3mm thick. For systems installed since 1st October 1999, reinforcement plates are not at least 2.5mm thick and have a surface area of at least 5500²mm (3600²mm for CNG);

NOTE: For original equipment installations, the vehicle should not be rejected if mounting point reinforcement plates, anchorage straps, bolts or studs are smaller than those shown in this rule.



Fuel Systems

LPG/CNG Vehicles

Rule 108

Light Vehicles

108.04 Inspect remote filled internally mounted containers

Reasons for rejection

- a) The compartment housing the container and its fittings, or the sub-compartment has electrical equipment other than the automatic fuel shut off device (AFSOD), its wiring or the wiring connecting the contents gauge;
- b) wiring is not insulated or secured at intervals of not more than 600mm;
- c) any conduit containing the piping and hoses which pass through an enclosed area of the vehicle is missing, modified or damaged so that it allows venting to the inside of the vehicle;
- d) the clamps for the conduit connections are missing or loose (adhesives or sealing compounds are not acceptable as alternatives to mechanical clamps);
- e) the container service valve is inoperable;
- f) the seals for any sub-compartment do not provide a gas-tight seal;
- g) any container space vent outlet is less than 250mm from the exhaust system (75mm for CNG);
- h) any container space vent is obstructed.



Fuel Systems

LPG/CNG Vehicles

Rule 108

Light Vehicles

108.05 Inspect direct filled internally mounted containers

Reasons for rejection

- a) the passenger compartment of the vehicle is not sealed from the container space;
- b) any container space vent(s) is obstructed;
- c) any container space vent outlet is less than 250mm from the exhaust system (75mm for CNG);
- d) wiring is not insulated or secured at intervals of not more than 600mm.



Fuel Systems

LPG/CNG Vehicles

Rule 108

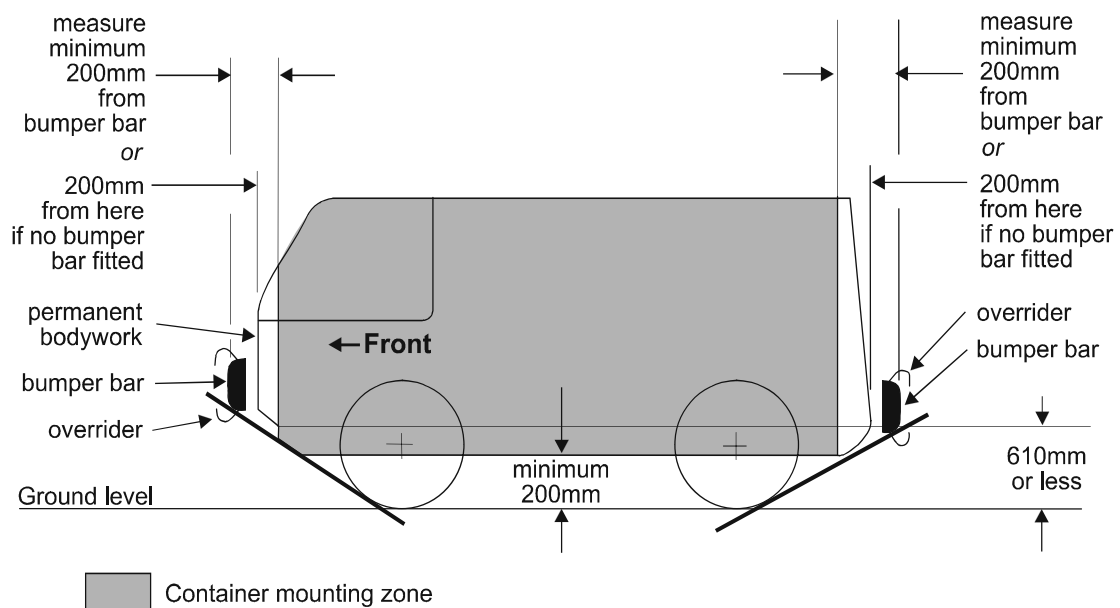
Light Vehicles

108.06 Inspect externally mounted containers

Reasons for rejection

Where the chassis ground clearance, at the rear of the vehicle, is 610mm or less (600mm for systems installed from 1st October 1999):

- the tank, or any tank component, has ground clearance of less than 200mm;
- the tank, or any tank component, is not a minimum 200mm inboard of the bumper bar (measured on the centreline of the vehicle) or permanent body work (if a bumper bar is not fitted);
- the tank, or any tank component, is not above a line which is tangent to the front or rear wheels and slopes upward and outward to the extremity of the vehicle's bumper bar or permanent body work (if a bumper bar is not fitted);



Fuel Systems

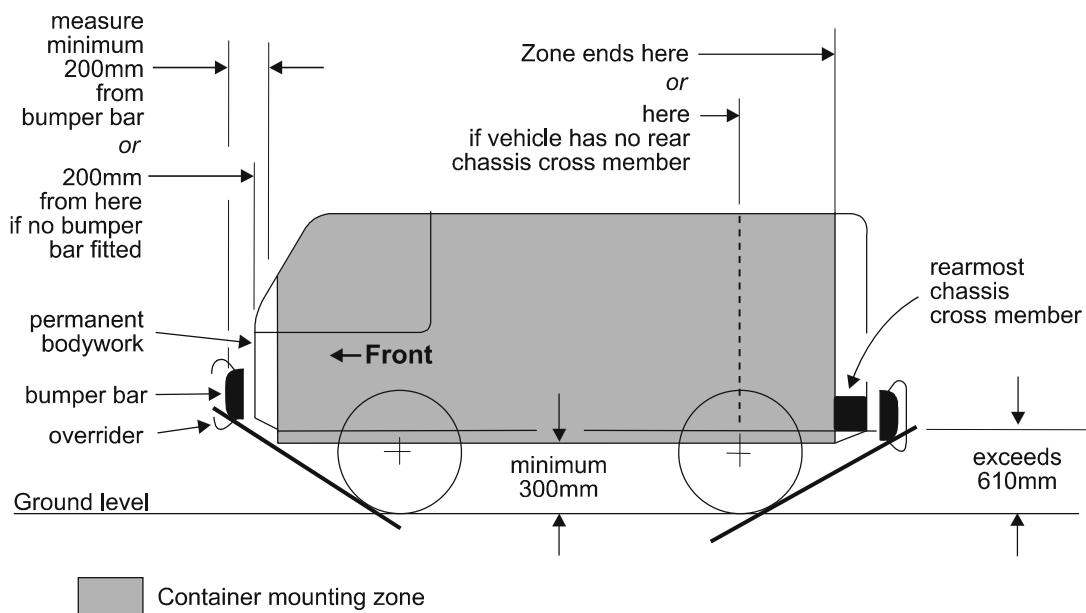
LPG/CNG Vehicles

Rule 108

Light Vehicles

Where the chassis ground clearance, at the rear of the vehicle, exceeds 610mm (600mm for systems installed from 1st October 1999):

- d) the tank, or any tank component, has ground clearance of less than 300mm;
- e) if fitted at the front of the vehicle, the tank, or any tank component, is not a minimum 200mm inboard of the bumper bar (measured on the centreline of the vehicle) or permanent body work (if a bumper bar is not fitted);
- f) if fitted at the rear of the vehicle, the tank, or any tank component, is not in front of the rearmost chassis cross member or the centreline of the rearmost wheels;
- g) the tank, or any tank component, is not above a line which is tangent to the front or rear wheels and slopes upward and outward to the extremity of the vehicle's bumper bar or permanent body work (if a bumper bar is not fitted);



Fuel Systems

LPG/CNG Vehicles

Rule 108

Light Vehicles

108.07 Inspect automatic fill limiter, ullage and safety valves

Reasons for rejection

- a) for systems installed before 1st October 1999, where a container is fitted with an automatic fill limiter (AFL), a warning label "AFL fitted - bleeding during filling not required" is not fitted at the filling point;
- b) where an ullage valve is fitted, the outlet does not have a cap or plug (an ullage valve is not required if the vehicle is fitted with an AFL);
- c) where a container is not fitted with an AFL, a warning label "Stop filling when liquid appears" is not fitted at the filling point;
- d) the safety valve has any damage in the system or blockage to the discharge pipe, if fitted, or allows the discharge to strike the exhaust system, container or a bystander, or the protective cap is not functioning or is missing.

108.08 Inspect hydrostatic relief valves (LPG only)

Reason for rejection

- a) the hydrostatic relief valve on multiple containers is damaged, missing or not fitted with a self-closing device which prevents the entry of dirt or water into the outlet.
- b) the discharge of this valve would strike the exhaust system, a bystander or the container.



Fuel Systems

LPG/CNG Vehicles

Rule 108

Light Vehicles

108.09 Inspect fuel lines, joints and connections

Reasons for rejection

- a) where the vehicle body or chassis members do not provide protection for fuel lines under the vehicle, the piping is not shielded or encased in a protective sleeve;
- b) any part of the fuel service line is located within:
 - i) 150mm of an unshielded heat source; or
 - ii) 40mm from a heat source if the fuel line is fitted with a sheet metal heat shield at least 15mm from the line;
- c) the sleeving of any copper fuel line routed under the vehicle is damaged such that the fuel line is exposed;
- d) any supporting clips (required to be spaced at intervals not exceeding 600mm) are missing or do not provide effective support for the fuel line;
- e) any provision has been made to allow use of the gas fuel for purposes other than as automotive fuel;



Fuel Systems

LPG/CNG Vehicles

Rule 108

Light Vehicles

108.10 Inspect fuel shut off devices (or filter locks), converters (vaporiser regulators), fuel selectors, fuel fillers and air/gas mixers

Reasons for rejection

- a) the fuel shut off device is not securely mounted;
- b) the fuel shut off device allows fuel to flow to the converter when the ignition is off or when the ignition is on and the engine is not running or cranking;
- c) the converter is not securely mounted;
- d) where the converter uses water circulation to assist in vaporisation, the water hoses leak, are disconnected or deteriorated;
- e) any fuel selector or air/gas mixer is not securely mounted or vapour lines and connections have leaks;
- f) the filling connection does not have a captive cap or the seal is deteriorated or missing;
- g) the high tension ignition wiring or electrical contacts in the engine compartment are exposed.
- h) (for CNG systems), a fuel container detail plate is not affixed near the filler point or clearly visible to anyone refilling the vehicle
- i) that plate does not state the following details about the fuel container:
 - it's working pressure (in MPa) & it's capacity (in Litres)
 - its ID number
 - the date it is to be re-tested.



Fuel Systems

LPG/CNG Vehicles

Rule 108

Light Vehicles

108.11 Test the operation of the excess flow valve

Close the service valve and run the engine until the fuel line is empty. With the ignition turned OFF, quickly open the service valve.

If an automatic fuel shut off device is fitted at the container, there is no requirement to test the excess flow valve.

Reason for rejection

- a) the excess flow valve does not produce a click or thud sound

NOTE: if the owner produces a certificate issued from an Autogas installer within the last 21 days certifying that the excess flow valve is operating satisfactorily, there is no need to test the excess flow valve. Under these circumstances, the certificate number and the installer's licence number must be recorded in the comments section of the inspection report.

108.12 Test the operation of the automatic fuel shut off device (AFSOD)

Deactivate the AFSOD at the container by operating the current limiting device or removing the fuse and run the engine until the service line is empty and the engine stops.

Reasons for rejection

- a) the engine fails to stall.
- b) A current limiting device or fuse is not fitted to the positive power supply to the AFSOD for the purpose of deactivating the AFSOD.

NOTE: if the owner produces a certificate issued from an Autogas installer within the last 21 days certifying that the AFSOD is operating satisfactorily, there is no need to test the AFSOD. Under these circumstances, the certificate number and the installer's licence number must be recorded in the comments section of the inspection report.



Fuel Systems

LPG/CNG Vehicles

Rule 108

Light Vehicles

108.13 Test the fuel lines, joints, connections and gas carrying components for leaks

Apply a foaming agent solution or use a combustible gas detector around all components or areas that may develop a gas leak.

Reasons for rejection

- a) any fuel lines, joints, connections or gas carrying components leak.



Fuel Systems

Petrol/Diesel Vehicles

Rule 109

Light Vehicles

109.01 Visually inspect the fuel system.

Reason for rejection

- a) there is any leakage from the fuel system.



Section 4

Safety Check Standards

Motor Cycles

Motorcycles

Brakes	Rule 141
Towing attachments	Rule 142
Steering and suspension	Rule 143
Wheels and tyres	Rule 144
Body condition	Rule 145
Lighting	Rule 146
Engine and driveline	Rule 147

Brakes

Rule 141

Motorcycles

141.01 Visually inspect the condition of the brake controls.

Reasons for rejection

- a) on rubber faced brake pedals, any metal is showing;
- b) on metal brake pedals, there is no anti-slip surface;
- c) missing or broken pedal or handle.

141.02 Check the operation of the brake controls

Sit in the rider's position, and put the transmission into neutral or operate the clutch. Apply each brake while attempting to move the cycle forward.

Reasons for rejection

- a) when the brakes are firmly applied, less than 20% of the pedal or handle travel remains;
- b) any wheel brake is not functioning.

141.03 Inspect the condition of visible brake components.

Reason for rejection

- a) where visible, any brake component is leaking or is not securely mounted.



Brakes

Rule 141

Motorcycles

141.04 Check the operation of the parking brake on ADR 33 cycles fitted with side-car outfits.

Put the transmission in neutral, apply parking brake and attempt to move the outfit.

Reasons for rejection

- a) there is no parking brake fitted;
- b) the parking brake fails to stop the outfit being moved.



Towing Attachment

Rule 142

Motorcycles

142.01 Visually inspect the towbar and its mounting to the frame.

Reasons for rejection

- a) any towing attachment such as a tow ball is loose or is cracked;
- b) the towbar is not mounted directly to the frame or through rigid connections to the frame;
- c) the towbar is not securely mounted, or is cracked;
- d) any mounting bolts, fasteners or weld beads have advanced corrosion;
- e) where ADR 62 applies, the towbar does not display the gross mass rating and manufacturer's name or trademark;
- f) where any part of the coupling or towbar is intended to be removable, the bolts, studs, nuts etc. fastening those parts do not have a locking device such as U-clip, split pin, spring washer, nylon lock nut.



Steering and Suspension **Rule 143**

Motorcycles

143.01 Visually inspect all steering components.

NOTE: On most motor cycles this will normally only apply to the steering damper, however, there are some specialised cycles fitted with remote steering controls or centre-hub steering to which this check is more appropriate.

Reasons for rejection

- a) where steering linkages are fitted, the rotational free play exceeds 10mm measured at the end of the handlebars;
- b) any steering component can be seen to have been repaired or modified by heating or welding;
- c) any nut, bolt, or locking device is missing or insecure.

143.02 Visually inspect the suspension.

Reasons for rejection

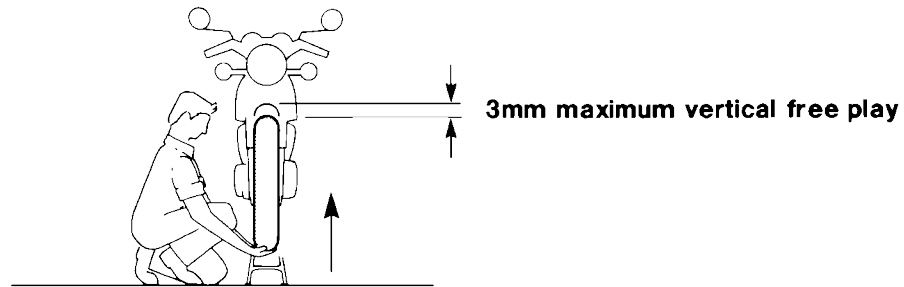
- a) any suspension component is broken, cracked, cut, missing, not secured or can be seen to have been repaired or modified by heating or welding;
- b) any shock absorber is inoperative;
- c) any shock absorber is not securely mounted;
- d) any nut, bolt, or locking device is not secured or is missing;



Steering and Suspension Rule 143

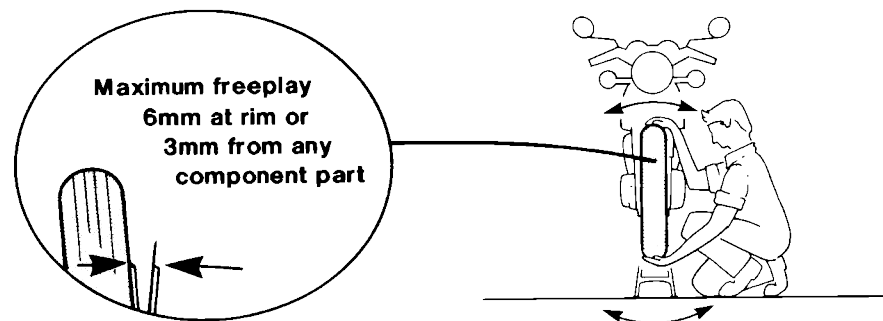
Motorcycles

- e) with the wheels raised, the vertical free play of any wheel exceeds 3mm;



NOTE: The free play measurement given is a guide only, and manufacturers' tolerances take precedence in all cases when performing these checks.

- f) with the wheels raised, the free play of the wheel measured at the rim exceeds 6mm in total or 3mm from any component part.



NOTE: The free play measurement given is a guide only, and manufacturers' tolerances take precedence in all cases when performing these checks.



Wheels and Tyres

Rule 144

Motorcycles

144.01 Inspect both sides of each road wheel.

Reasons for rejection

- a) any wheel or rim is cracked, has pieces of a casting missing, or is buckled;
- b) any hub has missing or broken wheel mounting nuts, studs or bolts;
- c) any spoked wheel has missing, loose, broken or cracked spokes;
- d) the tyre or rim fouls any component at any point over its full range of travel.

144.02 Visually inspect each road tyre.

Reasons for rejection

- a) the tyre has less than 1.5mm tread depth on the surfaces which normally contact the road;
- b) the tyre has deep cuts, bulges, exposed cords or other signs of carcass failure.



Body Condition

Rule 145

Motorcycles

145.01 Visually inspect body panels, chassis and frame for dangerous protrusions and rust.

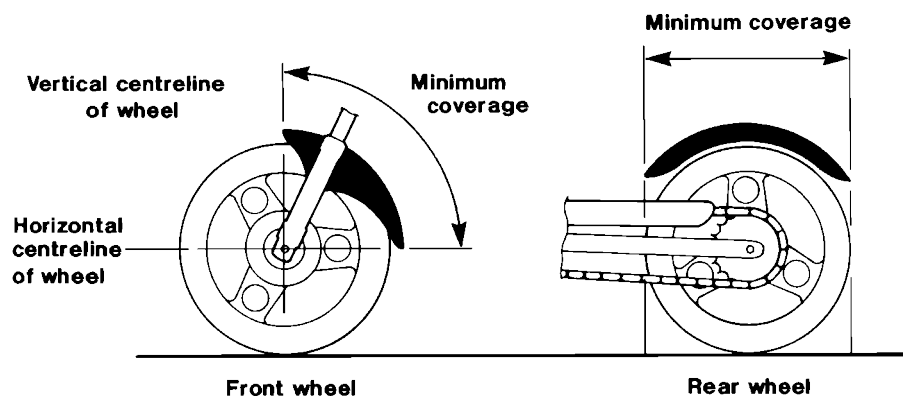
Reasons for rejection

- a) exterior body work, fairings and fittings have sharp edges due to rusted or fractured panels, or other damage that could cause injury to a person coming into contact with them;
- b) any structural member such as the chassis or frame, is cracked or has advanced rust.

145.02 Inspect the mudguards.

Reasons for rejection

- a) mudguards are not fitted to all wheels;
- b) the cycle or side car mudguard does not fully cover the width of the tyre and does not meet the requirements set out in the illustration below.



Body Condition

Rule 145

Motorcycles

145.03 Visually inspect rear vision mirror(s).

Reason for rejection

- a) rear vision mirror(s) is (are) missing, or do not provide a clear view of the road to the rear of the cycle.

145.04 Check the operation of the horn.

Reasons for rejection

- a) the horn is not working;
- b) the horn is of the following types: exhaust whistle, compression whistle, siren or alternating tone (reversing alarms are acceptable).

145.05 Visually inspect any exposed drive chain or belt guard.

Reason for rejection

- a) the drive chain or belt is not protected by the frame or by a guard extending at least 300mm rearward of the rear most footrest, or to the vertical centre of the drive sprocket.



Body Condition

Rule 145

Motorcycles

145.06 Visually inspect the number plate(s).

Reasons for rejection

- a) Any part of the number plate is more than 1300mm from the ground;
- b) The number plates are not substantially parallel to the vehicle's axles;
- c) Any number plate is obscured, for example by a towing attachment, gooseneck or tow ball;
- d) Any number plate cover is tinted, reflective, rounded or bubble like;
- e) Any number plate is not of RTA issue, is damaged or faded to the extent that the registration number is not visible;
- f) Characters on the number plate are not clearly visible from a distance of 20 metres at any point within an arc of 45 degrees from the surface of the number plate above or to either side of the vehicle.



Lighting

Rule 146

Motorcycles

146.01 Visually inspect the compulsory reflectors fitted to the rear of the cycle.

Reason for rejection

- a) reflector(s) are damaged, or are not fitted to the rear of the cycle.

146.02 Visually inspect and check the operation of all lights fitted to the cycle.

Reasons for rejection

- a) any of the following lights do not work:
 - i) headlight (high/low beam)
 - ii) tail light
 - iii) brake light(s)
 - iv) turn signal indicator lights
 - v) side-car marker light
 - vi) number plate light
- b) any of the above lights are damaged to the extent that white light shows to the rear of the cycle;
- c) any amber turn signal light is damaged so that it shows white light;
- d) the number plate light is not directing light on to the surface of the rear number plate.



Lighting

Rule 146

Motorcycles

146.03 Visually inspect front and rear lights for the presence of tinted covers.

Reasons for rejection

- a) any light has a tinted cover over it;
- b) there is any type of opaque cover over a headlight which cannot be readily removed without the use of tools.

146.04 Using a headlight tester, check the aim of the headlight(s).

Reasons for rejection

- a) the aim of the headlights is adjusted such that, when on high beam, the projected centre of the beam is to the right of the headlight centre and/or is above the headlight centre;
- b) when switched to low beam, the projected centre of the beam does not drop below and to the left of the correct high beam setting.



Lighting

Rule 146

Motorcycles

146.05 Visually inspect the headlight(s).

Reasons for rejection

- a) headlight reflector is tarnished or peeling to the extent that headlight performance is impaired;
- b) headlight lens is incomplete;
- c) headlight assembly is not secured.



Engine and Driveline

Rule 147

Motorcycles

147.01 Visually inspect the engine, remote oil reservoirs, transmission and driveline.

Reasons for rejection

- a) there are oil leaks from the engine, remote oil reservoir, gearbox or driveline which allow oil to drop onto the road surface, exhaust system or brake components;
- b) the engine or transmission is not securely mounted.

147.02 Visually inspect the fuel system.

Reason for rejection

- a) there is any leakage in the fuel system.

147.03 Visually inspect the exhaust system.

Reasons for rejection

- a) any component in the exhaust system is not securely mounted;
- b) there is any leak in the exhaust system, excluding manufacturer's drain holes in the mufflers;
- c) where ADR 39 applies.
 - i) **For original equipment**
The exhaust system does not bear the manufacturer's name or trademark; or



Engine and Driveline

Rule 147

Motorcycles

ii) For aftermarket equipment.

The exhaust does not bear a permanent mark showing at least:

- the manufacturer's name;
- the model of the cycle for which it is designed;
- the noise rating in decibels (dB(A)) at a selected rpm
(NOTE: 94dB(A) is the maximum allowable noise rating).



Section 4

Safety Check Standards

Light Trailers and Caravans

Light trailers and caravans

Brakes	Rule 181
Towing attachments	Rule 182
Steering and suspension	Rule 183
Wheels and tyres	Rule 184
Body condition	Rule 185
Lighting	Rule 186

Brakes

Rule 181

Light Trailers and Caravans

181.01 Inspect the condition of visible brake components.

Reasons for rejection

- a) where visible, any brake component is leaking, or is not securely mounted;
- b) any cable operating a brake is missing, broken or frayed;
- c) any wiring for electric brakes is frayed or bared.

181.02 Brake testing of trailers fitted with override brakes.

Test any override brake system by compressing the brake device and attempting to move the trailer.

Reasons for rejection

- a) the brakes do not retard the movement of the trailer.

181.03 Brake testing of trailers fitted with brakes other than override brakes.

With the trailer attached to the tow vehicle, apply the trailer service brake and attempt to move the trailer forward.

Reason for rejection

- a) the brake does not retard the movement of the trailer.



Brakes

Rule 181

Light Trailers and Caravans

181.04 Testing the parking brake

With the trailer attached to the tow vehicle, apply the parking brake and attempt to move the trailer.

Reason for rejection

- a) the park brake does not retard the movement of the trailer.

181.05 Rescinded October 1994.



Towing Attachment

Rule 182

Light Trailers and Caravans

182.01 Visually inspect the trailer coupling, drawbar and mountings on the trailer body.

Reasons for rejection

- a) any coupling component is loose, or is cracked;
- b) the drawbar is not securely mounted, or is cracked;
- c) any mounting bolts, fasteners or weld beads have advanced corrosion;
- d) the coupling does not display the gross mass rating and the manufacturer's name or trademark;
- e) where any part of the coupling or drawbar is removable, the bolts, studs, nuts etc. fastening those parts do not have locking device such as U-clip, split pin, spring washer, nylon lock nut.

182.02 Visually inspect safety chains or ropes.

Reasons for rejection

- a) any trailer without breakaway brakes is not fitted with at least one safety chain or wire rope;
- b) any safety chain or wire rope touches the ground, or its length is such that it prevents any breakaway protection device from operating;



Towing Attachment

Rule 182

Light Trailers and Caravans

- c) the safety chain(s) or wire rope(s) are not permanently attached to the drawbar;

NOTE: Attachment of safety chains or wire ropes to the drawbar by shackles is not permitted.

- d) if a trailer breakaway protection system is not fitted, the size of the chain or rope and shackles is less than that specified in table 6;

TABLE 6 Minimum chain and shackle sizes

AGGREGATE TRAILER MASS	MINIMUM CHAIN SIZE OR WIRE ROPE SIZE	SHACKLE BODY DIAMETER
Up to 1000kg	6.3 mm	9.5mm
Over 1000kg up to 1600kg	8.0mm	12.7mm
Over 1600 kg up to 2500kg	10.0mm	12.7mm



Towing Attachment

Rule 182

Light Trailers and Caravans

- e) on rigid drawbar pig trailers in excess of 2.5 tonne gross trailer mass there are less than two chains of a diameter specified in table 7, and there is at least one chain which is not positioned such that it prevents the drawbar from touching the ground when the drawbar is detached.

TABLE 7 Minimum chain sizes

AGGREGATE TRAILER MASS	MINIMUM CHAIN SIZE (2 of)
2500 to 4500 kg	7.1mm
Over 4500 kg up to 7500 kg	9.5mm
Over 7500 kg up to 13500kg	12.7mm



Suspension

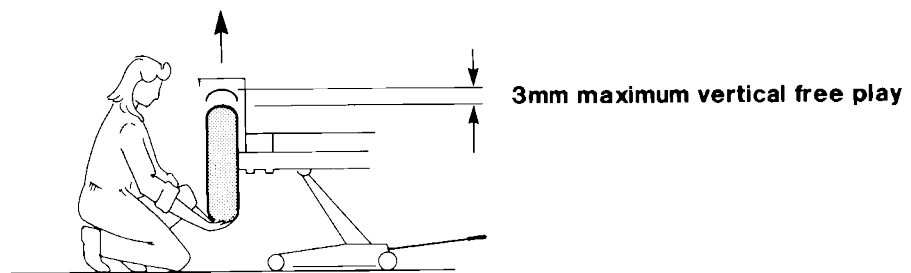
Rule 183

Light Trailers and Caravans

183.01 Visually inspect all suspension components.

Reasons for rejection

- a) any suspension component is broken, cracked, missing, not secured, or can be seen to have been repaired or modified by heating or welding;
- b) any nut, bolt, or locking device is not secured or is missing;
- c) with the wheels raised, the vertical free play of the wheel exceeds 3mm;



NOTE: The free play measurement given is a guide only, and manufacturers' tolerances take precedence in all cases when performing these checks.

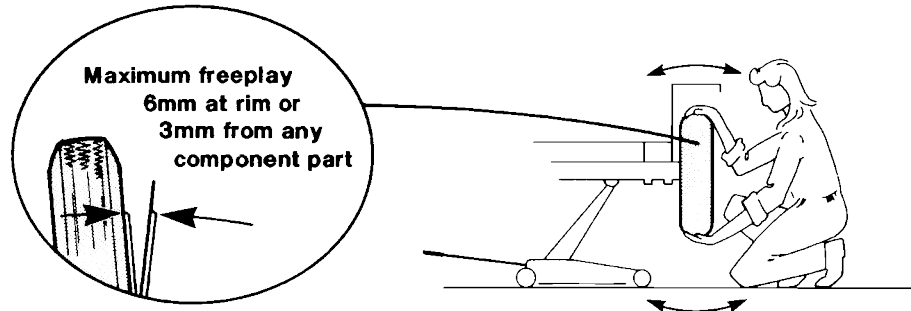


Suspension

Rule 183

Light Trailers and Caravans

- d) with the wheels raised, the free play of the wheel measured at the rim exceeds 6mm in total or 3mm from any component part.



NOTE: The free play measurement given is a guide only, and manufacturers' tolerances take precedence in all cases when performing these checks.

Wheels and Tyres

Rule 184

Light Trailers and Caravans

184.01 Visually inspect the inside and outside of each road wheel.

Reasons for rejection

- a) any wheel or rim is cracked, has pieces of a casting missing, or is buckled;
- b) the wheel nut does not engage the thread of the wheel stud for the full length of the nut, or the fitting of the wheel nut does not match the taper of the wheel stud hole (where these can be seen without removing hubcaps);
- c) any hub has missing or broken wheel mounting nuts, studs or bolts (where these can be seen without removing hubcaps);
- d) any spoked wheel has missing, loose cracked or broken spokes;
- e) the tyre or rim fouls any component at any point over its full range of travel.

184.02 Visually inspect each road tyre.

Reasons for rejection

- a) the tyre has less than 1.5mm tread depth on the surfaces which normally contact the road;
- b) the tyre has deep cuts, bulges, exposed cords or other signs of carcass failure.



Body Condition

Rule 185

Light Trailers and Caravans

185.01 Check the operation of doors, gates and flap.

Reason for rejection

- a) any door, gate or flap cannot be fastened securely in the closed position.

185.02 Visually inspect body panels, chassis and frame.

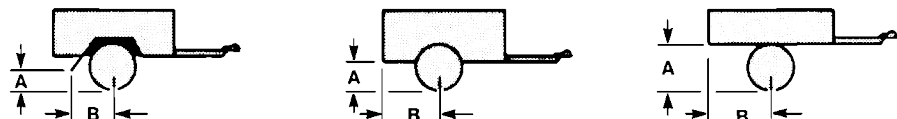
Reasons for rejection

- a) exterior body work and fittings have sharp edges due to rusted panels or body damage, or protrusions that could cause injury to a person coming into contact with the trailer;
- b) any structural member such as chassis or frame, or, in the case of frameless trailers, any floor or side panel, is cracked or has advanced rust.

185.03 Inspect the mudguards.

Reasons for rejection

- a) mudguards are not fitted to all wheels;
- b) any mudguard does not cover the full width of the tyre, or meet the requirements shown in the illustration below.



Dimension A must not be more than one third of dimension B (except that dimension A need not be less than 230 millimetres).

Note that the trailer body may perform the function of the mudguard.



Body Condition

Rule 185

Light Trailers and Caravans

185.04 Visually inspect the number plate.

Reasons for rejection

- ☐ ☐ a) Any part of the number plate is more than 1300mm from the ground;
- ☐ ☐ b) The number plates are not substantially parallel to the vehicle's axles;
- ☐ ☐ c) Any number plate is obscured;
- ☐ ☐ d) Any number plate cover is tinted, reflective, rounded or bubble like;
- ☐ ☐ e) Any number plate is not of RTA issue, is damaged or faded to the extent that the registration number is not visible;
- ☐ ☐ f) Characters on the number plate are not clearly visible from a distance of 20 metres at any point within an arc of 45 degrees from the surface of the number plate above or to either side of the vehicle



Lighting

Rule 186

Light Trailers and Caravans

186.01 Visually inspect compulsory reflectors fitted to the rear of the vehicle.

Reason for rejection

- a) reflector(s) are damaged, deteriorated, or are not fitted to the rear of the vehicle.

186.02 Visually inspect and check the operation of all lights fitted to the vehicle.

Reasons for rejection

- a) any of the following lights do not work:
 - i) tail lights
 - ii) brake light(s)
 - iii) turn signal indicator lights
 - iv) clearance lights
 - v) side marker lights
 - vi) number plate light
- b) any of the above lights is damaged or deteriorated to the extent that white light shows to the rear of the vehicle, or in the case of any side marker lights, any white light shows to the front of the vehicle;
- c) the number plate light is not directing light on to the surface of the rear number plate.



Lighting

Rule 186

Light Trailers and Caravans

186.03 Visually inspect the rear lights for the presence of tinted covers.

Reason for rejection

- a) any light has a tinted cover over it.

