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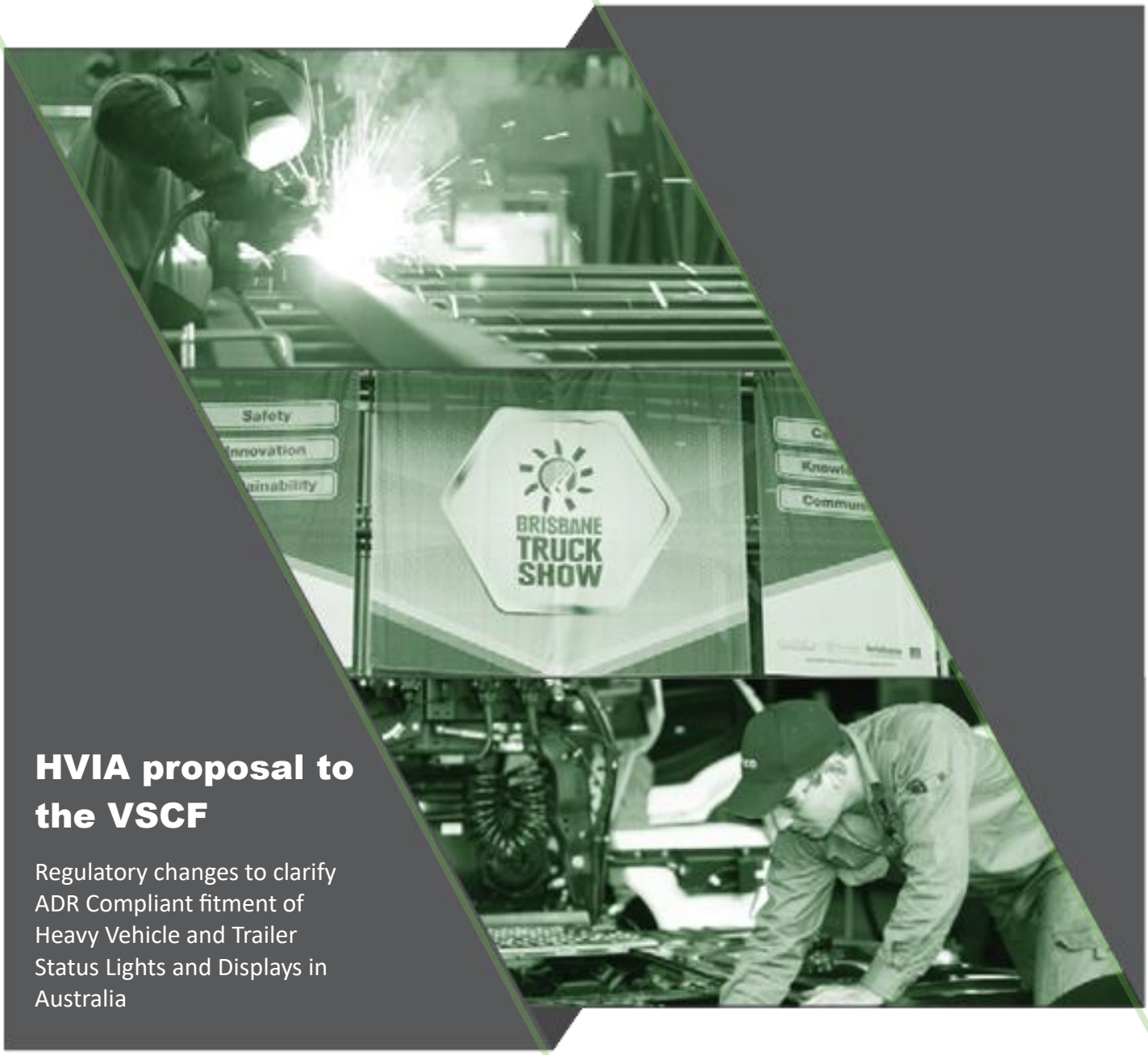

HVIA proposal to the VSCF

Regulatory changes to clarify ADR Compliant fitment of Heavy Vehicle and Trailer Status Lights and Displays in Australia

February 2026

Heavy Vehicle Industry Australia
Represents and advances the interests of manufacturers and suppliers of heavy vehicles and their components, equipment and technology.

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Background

This paper is intended to inform road and vehicle regulators and stakeholders of the need to reform Australia's regulations to provide an Australian Design Rule (ADR) pathway for 'Status Lights' or 'Status Displays' fitted to heavy vehicles or trailers (i.e. ADR categories NC, TC and TD).

HVIA understands that industry and operators are increasingly specifying the fitment of such lights and displays as standard. They provide a simple and clear method of indicating the operational status of key heavy vehicle and trailer equipment and systems such as couplings, brakes, tyres, and refrigeration units. In that sense, they perform a crucial operational and safety function.

In preparing this paper, HVIA has sought feedback and views from a wide variety of members. It outlines the need for the introduction of an explicit ADR compliance pathway, discussed current regulations, outlines a catalogue of status lights presently in use, and recommends next steps.

The need for an ADR pathway for status lights and displays

The fitment of lamps/lights and displays (of various types and purposes) to heavy vehicles is variously covered by the following regulations:

- ADR 13/00 – Installation of Lighting and Light Signalling Devices on other than L-Group Vehicles
- ADR 45/01 – Lighting and Light Signalling Devices not Covered by ECE Regulations
- HVNL (Vehicle Standards) National Regulation – Schedule 2, Section 79, item (3), (4), and (5).

These regulations do not presently provide an explicit pathway for the fitment of 'status' lights or displays to heavy vehicles or trailers. This issue has been raised with previous versions of the VSCF (i.e. the TLG) variously in the last 5-7 years, however no resolution has been achieved.

It was also raised at the first VSCF meeting for 2024 but was not progressed by the Department at the time. HVIA understands that it is planned to be reviewed in the Department's 'Phase II' ADR lighting package review in 2026.

HVIA's position is that further delays cannot hinder the rectification of this long-standing issue. HVIA requests that it be given priority and treated as a separate work package.

That call is reinforced by the National Heavy Vehicle Regulator's (NHVR) recent update to its Directional Stability Under Braking (DSUB) standard in the Performance Based Standards (PBS) scheme. The revised DSUB standard will be enforced on 1 July 2026, and calls for the following:

PBS combinations must have a device or devices fitted to show that the braking systems on all trailing units are:

- connected, powered on, and
- provide system fault status.

This means that there is only a short window of time available to reform Australia's regulations to provide an Australian Design Rule (ADR) pathway for 'status lights' fitted to heavy trailers.

Suggested ADR definition

The heavy vehicle industry has historically generally referred to these devices simply as 'Status Lights', or 'Status Lamps' and 'Status Displays'. HVIA recognises (and has used) both definitions but recommends that the term 'lamp' be retained for devices which are intended to illuminate other objects for visibility (e.g. headlamps), which leaves the term 'light' for status lights. 'Status indicator' is another option and may be preferrable to avoid the 'light vs. lamp' confusion as well as include an option for status 'displays'.

Thus, HVIA suggests the following be added as ADR definitions and included explicitly within the lighting ADR with adequate fitment options detailed for operators to comply with.

Technical terms – Recommended ADR definitions

Status Light – A status or warning light fitted externally to a Heavy Vehicle or Trailer which is intended to inform the driver that a critical function, mechanism or piece of equipment is operational or correctly engaged.

Status Display – An electronic display unit fitted externally to a Heavy Vehicle or Trailer which provides information on the status of a piece of equipment that has a critical or safety related function to the operation.

As there is no provision for Status Lights or Displays in Lighting and Light Signalling Devices in ADR 13/00, operators and suppliers have little certainty how to comply with ADR when fitting these lights or displays. As a result, there is a range of typical fitment locations, light types and light sizes used in the market. Some of these fitments have been deemed non-compliant by roadside enforcement and infringement notices given to operators as a result.

Given that the units have been fitted with an intention to promote safety and safe operation, this is a situation which the industry finds unjust and unsatisfactory as a path forward. HVIA is working together with the suppliers of these Status Lights and displays to determine what options are available, what functions they have and what may be a suitable or suitable locations for these to be fitted to vehicles and trailers without unintended consequences such as being mistaken for other ADR required lights, emergency vehicles or creating a distraction to other road users.

This topic is covered later in this paper.

The case for urgent review of Status Lights and Displays

The lighting standard for heavy vehicles and trailers is currently ADR 13/00. This ADR was planned for review as part of the Vehicle Standard Consultative Forum (VSCF) work package in 2025. HVIA was disappointed to discover after the minutes of the last meeting were released on the 24th October 2025, that review of ADR 13/00 has now been removed from the VSCF work package in favour of other priorities.

We have consulted with our members and whilst disappointed with the delays, many accept that the full comprehensive lighting work package has been delayed. We **do not accept** the delay on the ADR resolution for compliant fitment of Status Lights and Displays. We are requesting that this work

package be handled separately and given priority as we believe delaying this process is having a negative impact on safety. Additionally, we are seeing good operators fined or deterred for trying to promote safe Chain of Responsibility (COR) compliant checking processes and improve our industry and general road safety for all road users.

Additionally, members report that they have been looking for clarification on compliant fitment on status lights and displays for over a decade with little response from regulators. We are keen to demonstrate to industry that these topics can be dealt with swiftly and logically, which allows more industry capacity to take up more significant campaigns which can transform industry and provide wins in productivity, safety and sustainability for all stakeholders. It is in these more transformative initiatives where we want to put the bulk of our energy, so we can leave the industry in better shape for future generations to thrive and prosper.

Barriers to change

The main barrier we see to changing the standard to include provisions for externally fitted Status Lights and Displays, is determining what these provisions should be. To assist regulators in prioritising this work package, we have consulted with our members to determine the types of status lights and displays fitted and what options for fitment may be available and practical under a new standard.

Current legal requirements for lights and reflectors

There are several legal barriers which operators and suppliers need to work through to ensure fitment of Status Lights and Displays is compliant. The following laws and regulations have been researched and considered in this submission package, Figure 1.

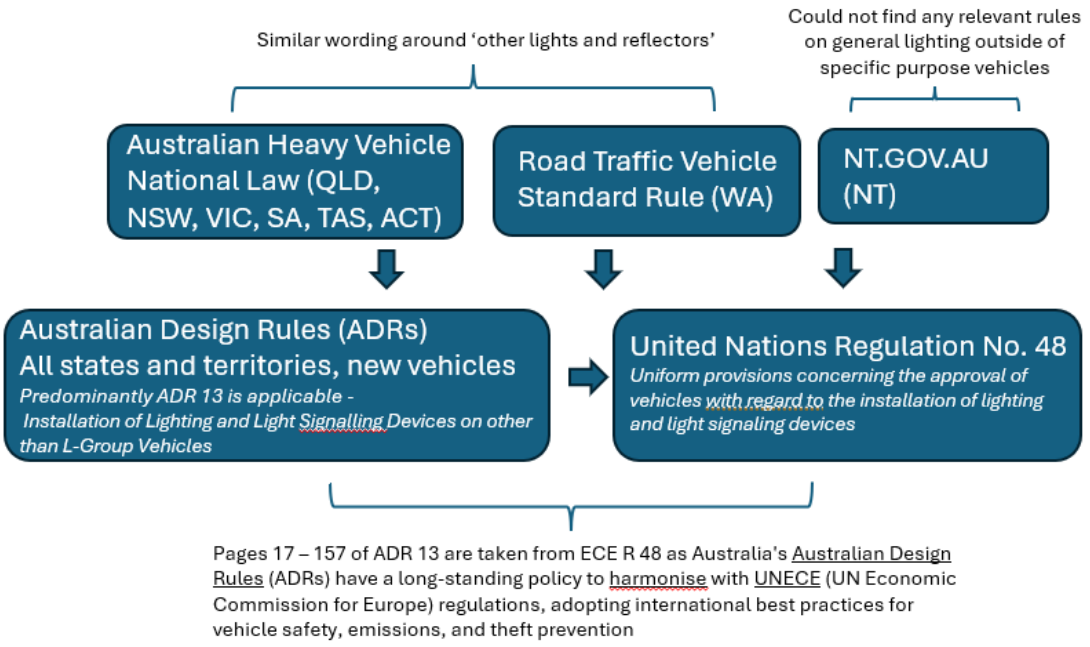
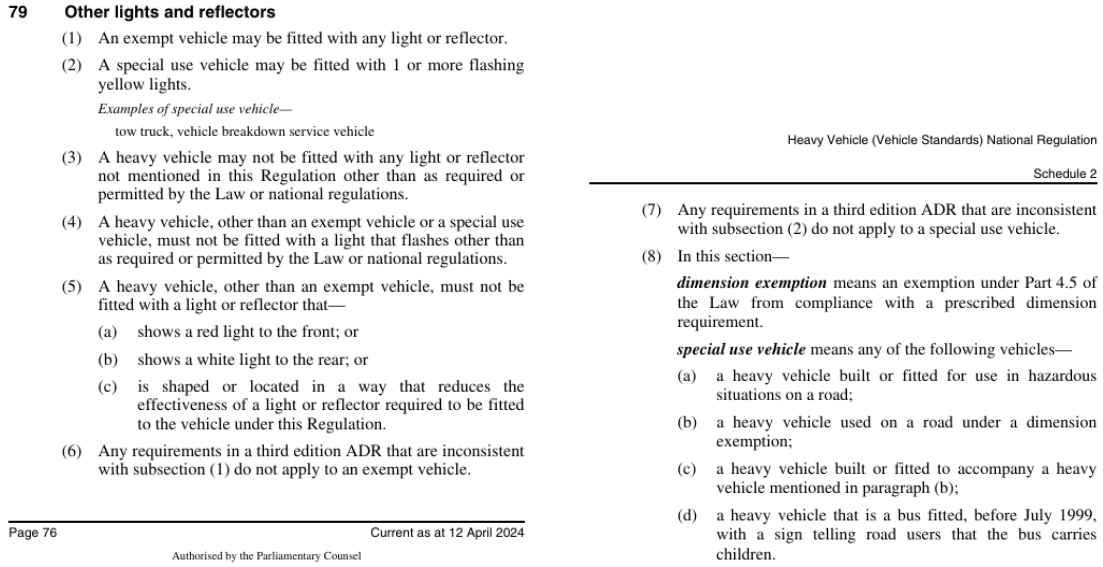


Figure 1. Current Regulations relevant to Status Light and Display requirements for heavy vehicles and trailers

The **Heavy Vehicle National Law (HVNL)** outlines some key requirements for lights and reflectors in Schedule 2, Section 79 (Figure 2). There are some explicit fitments of lights which are not allowed, but mostly the HVNL refers to the ADRs as the guiding documents for compliant light and reflector fitment.



79 Other lights and reflectors

(1) An exempt vehicle may be fitted with any light or reflector.

(2) A special use vehicle may be fitted with 1 or more flashing yellow lights.

Examples of special use vehicle—

tow truck, vehicle breakdown service vehicle

(3) A heavy vehicle may not be fitted with any light or reflector not mentioned in this Regulation other than as required or permitted by the Law or national regulations.

(4) A heavy vehicle, other than an exempt vehicle or a special use vehicle, must not be fitted with a light that flashes other than as required or permitted by the Law or national regulations.

(5) A heavy vehicle, other than an exempt vehicle, must not be fitted with a light or reflector that—

(a) shows a red light to the front; or

(b) shows a white light to the rear; or

(c) is shaped or located in a way that reduces the effectiveness of a light or reflector required to be fitted to the vehicle under this Regulation.

(6) Any requirements in a third edition ADR that are inconsistent with subsection (1) do not apply to an exempt vehicle.

Page 76 Current as at 12 April 2024

Authorised by the Parliamentary Counsel

Heavy Vehicle (Vehicle Standards) National Regulation

Schedule 2

(7) Any requirements in a third edition ADR that are inconsistent with subsection (2) do not apply to a special use vehicle.

(8) In this section—

dimension exemption means an exemption under Part 4.5 of the Law from compliance with a prescribed dimension requirement.

special use vehicle means any of the following vehicles—

(a) a heavy vehicle built or fitted for use in hazardous situations on a road;

(b) a heavy vehicle used on a road under a dimension exemption;

(c) a heavy vehicle built or fitted to accompany a heavy vehicle mentioned in paragraph (b);

(d) a heavy vehicle that is a bus fitted, before July 1999, with a sign telling road users that the bus carries children.

Figure 2. Exert from the HVNL Schedule 2, Section 7

It is notable that no red lights or reflectors shall be fitted towards the front of the vehicle (ie. Headboard of a trailer). Additionally, no additional white lights shall be fitted to the rear of the vehicle or trailer. Suppliers accept that Status Lights shall not be these colours when/if permitted to be fitted in these locations. We believe that the HVNL is not explicit enough to cover electronic displays which we feel would be an oversimplification to view these simply as lights. If an ADR definition for 'displays' was created, they may be interpreted as 'displays' and not 'lamps'.

Item (3) of Section 79 indicates that a heavy vehicle may be fitted with a light or reflector if it is permitted by the law. This is interpreted as if the Australian Design Rules permit a light or reflector, then it may be fitted. As such, any provisions agreed upon by the department and ministers relating to the fitment of Trailer Status Lights could be covered in an update to ADR 13. This was the case for the allowance of backlit badges which was included in ADR13/00 Section 7.6.

Lighting standards for heavy vehicles and trailers are contained across multiple ADR's, see Table 1.

Table 1. Lighting related ADRs and applicability to Trailer Status Lights or Displays

ADR No.	Description	Comment
13/00	Installation of Lighting and Light Signalling Devices on other than L-Group Vehicles	Top Level ADR for Lighting - Has reference Table to all other lighting ADRs and relevant ECE Regulations
1/00	Reversing Lamps	Not applicable to Trailer Status Lights
6/00	Direction Indicator Lamp	Not applicable to Trailer Status Lights
49/00	Front and Rear Position (Side) Lamps, Stop Lamps and End Outline Marker Lamps	Unlikely to be affected by Trailer Status Lights, however some parameters could be utilised and applied to Trailer Status Lights

74/00	Side Marker Lamps	Unlikely to be affected by Trailer Status Lights, however some parameters could be utilised and applied to Trailer Status Lights
76/00	Daytime Running Lamps	Not applicable to Trailer Status Lights
87/00	Cornering Lamps	Not applicable to Trailer Status Lights

Only the top-level ADR 13/00 demonstrated some applicability, however no options for lighting or display types for Trailer equipment status were provided. Some of the specification utilised for Side or end outline marker lamps could be considered when assessing which lights to select for trailer status. There is nothing available to assist with trailer displays or control screen selection and parameters.

The primary ADR relevant to this submission and topic is identified as being ADR 13/00 for – Installation of Lighting and Light Signalling Devices on other than L-Group Vehicles. This ADR is applicable to old vehicles manufactured in 1991 or later. Pages 17 – 157 of this rule contain Appendix A which is adopted from the United Nations Regulation No 48 'UNIFORM PROVISIONS CONCERNING THE APPROVAL OF VEHICLES WITH REGARD TO THE INSTALLATION OF LIGHTING AND LIGHT-SIGNALLING DEVICES'. This is indicative of the ADRs intent to harmonised with UNECE regulations where possible and is worth considering when determining what provisions may apply to Trailer Status Lights and Displays once included in local regulations.

Additionally, there have been several updates to the ECE R48 since ADR 13/00 was introduced which have not been explicitly included in ADR 13/00 at this time. It is understood that due to harmonisation principals, typically R48 is accepted when assessing compliance with the lighting standard in Australia.

Whilst the ADR and HVNL utilise the words light or reflector, further research on the ADR and UNECE definitions shows that all regulated lights are referred to as 'lamps'. The definition for a lamp is as follows:

"*Lamp*" means a device designed to illuminate the road or to emit a light signal to other road users.

This is a different purpose or intent to a Status Light which is designed to illuminate for the operator to provide critical information around the safety and status of equipment (and is not designed to signal other road users).

Based on the methodology utilised to allow backlit badges, if an element is not considered 'a lamp', then fitment is deemed legal if some sensible logic around fitment in alignment with ADR intent can be applied. Ie. No red lights to the front of the trailer as per HVNL requirements.

Additionally, given the definition of a lamp, it would be critical that any status lights fitted are not confused by other road users as lamps, ie. such as cornering indicators or brake lights etc. Particularly if they are illuminating when a vehicle is not turning or braking for example.

Manufacturers have provided us details of lights and display's currently utilised in Europe which are not explicitly covered by European Legislation or Australian Legislation but generally accepted as compliant in the marketplace. A few key thinking logics are applied by the Europeans which have traditionally been adopted in Australia which are:

- Lighting legislation is not explicitly applicable if a light or display is 'not a lamp' (see above comments).

- If lights or displays fitted are not fitted in regulated 'locations', and do not interfere with legislated lighting, fitment is permissible.

We acknowledge that modern legislation should not be left to elaborate and/or whimsical interpretation. To ensure maximum compliance, modern legislation should be clear, direct and as simple as possible whilst still delivering the correct intent. Whilst it is proposed that the current traditional logic be utilised in the short term to allow suppliers and operators confidence in status light and display fitment, we believe that long term, further clarity and precision in the regulatory framework is required.

Why use lights and displays at all? Shouldn't they all be incorporated into the Heavy Vehicle Human Interface (HMI)?

The temptation may be for regulators to decide that all lights and displays are unnecessary and that the truck dash should be utilised for all safety communications with the driver.

In a perfect world, this would be great and perhaps in many decades the combinations of the future will have sufficient technology for this to be a final solution. At current however, many of these safety systems and features are mandated as parts of schemes such as:

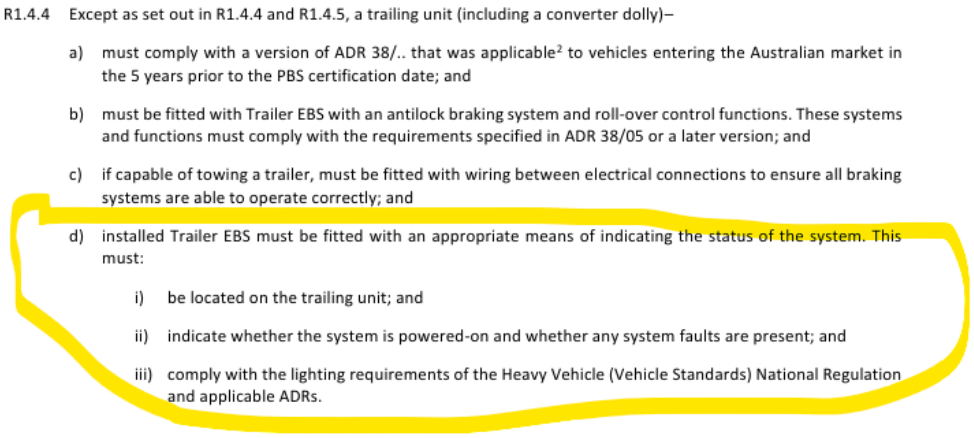
- Performance Based Standards (PBS) – the need for directional stability systems
- High Productivity Freight Vehicles (HPFVs) – Requirements for On Board Mass Management (OBM)
- COR Requirements – Operators trying to reduce the incidence of wheel end fires and hence fitting Tyre Pressure Monitoring (TPMS)
- COR Requirements – Operators trying to reduce the incidence of trailer dropping and hence fitting fifth wheel status lights

Many of these fitments are retrofitted to older vehicles and combinations to upgrade them. Where fitted new, many of the vehicles and trailers will go into large fleets where different brands of truck and trailer are interchangeable.

The Australian Design Rules do not mandate electronic communications between heavy vehicles and trailers, as Europe does in-line with UNECE regulations and ISO11992-2. This means there is not even forced compatibility between differing brands of truck new from the factory. Simply put, our newest vehicles are in no way mandated to utilise a common communications protocol. This makes the solution of 'smart dash' not a viable regulatory alternative to externally fitted status lights and displays at this time.

Directional Stability Under Braking PBS Standards Update

The proposed implementation of the Directional Stability Under Braking (DSUB) Standard for Performance Based Standards (PBS) mandated a trailer requirement to fit an 'appropriate means of indicating the status of the system', Figure 3.



R1.4.4 Except as set out in R1.4.4 and R1.4.5, a trailing unit (including a converter dolly)–

a) must comply with a version of ADR 38/.. that was applicable[2] to vehicles entering the Australian market in the 5 years prior to the PBS certification date; and

b) must be fitted with Trailer EBS with an antilock braking system and roll-over control functions. These systems and functions must comply with the requirements specified in ADR 38/05 or a later version; and

c) if capable of towing a trailer, must be fitted with wiring between electrical connections to ensure all braking systems are able to operate correctly; and

d) installed Trailer EBS must be fitted with an appropriate means of indicating the status of the system. This must:

i) be located on the trailing unit; and

ii) indicate whether the system is powered-on and whether any system faults are present; and

iii) comply with the lighting requirements of the Heavy Vehicle (Vehicle Standards) National Regulation and applicable ADRs.

Figure 3 NHVR Position Paper DSUB released by NHVR 20th November 2025, Page 12

Currently there are two commercially available market offerings which achieve this outcome.

1. A trailer information module or smart board
2. A Trailer EBS status light setup

As Option 2 is cheaper to implement, and PBS is already a costly exercise, many operators may prefer option 2 as it is very straight forward, easy for the driver to use, hard to miss etc. In the HVIA response to the final proposed implementation, we offered only one concern and subsequent request.

The concern raised was that there is not a clear pathway for operators to fit a Trailer EBS Status light in compliance with the ADRs. Due to a strict implementation timeframe from the NHVR, they have left the Trailer EBS Status Light as a viable option for compliance but have omitted it from the document as an example. This allows for these systems to still be fitted in the future where manufacturers can determine a pathway of compliance. We would like the department to amend the ADRs to ensure that this is explicit in future.

HVIA has approached this topic more specifically as part of our latest member informed DSUB submission which can be found here.

We have also worked with suppliers to provide some suggested guidance around compliant fitment of a Trailer EBS Status Light or lights and provided this to the NHVR for review. This is also now attached in Appendix A of this submission as an example of how a compliant fitment pathway might be.

Catalogue of status lights and displays in use in Australia

Historically, most warning or status lights have been placed within a truck cabin and/or integrated within the vehicle's Human Machine Interface (HMI) in the dashboard.

As many of the Australian standards for warning or status lamps are adopted or harmonised with regulations in overseas markets where only one trailer is connected per powered unit, that warning system arrangement falls short when applied to multiple trailer combinations.

The fitment of status lights and/or displays on each trailer and/or heavy vehicle, adjacent to the equipment they relate to, allows for quick diagnosis of functional issues with critical hardware and can immediately inform the driver, or any trained observer, of a potentially hazardous situation or health and safety issue prior to the commencement of a trip. This allows an opportunity to rectify the issue, modify the operation to reduce risk, or arrange for maintenance.

The below list summarises the range of status lights in use in Australia, but it is not exhaustive.

i. Trailer Electronic Braking System (TEBS)
ii. Refrigerated Units
iii. Battery Systems
iv. Reversing Assistance Systems
v. On Board Mass Systems
vi. Tyre Pressure Monitoring Systems
vii. Fifth Wheel
viii. Tarp Covers
ix. Telematics Trackers

Further information and limited examples of some of these are provided in the following sections.

Trailer Electronic Braking Systems (TEBS)

Trailer Electronic Braking Systems are now essentially mandated on most heavy trailers under the provisions of ADR 38/05. These braking control systems include critical safety braking features such as anti-lock braking and automated roll stability control. As such, trailers fitted with them can be less likely to roll, or lose control when cornering, changing lanes or when driving in wet conditions. This improves road safety generally and creates a potentially safer working environment for the vehicle or combination operator. Ensuring that these systems are both powered and fault free becomes very important for fleets and operators.

TEBS Operation Light – Indicates that a TEBS module is powered via the ISO7638 connection between truck and trailer. Typically, a solid light. May be green, white etc.

TEBS Warning Light – May flash or illuminate to indicate that a TEBS has an active fault affecting its operation. Typically, a red, amber or orange light is used.

TEBS Information Modular Displays – Each of the three main brands has a digital display which is optional for operators to fit to the side of the trailer. Such displays typically have a removeable cover when in general operation. When the cover is removed, they have a small display 10mm x 50mm approximately where more detailed information on the TEBS unit can be obtained. All the units themselves are roughly 80mm x 80mm in size. These modules are typically fitted to the side of the trailer within the trailer width allowance and typically the side webbing and not obvious or readily

observable to other road users. The screens for these devices have limited digital content which can only be viewed within proximity. Ie 0.5m. As such we believe they do not fall under the lighting requirements for HVNL or ADRs and are hence considered compliant.

General Comments on TEBS Operation or Warning Lights - Sometimes the Operation and Warning Light features will be integrated into one light, or separate lights may be utilised. One light may also be used but the same light will flash a different colour to indicate a warning state. Depending on the supplier, some lights will be integrated into the main 7-PIN wiring harness; others may be powered from an auxiliary port in the TEBS module. Novel features may be used by some suppliers to include additional alerts such as a Warning Light which will flash when powered until the End of Line has been completed on the module.

These lights are typically ≈ 60mm x 35mm in size or smaller. A range of amber, red, white and green lights as varying luminosities are all utilised by TEBS Status Light suppliers. These lights are fitted either on the trailer headboard or drawbar, or the side of the trailer, often in a recess or gusset and generally not in interference with the regulated side markers.

Some examples are shown below (Figure 4, Figure 5):

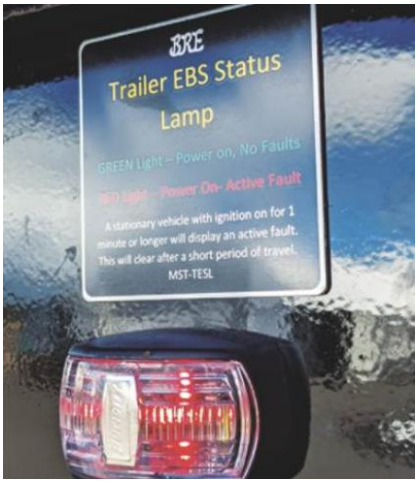


Figure 4. Trailer EBS Status light fitted to outer side of trailer in between chassis rails. Labelling used, one light with multi-colours solution

Figure 5. Two light solution, with labels.

i. Refrigerated Units

Many trailers are fitted with refrigerated units when carrying goods which require cold storage. This can be food, medicine or other critical supplies. There are many challenges when carting this freight to ensure that temperatures stay below a critical level and remain there for the entire time the goods are in transit. The interests of public health often depend on this, as well as contract conditions mandating this temperature, food safety requirements etc. As such, any failure or concerns with the operation of the equipment need to be found as soon as possible to minimise damage, waste or risks to public health.

There are other workplace health and safety concerns such as night times are the most dangerous for a driver to leave the cab just to check the operation of the refrigeration unit. This is especially pertinent in Australia as the fridge controllers are fitted to the passenger side. In this particular use case, the unit display can be seen from the drivers' side mirror, removing the need to exit the cab for these checks and removing the risk to the driver completely.

Refrigerated Unit Operation Light – Indicates that refrigerated unit is operating and fault free

Refrigerated Unit Warning Light – Indicates there is a fault with the refrigerated unit

Refrigerated Unit Information Panel – Indicates further and detail information about the status of the refrigerated unit, i.e. may give a temperature reading or next service notice.

General Comments Refrigerated Unit Status Lights – Typically located at the headboard of the trailer or just to the side of the headboard near the refrigerated unit. May include a control panel for accessing more information about the unit's operation. See example Figure 6.

Information panels are typically also located on the headboard and may use a tablet or phone sized screen to provide the information. See Figure 6.

Figure 6. Example of Refrigerator status light on trailer

ii. Battery Systems

Now in the age of 'Powered Trailers', many new technologies and innovations are being developed to fit and benefit from trailer battery storage and electricity regeneration. Battery systems may be fitted to powered refrigerated units and in the future even trailer drive axles. These systems must function correctly to ensure safe operation of the combination, and feedback to the operator can be critical. These technologies are often cited as ways to reduce heavy vehicle emissions and are continuously developing and improving over time.

Battery Systems Status Lights – May be in the form of simple lights or a digital display. Could be located at the headboard or side of a trailer. Provides information on battery levels and any malfunctions or concerns.

Digital Displays – In the example given for a battery status light, the supplier has utilised a digital display so more complex information can be provided on the battery status. The display in this case has a black background and information can appear in white or orange etc. The battery status display is estimated to be 150mm x 150mm in length and width, See Figure 7.

Figure 7. Example of Battery Status Indicator digital display

iii. Reversing Assistance Systems

Camera and sensor based reversing aids are used frequently on trailers, primarily to prevent rear damage from dock collisions and to improve pedestrian safety. These systems have even been mandated on certain vehicles as per ADR 108/00 which was in force for new models from November 2025 and will apply to new models from November 2027. Some systems may meet the requirements with close-proximity rear-view mirrors or other hardware, but other systems utilise camera and or radar (sensor) technology paired with driver feedback aids, such as lights to improve reversing performance and reduce rearward collisions.

Light bars - Most sensor-based systems provide a light bar of some sort which may have one or several lights which light up in sequence or at once to indicate the proximity of a rear object when the trailer is reversing. To ensure the driver can see these lights, they are generally mounted to the side of the trailer, typically near the rear and will stick outward so the driver can see them in the side mirror, See Figure 8. In the example shown, the outline marker lights are red and will illuminate when the vehicle is in reverse and the system is active. If the lights do not illuminate when the vehicle is reversing, the system may not be functioning.

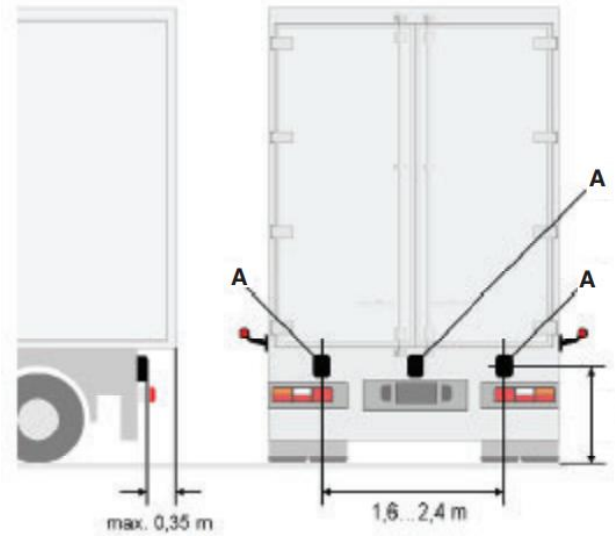


Figure 8. Reverse system outside marker light example

iv. On-Board Mass (OBM) Systems

On-board mass systems have been popular in many industries for the last decade as an aid for operators and vehicle loaders to ensure that axle masses are correct and within legal limits. In recent years, in multiple states, fitment of certified OBM systems have become a requirement for certain High Productivity Freight Vehicles (HPFV's) to gain permits and access to the heavy vehicle freight network. These certified systems must always be operational when the vehicle is on and provide constant mass data to a telematics device which is later provided to Transport Certification Australia (TCA) to collate and provide to road managers to inform them on the network demand and level of mass compliance of approved operators. Where fitted, operators are generally expected to interact with their OBM systems which loading and unloading to ensure compliant masses and correct system functionality.

On Board Mass Displays – To ease the interaction between the system and the operator, electronic displays may be fitted to the side of the trailer to allow the operator to view the live mass reading and ensure that the system is operational. A dedicated trailer display can also be useful during loading as typically the loader is unable to view the masses in the vehicle cabin during this operation, particularly in long combinations.

One example of an on-board mass trailer display is shown in Figure 9 below. These displays may be fitted to both a rigid vehicle itself or trailer.

Figure 9. On-board Mass Display Unit example

v. Fifth Wheel

Trailer drops are a concern for many fleets and occur in the case that an operator has attempted to couple or uncouple and at some stage in the process perceived the fifth wheel status incorrectly. This can lead to a situation where an operator thinks the fifth wheel mechanism is locked, when it is not, and leads to the trailer pulling off the back of the prime mover and 'dropping' as the operator attempts to move off. Some operators have worked with suppliers to install cameras or sensors which are linked to an indicator light which can inform the driver of whether the mechanism is locked or unlocked.

Fifth wheel indicator light – Usually a green or amber/red light which informs an operator on the status of the fifth wheel locking mechanism.

One example of such a mechanism is shown in Figure 10 below and is fitted to the prime mover underneath the fifth wheel, where an operator can view the light clearly before and after when they get out of the vehicle to do their regular process checks and tasks for coupling and uncoupling. This product is gaining market traction and has received positive feedback from operators who want to ensure trailer dropping is mitigated against during their regular operations.

Figure 10. Fifth wheel locking status indicator light

i. Tyre Pressure Monitoring Systems (TPMS)

TPMS Systems have been around for quite some time with variations from systems which monitor tyre pressure and temperature to systems which monitor but also can re-inflate tyres which may have fallen to low pressure due to punctures or unexpected damage and conditions. There are a range of gauges and methods for these systems to communicate to the operator. Some will have gauges on each trailer which the operator can view whilst completing a pre-trip inspection or if they've pulled over and want to check the tyre operating condition.

These systems may also feature a status light which will illuminate if there is a fault or concern with the tyre pressures.

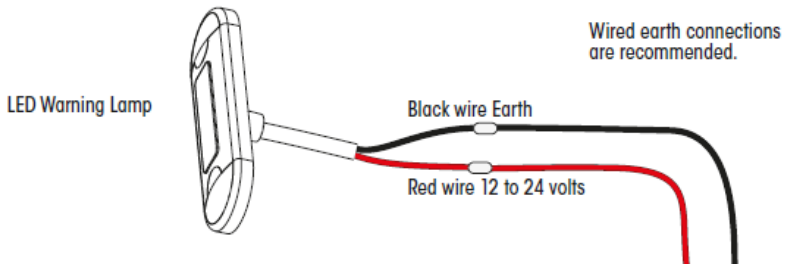


Figure 11 TPMS LED Warning Lamp example

Other Status Lights and Displays may be utilised for

x. Tarp Covers
xi. Telematics Trackers
xii. Other safety or operational equipment

Member Feedback

We have had a variety of views from members on what level of fitment should be allowable. Members generally agree on the below points:

- Current ADR 13 and other lighting requirements are not clear when it comes to the guidelines for Trailer Status Lights and what is a 'compliant' fitment.

- Members want further clarity in lighting regulation around heavy vehicle and trailer status lights and displays.

- Members understand that limitations and caution are needed when setting the final conditions for status lights as road safety and ensuring compatibility with other road users and drivers is necessary.

- Members agree trailers should not be 'lit up like Christmas trees' or appear like vehicles from the movie 'Tron'.

Suggested Amendments

We suggest that ADR 13/00 is updated to include compliant provisions for fitment of Status Lights or displays.

The ADR should include a specific sectional reference to a Status Light or display including:

1. **Definition**

- What is a Trailer Status Light or display?
- Which types of status lights will be allowed?
- Is there a limit on the quantity?
- Are digital displays included or will they have their own category?

2. **Areas of permitted fitment**

- Can they be on the headboard?
- Can they be on the side of the trailer?
- Will the rear location be rulled out all together outside of current ADR required/permitted lights.

3. **Colours permitted**

- Will the colour range be limited? Ie. Green for good, amber for malfunction and nothing else?
- Colours used on digial displays limited?
- Do digital displays have to have a cover so not light shows unless cover removed?
- Red on the front appears to be prohibited completely under HVNL. Section 79 Part 5, so assumption is any display with red must be covered when the vehicle is in motion. Can you confirm this interpretation?

4. **Size of light(s) permitted**

- We have seen displays as large as 150mm x 150mm, will there be a maximum size allowed for displays or lights?

5. **Requirements around brightness/ intensity**

- Concerns around brightness, particularly in the night time have been raised by members and many members mention field experiences where they have utilised methods to reduce the intensity of the status lights to improve operator experience. We suggest that some level of testing is done on a variety of light colours and intensities at night on real trailers to determine what the appropriate maximum brightness for any allowed status lights or displays should be.

6. **Operational Requirements**

- Could certain lights and displays of concern be permitted on the condition that they have 5 minute black out or reduced brightness options so they are not typically illuminated whilst the vehicle is in operation?

7. **Labelling (if required)**

- Do status lights require labelling with their key purpose ie. ‘Trailer EBS Status Light’ or ‘Refrigerated Unit Status Indicator’ etc?

- Do status lights require an ADR label or marking of some kind to confirm they comply to a particular section of the ADR or have been approved?

To assist with determining an appropriate specification, HVIA has worked with members to develop a supplementary draft specification. This **draft is not attached in this submission** and is currently being circulated with our members. The draft specification which covers all Status Lights and Displays will be provided to VSCF in the coming weeks as a working document.

Next Steps and Conclusion

HVIA will work with the VSCF and the department to increase the priority of this issue and see amendments to the relevant ADRs in future to allow for clear direction on compliant fitment of Trailer Status Lights to heavy trailers.

We also request that this submission is handled with sensitivity as suppliers have provided information regarding their safety and operationally focused status lights and displays in good faith and in the spirit of determining a path forward for ADR compliant fitment.

The method of review should consider key heavy related equipment which utilises these lights and displays and work with existing suppliers to confirm their current approach. From this, we hope regulators can determine whether these fitments can be continued, or if amendments are required.

HVIA will provide a draft proposal for the future specification and work with the regulator to ensure the final proposal is fit for purpose.

Not part of this submission and think you should be?

The information contained in this proposal is based directly on feedback from HVIA member organisations and cross referenced with information from reputable sources such as the Heavy Vehicle National Law and ADR legislation. Calls for feedback were made by HVIA on the 18th November 2025 via our Talk the Torque publication, an article which is still published on the HVIA website at time of this submission. If you are part of a HVIA member organisation and have critical information which should be included or dispute any of the content currently in the submission, please contact r.michaud@hvia.asn.au to join the Trailer Status Lights working group (now inclusive of Heavy vehicles and displays) and we can consider your feedback moving forward.

We expect that it will take some time to work with regulators on a resolution to include heavy vehicle and trailer status lights and displays in current ADR legislation in the new year of 2026. In the meantime, we will keep all working group members updated on the progress of this submission and work together with the VCSF and regulator to address this topic in full.

To subscribe to our weekly Talk the Torque email publication and stay updated on HVIA Member submissions, regulatory consultations and the latest in all things heavy vehicles, please go the HVIA website. https://hvia.asn.au/?uicore-tb=subscribe-talk-the-torque

Appendix A – Draft Industry Best Practice Guide Example

Note: Given the current proposed pathway which will cover all status lights and displays, this document is unlikely to require release and is attached as an example for information only.

Industry best practice guide

Recommendations for Fitting Trailer EBS Status Lights

HEAVY VEHICLE INDUSTRY AUSTRALIA

Purpose

This guide provides information to heavy vehicle operators on how Trailer Electronic Braking System (EBS) status lights may be fitted to trailers in compliance with the Heavy Vehicle National Law (HVNL) and Australian Design Rules (ADR's).

Introduction

Recently, the revised Directional Stability Under Braking Standard (DSUB) for Performance Based Standards (PBS) vehicles was released. In the new standard, new trailers entering the PBS scheme with installed Trailer EBS must be fitted with an appropriate means of indicating the status of the system. This must:

i) be located on the trailing unit; and
ii) indicate whether the system is powered-on and whether any system faults are present; and
iii) comply with the lighting requirements of the Heavy Vehicle (Vehicle Standards) National Regulation and applicable ADRs.

Currently, there are two known market solutions to meet this requirement. These are:

Fitment of an Information Display Module which communicates with the proprietary Trailer Information CAN directly from the Trailer EBS unit. These modules are typically fitted to the side of the trailer within the trailer width allowance and typically the side webbing and not obvious or readily observable to other road users. The screens for these devices have limited digital content which can only be viewed within proximity. Ie 0.5m. As such we believe they do not fall under the lighting requirements for HVNL or ADRs and are hence considered compliant. These modules will not be covered any further in this guide.

Fitment of a Trailer EBS Status Light system which features typically one or two lights which indicate both the operational status of the Trailer EBS and whether any faults are present. It has been identified that it is difficult to interpret the current regulation on these lights.

There is a planned update package to the current ADRs which will address the topic of Trailer Status Lights including Trailer EBS Status Lights more explicitly. This guide has been developed as an interim measure to provide guidance on compliant fitment of Trailer EBS Status Lights in line with the HVNL and ADR's.

Note: The purpose of a Trailer EBS Status Light is to make it easy for the operator to confirm that the Trailer EBS on every trailer connected is operational and fault free. The trailer-mounted EBS status light is particularly useful in a multi-trailer combination as it is clear which units are operational, and which are not. Mandated dash lights can only indicate that there is a problem, but not which specific trailer unit is affected when there are multiple units connected.

The mandated dash light in the truck cabin will indicate an ABS/EBS fault on a connected trailer, but does not always capture the failure condition where there are other common faults present in the combination. Common difficulties are found with dash lights **not** illuminating when there are disruptions to the Trailer EBS power line, fuses in the truck are blown, EBS connectors are not plugged in, are damaged or, incorrectly placed in dummy sockets.

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Industry best practice guide

Recommendations for Fitting Trailer EBS Status Lights

HEAVY VEHICLE INDUSTRY AUSTRALIA

What is a Trailer EBS Status Light?

There are two types or key features of Trailer EBS Status Lights.

TEBS Operation Light – Indicates that a TEBS module is powered via the ISO7638 connection between truck and trailer. Typically, a solid light. May be green, white etc.

TEBS Warning Light – May flash or simply illuminate to indicate that a TEBS has an active fault effecting its operation, this could even include where an End of Line test has not been completed. Typically, an amber or red light is used

Sometimes the Operation and Warning Light features will be integrated into one light, or separate lights may be utilised. One light may also be used but the same light will flash a different colour to indicate a warning state. Depending on the supplier, some lights will be integrated into the main 7-PIN wiring harness other may be powered from an auxiliary port in the TEBS module.

Note: Operator awareness of the status of the Trailer EBS system is a safety critical requirement as these systems play a significant role in reducing the instances of heavy vehicle roll-overs. These can only do this if they are operational during each trip, hence the importance and growing industry driven fitment of these lights.

What Regulations Apply?

Schedule 2, Section 79 of the HVNL, item (3) states that 'A heavy vehicle may not be fitted with any light or reflector not mentioned in this Regulation other than as required or permitted by Law or national regulations.' A Trailer EBS Status Light (or any Trailer Status Light) is not explicitly covered in the HVNL. This means that national regulations such as ADRs must be referred to for guidance.

In ADR 13/00, requirements for lights which are covered are referred to as 'lamps.' Trailer EBS Status Lights should not be considered lamps as they **are not** a device designed to illuminate the road or to emit a light signal to other road users.

Recommendations for Trailer EBS Status Lights

A Trailer EBS Status Light is a trailing unit fitted light or lights which indicate whether the Trailer EBS system is powered-on and whether any system faults are present.

Trailer EBS Status Lights should be limited to a maximum of two lights per Trailer EBS module.

The colour for the powered-on feature should be green or white and the light must be solid. The colour for system faults indication should be amber or red, this light may flash or be solid. Where a one light system is utilised, an amber or red light may also indicate that the system is powered-on.

In alignment with the intent of Schedule 2, Section 79 of the HVNL, item (5), Trailer EBS Status lights **must not** be fitted such that they:

(a) show a red light to the front; or
(b) show a white light to the rear; or
(c) are shaped or located in any way that reduces the effectiveness of a light or reflector required to be fitted to the trailer under any National Laws or Regulations.

Trailer EBS Status light(s) should not be fitted in a way that they can be mistaken for another ADR prescribed light.

The light source should not be more than 60 candelas; but is great enough for the operator to interpret the Trailer EBS status both during the day and at night.

The lights should be fitted more than 200mm from the nearest ADR defined lamp.

The size of the light source must not be overly large to affect the prominence of other mandatory lamps; but adequately sized to be visible to an operator when inspecting the trailer.

The light(s) should be located such that they are visible to the operator and not unnecessarily obscured from view or tucked away. Trailer EBS Status Lights can be fitted to the front or side of the trailer, but not in an ADR regulated position. It's recommended not to fit these lights to the rear of the trailer.

Trailer EBS status lights should be labelled appropriately with their intended function and operational nature so as an operator can understand when the Trailer EBS is powered and how to tell when there is a fault present with the Trailer EBS.

Retrofitting Trailer EBS Status Lights

Trailer EBS Status Lights can be retrofitted to any Trailer EBS fitted trailer. There are multiple options available in the market.

For further information regarding retrofitting, it is recommended that you contact a reputable brake or trailer component supplier, G2 accredited Approved Vehicle Examiner or auto electrician with a good understanding of these advanced systems.

Where light fitment is not 'plug and play', for example, involves cutting or splicing of trailer wiring, a qualified persons or auto-electrician should be utilised to complete the installation and ensure safe and correct practices are followed.

Complying with the Heavy Vehicle National Law

The operator of a heavy vehicle must ensure that their vehicle complies with the applicable Australian Design Rules (ADRs), Heavy Vehicle National Law and heavy vehicle safety standards. Using or permitting another person to use a defective heavy vehicle, or a heavy vehicle with unapproved modifications on a road, is an offence.

Penalties can include on-the-spot fines or prosecution. Formal warnings or a defect notice may also be issued. For more information see the Heavy vehicle defects— Compliance and enforcement bulletin at www.nhvr.gov.au/ce-bulletins

Other requirements for the Directional Stability Under Braking Standard

A complete guide on all the requirements for the DSUB Standard can be found on the NHVR website under xxxxxxxxx.