



Workplace Health & Safety rules with heavy vehicles

apply to the activities that heavy vehicles are involved in, because they are workplaces. A few types of road vehicles are prescribed plant equipment, including mobile cranes with a rating over 10 tonnes; mobile, elevated work platforms (EWPs); and dangerous-goods tankers. Technical standards for prescribed equipment apply to these types of vehicles and a specific design approval is needed from an authority. A design registration plate that shows the design registration number and other prescribed information must be affixed. Some jurisdictions also require individual plant vehicles to be registered with the local WHS regulator.

Any of the state and territory WHS authorities can issue a design approval. Comcare, the national WHS regulator, can issue design registrations for mobile cranes and EWPs, but not for dangerous-goods tankers. WHS legislation in all jurisdictions except for Victoria and Western Australia is now based upon the national WHS regulations. That is, it has been harmonised. Organisations that operate nationally can opt in to national regulations and deal with Comcare, whereas state-based companies must comply with the local WHS regulations and deal with the state regulator. Designers, manufacturers and body builders must research the applicable WHS regulations in each jurisdiction that they supply into.

PLANT EQUIPMENT

Vehicles with plant equipment installed that are not of a prescribed type must comply with the regulations and codes of practice that define the minimum safety features required. This places specific obligations on the designer of the plant equipment and, by association, on the installer and the distributor. Designers are required to ensure that all hazards associated with the use of the plant equipment are identified during the design – with ‘use’ including operation, maintenance, service, repair, inspection and cleaning. The design should seek to eliminate the risk of the hazard, where reasonably possible.

In practical terms, suppliers who provide vehicles with plant equipment attached –

such as concrete pumps, street sweepers, bin hooks, eductors and vehicle-loading cranes – should be able to produce a detailed hazard and risk assessment for the vehicle. Owners must have safe-work practices in place, and it is expected that owners will train and instruct operators in safe-work practices and that operators will implement those work practices.

Tow trucks are not registrable plant. This is the result of a decision by governments to have road agencies determine tow-truck features. Unfortunately, there is no national regulation for tow trucks, although the National Heavy Vehicle Regulator (NHVR) has this on its work program. ADR 44/00 requires tow-truck lifting gear to comply with AS 1418 Parts 1 and 2. The design and installation aspects also need to comply with Sections T1 and T2 of the national modification code (Vehicle Standards Bulletin VSB6) – assuming that the tow truck work was done as a modification. One important aspect of tow truck design is to limit the unloading of the steering axle to no more than 60 per cent of the tare weight due to load imposed on a rear under-lift arm by a towed vehicle. Tow trucks that pick up vehicles on public roads must carry prescribed equipment that could be useful, such as fire extinguishers, brooms, safety cones, wheel chocks and light boards for a trailing vehicle. To find out what is necessary, check the local state regulations.

Finally, the NHVR has foreshadowed that a new tipping truck or trailer body that is lifted by a hydraulic hoists must comply with AS 1418 Part 8, Section 4. This requirement is in VSB6, Section R and is mandatory for newly manufactured or modified tip trucks from 1 April, 2018. If you operate a business involving the installation of tip-body hoisting gear, you must follow up on this. Sound complicated? No, it isn't. The secret is to get all parties to cooperate to produce a safe working environment. A guide to some hazards that are easily identifiable is given in the table opposite.

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WORKPLACE HEALTH & SAFETY HAZARD	CONSIDERATIONS
Slips and trips	Work platforms with serrated edges and steps should be provided. Controls should be in easy reach. Controls located in the same general area are preferred. Easy access to control locations is essential.
Falls	Well-placed grab handles are required for cabin entry and for platform entry. Working at heights without guard rails is no longer acceptable.
Ease of control operation	Controls to be identified and the direction of operation signified. Provision to manually override pneumatic or hydraulic valves may be necessary.
Control illumination	Adequate lighting is needed at the control locations.
Emergency stops	Emergency stops are needed at multiple locations.
Programmable logic controls	Independently checks are needed by persons not involved in the programming or control system design. Controls should be operated in the incorrect order (controlled checks) to identify logic faults.
In-cab noise	Noise levels in the low 70s dB(A) are appropriate for a truck cabin.
Out-of-cabin noise	Occasional short-term noise exposure to 85 dB(A) should be the limit. Ear protection should be provided when noise levels exceeds 75 dB(A).
Rough ride in the cabin	The Australian standards that exist apply to earthmoving equipment. Drivers will describe a vibration level of 2m/s ² as very uncomfortable and level of 0.5 m/s ² as acceptable.
Fatigue	Fatigue factors are time at work, shift hours, vibration levels, noise levels and physical effort level. The maximum physical effort required by the operator should be determined and considered.
Crane and boom capability	Prescribed cranes must comply with the relevant parts of AS1418. Part 5 applies to mobile cranes and Part 11 applies to vehicle loading cranes. Part 10 applies to EWPs. Cranes and booms that are not prescribed should still be assessed against these standards. A clear lifting-limit placard is mandatory.
Leakage or explosion of dangerous goods	Dangerous-goods tankers must comply with the applicable parts of AS 2809. Dangerous goods must be transported according to the Australian Dangerous Goods Code 7.5. Explosion zones 0, 1 and 2 must be identified and suitable equipment used inside each zone.
Security of loads	Loads to be affixed according to the National Transport Commission's Load Restraint Guide.
Hoisting systems	Hydraulic hoists must be installed to comply with AS 1418 Part 8.
Protections against hydraulic and pneumatic system failures	Secondary (mechanical) locks must be provided for any feature that is suspended by hydraulic and pneumatic force in a location where a person could be present.
Strains during loading and unloading.	Load-handling assistance is required wherever manual lifting above 25kg is likely to occur.
Sunstroke and sunburn	Sunshades should be considered for working locations where operators stand outside frequently.
Dust and fumes	Consider fans to direct clean air over the work location. Provide personal protective equipment (PPE) breathing protection.
Electrical safety for low-voltage equipment (240VAC/415VAC)	The electrical system should be adequately protected physically and electrically. An electrical safety certificate should be obtained. The relevant standards are: AS 60204, AS 3000 and AS 3820.
Protrusions and attachments	Protrusions that an operator might clash with should be minimised, and highlighted – particularly at head height.
Injuries during roadside repairs	Specific work procedures must be documented for road-side work to minimise risks. Equipment must be carried.
Vehicle roll-away	Drive-away brake interlocks will usually be required. A protection is required against the interlock applying when the vehicle is moving.