

Motorcycles and Sidecars

Vehicle Standards Fact Sheet

MR808 11/14



This Fact Sheet provides information on the requirements for motorcycles, and motorcycles with a sidecar fitted.



Motorcycles manufactured after July 1975 are built to comply Australian Design Rules (ADRs). These design rules cover various aspects of the motorcycle such as brakes, noise, lighting etc.

Motorcycles that comply with the ADRs, and were manufactured after October 1977, are also fitted with a compliance plate. This plate is mounted to the motorcycle's frame, usually in the head stem area.

If a motorcycle is certified to comply with the ADRs it must continue to comply with those rules. If modifications are being considered you must ensure that the vehicle's ADR compliance is not compromised by the intended modification.

Motorcycle manufacturers also market motorcycles designed specifically for off-road use and not intended for use on public roads.

A motorcycle in this category, manufactured after October 1977, is not eligible for registration in South Australia unless it is fitted with a Australian compliance plate.

However, under certain circumstances, motorcycles not fitted with a compliance plate may be eligible for an exemption and full registration.

Exemption from the fitting of a compliance plate may be given for:

- Imported motorcycles that meet requirements of the Motor Vehicle Standards Act administered by the Commonwealth Department of Infrastructure and Transport.
- Individually Constructed Motorcycles
- Motorcycles operated by primary producers for agricultural purposes
- ADR certified motorcycles fitted with a replacement frame, or if the compliance plate has been damaged or lost.

Further information

Call 1300 882 248

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Braking

A motorcycle is required to have both wheels braked, with each wheel having its own independent control, or alternatively, a single control operating both brakes. If a single brake control is fitted effective braking control must remain on at least one wheel if part of the system fails. It must also include a warning light to indicate that a failure in the system has occurred.

A motorcycle manufactured after June 1988 and fitted with a sidecar, must be fitted with an effective park brake, applied by mechanical means that can hold the vehicle stationary on a 30% (16.7° from horizontal) gradient. The park brake must be independent from the service brakes. Sidecars are not required to be fitted with a separate brake.

Brake performance

A motorcycle or motorcycle with sidecar and/or trailer attached must be capable of stopping from a speed of 35 kilometres per hour within 12.5 metres with one application of the service brake or brakes.

Hydraulic brake hose and tubing

All brake lines and hoses fitted to a motorcycle must be manufactured from the correct material, be long enough to allow full movement of the suspension and be positioned to avoid possible damage or heat. All brake hoses (including braided brake hoses) must have permanent markings on the hoses to enable identification of the hose and the manufacturing standard.

Instrumentation

Motorcycles manufactured after July 1988 must be fitted with an operational speedometer and odometer that is positioned and readily visible to the rider in their normal seated position. It must also be positioned within direct view of the rider and not mounted on the forks or engine. Instrumentation must also be clearly legible both day and night.

Motorcycle dimensions

The handlebars on a motorcycle must be mounted symmetrically and must extend between 250mm and 450mm on each side of the centre line of the motorcycle, excluding a sidecar (if fitted).

For a motorcycle that has the head stem as the steering pivot point, the horizontal distance measured from the mid-point between the head stem bearings to the centre of the front wheel must not be more than 550mm.

The maximum width of the motorcycle must not exceed 1 metre.

If a sidecar is fitted, the width of the motorcycle and sidecar cannot exceed 1.85 metres.

Motorcycles manufactured prior to July 1988

The lowest part of the hand grip on the handle bars must not be higher than 380mm above the attachment point of the handlebars to the motorcycle.

Motorcycles manufactured after June 1988

The height of the lowest part of the handgrip above the lowest part of the upper surface of the driver's seat shall not exceed 380mm.

Noise

The amount of noise a motorcycle can produce from the exhaust outlet depends on the year it was manufactured. If it was manufactured after February 1985, the acceptable noise level is 94 dB(A), but if manufactured prior to this date, then it is 100 dB(A). The noise level is tested with the engine operating at a steady speed and, depending on the type of engine the motorcycle has, the engine speed will be between 2500rpm and 3750rpm

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Wheel Guards (Mudguards)

A motorcycle must be fitted with a front and rear wheel guard. The wheel guards must be so designed as to protect other road users, as far as practicable, against thrown-up stones, mud, ice, snow and water and to reduce for those users the dangers due to contact with the moving wheels.

If your motorcycle is fitted with a sidecar the sidecar wheel must also be fitted with an effective mudguard.

Wheel guards may consist of either permanent body structure or part structure and other components, including mudflaps, provided the specified protection is retained during vehicle operation.

The wheels of a vehicle and the wheel of a side-car must be fitted with wheel guards of width not less than the 'Section Width' of the tyre.

If a motorcycle was built to meet the previous version of the ADR we recommend that you do not remove any part of the original wheel guards

However, if a motorcycle was built with a tail extension so that it met the requirements of the previous version of ADR 42/04, you may wish to remove the extension and fit a tail tidy, in which case you must ensure that:

1. The number plate does not need to be vertical but must be fitted so that it is visible and can be read at:
 - both 3m and 18m from the rear of the motorcycle; and,
 - an angle of 45° from either side of the rear of the motorcycle;
 - an angle of 45° looking down from above the rear of the motorcycle;
2. the number plate must be illuminated when the lights are switched on;
3. the indicators show an orange light when operating and are:
 - 'E' marked;
 - separated by at least 180mm; and,
 - visible from 80° to the side of the vehicle as well as to the rear;
4. a rear retro-reflector is fitted at no more than 15° from the vertical.



Original tail extension



Fitted with a 'tail tidy'.

If your tail tidy tucks the lights and number plate in underneath the tail it is unlikely your motorcycle will meet these requirements, so check how your tail tidy will fit before purchasing as it may not have been manufactured to meet the requirements of the Road Traffic Act, Motor Vehicles Act and Regulations. The motorcycle must also continue to meet these requirements when loaded, or when any luggage is attached.

Number plate light

A light must be fitted that when switched on, illuminates the number plate with white light, enabling the number plate characters to be read from 20 metres at night. This light cannot shine a white light to the rear of the motorcycle. The tail and number plate lights must automatically be switched on with the headlamp(s).

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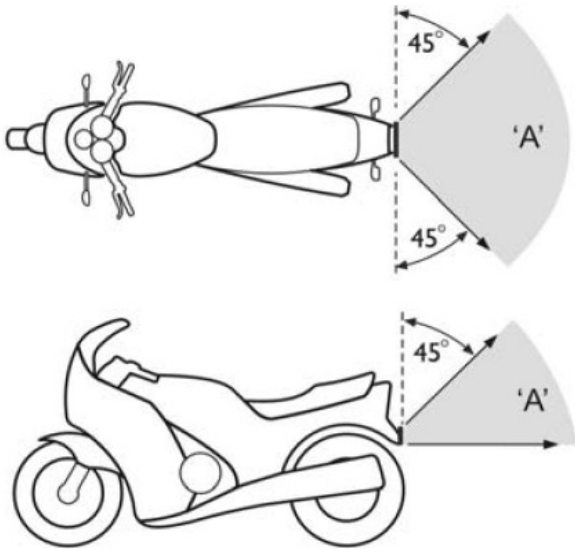


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Number plate position

You are required to display a number plate on the rear of your motorcycle only. The number plate must be positioned so it is clearly visible at all angles. It is not acceptable to mount it alongside the rear wheel. The number plate must be mounted so that the bottom edge of the plate is at least 300mm above ground level and positioned so that every figure and letter of the registration number is upright and it is read from left to right.



The number plate must be visible from at both 3m and 18m from the rear of the motorcycle and at all points within the arcs marked 'A'

Rear vision mirrors

A motorcycle manufactured before July 1975 must be fitted with at least one rear vision mirror that allows the driver to clearly see the road behind, and any following or overtaking vehicle.

A motorcycle manufactured after June 1975 must be fitted with two rear vision mirrors. Both mirrors must have be either flat or convex glass with the convex mirrors having a radius of at least 1.2 metres. These mirrors must be fitted symmetrically on the motorcycle and allow the driver to clearly see the road behind, and any following or overtaking vehicle. Mirrors fitted to bikes built after March 1991 must have a surface area of at least 80² cm per mirror with flat mirrors or 64.5²cm with convex mirrors.

Stands

A motorcycle manufactured after 1 June 1988 must be fitted with at least one stand to hold the motorcycle upright. This stand can be either a side or centre stand and must be fitted with a spring or other device to ensure it is held clear of the road when retracted.

A side or centre stand shall either automatically retract when the motorcycle is taken off the stand or moved forward or, be connected so that the motorcycle will not start or operate under its own power unless the stand is retracted, or an audible and visible warning system that activates when the ignition is switched on.

For a motorcycle manufactured prior to July 1988, there is no requirement for it to be fitted with a stand, although it is recommended.

If a sidecar is fitted to your motorcycle there is no requirement for a stand regardless of when the motorcycle was manufactured.

Tyres

Although there are a wide variety of tyres available you must ensure that the ones fitted to your motorcycle are the correct size and have the correct load and speed rating for your motorcycle. All tyres must have a clearly visible tread pattern on all parts of the tyre that normally come in contact with the road and a minimum tread depth of at least 1.5mm.

If your motorcycle is fitted with tyres marked 'not for highway use', or have a marking meaning the same, it cannot be used on public roads or road related areas. Tyres cannot be fitted with cleats or any other gripping devices that could cause damage to the road.

It is recommended that you only fit tyres of the same size and specifications as those originally fitted by the motorcycle manufacturer.

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Chain guards

If your motorcycle has a chain final drive to the rear wheel, the driver and any passenger must be protected from the front sprocket and at least the upper part of the chain. The protection can be either the motorcycle frame and equipment or a separate guard. The guard must offer protection from the upper part of the chain to at least 300mm to the rear of the rearmost foot rest, or to above the center of the rear drive sprocket.

Primary drive guards

On motorcycles that have a separate engine and gearbox with an external belt drive between them, are required to have a protection guard fitted covering the belt. This guard must cover the upper surface of the belt to a point level with a horizontal line drawn through both pulleys. It should sufficiently cover the belt and pulley to prevent clothing, shoe, laces etc being caught by the belt or pulleys.

Horn

A motorcycle must be fitted with a horn or other audible warning device, but not a siren, bell, exhaust whistle, compression whistle or repeater horn.

Anti-theft alarms are exempt from these requirements, providing the alarm cannot be operated with the ignition on.

Towing

If you tow a trailer, ensure that the weight of the trailer and load does not exceed the maximum towed weight specified by the manufacturer of the motorcycle. If the motorcycle manufacturer does not specify a towing capacity, the loaded mass of a trailer must not exceed the unladen mass of the motorcycle.

Lighting

If your motorcycle was built before 1931 and only used in daylight hours, or built before 1946 and used mainly for exhibition purposes, it is not required to be fitted with lights or reflectors. For all other motorcycles the following applies:

Headlamps

A motorcycle is required to be fitted with at least one headlamp.

If two or more headlamps are fitted they must be mounted:

- in pairs at least 500mm from the ground
- centrally with one above the other or
- side by side symmetrically about the centre-line of the motorcycle.

The positioning of the light on your motorcycle does not take into account a sidecar, if fitted.

If the motorcycle was manufactured after 1934 and can travel above 60km/h, it must be fitted with a headlamp or headlamps, with both high and low beam and a mechanism to change them from one to the other.

Your motorcycle only requires to be fitted with a low beam light if it was manufactured before 1935 or it cannot exceed 60km/h.

It is acceptable to have a high/low beam headlamp mounted side by side with a driving light, provided that they are mounted symmetrically about the centre line of the motorcycle.

Motorcycles manufactured after 1953 must also have a device to indicate when high beam is used. This device must be a blue indicator light, if manufactured after June 1988.

A headlight modulation system may also be fitted that varies the brightness of the headlamp between 200 and 280 times per minute provided that it is designed so it can only operate during daylight hours.

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Fog lights

Fog lights are only to be used during periods of poor visibility. If a motorcycle was manufactured prior to October 1991, you may fit a single or a pair of front fog lamps to your motorcycle.

When switched on, the lamp(s) must display a white or amber light, be capable of operating independently from the headlamp, and must not be mounted higher than the high beam headlamp.

If your motorcycle was manufactured after September 1991 it can be fitted with a fog lamp and which must be mounted no lower than 250mm from the ground nor higher than the high beam headlamp.

Front position (parking) light

A motorcycle without a sidecar is not required to display a front parking light. If a sidecar is fitted to a motorcycle manufactured after 1953, but before October 1991, it must display at least one parking light to the front. A motorcycle built after September 1991, that is fitted with a sidecar, is required to be fitted with a white front position light mounted on the sidecar, facing forward, and is not more than 150mm in from the left hand outer edge of the sidecar.

Tail light

A light must be fitted to the rear of your motorcycle, showing a red light visible at 200 metres from the rear of the bike, with a power output of not more than 7 watts. If the motorcycle was built after September 1991, this light must not be positioned lower than 350mm from the ground.

A motorcycle built after September 1991, and fitted with a sidecar, must have an additional tail light mounted not more than 150mm in from the left hand outer edge of the sidecar.

Any tail light must switch on when the parking lights or headlamp(s) are switched on.

Stop lamp

A motorcycle manufactured after 1934 must have a stop lamp which is illuminated when the service brake is applied. When on, the stop lamp must show a red light to the rear of the motorcycle that is visible at 30 metres. It cannot be mounted lower than 350mm from the ground and may be incorporated with another light.

The stop lamp must be activated by the front and/or rear brake.

Direction indicator lights

All motorcycles, including those fitted with a sidecar, which were manufactured after September 1991, are required to have direction indicators fitted. The bottom of the indicator lights must not be lower than 350mm nor higher than 1200mm from the ground.

Front indicators

The front indicators must be symmetrically mounted at least 240mm (measured from the inside edges) apart and at least 75mm from the headlamp.

Rear indicators

The rear indicators must be at least 180mm apart (measured from the inside edges) and mounted symmetrically. If a sidecar is fitted the left rear indicator is to be mounted not more than 150mm in from the left hand outer edge of the sidecar.

If indicators are fitted to your motorcycle they must flash between 45 and 120 times per minute and have either an audible, or visible device, to indicate their operation to the rider. When on, a direction indicator light must show an amber light and be visible from at least 30 metres from the front and rear of the motorcycle.

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Reversing light

A motorcycle manufactured after September 1991, which is fitted with a sidecar and has a reverse gear, must be fitted with a reversing light. This light must switch on when reverse gear is selected and show a white light to the rear of the motorcycle.

Reflectors

Your motorcycle must be fitted with a reflector to the rear which is capable of projecting a red reflection of light. If a sidecar is fitted, this must also have a red rear facing reflector. The centre of any reflector must not be higher than 1.5 metres from the ground and be fitted in the vertical plane facing squarely to the rear.

If your motorcycle is built after September 1991, and fitted with a sidecar, an additional red reflector must be mounted to the rear of the sidecar, not more than 400mm in from the left hand outer edge.

Footrests

Every motorcycle must be fitted with suitable footrests for the rider and if a seating position for a pillion passenger is provided, footrests must also be provided for the pillion passenger.

Ground Clearance

A motorcycle must have sufficient ground clearance so that no part of the body work or frame will contact the road when one or both tyres are deflated.

Sidecars

A sidecar must be attached to the left hand side of the motorcycle.

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