Road Safety Rules

Awareness Package

Contents

ROAD SAFETY RULES

1. INTRODUCTION

Driving is something most of us do every day. It can also be one of the most dangerous things we do.

All OTML personnel, contractors and visitors operating or travelling in any vehicle while at work, or on their way to or from work, must demonstrate low-risk driving behaviours. These behaviours include:

- Ensuring that you are physically fit and competent to drive the vehicle
- Taking appropriate rest breaks
- Driving to the road conditions
- Following procedures and road rules.

The requirements of the PNG Motor Traffic Act 1950 must be complied with.

In addition to this, operational areas of OTML will have developed and implemented a Traffic Management Plan based on risk assessments. The plan identifies the site road rules for:

- Maximum speed limits
- Give way
- Overtaking
- U-turns
- Horn signals
- Separation requirements for vehicles
- Minimum approach distances
- Park up.

Site and project inductions should include information regarding road safety and the hazards associated with traffic management, mobile vehicle and road safety and pedestrian safety.

2. SAFETY

You are responsible for complying with all safety rules, regulations, policies and guidelines applicable to the work site. You must also take reasonable care for your health and safety and ensure that your actions do not adversely affect the health and safety of others.

General site rules regarding vehicle movement must be followed to ensure the safety of all personnel.

- All vehicles in operational areas must be checked and authorised for use on site.
- All vehicles must have a two-way radio.
- All vehicles must give way to emergency vehicles displaying their emergency lights.
- All light and medium vehicles must have an appropriate flashing light activated when in an operational area.
- All vehicles entering a designated (signposted) heavy equipment circuit must make contact with the circuit and receive acknowledgment before proceeding.
- Do not approach within 50 metres of operating equipment before notifying the operator. Acknowledgment must be given before approaching.
- While travelling on site roads, maintain a 50 metre distance from the vehicle travelling in front.

2.1.1 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. Never carry passengers in or on attachments or in the back of open-back vehicles.

DANGER

NEVER get on or off a moving vehicle.

3. COMMUNICATION

The two-way radio is a common communication tool used on site.

When using the radio, identify yourself at the start of the message and wait for confirmation before proceeding (Positive Communication). When using communication equipment:

- Make sure you know how to use equipment before you need to use it
- Know the site area and emergency radio channels
- Inspect equipment before use and make sure that it is operational (tag out and report if damaged or faulty)
- Have spare power source (batteries, power cable)
- If working in a remote area, consider having more than one method of communication available (e.g. radio and satellite phone) in case one does not work in an emergency situation
- Acknowledge communication directed at you
- Do not swear or use offensive language on the two way.

CAUTION

Do not use a hand held mobile phone when operating equipment.

3.1 Signs

A sign displaying a safety message carries the same authority as a direct instruction from your supervisor. Failure to obey a sign can result in disciplinary action, injury or death. The following table shows different types of signs common on mine sites.

		
Traffic Signs Must be adhered to. Speed limit signs are the maximum speed limit. Always drive to conditions.	Prohibitory Signs Indicate an action or activity that is not permitted.	Warning Signs Indicate a hazard that is not likely to be life threatening.

3.2 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.

4. OPERATING VEHICLES

During the planning phase ensure that you select the correct vehicle for the task.

- Do not exceed the load capacity when loading anything in a vehicle.
- Do not exceed the maximum passenger limits.
- All passengers must sit in a proper seat and wear their seatbelt while the vehicle is operating.

Only use the vehicle for the purpose for which it is intended. For example:

- do not overload the tray of a light vehicle if the load would be better suited on a tray back or medium rigid vehicle
- a bus is for transporting people, not any other type of cargo.

Vehicle Classification

LV Light Vehicle

A motor vehicle (with or without a trailer) that:
- has a maximum weight of 4.5 tonne gross vehicle mass (GVM)
- is built or fitted to carry no more than 12 adults, including driver.

LR Light Rigid

A bus, truck, prime mover or a mobile crane less than 8t GVM.

MR Medium Rigid

A bus, truck or a mobile crane over 8t GVM with a maximum of 2 axles

HR Heavy Rigid

A Haul truck or a prime mover over 8t GVM with more than 2 axles

HC Heavy Combination

A truck (including a prime mover or mobile crane) over 8t GVM with a trailer of more than 9t GVM.

MC Multi-combination

A B-double (prime mover towing 2 semitrailers, with 1 semitrailer supported at the front and connected to the other semitrailer)

A road train (motor vehicle, other than a B-double, towing 2 or more trailers)

Other considerations include the following.

- 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.
- Always use the turning indicators well in advance, to notify others of your intention to turn.
- 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.
- Drive to conditions. If conditions change, your operating technique should change, e.g. go slower in the rain.

4.1 Journey Management Plan

Your role may require you to take the vehicle off site for varying reasons, for example:

- driving from one work site to another
- collecting parts or supplies from a supplier
- transporting an injured worker to the hospital.

Check that the vehicle that you are taking off site is registered for use on public roads.

Plan your trip before you leave site. Use GPS navigation equipment or a current map of the area and develop a Journey Management Plan (JMP). Your JMP should include:

- Details of driver and passengers, including contact details
- Destination
- Day, date and time of departure and expected arrival at the destination
- Route
- Known hazards and controls
- Resources and supplies.

Leave a copy of your JMP with your supervisor, and call in at agreed times throughout the journey.

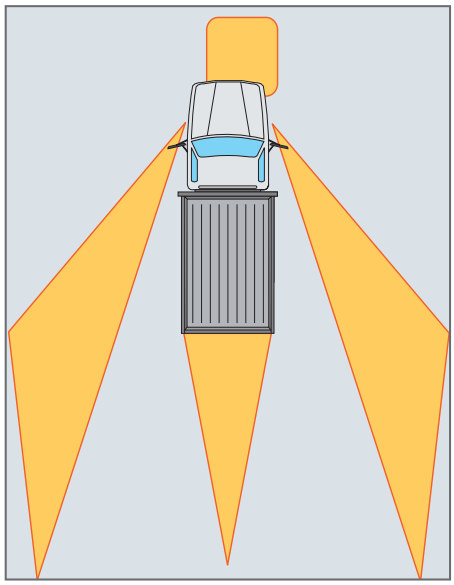
CAUTION

Do not use the navigation equipment or read a map if you are driving the vehicle if it requires you to take your eyes off the road, or your hands off the steering wheel.

4.2 Blind Spots

Blind spots are the areas not visible from the operator's seat and may hide other vehicles, machines, pedestrians and obstacles. Follow these guidelines.

- Before moving off, check the area around your vehicle for other vehicles or personnel.
- Look over your shoulder before moving off, changing direction, turning corners or overtaking. This is preferable to just using your mirrors.
- As you move off, look ahead and check the path is clear.
- Check the rear view mirror as you drive.
- Keep a sharp watch to the left and right.
- Use a spotter in tight areas.



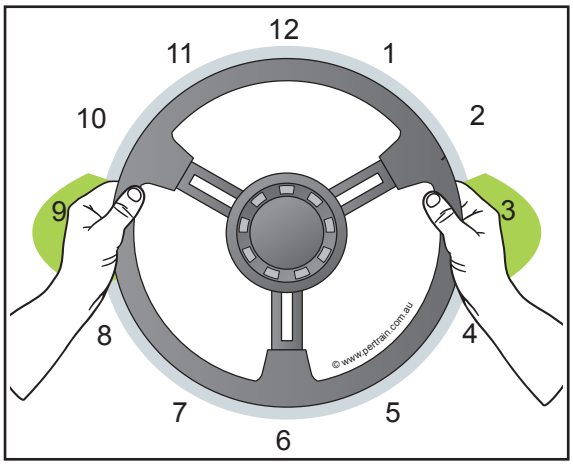
CAUTION

Remember, the bigger the vehicle, the bigger the blind spots.

4.3 Driving Techniques

When you get into a vehicle, adjust the seat, mirrors and steering wheel position (if applicable) so that you are seated in an alert yet comfortable position.

Place hands on opposite sides of the steering wheel, e.g. with the left hand at 9 o'clock and right hand at 3 o'clock. This gives you greater control over your vehicle and the risk of hand injury from airbag deployment is minimised.



Use the hand-over-hand technique when turning sharp corners. Straighten out the steering wheel by hand. Do not let the wheel slip through your fingers uncontrolled.

CAUTION

Never put your hand through the steering wheel to turn.

4.3.1 Cornering

Conduct turns at low speed with a small turn radius or at operational speed with a larger turn radius (as normally encountered on the road). The rate or speed of entry into a turn, coupled with the vehicle weight and the distribution of that weight over the drive and steer axles, will determine how the vehicle will steer. Follow this sequence when approaching a bend or a turn.

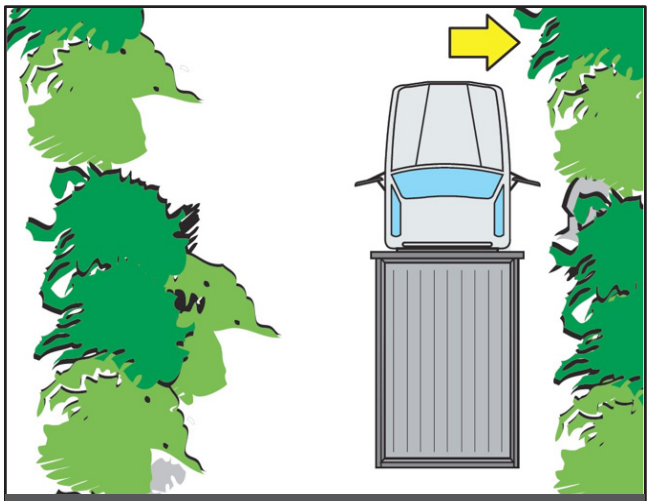
1. Slow the vehicle speed down to a point where you are certain that it is capable of safely negotiating the corner. Your decision on how much to slow down will be based on the:
   - curve of the bend
   - road surface condition
   - visibility entering the corner
   - width of road available to you.
2. Decelerate into the corner and accelerate out.
3. When you approach a left bend or corner, position the vehicle as far to the right on your half of the road as practicable. This gives you better vision around the bend, makes for a straighter line of travel through the corner and less steering lock will need to be applied. This also generates less body roll, weight transfer and subsequent loss of stability.
4. Maintain the most constant radius possible after you have entered the corner. This prevents the vehicle from becoming unbalanced in the tightest part of the corner.
5. As you exit the turn, smoothly return the steering to a straight position to return the vehicle weight evenly back over the wheels.

4.3.2 Reversing

Use the rear-vision mirrors and reversing camera (if installed). Look all around you before reversing. Remember that items in the mirrors may be closer than they appear.

Pay attention to proximity alarms if fitted.

When reversing in a tight situation, maintain minimum clearance on the near side (driver side). You can then be confident that there is sufficient clearance on the off-side of the vehicle. Continually check the off-side mirror when performing this manoeuvre, to ensure that no obstructions are present.



Minimum Clearance Driver Side

NOTE

If necessary, have a spotter with a clear view of the sides and rear of the vehicle direct you and assist in controlling the area while you are reversing.

4.3.3 Slowing and Braking

Slow the vehicle using a combination of accelerator control, appropriate downshifting (if manual transmission) and brake application.

The stopping distance is affected by the driver's reaction time and the braking distance.

Driver Reaction Time

The driver's reaction time is the time it takes from recognising a hazard until the time the brake is actually applied. Typically this is about three quarters of a second.

Braking Distance

The braking distance is the distance the vehicle travels after the brake is applied until it stops. This distance depends on the ability of the brake lining to produce friction, the brake drums to dissipate heat and the tyres to grip the road. If the brake drums become too hot, braking effectiveness is reduced.

The heavier the load and the faster the speed, the longer will be the stopping distance and the greater the force required to stop the vehicle.

Always test the brakes immediately after driving through deep water or washing the vehicle to ensure they are working correctly. If the brakes pull to one side or do not work effectively, drive slowly along the road with the brakes on until they heat up and dry off. This should restore brake effectiveness.

The following are some key considerations when braking.

Technique	Key Points
Brake early and gradually	• Apply the brakes early for smoother stops, greater control and less wear on the brakes. • Braking early also makes the vehicle movement more predictable, and therefore safe for other personnel.
Brake in a straight line	• The greater the effort of brake application required the more important it is to ensure that the vehicle is travelling in a straight line. • Always brake before entering a turn, not during the turn. • Braking on bends is dangerous due to the risk of skidding or overturning and should only be carried out in an emergency. If you must brake on a bend do so as gently as possible.
Allow for the load	• Adjust braking techniques for different loads. • When the vehicle is fully loaded, it requires greater braking effort to slow down or stop and a greater braking distance is required. • An empty or lightly loaded vehicle will have reduced braking stability, with the possibility of wheel lockup and skids.
Match vehicle braking to the road surface	• Adjust your braking techniques to suit the road conditions. • Allow extra braking distance and brake smoothly if the road surface is wet or slippery. • Constantly monitor the road surface conditions.
Ease off as the vehicle slows	• Ease off the brake pedal as the vehicle slows as it takes less braking effort to continue slowing at the same rate. • If the brake pedal is not eased off, the vehicle will come to an abrupt or violent stop and could possibly lock the wheels in slippery conditions.
Avoid fanning	• Avoid fanning (repeatedly applying and releasing) the brakes as this increases brake temperature and wear. • One of the most common causes of brake loss on long downgrades is overheating due to failure to select a low enough gear.

4.4 Defensive Driving Techniques

There may be several driving hazards when operating the light vehicle, including other vehicles and machines, changing environmental conditions, pedestrians, obstacles and confined working spaces. To drive safely, you need to be aware of what is happening all around your vehicle and apply a defensive driving technique for safe and efficient driving.

4.4.1 Observation Skills

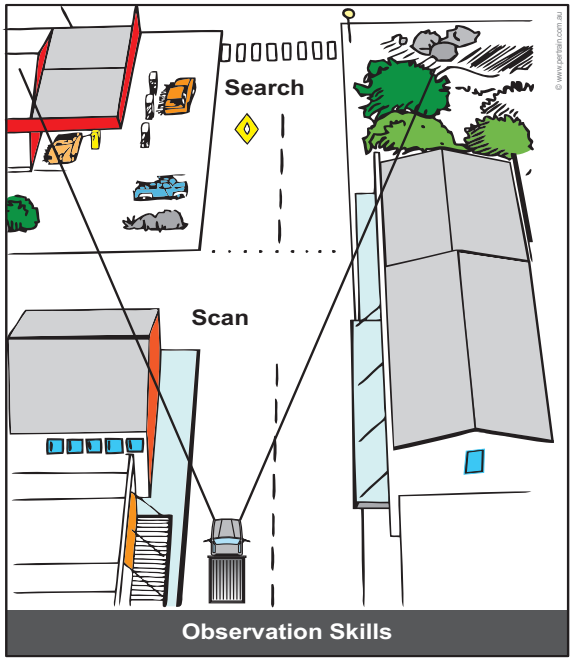
You need to develop superior observation skills to be a good defensive driver. Failure to observe the road and surrounding area carefully is a major cause of accidents. You should be seeing what is happening at least 12 seconds ahead of your vehicle or you will not be giving yourself sufficient time for the necessary reactions and decisions.

Constantly scan the area you are driving through, keeping your eyes moving and looking as far ahead as possible.

Frequently check your mirrors. You must know what is happening ahead, to the rear and on both sides of your vehicle.

Key points for developing a good scanning technique include:

- aim high
- get the big picture
- keep your eyes moving
- leave yourself with a way out
- make sure other drivers and pedestrians see you.



Observation Skills

4.4.2 Forced Off the Road

The most common conditions that may force the vehicle off a road are narrow bitumen surface, loose gravel, an approaching vehicle or an object falling from a vehicle.

- Do not brake suddenly. If you apply excessive brake pressure, you may lose control of the vehicle. Take your foot off both the accelerator and brake. Let the vehicle slow down on its own.
- To go around an object, maintain travelling speed and turn the vehicle just enough to avoid the obstacle. Be firm but smooth in your movements, using a full steer with both hands to move the vehicle to the side and then back.
- Counter steer to keep the vehicle straight if the rear swerves. Look to where you want to go on the correct side of the road, past the obstacle.
- Once the immediate danger has passed and you are travelling in a forward direction, brake as necessary.

CAUTION

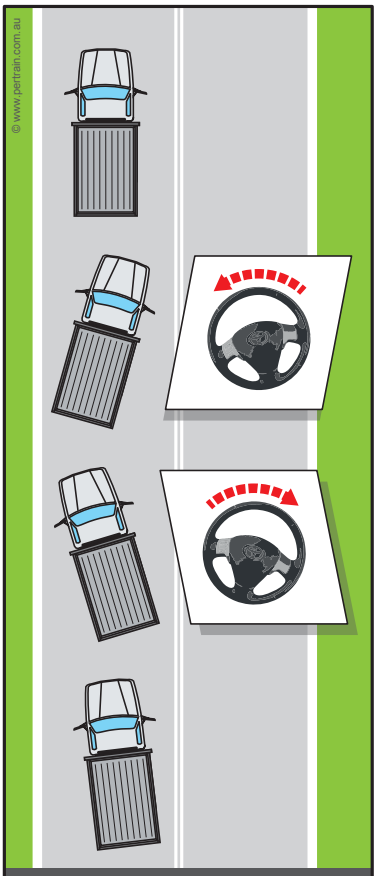
Keep looking at where you want to go, not at the object you are trying to avoid.

4.4.3 Dealing with Skids

Skids are caused when the tyres can no longer grip the road, e.g. road is wet or icy. Skids are usually caused by drivers travelling too fast for the conditions.

If your vehicle begins to skid follow these steps.

- Do not use the brake until the vehicle slows. Your brakes will not work and could cause you to skid more.
- Turn the steering wheel in the direction you want the vehicle to go.
- As soon as the vehicle begins to straighten out, turn the steering wheel back the other way.
- Continue to correct your steering, left and right, until the vehicle is again moving down the road under your control.



Controlling a Skid

4.5 General Traffic Rules

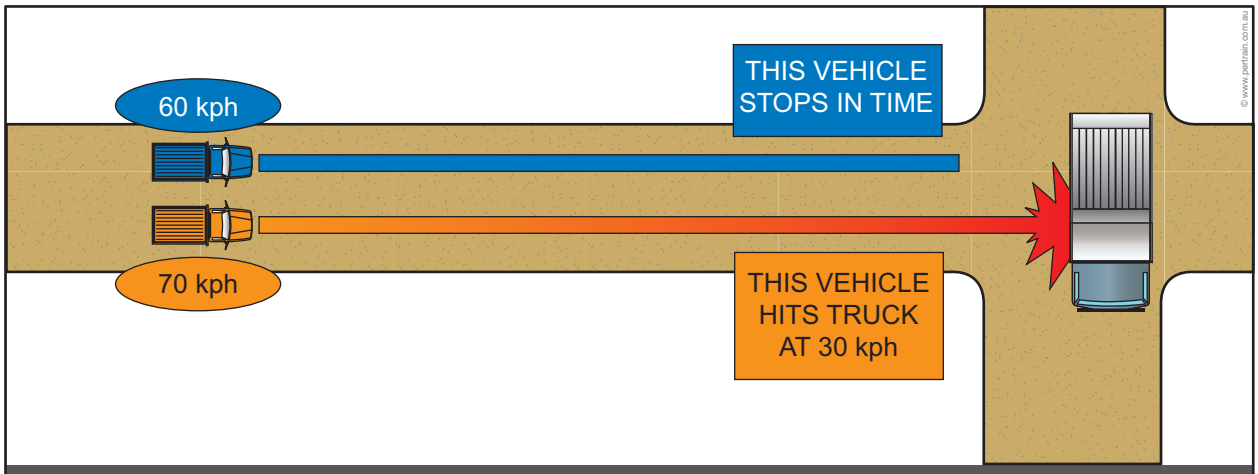
Traffic rules (on and off site) are in place for the safety of all personnel. You must obey all traffic rules and signage.

4.5.1 Speed Limits

Excessive speed multiplies the chances of getting into trouble and decreases the amount of time you have to react to a situation. For example:

- Double the speed = 4 times the braking distance.
- Triple the speed = 9 times the braking distance.

Greater speed also increases the impact if you hit something, increasing the risk of injury or death.



Speed - The Dangerous Multiplier

Speed limits vary according to location and site and should be clearly signed. Speed limits are maximum only. Weather, road and traffic conditions should be taken into account when determining safe speed.

Typical site speed limits are:

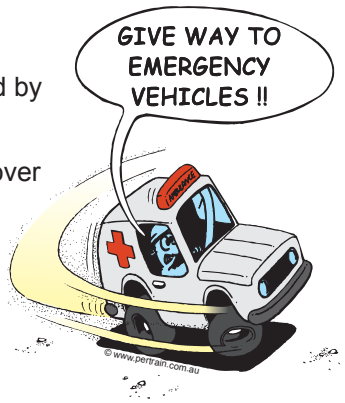
Speed Limit	Location	Speed Limit	Location
	Shared areas where pedestrians are present, e.g. offices, workshop, handling/ processing plant		Access ramps, towing, around infrastructure.

4.5.2 Traffic Flow

Traffic flow problems are amplified by the large size of production machinery, restrictions on haul and mine roads and, particularly in the case of underground mines, poor visibility. Observe the following:

- maintain a 50 metre minimum separation distance from any vehicle while travelling
- sound vehicle horn when approaching a corner or intersection, if site procedures require this
- in one-way traffic flow, observe traffic control lights and use passing bays
- approach an intersection with caution; go when you are sure no other vehicle or person is coming
- drive around corners with care, especially when vision is restricted. Use a spotter if necessary.

4.5.3 Right of Way



Normal traffic rules apply in operational areas, except if otherwise directed by signs. General right of way rules are shown below.

- Emergency vehicles, in an emergency situation, have right of way over all other vehicles.
- Road maintenance plant working on the road (grading or watering) have right of way over other vehicles and mobile plant.
- Light vehicles are to give way to operating production vehicles.

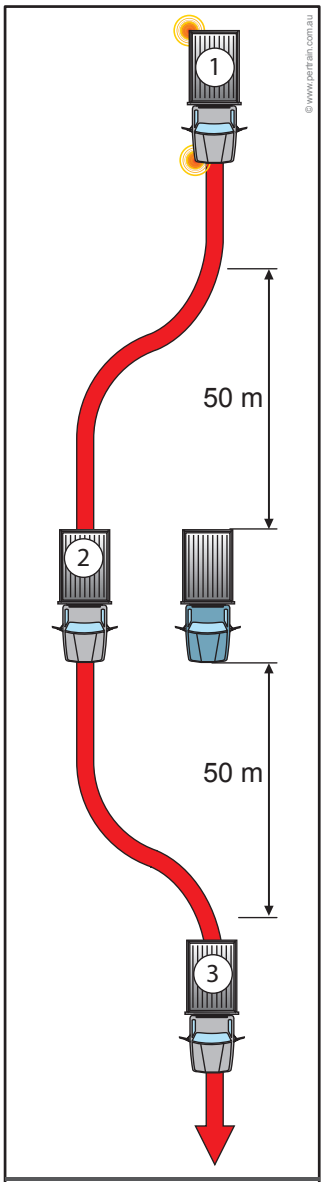
CAUTION

Whether you have the right of way or not, check it is safe to proceed before doing so.

4.5.4 U-Turns

U-turns are not permitted on ramps in open cut operations.

4.5.5 Overtaking



Follow site traffic rules for overtaking or passing other vehicles.

- The operator of the overtaking vehicle is responsible for ensuring that conditions are safe for overtaking.
- The vehicle operator must acknowledge the driver of the overtaking vehicle and confirm that it is safe to overtake.

Use the following guidelines when overtaking.

Stage 1	• Do not attempt to overtake unless you can see for 100 metres in front of the vehicle you are passing. • Ensure that the minimum 50 metre safe distance with the vehicle in front is maintained before overtaking. • Contact the vehicle ahead by two-way radio before attempting to pass. • Wait for acknowledgement before starting the manoeuvre. • Use the indicator to signal before overtaking.
Stage 2	• Move into the oncoming lane if there is still no oncoming traffic. • Maintain constant visibility of any oncoming traffic. • Keep a safe distance from the other vehicle as you move past.
Stage 3	• Ensure that there is a 50 metre safe distance between you and the other vehicle before signalling again and returning to the correct lane. • Turn off the turn signal.

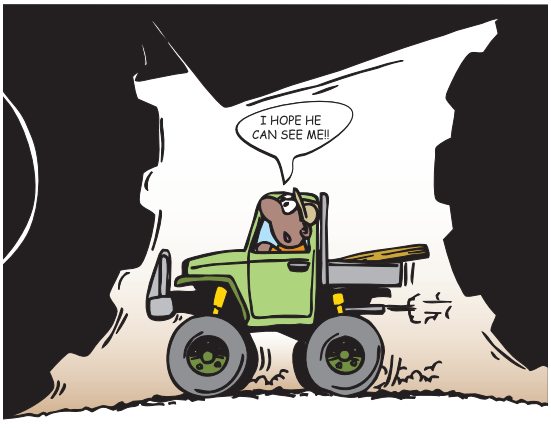
When overtaking:

- maintain constant visibility of on-coming traffic
- make sure that you are visible in the vehicle's rear view mirror until you pull out to overtake
- do not cut in too quickly on the blind side of the overtaken vehicle.

DANGER

Do not overtake:

- an emergency vehicle
- a water spray truck with water sprays in operation
- explosives vehicle, haul truck, convoy
- in the vicinity of a Wopa Stopa
- if it requires exceeding the speed limit.



4.6 Park-up and Shutdown

Vehicles must be parked according to site procedures.

- Observe site parking regulations.
- Use designated park-up spaces.
- Park light vehicles and heavy equipment in separate areas or with adequate separation between them, e.g. minimum distance of 5 m between each vehicle.
- Do not park within 50 metres of operating machines unless in a designated parking area.
- Do not park under or near a highwall.
- Park on level ground if possible.
- Park where you are clear of traffic flow and visible to other operators.
- Park in a V-drain or over a hump, or turn the front wheels into the kerb, rill or embankment.
- Chock the wheels to prevent uncontrolled movement if you must park on a slope.
- Keep the rotating beacon on if you must park in an operational area.
- Reverse park so that you can go forward when leaving the parking space, if possible.
- Follow the manufacturer's recommendations for parking-up and shutting down.
- Gear shift in neutral or park and park brake applied.
- Lower any implements or attachments to the ground.
- Do not leave a load suspended when parked.
- If you are only leaving your vehicle for a short time, turn the ignition off, make sure that the park brake is on, the transmission is in the correct gear and the vehicle is fundamentally stable. Leave rotating beacon on.
- If you are leaving your vehicle for an extended period, remove the keys (unless otherwise stated in your site procedures) and isolate the vehicle to prevent inadvertent movement. You must ensure that the vehicle is fundamentally stable before leaving it.

5. NON-COMPLIANCE

Failure to observe vehicle standards and road rules will result in license or driving permit demerit points as follows.

	Points / Action
Positive BAC or drug test	Termination
Driving without valid OTML permit for vehicle class	Termination
Trakpro speeding 20 kph or more over speed limit	12
Trakpro speeding greater than 10 kph but less than 20 kph over speed limit	4
Failure to comply with applicable standards or road rules	3
Use of vehicle for personal business without authority	2

If a driver accumulates 12 Demerit Points or more their Driver's Permit will be suspended.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