LIGHT VEHCLE SPECIFICATION

Safer Together

Light Vehicle Specification

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Revision History		
Version	**Date**	**Amendments**
1.0	01.12.2015	First issued for use
2.0	26.03.2020	Re-formatted (title, disclaimer, foreword, roles and responsibilities). Define Roles and Responsibilities for Companies Adopting this Specification. Editorial changes.
3.0	21.11.2024	Scope expanded to cover QLD and WA/NT member companies. Revised to align with IOGP and address technology changes (AFDD).

Feedback and Enquiries

Safer Together welcomes feedback and enquiries on this Specification: land.transport@safertogether.com.au

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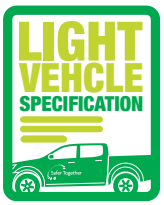
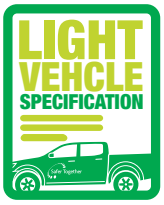


Foreword

This Specification was developed by the Land Transport Working Group of the Queensland Natural Gas Exploration and Production Industry Forum (Safer Together). Following approval by the Land Transport Working Group (QLD) and the Land Logistics Working Group (WA/NT), the QLD and WA/NT Safety Leaders Groups have endorsed the publication of this Specification by Safer Together.

Where this Specification is adopted by individual companies (by incorporating the Requirements defined in s4 into their Safety Control Framework and passing them onto their supply chains via contract terms and conditions), it aims to supersede existing company requirements for the purpose of industry-harmonised standardisation.

Companies operating in the Australian onshore energy production industry are obliged to comply with the law and are expected to inform themselves of legal requirements. This Specification does not detail legal requirements. Where this Specification offers a higher standard than that required under the law, it is intended that the higher standard shall apply.



1. Purpose

Purpose

The Australian onshore energy production industry accepts that one of its highest risks is presented by the operation of Light Vehicles in urban and rural/field locations. A key area that has been identified to assist in managing this risk is setting a Specification for Light Vehicles.

This Specification aims to provide clear and simple direction to the Australian onshore energy production industry on the expected requirements for Light Vehicles.

2. Scope

Scope

These minimum requirements apply to:

- All Safer Together member companies and their contractors.
- Company owned Light Vehicles only (<4500 kg GVM); and,
- Privately owned Light Vehicles used on 'Company Business' for >8000 km annually).

Privately owned vehicle means that it is owned or paid for by the individual, including under a car allowance scheme. However, where individuals are required to have a vehicle as a condition of their work, such as sales manager, construction supervisors, pipeline inspection engineer, and typically drive more than 8,000 km per year on company business, these privately owned vehicles shall meet the required safety features set out for company owned vehicles.

Where the mandatory elements of this Specifcation cannot be met due to specific operational needs, a risk assessment shall be undertaken and the Operator Company / Contract Partner Company deviation process shall be applied and documented prior to the vehicle being used.

Optional requirements in this Specification are considered to be important common equipment or operations that are used consistently across Safer Together member companies, but their application requires flexibility when related to the varied working environments and exposures.

Where additional items are required due to operational needs (utility toolboxes, snorkels, ROP, etc) a risk assessment shall be undertaken to review potential impacts on the unmodified vehicle performance and safety capabilities. Any safety impacts related to the modifications shall be managed to a level that is ALARP.

3. Roles and Responsibilities

3.1 Safety Leaders Group

The Safer Together Safety Leaders Group (SLG) is responsible for:

- Approving this Specification and any subsequent revisions; and,
- Ensuring that necessary arrangements and resources are in place to administer this Specification.

3.2 Land Transport Working Group

The Safer Together Land Transport Working Group is responsible for:

- Maintaining this Specification by: monitoring feedback from users and other relevant stakeholders; tracking Industry practice and legislation; obtaining input from subject matter experts and legal advice as necessary;
- Providing user support for implementation;
- Communicating Requirements to relevant stakeholders;
- Monitoring the degree of standardisation achieved by implementing this Specification across the Industry and evaluating the impact it is having on safety; and,
- Ensuring Specification is consistent with current and emerging technology.

3.3 Companies Adopting this Specification

Companies adopting this Specification are responsible for:

- Incorporating its Requirements into their Safety Control Framework, including processes to ensure integrated planning, risk assessment and change management;
- Passing its Requirements onto their supply chains via contract terms and conditions;
- Communicating and implementing its Requirements;
- Assuring that its Requirements are met through auditing and inspection programs;
- Approving any exemptions to this Specification in accordance with processes defined in their Safety Control Framework.

4. Requirements

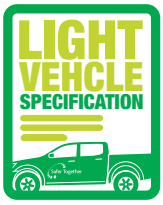
4.1 Equipment

The following equipment is identified as the requirements for Light Vehicles. Please see notes in Appendix A and B for justification of inclusion/exclusion of specific equipment items.

	M = MANDATORY O = OPTIONAL			
Item/Accessory	**Company Field**	**Company Urban**	**Private**	**Comments**
ANCAP 5 or NCAP 5 or risk assessed to International UNECE standards	M	M	M	Review Appendix A for additional information.
Three-point seatbelts for all occupants	M	M	M	Required for all seats after 1 April 2025.
Head restraints	M	M	M	Seats with appropriately adjusted head restraints for all occupants.
Driver and passenger-side mirrors	M	M	M	
Recognised tyre standards - UNECE R30 for Pneumatic Tyres (Passenger Vehicles)	M	M	M	Appropriate for the conditions and operating environment and having a minimum tread depth of 1.6 millimetres across 75% of the width of the tyre.
ABS	M	M	M	
Airbags (front) for driver and front seat passenger.	M	M	O	And, wherever possible, extended with side (curtain) airbags.
Cargo barrier	M	M	O	Mandatory in wagons.
Air conditioning	M	M	O	Climate controlled.
First aid kit	M	M	O	Type to be determined by requirements based on a risk assessment.
Spare wheel and changing equipment	M	M	M	Unless the vehicle is not provided a spare by the OEM.
Reflective triangles/Cones and as a minimum one high visibility vest or shirt should be in the vehicle.	M	M	O	Vehicles signed and used as pilot escort vehicles must have 6 cones.
Torch/work light	M	M	O	
Vehicle inspection checklist(s)	M	M	O	
Tinted windows	M	M	O	
In-vehicle monitoring system (IVMS)	M	O	O	Must meet industry specifications.
Four wheel drive	M	O	O	Mandatory for unsealed roads.
Fire extinguisher (type ABE)	M	O	O	
Permanent headlights on	M	O	O	
Vehicle decals	M	O	O	To include company name and or logo.
Reverse alarm/beeper	M	O	O	Cut-out switch must be fitted.
UHF radio	M	O	O	Or digital equivalent.
Electronic stability control	M	O	O	
Hand break alarms (OEM approved)	M	O	O	
Distraction & Fatigue Detection Technology	O	O	O	Guideline and functional requirements set out in Appendix B.
Autonomous Emergency Braking (AEB)	O	O	O	Or Forward Collision Warning (FCW) when AEB is not available, with pedestrian and cyclist detection functionality.
Lane Departure Warning (LDW)	O	O	O	
Parking sensors	O	O	O	Or parking assist systems such as a reversing camera.
Blind spot detection	O	O	O	Monitors or indicators.
Secondary communication device (e.g. satellite phone)	O	O	O	Consideration based on risk assessment
Bull bar (OEM Certified or ADR approved)	O	O	O	Consideration based on risk assessment including potential impact on ANCAP/N-CAP/UNECE ratings and standards.
Dune pole	O	O	O	Consideration based on risk assessment.
Revolving beacon	O	O	O	Consideration based on project requirements and must comply with applicable State revolving light legislation / guidelines.
Rollover protection (ROPS)	O	O	O	Consideration based on site exposures and risk assessment.
Wheel nut indicators	O	O	O	Recommended for vehicles in field regularly traveling off sealed roads.
Water required for vehicle	O	O	O	Consideration based on risk assessment.

4. Requirements (cont.)

4.2 Vehicle load	A system shall be implemented to ensure light vehicles are loaded in compliance with the NTC Load Restraint Guide[1]. The system shall address safe loading practices including mass management, loading and restraints, LUEZ Guidelines[2] and DROPS Recommended Practice[3] 1 National Transport Commission. Available at: www.ntc.gov.au 2 LUEZ Control Measures Available at: www.safertogether.com.au 3 Dropped Objects Prevention Scheme. Available at: www.dropsonline.org
4.3 Buses (Up to 12 seats including driver)	Operator Companies / Contract Partner Companies should meet or exceed the regulatory requirements referenced in the Safe Transport of Passengers Guideline, noting that some of the 'buses' recommendations within the scope of the Guideline also fall within the scope of this Light Vehicle Specification (GVM <4500 kg).
4.4 Electric vehicles and alternative fuels	Emergency Response Plans shall include electric vehicles and alternative fuels incident scenarios (e.g. battery thermal runaway and fire). Electric vehicles and alternative fuel vehicles shall be clearly labelled to enable them to be identified by site staff and emergency responders. The risks associated with the absence of noise emitted by the vehicle engine shall also be managed.
4.5 Alternative Fuels (e.g. Hydrogen)	Vehicles with alternative fuels shall incorporate the ADR specifications.
4.6 Vehicle break down and recovery	A risk assessment shall be undertaken and documented by Operator Companies or Contract Partner Companies prior to recovering a broken down vehicle.



5. Definitions

Light Vehicle	A vehicle with a Gross Vehicle Mass (GVM) not more than 4500kg (4.5 tonnes), not including motorbikes, quad bikes (other ATV's including Polaris 6 wheelers etc.), bicycles and tricycles.
Heavy Vehicle	A vehicle with a Gross Vehicle Mass (GVM) of more than 4500kg (4.5 tonnes) and /or a combination that includes a vehicle with a GMV of more than 4.5 tonnes.
Urban Location	A location within the recognised boundaries of a population centre (city, town).
Field Location	Field locations include all roads and tracks outside the limits of LNG facilities, and/or outside recognised town limits where personnel are required to drive for work.
Shall	The mandatory requirements of these controls are signified by the use of the word "shall".
Should	The word "should" indicates the the primary intent is to comply with the requirement however, there will be circumstances where the local conditions may demonstrate that the requirement is either not applicable, compliance is not possible or an alternative approach is necessary.
ANCAP	Australasian New Car Assessment Program.
OEM	Original Equipment Manufacturer.
ADR	Australian Design Rules (ADRs) are national vehicle standards for vehicle safety, anti-theft and emissions.
UNECE	International United Nations Economic Commission for Europe (UNECE) standards.
ATV	All terrain vehicle.
LNG	Liquified Natural Gas.
NCAP	New Car Assessment Program
IVMS	In Vehicle Monitoring System
GPS	Global Positioning System
IOGP	International Oil and Gas Producers
AFDD	Arc Fault Detection Devices

Appendix A: NCAP, ANCAP & UNECE Requirement

New Car Assessment Programme (NCAP)

There are several regional New Car Assessment Programmes (NCAPs) across the world. Regional NCAPs promote and conduct independent research and testing that assess safety and environmental characteristics and comparative safety performance of motor vehicles available for purchase in that region. The same vehicle model in different markets can have different build quality and safety features.

The number of stars (zero through five) reflects how well the car performs in NCAP tests. A five-star safety rating would indicate good performance in crash protection. Additional crash avoidance technology could be present.

The Australasian New Car Assessment Program (ANCAP) provides consumers with independent and transparent advice on vehicle safety through its safety rating program. The star rating system is updated every year to ensure that the latest technology and vehicle safety initiatives are included. Safer Together considers that all Light Vehicles should be mapped to the ANCAP or NCAP or UNECE standards rating and all Light Vehicles should achieve a minimum level of 5-star ANCAP or equivalent from 2018 were applicable.

NOTE: Discussions with ANCAP have confirmed that "once a vehicle has been awarded an ANCAP rating, that rating stands for the life of that vehicle ...There is no expectation that the vehicle will need to meet future year standards … From 2014, all new ratings include a date stamp clearly identifying the year to which the vehicle has been rated".

For vehicles where there is no ANCAP rating available (such as for a new vehicle model or type such as electric vehicle (EV) which is just introduced to the market) a risk assessment incorporating the following shall be undertaken and the Operator Company / Contract Partner Company deviation process shall be applied and documented prior to the vehicle being used.

- Verify with the OEM that the vehicle model sold in-country is of the same design and specifications used by one of the regional NCAP programs.
- Confirm that the vehicle is competitively available through importation from a region or country where the vehicle has received a five-star NCAP rating.
- If importation is not feasible refer to international UNECE standards for vehicle design standards such as:
  - **UNECE Regulation 12** for steering mechanism, frontal impact
  - **UNECE Regulation 94** for frontal collision protection
  - **UNECE Regulation 95** for side collision protection
  - **UNECE Regulation 135** for pole side impact protection
  - **UNECE Regulation 14** for seatbelt anchorages
  - **UNECE Regulation 16** for seatbelt restraint systems
  - **UNECE Regulation 17** for strength of seats, anchorages, & head restraint
  - **UNECE Regulation 140/GTR 8** for Electronic Stability Control (ESC); &
  - **UNECE Regulation 127/GTR 9** for pedestrian protection

Appendix B: Distraction & Fatigue Detection Technology

The purpose of this Appendix is to provide guidance on the functional requirements for driver distraction and fatigue detection technology in vehicles. Member companies should review data security and privacy laws when implementing driver distraction and fatigue detection technology.

The Procedure/Specification requires the following:

- Distraction/fatigue detection technology should be installed in Light Vehicles based on risk assessment (excluding vehicles that do not leave site boundaries or vehicles that do not leave metropolitan/city areas).
- The mounting location for the distraction/fatigue detection technology shall be in accordance with the local regulations.
- Distraction/fatigue detection technology shall provide real time feedback to drivers.
- The technology shall allow In Vehicle Monitoring System (IVMS) and distraction/fatigue driving performance data to be collected for monthly reporting.
- The technology shall allow distraction/fatigue detection data to be evaluated quarterly to identify and address risks and trends.

The primary function of the technology is driver safety – monitoring and alerting a driver in real time that they may be at risk due to distraction or fatigue.

The technology can also alert or inform the driver's leaders. Leaders may then have the relevant distraction/fatigue discussions with the driver.

Companies should ensure that:

- They have the resources to monitor and maintain the technology on an ongoing basis.
- Such controls are integrated into their existing land transport and driver management frameworks or other safety procedures.

Minimum required performance data to be collected for reporting shall include:

- Fatigue events
- Distraction events
- Tampering.

Appendix B: Distraction & Fatigue Detection Technology (cont.)

Funtional Requirements:

Objective: Monitor and alert drivers in real time when system detects driver is fatigued or distraction	
System Functionality	**Minimum Requirements**
Technology Type	Camera based technology capable of reliably functioning in day/night conditions, all road/weather conditions and with drivers wearing glasses, face masks etc.
Fatigue Event Detection	Real time detection of at-risk microsleep / drowsiness (e.g., based on eye closure).
Distraction Event Detection	Real time detection of at-risk distraction (e.g., based on eyes off the road).
Artificial Intelligence (AI)	Driver distraction and fatigue monitoring.
In-Vehicle Alerts	Audible and visual alerts, with seat vibration for fatigue events.
Event Footage Capture & Storage	Snips of fatigue or distraction events recorded for a few a few seconds before, during and after the event. Minimum 24 hrs storage historical playback.
Back to Base Monitoring	In vehicle alerts with event notification via email, SMS and/or, phone call for fatigue events.
Cameras	Driver facing and road facing.
Camera Quality	Black and white and infrared 720p @ 30 fps.
Communication	NextG/4G/5G connectivity.
System Integration	Vehicle identification and event location (GPS).
Unit Function Reporting	Ability to provide daily unit functionality report.
Reporting	Ability to provide daily event reporting.

IVMS settings, exceptions and reporting requirements are set out in the IVMS Specification. The IVMS Specification has been developed in order to provide high-level requirements which Queensland Natural Gas Exploration and Production Industry participants and IVMS providers may refer to when specifying requirements for IVMS events.

Distraction from mobile phones and other communication devices

Every member company should have a policy in place to minimise distraction. The policy should incorporate national and state laws on the use of mobile phones and UHF radios. Specific Operating Companies requirements will be incorporated into Contract Partner Companies contracts and are not covered in the Specification.