

Vehicle Safety Systems Awareness Package



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Safety Prompts

Symbols are used throughout this module to highlight specific points, particularly those that involve safety. The symbols and their meaning are shown below.



DANGER

This prompt is used when there is an immediate hazard that **IS LIKELY TO** result in severe personal injury or death if proper procedures are not followed.



CAUTION

This prompt is used to warn against potentially unsafe practices that **COULD** result in personal injury or death and/or property damage if correct procedures are not followed.



NOTE

This prompt is used when an operation, condition, or information is of sufficient importance to warrant highlighting.

VEHICLE SAFETY SYSTEMS

1. INTRODUCTION

Vehicles accessing and operating on OTML sites must be equipped with appropriate safety features and systems.

These include (depending on the type of vehicle):

- Seatbelt for driver and each passenger
- Trakpro vehicle tracking device
- SAFEmine collision avoidance system
- Front mounted buggy whip with a light and luminous Flag attached
- Yellow reflective tape on all sides of vehicle (and back of vehicle if body colour is not white)
- Equipment number (at least 100mm in height) and company logo (clearly visible)
- Operational two-way radio
- Automatically activated reversing alarm
- Current permit label for the area of operations that the vehicle is permitted to operate in (label must be clearly displayed)
- Current safety and registration stickers attached to the front windscreen
- Fire extinguisher that is fully charged, fit for use and within inspection date
- Fully stocked first aid kit
- Appropriately coloured, rotating, non-strobe beacon light.



Know your vehicle and operate within its capability and limitations according to the manufacturer guidelines. Observe and respond promptly to indicator and warning lights and gauges.



DANGER

Vehicle safety features and systems are there for your safety and the safety of your work mates. Safety devices are not to be tampered with.

2. OPERATOR OBLIGATIONS

As a vehicle operator you have the following obligations in relation to vehicle safety systems.

- During your pre-start inspection, make sure the vehicle has the required equipment fitted, and that it is clean and operational.
- Report missing and faulty safety equipment to your supervisor or maintenance.
- Tag out and do NOT use the vehicle until safety equipment has been replaced or fixed.
- Know what to do if a safety system alarm sounds and respond promptly.
- Make sure that planned maintenance of safety equipment is undertaken in accordance with manufacturer specifications and OTML schedule.

3. CABIN SAFETY SYSTEMS

3.1 Seatbelts

For your own safety always wear a seatbelt when operating the machine. All other occupants must also sit in an approved seat and wear a seatbelt during operations.

- Vehicles must not be operated if the seatbelts required for use are damaged.
- The maximum number of people in the cab of a vehicle shall be limited to the number of seat belts.
- Drivers must not allow people in the back of open-back vehicles or in or on attachments.

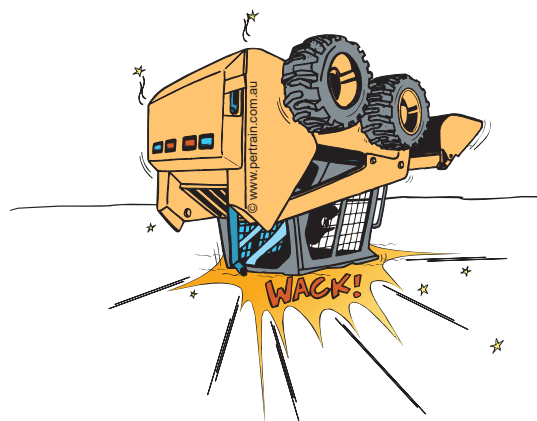


3.2 ROPS and FOPS

Mobile equipment subject to roll-over is fitted with roll over protection structures (ROPS) and signs in the cabin that provide safety directions for a roll-over event.

Mobile equipment working in the mine is also be fitted with falling object protection structures (FOPS).

ROPS and FOPS are integrated in the construction of the operator cabin. The purpose of these structures is to reduce the risk of an operator from being crushed or injured if the machine rolls over or is struck by falling rocks or debris.



4. VISIBILITY SAFETY SYSTEMS

Vehicles and mobile equipment are fitted with horns and lights for visibility and signalling.

Vehicles must also have yellow reflective strip around the sides and front of the vehicle. Vehicles that are not white must also have a reflective strip at the back.

Drivers shall use available vehicle equipment (orange flashing lights, buggy whip, spot-lights and/or fog-lights) to enhance visibility in poor conditions (fog, rain or smoke etc).

4.1 Lights

Lights include headlights, tail lights, brake lights, indicators and appropriately coloured, rotating, non-strobe beacon Light/s as per the following table:

Vehicle Type	Beacon Colour
Light Vehicle	Amber
Vehicles carrying explosive	Red
Road maintenance machines	Blue
Emergency vehicles	Red
Escort vehicles	Red

4.2 Buggy Whips

Light vehicles in all high-hazard areas (eg. Past Mill Concentrator plant, at Bige operations, in the Kiunga copper shed) must have a front-mounted buggy whip in the “up” position (to reach at least 4.6m but no more than 5.1m off the ground and include a light and luminous flag) and a roof-mounted orange flashing light that is on.

Buggy whip must be raised at mill warehouse 121 before entering mine and 5 mile security check point when travelling to Ok Menga, Bige or Kiunga.



4.3 Horn Signals

Operators of heavy vehicles use the following horn signals:

- One blast before starting the engine
- Two blasts before moving forward
- Three blasts before reversing.

To enable nearby personnel to move to a safe location, wait 5 seconds after signalling before moving the machine.



5. OPERATIONAL SAFETY SYSTEMS

5.1 Trakpro

Trakpro is a tough and intelligent fleet tracking unit that monitors and records driver and vehicle performance, including:

- Real-time GPS tracking of location and distance travelled
- Speed monitoring
- Harsh braking, cornering and engine data
- Driver duress / emergency alarm notification
- Driver performance (buses and trucks) based on actual log events
- Any accidents the vehicle may be involved in.

Trakpro's online tracking platform can send instantaneous alerts to phones or email accounts, allowing OTML allowing OTML personnel to be in control of such situations right from the minute they happen. Accurate and up-to-date knowledge of OTML vehicle positions and other driving related events is available 24/7. The Trakpro vehicle tracking system will enable OTML to be in control of OTML vehicles providing crucial information to management directly through a computer or any internet-enabled device via a wide-ranging set of advanced features:

- Tracking vehicles
- Reporting on vehicles and how they are being driven
- Identifying locations of vehicles
- Monitoring vehicle maintenance
- Alerts can be produced for events like speeding, unexpected movement, prolonged inactivity, leaving or entering restricted areas etc.

5.1.1 Speed Limits

Trakpro's Speed Limits feature updates drivers with accurate speed limit information for any given area- local, residential and highway roads included. It promotes safe driving and reduces the chances of a collision occurring by keeping drivers under the designated speed limits.

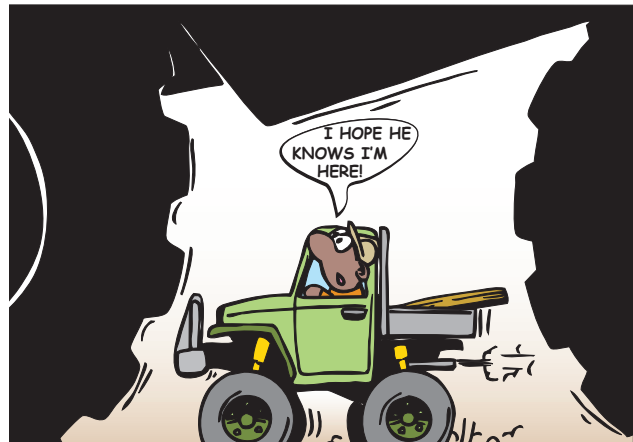
- Drivers shall not exceed the speed limits indicated by road signs.
- Where visibility or road conditions require it, drivers shall reduce speed to the extent necessary to maintain control and safety.
- Speed warning alarms must be adhered to.

5.2 SAFEmine Collision Avoidance System

SAFEmine Collision Avoidance System (CAS) uses audio and visual indications to prevent potential collisions and assists operators by improving traffic awareness, particularly in blind spots around the vehicle.

SAFEmine uses GPS via a Collision Avoidance System (CAS) to provide operators with:

- awareness of vehicles around them
- speeding alerts
- collision alert, if a possible collision is predicted.



NOTE

It's the responsibility of operators to ensure that they know how to use the SAFEmine system BEFORE operating a vehicle.

5.3 ADAS Fatigue Management

The Advanced Driver Assistance System (ADAS) uses a vehicle camera to monitor fatigue symptoms and provides a warning if the driver displays fatigue symptoms such as yawning, head drooping or closing the eyes. The ADAS systems provides a loud audible alert if fatigue symptoms are detected.

6. EMERGENCY SAFETY FEATURES

Mobile plant and vehicles should be equipped with the following safety equipment.

6.1 First aid kit

All vehicles must have a first aid kit that is easily accessible. First Aid Kits are to be secured and sealed. Inspections of the contents of the first aid kit are to be made on a regular basis, e.g. every 3 months, after it has been used, and when obvious damage to the kit is visible. The kit must be stocked in accordance with OTML standards and will include:

- First Aid booklet
- Wound dressings and bandages
- Safety pins
- Scissors
- Disposable gloves
- Instant ice pack
- Thermal blanket.



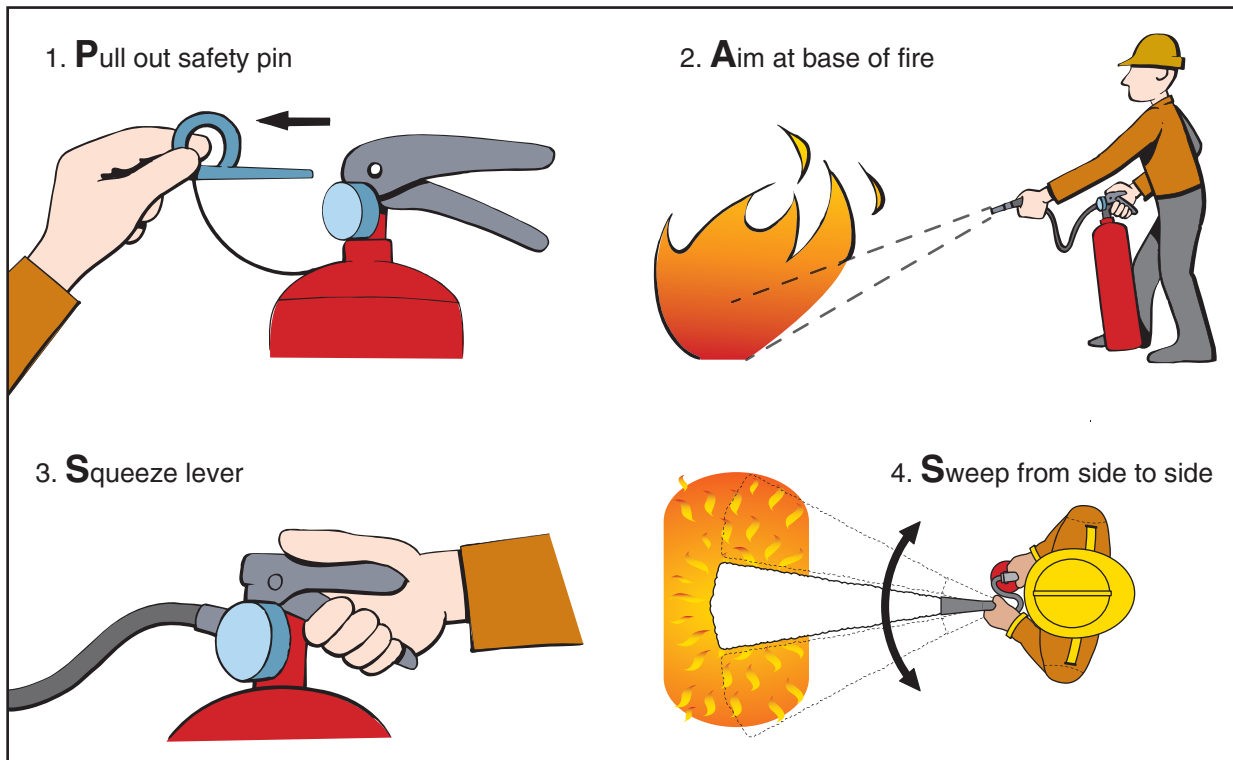
6.2 Fire extinguisher

Fire extinguishers are your first line of defence when you are confronted with a fire. Do not fight the fire if the following conditions exist:

- You don't have the proper equipment
- You don't have the correct type or large enough extinguisher
- You have not been trained or instructed in using a fire extinguisher
- You might inhale toxic smoke
- Your instincts tell you not to.



The following graphic shows the PASS technique for using a fire extinguisher.



NOTE

Once you have discharged the fire extinguisher move to a safe place to wait for assistance. Do not put the discharged extinguisher back in your vehicle. It must be tagged out and replaced.



DANGER

Do not attempt to fight a fire unless it is safe to do so.

6.3 Fire suppression system

Vehicle fire suppression systems are pre-engineered fixed branch systems designed for installation to mobile equipment.

The system consists of:

- Suppressant storage cylinders containing dry chemical suitable for Class A (solids), Class B (liquids), and Class C (electrical) fire hazards
- System actuators
- Delivery nozzles positioned around the machine that target key hazard areas including the engine, transmission, hydraulics and operator station.



The system can be discharged manually by a button in the equipment cabin or externally on the vehicle, or automatically using detection and control devices.

6.4 Emergency Stop Button (E-stop)

If an emergency situation arises and you have to stop the vehicle immediately, use the E-stop button in the cabin or externally on the vehicle.

1. Bring the vehicle to a stop as soon as possible
2. Move the transmission to neutral
3. Apply the park brake
4. Press the emergency stop button (or turn the ignition switch to off if there is no emergency stop button)
6. Remove the cabin fire extinguisher, if required, and exit the operator cabin if safe to do so
7. Notify your supervisor and maintenance immediately using the nearest possible communication device.



CAUTION

Activating the E-stop shuts down the engine immediately without an idle down time. This can cause equipment damage and must only be done in an emergency.



NOTE

After an emergency stop, do not operate the vehicle until a complete check has been made of the vehicle and necessary repairs have been completed.

7. OTHER SAFETY SYSTEMS

Mobile equipment and heavy vehicles are also equipped with manufacturer standard safety systems such as:

- Electronic braking systems
- Electronic stability control
- ABS
- Trailer stability control
- Reversing alarms
- Traction and descent control
- Wheel bearing temperature monitors.

8. TRAINING

Drivers and operators will be informed about the features of the vehicle they are operating.

It is your responsibility to ensure that you are aware of and know how to operate the safety systems in your vehicle.



CAUTION

Do not operate a vehicle if you are not trained and licensed for that type of vehicle and competent in the use of all its safety features.

9. INSPECTION AND MAINTENANCE

The safety devices and features fitted to vehicles and mobile equipment must be inspected and their functional performance maintained. The existence and functional performance of safety devices and features fitted to vehicles and mobile equipment must be assessed daily as part of the pre-start/post-start inspection and audited as part of an annual auditing cycle. Check condition and / or operation of vehicle or mobile equipment safety devices before use. If defective, do not use vehicle and report defect to a supervisor.

- Check the vehicle, tools and any other equipment for serviceability before taking them on site.
- Faulty or damaged equipment must be taken out of service, tagged, reported and repaired according to site procedures.
- Make sure that planned maintenance of safety equipment is undertaken in accordance with manufacturer specifications and OTML schedule.



