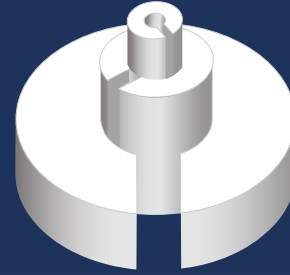


CLOCS-A

Heavy Vehicle Silver Standard



• A higher standard of equipment that is preferred for heavy vehicles complying with CLOCS-A technical requirements. Similar to UK CLOCS and broadly aligned to current NSW/VIC government major projects. Accreditation to Silver also requires prior accreditation to Bronze.



Left-Side Blind Spot Cameras
or
Left-Side Proximity Sensors
Left Turn Audible Warning

Day Run Lights

Front Underrun Protection



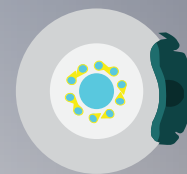
Side Underrun Protection
- Trucks

Rear Underrun Protection
Euro V Emission Standard



Side Underrun Protection
- Trailers

ABS - For Trailers



ABS - For Trucks



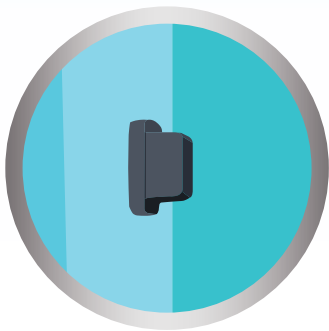
Left-Side Blind Spot Camera

Fit a camera system and in-cab screen to the vehicle to monitor the presence of left-side blind spot objects.

Pro: They can provide the driver with considerable confidence when driving large trucks in urban environments that may include Vulnerable Road Users near to the vehicle.

Con: The presence of the in-cab monitor may be a source of driver distraction.

OR

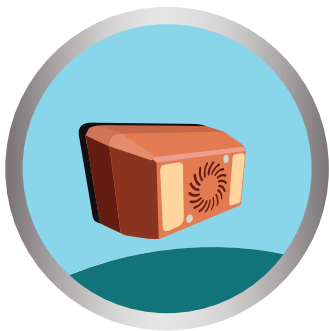


Left-Side Proximity Sensors

Fit a proximity sensor and alarm system to the vehicle to monitor the presence of left-side blind spot objects.

Pro: Compared to a blind spot camera system, proximity sensors offer the advantage of not requiring the driver to continually monitor a screen.

Con: Proximity sensors do not inform the driver if the object is a car, truck, cyclist, motorcyclist or pedestrian.



Left Turn Audible Warning

Fit a speed-sensitive left turn indicator that incorporates a recorded (spoken) audible warning message able to be heard by cyclists and pedestrians near the to left side of the vehicle.

Pro: It provides a bespoke audible warning to vulnerable road users, in contrast to other more typical visual measures.

Con: May not be able to be heard by motorcyclists wearing a crash helmet.

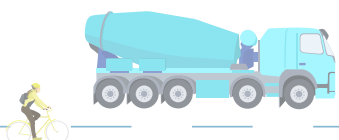


Day Run Lights

Fit 2 LED daytime running lamps to the front of the truck to enhance the awareness of trucks to Vulnerable Road Users by visual means.

Pro: Low tech but reliable and effective means of increasing road safety as they substantially raise the visibility of motor vehicles to other road users.

Con: The combined cost of parts and fitting may be significant at the higher end.





Front Underrun Protection

Have trucks fitted with a conforming Front Underrun Protection Device (FUPD) to help to reduce the severity of incidents.

Pro: They assist occupants of smaller vehicles to survive crashes with the front of a heavy vehicle.

Con: It is important the FUPD does not interfere with the vehicle's functionality when installed.

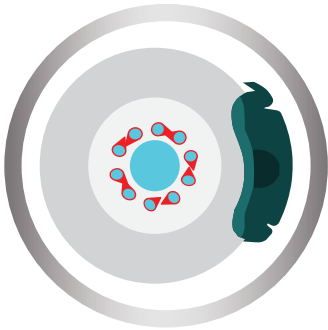


Side Underrun Protection Device – Trucks

Have trucks fitted with a conforming Side Underrun Protection Device (SUDP) to help reduce the severity of incidents.

Pro: Reduces the likelihood of pedestrians, cyclists and motorcyclists from entering under the sides of a heavy vehicle and being run over by the rear wheels.

Con: It is important that the devices do not interfere with the vehicle's functionality when installed.



Anti-lock Braking System – For Trucks

Have trucks fitted with an Anti-lock Braking System (ABS) to reduce the likelihood of heavy vehicles involved in incidents via advanced electronic driving aids.

Pro: In emergency stops, ABS has proven to be highly effective as an invaluable safety feature.

Con: ABS was not designed to reduce stopping distances and under some circumstances may increase it.



Rear Underrun Protection

Have the rearmost heavy vehicle unit fitted with a compliant Rear Underrun Protection Device (RUPD).

Pro: RUPDs prevent lighter vehicles from running under the rear of a heavy vehicle and being damaged by the heavy vehicle's unyielding structure.

Con: Cons relate to additional tare weight and cost, however these devices have been mandatory on trailers now for a very long time.



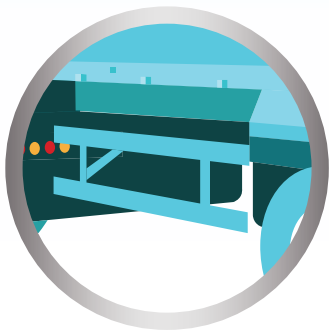


Euro V Emission Standard

The use of post-2010 model trucks with engines that comply with Euro V emission standards to reduce the impact of heavy vehicle exhaust emissions.

Pro: Will contribute to a reduced incident of disease and premature deaths attributable to air pollution.

Con: Adds weight, takes space and may use more fuel

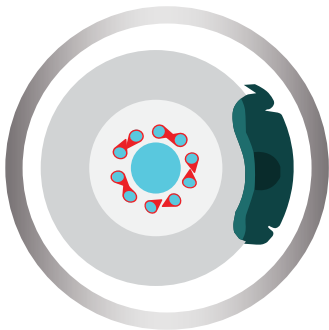


Side Underrun Protection Device – Trailers

Where a trailer is included in a heavy vehicle combination, have the trailer fitted with Side Underrun Protection Devices (SUPD).

Pro: Reduces the likelihood of Vulnerable Road Users from entering under the sides of a heavy vehicle and being run over by the rear wheels.

Con: additional tare weight and cost, and reduced accessibility to some equipment that may be directly behind the device.



Anti-lock Braking System – For Trailers

Where a trailer is included in a heavy vehicle combination, have the trailer fitted with an Anti-lock Braking System (ABS).

Pro: By eliminating trailer wheel lock-up the system helps to reduce the occurrence of trailer swing and jack-knifing.

Con: Relatively expensive compared to other measures.

