Road Transport Authority Information Bulletin

Headlights and Lamps

There are numerous lights and lamps on a vehicle which the driver needs to see the road, pedestrians and other vehicles clearly at night, and to signal to other drivers. For safety reasons, there are certain requirements for where these lights or lamps should be placed, how many there should be, or how bright they should be. This bulletin provides a brief outline of what inspectors will look for before allowing a vehicle to be registered.

Daytime Running Lamps (DRLs)

DRLs are optional lamps which can be used to increase a car’s visibility during the day. These lamps have become more popular in recent times and are in wider use on new model vehicles, and popular in automotive after-market kits.

DRLs have a placement and height requirement outlined in the Australian Design Rules (ADRs)

See Figure 1 below. Placement instructions and ADR requirements may be found in after-market lamp installation kits.

![Figure 1 location and measurements of DRLs](image)

Daytime Running Lights must NOT operate with headlights. Late model DRL units may incorporate a park light and therefore dim output to operate as a park light.

Driving Lamps (driving lights) and the use of LED Light Bars

Driving lights are covered by Australian Design Rule 13 (ADR13). The ADR was recently amended (July 2015) which now aligns the vehicle safety standards to the alternate international standards of a maximum of four additional lamps, removing the former requirements of lights in pairs and two or four.

Changes made to the Australian Design Rules (ADRs) also allow for single driving lamps to be fitted. While this change has made it easier to fit LED light bars (see Fig 2 below) and other driving lamps, it is still important to make sure that driving lamps are correctly fitted to all vehicles.
Number of Lamps

An LED light bar is considered to be one lamp if all of the LEDs operate together.

If an LED has different parts or sections that can be switched on or off independent of other parts (sometimes referred to as being switchable) then each independently controlled section counts as a lamp.

Requirements for fitting and using driving lamps, including LED Light Bars:
- The lamp/s must be fitted to the front of the vehicle, symmetrically about the centre.
- The lamp/s must be installed in a way that the light produced does not cause the driver of the vehicle discomfort either directly or by reflection. (Reflection from body or bull bars and ladder racks or mirror surfaces).
- The lamp/s must only come on when the main-beam (high beam) headlamps are used, and must automatically turn off when the main-beam headlamps are turned off.
- No more than four (4) driving lamps may be fitted to a vehicle.
- all driving lamps must not interfere with the drivers field of view.

Note: All forward mounted fixed additional lights will be considered driving lights.

Figure 2 example of a LED Light Bar

Additional information on vehicle accessories and equipment may be accessed here. Protruding Vehicle Accessories and Equipment and the field of view requirements.

High Intensity Discharge (HID) Lights

HID lights produce more light to the amount of power they consume than other light types. The ADRs specify minimum design and performance standards in HID lights for road vehicles.

ADRs mandate specific performance and orientation requirements for such lamp assemblies due, in part, to the higher light intensity/output and the potential for these types of lamps to severely dazzle oncoming road users. Simply retro-fitting original or aftermarket conversions of HID lamps and/or lamp assemblies to the dipped beam (low beam) circuit of a vehicle does not guarantee that they will comply with the specific set of ADR performance requirements applicable to the vehicle which may make them non-compliant for road use.

HID lights producing more than 2000 lumens (a measure of light) may be fitted to dipped beam (low beam) lights on road vehicles. However, the vehicle’s lights must also align to ADR13, have headlamp cleaning devices (washer jets or wiper) and have self-leveelling systems to prevent the brighter lights being projected into oncoming vehicles. The road rules prohibits against dazzling another road user with bright vehicle lights.

Higher powered lights with a higher end white colour, such as Phillips Crystal Vision 4300K (Kelvin) are not allowed for road use. Commercially available high performance light products ensure that lighting kits, packages and globes are marked 'not for road use', however some products available online have no warnings or consumer information notices.

Inspectors and Examiners do not need to record a vehicle with HID headlamps as a modified vehicle. However, the vehicle must meet the full requirements of ADR13 by
ensuring vehicles are fitted with a self levelling device and a cleaning device. The ACT Light Vehicle Inspection Manual (LVIM) Rule 106.05 Reason for Rejections has been amended to align with this bulletin.

Fog Lights
Fog lights produce a light that are intended to improve the illumination of the road in times of reduced visibility such as heavy rain, smoke, dust storm or fog. These lights produce a broad flat beam. The top of the beam must not be higher than the centre of the fog light, when measured 8 metres in front of the vehicle.

Four-wheeled motor vehicles may be fitted with two fog lights which must be mounted symmetrically;
- no higher than the top of the low beam headlights;
- not more than 400mm from the sides (extreme outer edge) of the vehicle;
- at least 600mm apart; and
- not less than 250mm above the ground.

Fog lights must be able to be operated independently from the headlights and driving lights. As a minimum, they must only be able to operate when the park lights are on.

The light emitted shall not cause discomfort by reflecting off any of the vehicle’s surfaces into the driver’s eyes.

Note: The Australian Road Rules (ARRs) Rule 217.
The driver of a motor vehicle fitted with front or rear fog lights must not operate the fog lights unless the driver is driving in fog or other hazardous weather conditions causing reduced visibility.

Backlit badges and logos
The Australian Motor Vehicle Certification Board (AMVCB) have recently determined a badge fitted to a vehicle (front, rear or side) which indicates the make/model or other information, which had a backlight (a backlit badge), would not be considered a lamp under Australian Design Rule 13 (ADR13). (Examples in figure 3 below)

The Commonwealth Government in conjunction with the States and Territories have determined and allowed these backlit lights if when fitted, meets the requirements below.

Requirements:
- The light source is integrated and contained with the logo/badge.
- The light must only show:
  - White to the front;
  - Yellow to the side of the vehicle; or
  - Red to the rear of the vehicle;
- The light source shall not flash;
- The light source shall be fitted more than 200mm from the nearest lamp;
- The light emitted shall not cause discomfort to the driver either directly or indirectly through the devices for indirect vision and/or other reflecting surfaces of the vehicle;
- The light is connected so that it only operates with the vehicles front lighting system (parking lamps and head lamps).
Search or Work lights

Additional lights intended to be used for temporary purposes (such as reading signs, handling or adjusting loads or providing additional illumination) may be fitted to a vehicle in any location. (Note; all forward mounted fixed additional lights will be considered driving lights.)

Work lights must be fitted with a tell-tale illuminated labelled rocker switch (see Fig. 4 below) to warn the driver the light is on.

Note: A driver must not use, or allow to be used, any light fitted to or inside the vehicle to dazzle, or in any way that is likely to dazzle, another road user.

General Requirements

Any additional driving lights, fog lights or work lights fitted to a vehicle must be designed and securely fitted in a way that;

- minimises the likelihood of injury to a person making contact with the vehicle; and
- does not obstruct the driver’s view of the road and traffic to the front of the vehicle.
- all additional lights fitted to a vehicle that are mounted facing forward are considered driving lamps.

These requirements are all intended to improve the safety of the driver and other road users.

Emergency Vehicle Coloured Type Lighting

Where a vehicle is fitted with lighting that is coloured, other than mandatory lights (Red, Amber or White), the lights must not be visible to other motorists when driving or stationary.

Commonly known as emergency / enforcement coloured lights (Blue, Green or Magenta), these lights are not intended for use on private use vehicles but have been known to be used as under body neon type lights to enhance a vehicles aesthetic character.

This type of lighting can diminish the conspicuity of other statutory lighting requirements and when fitted to unauthorised vehicles can be confused by other road
users with other types of lighting or can cause glare or light reflection confusing other motorists.

Where the vehicle is fitted with Amber working lights, the light must not be concealed and only be used where a vehicle is working on a road or road related area.

**Advertising and Destination Signs**

The fitting of advertising or destination signs is permitted on vehicles. They are normally assigned to vehicles such as taxis, pizza delivery vehicles or for business advertising on company cars. Where such signage is used on a vehicle, it must meet the following requirements:

- The sign must be securely mounted to the vehicle;
- Not have any sharp or protruding edges;
- The lighting must not overpower or obscure any mandatory lighting fitted to the vehicle or produce undue glare to other motorists; or
- Restrict the driver’s field of view.

Additional information may be obtained by contacting the Vehicle Inspection Technical Unit.

**Table 1 Contact Details**

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