Government of **Western Australia**
Department of **Transport**

# Heavy vehicle competency standard

The driver competency standard specifies the attributes of safe heavy combination driver performance and behaviour. The standard will become the foundation for both training and assessment.

## Using the standard

This competency standard contains much detail, which explicitly describes the performance, which licensing services requires from heavy combination drivers.
It will be the foundation for the training and assessment of heavy combination drivers.
Accredited training providers will be required to use it to develop checklists of learning points and devise comprehensive training programs.

## Outline of the standard

This section explains where the units come from and then summarises the units with their elements. The 'standard in detail' part of the then gives the whole structure: in units, elements and performance criteria. Most elements have further explanation and background information.

**Table 1: Structure of a competency standard**

| | |
|---|---|
| There is a key purpose of the function or role that must reflect the needs of an industry or enterprise. | |
| What must happen in order to achieve this key purpose ... | Is called a **Unit of Competence.** Units are worded in terms of an outcome. |
| What the individual must do to show they have achieved the unit ... | Is called collectively the **Elements.** They are oriented towards performance, and have a start and a finish. Elements should be unambiguous, measurable and describe performance in terms of results not procedures. |
| What level of performance is expected in each element ... | Is collectively called the **Performance Criteria.** They should be realistic, attainable and measurable. |
| When and where this is to happen ... | Is specified in the **Range of Variables** |
| Contexts for assessing and specifying evidence ... | Is specified in the **Evidence Guide** |

In the heavy combination driver competency standard, the key purpose is for the individual 'to effect safe, efficient personal mobility by operating a heavy combination vehicle in the public traffic system'.

**Table 2:**
**Units in the standard come from key issues of driver performance**

| **To achieve the key purpose the individual must:** | |
|---|---|
| **1. Operate vehicle** | These are the most basic skills you need so that you can safely operate the vehicle, move off and stop. |
| **2. Guide and control vehicle** | These are the things you have to be able to do to accurately drive and position the vehicle on the road. (They are separate from dealing with traffic.) |
| **3. Drive in orderly traffic system** | These are driving techniques you use in a traffic system where everyone is obeying the rules.<br><br>Eventually you use these techniques almost without thinking. |
| **4. Minimise conflict** | Driving conditions will not always be ideal. People can make mistakes, or take chances in spite of the rules. Experienced drivers 'second-guess' what might happen. This helps them avoid getting hurt.<br><br>Experienced drivers can also control things about themselves that could cause danger.<br><br>Together, the elements in this unit help you to avoid trouble before it starts. |
| **5. Manage crisis** | It is possible to reduce conflicts on the road, but not get rid of them completely. Most drivers at some time find themselves in trouble.<br><br>Experienced drivers have yet another set of ways to do something about a crisis, or at least make it not quite so bad. |
| **6. Evaluate and adjust driving** | This unit describes how you can learn from experience and become a better driver.<br><br>It also mentions some important things you need to know about road safety. |

**Table 3:**
**Summary of units and elements in the heavy combination driver competency standard**

| **Unit**<br>To drive a motor vehicle in the public traffic system you must be able to: | **Elements**<br>To perform the unit, you do this: |
|---|---|
| **Unit 1.**<br>**Operate the heavy combination vehicle** | 1. Prepares to drive.<br>2. Moves off.<br>3. Monitors and uses instruments and switches.<br>4. Conducts a mid-trip inspection.<br>5. Stop |
| Unit **2.**<br>**Guide and Control the Heavy Combination Vehicle** | 1. Manoeuvres the vehicle.<br>2. Manages the accelerator.<br>3. Manages the brakes.<br>4. Manages the steering.<br>5. Uses the engine's transmission.<br>6. Uses and co-ordinates inputs. |
| **Unit 3.**<br>**Drive in an orderly traffic system** | 1. Uses safe driving procedures.<br>2. Navigates the road system.<br>3. Negotiates the road and traffic system.<br>4. Interacts with traffic.<br>5. Drives efficiently in the traffic system.<br>6. Responds to conditions of poor visibility. |
| **Unit 4.**<br>**Minimise conflict** | 1. Adjusts to environment.<br>2. Responds to situations within the environment.<br>3. Avoids stressful/difficult situations.<br>4. Responds to stressful situations.<br>5. Manages motivations. |
| **Unit 5.**<br>**Manage crisis** | 1. Avoids imminent crisis.<br>2. Uses and co-ordinates inputs to retain or restore control of the vehicle.<br>3. Follows procedures in the event of a crash.<br>4. Follows procedures in the event of own vehicle breaking down. |
| **Unit 6.**<br>**Evaluate and adjust driving** | 1. Monitors and improves performance.<br>2. Monitors and modifies behaviour.<br>3. Monitors other road users' behaviour.<br>4. Monitors and responds to risk factors. |

# Unit 1 - Operate heavy combination vehicle

There are some things you need to be able to do so that you can safely operate the vehicle. They are called skills.

Operating the vehicle can be broken down into these five elements:

**1.1 Prepares to drive.**

**1.2 Moves off.**

**1.3 Monitors and uses instruments and switches.**

**1.4 Conducts a mid-trip inspection.**

**1.5 Stops.**

| Elements | Performance Criteria |
|---|---|
| **1.1 Prepares to drive.** | 1. Legal requirements are confirmed.<br>2. Pre trip checks are conducted.<br>3. Results of inspection and checks are recorded.<br>4. A cabin drill is performed.<br>5. Mirrors are adjusted for maximum vision.<br>6. A driving posture that permits effective control and operation of the vehicle is adopted.<br>7. Climate control and demisters are set.<br>8. Seat belt is secured and adjusted. |
| **1.2 Moves off** | 1. Engine is started.<br>2. Gear is selected.<br>3. Vehicle is moved off with co-ordinated inputs.<br>4. Mobile checks are conducted.<br>5. Vehicle is moved off on an incline. |
| **1.3 Monitors and uses instruments and switches.** | 1. Gauges and warning lights are checked after the engine starts.<br>2. Whilst driving, necessary action in response to gauges and warning lights is taken.<br>3. Switches and auxiliary controls are used according to needs. |
| **1.4 Conducts a mid trip inspection.** | 1. On road inspections are made when appropriate. |
| **1.5 Stops.** | 1. Inputs are co-ordinated to stop the vehicle.<br>2. The park brake and trailer brakes are applied.<br>3. The engine is shut down.<br>4. A post trip inspection is conducted.<br>5. The vehicle is parked safely and secured. |

## 1.1 Prepares to drive

**1.1.1 Legal requirements are confirmed.**

**Essential legal requirements include:**

- common road law requirements associated with B doubles and road trains, including Road Traffic Code, Road Traffic [Vehicle Standards] Regulations;
- knowledge of permissible maximum lengths of multi-combination vehicles;
- driver's licence and any required permits are carried;
- appropriate signs are displayed;
- driver licence condition codes, i.e. glasses/contact lenses, are complied with; and
- towing vehicle appropriately Licensed for the number of trailers towed.
- Confirmed, means:
- Successfully completing the theory component of the assessment.

**1.1.2 Pre trip checks are conducted.**

**Essential Pre trip checks include:**

- vehicle posture;
- leaks;
- load security;
- turntable;
- wheels, rims, hubs and tyres;
- fluid levels;
- belts and pulleys;
- lights;
- safety equipment; and
- signage.

**1.1.3 Results of inspection and checks are recorded.**

- an accurate record of the results of the pre-trip inspection is made.
- record is clear and concise and completed in accordance with company policy.

**1.1.4 A Cabin drill is performed.**

Performance includes:

- approach to the driver's door is from the front of the vehicle;
- steps, foot - holds and grab handles are used when entering and exiting the cab;
- loose articles are secured; and
- controls are located and identified.

**1.1.5 Mirrors are adjusted for maximum vision.**

Correct adjustment is when:

- View into side mirrors skims the side of the vehicle and takes in 50/50 horizon and road when the vehicle is on a level surface.

**1.1.6 A driving posture that permits effective control and operation of the vehicle is adopted.**

Effective posture includes:

- legs placed apart and left foot extended to supporting position [full clutch operation possible];
- knees are slightly bent [will not lock when legs are stretched];
- hands can complete a full turn of the wheel with slight bend in the elbow when shoulders are against seat; and
- head restraint adjusted [if possible] to allow even impact.

**1.1.7 Climate control and demisters are set.**

- Settings are appropriate for conditions or immediately anticipated conditions.

**1.1.8 Seat belt is secured and adjusted.**

Secured and adjusted means:

- lap section fitted below the stomach;
- no twists in the webbing; and
- looseness between the belt and the body is removed to ensure a firm fit.

## 1.2 Moves Off

**1.2.1 Engine is started.**

- A procedure is followed that complements the characteristics of the vehicle and that should enable the engine to start, run and continue to run.
- The vehicle remains stationary and secure throughout the starting operation.
- An appropriate contingency is used if the engine fails to start the first time or to continue to run after starting.

**1.2.2 Gear is selected.**

- Vehicle is stationary and held with park brake prior to selecting gear;
- clutch brake [if fitted] is applied; and
- the gear selected is the one that can enable the vehicle to move off in the desired direction without causing the engine to labour.

**1.2.3 Vehicle is moved off with co-ordinated inputs.**

- No significant imbalance results when the vehicle moves off; and
- satisfactory contingencies are immediately employed if an error occurs when the vehicle is moving off.

**1.2.4 Mobile checks are conducted.**

- Checks to include:
- trailer brakes;
- fifth wheel slackness;
- parking brakes;
- service brakes; and
- steering.

**1.2.5 Vehicle is moved off on an incline where required.**

- a procedure that enables the vehicle to move off without noticeable roll in the opposite direction is used;
- no significant imbalance results when the vehicle moves off; and
- satisfactory contingencies are immediately employed if an error occurs when the vehicle is moving off.

## 1.3 Monitors and uses engine instruments and switches

**1.3.1 Gauges and warning lights are checked after the engine starts.**

- Contingencies will be used in response to warning lights that do not go off at appropriate times or when gauges or alarms inform the driver of the need for follow up action.

**1.3.2 Whilst driving, necessary action in response to gauges, alarms and warning lights is taken.**

- Contingencies will be used in response to warning lights and alarms that come on and gauges that alert the driver to problems; and
- a response time of less than thirty [30] seconds to warning lights is required.

**1.3.3 Switches and auxiliary controls are used according to needs.**

- Switches and auxiliary controls may include:
- lights;
- indicators, horns and hazard lights;
- wipers;
- climate and ventilation controls;
- speed or vehicle stability devices;
- side window operation; or
- entertainment and communication equipment.

## 1.4 Conducts a mid trip inspection

**1.4.1 On road inspections are made when appropriate and in accordance with vehicle manufacturer's instructions.**

**Inspections to include:**

- leaks;
- load security;
- tyres and hubs;
- brakes;
- vehicle posture [springs etc.];
- hitching and points of articulation; and
- signage.

## 1.5 Stops

**1.5.1 Inputs are co-ordinated to stop the vehicle.**

- Vehicle remains stable and secure at stopping point with engine running;
  no significant instability to occupants or load is caused.

**1.5.2 The park brake and trailer brakes are applied.**

- If the vehicle is to be left unattended or not under instant control of the driver the park brake and trailer brakes will be applied. If it is not an air system, the pressure applied to the park brakes should be sufficient to prevent the vehicle moving independently.

**1.5.3 The engine is shut down in accordance with vehicle manufacturer's instructions.**

- The appropriate procedure is used when the vehicle is to be shut down.

**1.5.4 A post trip inspection is conducted in accordance with vehicle manufacturer's instructions.**

**Inspection to include:**

- uncoupling procedure;
- parking of truck;

- leaks;
- posture;
- cab tidiness and truck cleaning;
- refuelling; and
- paperwork.

**1.5.5 Results of inspection and checks are recorded.**

- An accurate record of the results of the mid and post-trip inspection is made.
- Record is clear and concise.

**1.5.6 The vehicle is parked safely and secured in accordance with road law requirements.**

**Safe and secured includes:**

- park and trailer brakes are applied;
- all systems switched off and the battery is isolated;
- all windows closed, keys removed and doors locked;
- legally parked;
- not vulnerable to other traffic; and
- location security.

# Unit 2 - Guide and control heavy combination vehicle

| Elements | Performance Criteria |
|---|---|
| **2.1 Manoeuvres the vehicle.** | 1. Legal procedures and requirements are complied with.<br>2. On approach to manoeuvre: mirrors and signals are used and rear blind spot [where appropriate] is checked.<br>3. Safety and legality of manoeuvre is checked.<br>4. Appropriate starting position is selected.<br>5. Observations are maintained.<br>6. Precise directional control and speed control are maintained.<br>7. On completion of manoeuvre, the vehicle is positioned accurately. |
| **2.2 Manages accelerator.** | 1. Accelerator is applied and released progressively to produce desired changes of speed.<br>2. Accelerator is used to maintain a selected speed.<br>3. Accelerator is used to counteract the effects of a gradient.<br>4. Progressive acceleration is used in corners and bends. |
| **2.3 Manages the brakes.** | 1. Braking is performed efficiently.<br>2. Braking is smooth and steady.<br>3. Desired stopping point is reached accurately. |
| **2.4 Manages steering.** | 1. Steering is applied smoothly and consistent with the desired path.<br>2. In straight line driving an accurate course is maintained.<br>3. In curves an accurate course is maintained. |
| **2.5 Uses the engine's transmission.** | 1. Gears are changed smoothly.<br>2. Appropriate gear for speed and driving conditions is used.<br>3. Gear changes are completed primarily while the vehicle is travelling in a straight line.<br>4. When changing to a lower gear speed is adjusted first.<br>5. When descending hills the appropriate gear is selected prior to the hill. |
| **2.6 Uses and co-ordinates inputs.** | 1. When braking into turns brake pressure is matched to the increasing steering load.<br>2. When steering in turns is being maintained speed is held steady.<br>3. When driving out of turns acceleration is matched to the reduced steering load.<br>4. Steering, brake and accelerator input are adjusted according to deterioration in road surface conditions.<br>5. Braking and gear selection is integrated efficiently as required. |

## 2.1 Manoeuvres the vehicle

**This may be assessed in a simulated exercise of:**

- a seventy [70] metre straight line reverse into a marked bay within seven [7] minutes;
- an offset reverse to the left, into a marked bay;
- a reverse to the left and/or right;
- coupling procedure;
- uncoupling procedure; and
- forward parallel parking.

**2.1.1 Legal procedures and requirements are complied with.**

Legal requirements include:

- manner and location of stopping; and
- other road users are not obstructed by the manoeuvre.

**2.1.2 On approach to manoeuvre, mirrors and signals are used and rear blind spot [where appropriate] is checked.**

**2.1.3 Safety and legality of manoeuvre is checked.**

- The driver to make a complete scan of the area to be used during the manoeuvre and confirms that it is safe to continue; and
- other road users are not inconvenienced by the manoeuvre.

**2.1.4 Appropriate starting position is selected.**

a starting position is adopted that complements the intended manoeuvre.

For example:

- prior to the straight line reverse the truck is straight and aligned with the marked bay, or
- prior to the coupling procedure the prime mover is positioned in a straight line with the trailer; and
- the starting position will not unnecessarily inconvenience other road users.

**2.1.5 Observations are maintained.**

Driver should conduct continual all round checks for hazards while conducting the manoeuvre.

**2.1.6 Precise directional control and speed control is maintained.**

During the manoeuvre the actual path taken should be consistent with the desired path. Movements should be steady and smooth and a speed that can compensate for errors not exceeded.

**2.1.7 On completion of manoeuvre, vehicle is in the appropriate position.**

Appropriate position means:

- vehicle should be parallel in the loading bay after the 70 metre reverse manoeuvre;
- after reversing from the left or right into a two way street - where the kerb or kerb line becomes straight the vehicle must be parallel with and no more than 1.5 metres from the left kerb or left kerb line;
- vehicle should be no more than 30cm from the kerb after the parallel park manoeuvre; and
- prime mover should be in a straight line with the trailer after coupling and uncoupling.

**2.1.8 Coupling and uncoupling procedures are conducted in accordance with transport industry [Truck Drivers Manual] and company policies.**

## 2.2 Manages accelerator

**2.2.1 Accelerator is applied and released smoothly to produce desired change of speed.**

Smoothly means:

- Incremental movements, the result does not unsettle vehicle occupants, stability, load, cause damage to drive train, king pin or its coupling.

**2.2.2 Accelerator is used to maintain a selected speed.**

On a level road the driver will be able to maintain a set speed for the required period by fine adjustments to the position of the accelerator pedal.

**2.2.3 Accelerator is used to counteract the effects of gradient.**

When a gradient is encountered and a gear change not required the driver will adjust the accelerator to maintain the desired speed. No more than 5-10 Km/h increase or decrease in speed will occur.

**2.2.4 Progressive acceleration is used in corners and bends.**

Progressive means:

- To balance the vehicle so that it is neither accelerating nor decelerating, but keeps the trailers tight and ensures they are not pushing the prime mover, while turning the corner or negotiating a bend.

## 2.3 Manages the brakes

**2.3.1 Braking system requirements are confirmed.**

Confirmed means:

- the driver can identify the various braking systems used on heavy vehicles;
- the specific characteristics of the braking systems are pointed out by the driver; and
- special precautions to be taken by the driver regarding the braking systems are identified and demonstrated.

**2.3.2 Braking is performed efficiently.**

Efficiently means:

- brakes are used as the primary means of slowing the vehicle;
- brakes are used primarily while the vehicle is travelling straight;
- the best road surface option is selected for braking;
- engine braking is used to supplement vehicle brakes when descending hills;
- skidding does not occur;
- variations are made to the brake pressure according to changes in the road surface;
- variations are made to the brake pressure according to load;
- trailer brakes are not used instead of the service brakes; and
- auxiliary brakes or speed retarders are used to increase braking safety and reduce brake wear.

**2.3.3 Braking is smooth and steady.**

Smooth and steady braking means:

- Initial weight transfer should be gradual and then brake pressure applied progressively. Brake pressure should be modulated just prior to becoming stationary to avoid the wheels locking.

Smoothly means:

- Incremental movements, the result does not unsettle vehicle occupants, stability, load, cause damage to drive train, king pin or its coupling.

### 2.3.4 Desired stopping point is reached accurately.

Brake pedal pressure is modulated to achieve a steady stop and the vehicle becomes stationary less than one metre before the desired stopping point.

## 2.4 Manages steering

#### 2.4.1 Steering is applied smoothly and consistent with the desired path.

- The vehicle is steered with both hands unless operating the controls. Hands should be outside the wheel with palms on the rim at about the ten to two or quarter to three position and thumbs clear of the steering wheel spokes;
- pressure of grip is adjusted consistent with the required steering effort;
- when steering is applied the driver should maintain a posture enabling effective control and operation of the vehicle;
- method of applying steering is not assessed as there is no evidence to suggest one method is better than another.

#### 2.4.2 In straight line driving an accurate course is maintained.

An accurate course means:

- One that maintains a legal road position, without adversely affecting, people, vehicles or property.

A straight line means:

- A constant direction without wandering, crossing lane or centre lines.
- The vehicle is steered with both hands unless operating the controls. Hands should be outside the wheel with palms on the rim at about the ten to two or quarter to three position and thumbs clear of the steering wheel spokes;
- pressure of grip is adjusted consistent with the required steering effort.

### 2.4.3 In curves an accurate course is maintained.

The vehicle is steered with both hands. Hands should be outside the wheel with palms on the rim at about the ten to two or quarter to three position and thumbs clear of the steering wheel spokes;
pressure of grip is adjusted consistent with the required steering effort;
when steering through a turn or curve, the driver should maintain a posture enabling effective control and operation of the vehicle.

An accurate course means:

- One that allows for cornering lines and sweep paths, without adversely affecting, people or property.

## 2.5 Uses the engine's transmission

**2.5.1 Gears are changed smoothly.**

The double de clutching method to be used if the vehicle is fitted with a constant mesh gearbox.
If a clutch brake is fitted and the vehicle is moving, the clutch is not fully depressed when changing gear.

Smoothly means:

- Incremental movements, the result does not unsettle vehicle occupants, stability, load, cause damage to drive train, king pin or its coupling.

**2.5.2 Appropriate gear for the speed and driving conditions is used.**

Selection should be completed prior to the situation in which it will be required; and
gears need not be selected in numerical sequence.

**Appropriate gear means:**

- The engine is not over revving or labouring.

**2.5.3 Gear changes are completed primarily while the vehicle is travelling in a straight line.**

At an intersection or curve the driver should not change gears while turning the steering wheel. Changing gears while in a turn but not when steering is being applied or removed is acceptable where the change does not unbalance the vehicle. This technique may be required when turning at intersections.

**Completed means:**
The clutch pedal has been released.

**2.5.4 When changing to a lower gear speed is adjusted first.**

- Adjustment of speed must allow gear selection not to unsettle the vehicle or cause excessive engine revolutions.

**2.5.5 When descending hills appropriate gear is selected before descent.**

- An appropriate gear is one that will hold the vehicle to a safe speed.

## 2.6 Uses and co-ordinates inputs

### 2.6.1 When braking into turns brake pressure is matched to the increasing steering load.

- Matching brake effort and steering effort requires brake pressure to be decreased as steering effort increases.
- If the brakes are being applied firmly on the entry to a turn brake pressure will be reduced to provide for steering forces.

**2.6.2 When steering in turns is being maintained speed is held steady.**

**Steady means:**

- Significant acceleration of the vehicle does not occur.

**2.6.3 When driving out of turns acceleration is matched to the reduced steering load.**

Matching acceleration and steering effort requires steering effort to be reduced as acceleration increases.

**2.6.4 Steering brake and accelerator input are adjusted according to variations in road surface conditions.**

Appropriate adjustments will be recognised by smooth performance and an ability of the vehicle to handle significant changes in speed or direction.

**2.6.5 Braking and gear selection are integrated efficiently as required.**

Efficient integration [overlapping of brakes and gear change] will be observed when:

- the action is primarily conducted when the vehicle is travelling straight;
- vehicle occupants/load are not unsettled;
- gear selection is completed in a reasonable time;
- no significant increase in engine revolutions is noticed when gear selection is complete; and
- the transmission is engaged prior to any steering being applied.

Reasonable time means:

- Within a time span of 2 - 4 seconds.

# Unit 3 - Drive in an Orderly Traffic System

| Elements | Performance Criteria |
|---|---|
| **3.1 Uses driving procedures.** | 1. Before vehicle is moved laterally more than half a vehicle width, mirrors are checked, signals are used and rear blind spot is checked.<br>2. Before the vehicle enters any zone where something could cause the driver to slow or stop, the mirrors are checked, speed is adjusted and appropriate gear changes are completed.<br>3. Before the vehicle is turned at an intersection, mirrors are checked, signals are used, speed is adjusted and appropriate gear changes are completed.<br>4. Before the vehicle enters a curve, mirrors are used in conjunction with required braking and appropriate gear changes are completed.<br>5. Before overtaking, mirrors are checked, signals are used, speed is adjusted, appropriate gear changes are completed. After overtaking mirrors are checked and signals used |
| **3.2 Navigates road system.** | 1. A route for the journey is selected.<br>2. Information signs, geographical and physical features are used in navigation.<br>3. Immediate desired route is matched to the road signs and road markings.<br>4. If navigation error occurs the route is legally and safely adjusted. |
| **3.3 Negotiates the road and traffic system.** | 1. Legal responses are made in road traffic system.<br>2. A built up area with limited road user interactions is negotiated and timely responses made.<br>3. A built up area with significant road user interaction is negotiated and timely responses made.<br>4. A rural area with limited road user interaction or road variation is negotiated and timely responses made.<br>5. A rural area with significant road user interaction and reasonable probability of road variation is negotiated and timely responses made.<br>6. Special road systems are negotiated and timely responses made. |
| **3.4 Interacts with traffic.** | 1. Driving manoeuvres in traffic are completed in a legal and timely manner.<br>2. Special events are responded to in a legal and timely manner.<br>3. Pedestrians are responded to in a legal and timely manner.<br>4. Low speed vehicles are responded to in a legal and timely manner. |

| | |
|---|---|
| **3.5 Drives efficiently in the traffic system.** | 1. Other road users can maintain normal driving behaviour in response to the driver's actions.<br>2. Where the driver's free flow is impeded and safe and legal options are available, timely action is taken and progress maintained.<br>3. Co-operation with other road users is shown.<br>4. When responding to situations that may require adjusting speed, brakes and accelerator are regulated early and smoothly. |
| **3.6 Responds to conditions of poor visibility.** | 1. Speed is adjusted so that stopping distance is within limit of clear visibility.<br>2. Headlights are used effectively.<br>3. At night when responding to glare, speed, position and mirrors are adjusted and eyes are directed to appropriate zone.<br>4. For night driving, vehicle is prepared for driving in darkness, windscreen clean, lights operating and correctly adjusted, mirror adjusted for day/night. |

## 3.1 Uses safe driving procedures

Safe driving procedures are drills [psychomotor
actions] that take care of basic driving functions. In competent drivers these are developed as habits freeing the driver's conscious attention for other tasks.

**3.1.1 Before vehicle is moved laterally, mirrors are checked and signals are used.**

- Mirrors should be used in conjunction with signals. This means mirrors are checked less than 5 seconds before the signals are activated and no more than 1 second after;
- signals should operate for a minimum of 30 metres before commencing manoeuvre and remain on until manoeuvre is completed; and
- signals must be turned off within at least three flashes of completing the manoeuvre.

**3.1.2 Before vehicle enters any zone where something could cause the driver to slow or stop, mirrors are checked, speed is adjusted and appropriate gear changes are completed.**

Mirrors should be used in conjunction with brakes. This means mirrors are checked less than 5 seconds before the brakes are applied and no more than 1 second after.

**3.1.3 Before vehicle is turned at an intersection, mirrors are checked, signals are used, speed is adjusted and appropriate gear changes are completed.**

- Mirrors should be used in conjunction with signals. This means mirrors are checked less than 5 seconds before the signals are activated and no more than 1 second after;
- signals should operate for a minimum of 30 metres before commencing manoeuvre and remain on until manoeuvre is completed; and
- signals must be turned off within at least three flashes of completing the manoeuvre.

**3.1.4 Before vehicle enters a curve, mirrors are used in conjunction with required braking and appropriate gear changes are completed.**

Mirrors should be used in conjunction with brakes. This means mirrors are checked less than 5 seconds before the brakes are applied and no more than 1 second after.

Appropriate gear change means:

- Selecting the right gear for the road speed and could include skip changing.

Skip changing means:

- Not sequentially changing through the gear range.

**3.1.5 Before overtaking, mirrors are checked, signals are used, speed is adjusted and appropriate gear changes are completed. After overtaking mirrors are checked and signals used.**

Mirrors should be used in conjunction with signals.

This means:

- mirrors are checked less than 5 seconds before the signals are activated and no more than 1 second after.

Overtaking in this case applies to:

- Overtaking on the off side on a two-way section of road.

Appropriate gear change means:

- Selecting the right gear for the road speed and could include skip changing.

Skip changing means:

- Not sequentially changing through the gear range.

## 3.2 Navigates the road system

**3.2.1 A route for the journey is selected.**

Navigation at this level deals with identifying designated routes [including those nominated on a permit] and determining the one which is most appropriate. Navigation in this sense does not necessarily involve the use of maps, it may be based on experience.

**3.2.2 Information signs, geographical and physical features are used in navigation.**

Navigation at this level deals with navigation during a journey, bridge height weight and width are critical physical features, but it particularly applies in cases where a driver is not familiar with driving in the area. This criterion may be difficult to assess where the driver is familiar with the environment.

Often identifying and interpreting signs need to be done while moving in traffic, this should be considered in the assessment.

Literacy is not the key feature of this criterion, rather it is the interpretation of information.

**3.2.3 Immediate desired route is matched to road signs and markings.**

- Navigation at this level deals with lane selection.

**3.2.4 If a navigation error occurs the route is legally and safely adjusted.**

Contingencies are required for legally and safely returning to a designated route.

Legally means:

- Any routes selected must approved for the operation of heavy combination vehicles.

## 3.3 Negotiates the road

Successful negotiation of the road and traffic system demands that the driver be able to apply road rules, perform driving procedures, navigate, identify and process information and make timely decisions. Competent drivers integrate these attributes into an efficient mental 'program' [cognitive schema].

Competent drivers have mental 'programs' for an extremely wide range of driving situations. It is not possible to list these here. This element looks at the performance of the driver in three environments, which are then further subdivided according to the information processing demands each would require of an experienced driver.
It should be noted that observation - a crucial attribute - is not covered in the performance criteria because it is a process and not an outcome - good driving infers good observation.

**3.3.1 Complies with the road rules whilst driving in the road traffic system.**

This criterion applies to all driving situations whether covered by other criteria or not.

**3.3.2 A built up area with limited road user interactions is negotiated and timely responses made.**

Timely means the driver:

- is able to respond and complete manoeuvres in a smooth and steady manner; or
- does not have to employ contingencies as a result of late planning or decision making.

Limited road user interaction means an environment where:

- driving requires judgements only in relation to road user movements from one direction at a time;
- accurate gap selection is not essential for a safe outcome;
- there is not a significant speed differential in traffic travelling in the driver's direction; or
- it is a real possibility that there will be a need for complex decisions about road obstructions, surface, radius or gradient.

The limiting factor in this performance criterion is the amount of information processing required of the driver and the complexity of decisions. Multi lane intersections controlled by traffic lights for example could fit into this category very early in the morning when there is little traffic about.

Locations include:

- all those that could normally be encountered by a heavy-combination vehicle in a built up area.

**3.3.3 A built up area with significant road user interaction is negotiated and timely responses made.**

Timely means the driver:

- is able to respond and complete manoeuvres in a smooth and steady manner; or
- does not have to employ contingencies as a result of late planning or decision making.

Significant road user interaction means an environment where:

- driving requires judgements in relation to road user movements from more than one direction at a time;
- accurate gap selection is critical for safe outcomes;
- there are significant speed differentials in traffic travelling in the driver's direction; or
- it is a real possibility that there will be a need for complex decisions about road obstructions, surface, radius or gradient.

The important factor in this performance criterion is the amount of information processing required of the driver and the complexity of decisions, not solely the number of other road users in the traffic system. A normally quiet road may at times require high levels of information processing and complex decisions.

Locations include:

- all those that could normally be encountered by a heavy-combination vehicle in a built up area.

**3.3.4 A rural area with limited road user interaction or road variation is negotiated and timely responses made.**

Timely means the driver:

- is able to respond and complete manoeuvres in a smooth and steady manner; or
- does not have to employ contingencies as a result of late planning or decision making.

Limited road user interaction or road variation means an environment where:

- driving requires judgements in relation to road user movements from only one direction at a time;
- accurate gap selection is not essential for a safe outcome;
- there is not a significant speed differential in traffic travelling in the same direction; or
- there will still be a real possibility that there will be a need for complex decisions about road obstructions, surface, radius or gradient.

The limiting factor in this performance criterion is the amount of information processing required of the driver and the complexity of decisions, not the number of other road users in the area or the type of road system.

Locations include:

- All those that could normally be encountered by a heavy-combination vehicle in a rural area.

**3.3.5 A rural area with significant road user interaction and reasonable probability of road variation is negotiated and timely responses made.**

Timely means the driver:

- is able to respond and complete manoeuvres in a smooth and steady manner; or
- does not have to employ contingencies as a result of late planning or decision making.

Significant road user interaction and reasonable probability of road variation means an environment where:

- driving requires judgements in relation to road user movements from more than one direction at a time;
- accurate gap selection is critical for safe outcomes;
- there are significant speed differentials in traffic travelling in the driver's direction; or
- it is a real possibility that there will be a need for complex decisions about road obstructions, surface, radius or gradient.

The important factor in this performance criterion is the amount of information processing required of the driver and the complexity of decisions, not the number of other road users in the traffic system. A normally quiet rural road may at times require high levels of information processing and complex decisions.

Locations include:

- All those that could normally be encountered by a heavy-combination vehicle in a rural area.

**3.3.6 Special driving situations are negotiated and timely responses made.**

Special driving situations include:

- highways requiring long distance driving;

- remote driving on sealed and unsealed roads; or
- road works.

Timely means the driver:

- is able to respond and complete manoeuvres in a smooth and steady manner; or
- does not have to employ contingencies as a result of late planning or decision making.

## 3.4 Interacts with traffic

The criteria in this element have been documented to expand the previous element. Each criterion nominates driving tasks and events that warrant special attention because they are either non-routine or they require very accurate judgement.

**3.4.1 Driving manoeuvres in traffic are completed in a legal and timely manner.**

Driving manoeuvres include:

- entering/leaving traffic stream from parked position or truck bay;
- lane changing;
- merging;
- entering or leaving multi lane roads; or
- overtaking.

Timely means the driver:

- is able to respond and complete manoeuvres in a smooth and steady manner; or
- does not have to employ contingencies as a result of late planning or decision making.

**3.4.2 Special events are responded to in a legal and timely manner.**

Special events could include:

- emergency vehicles;
- obstructions;
- road works;
- significant changes in road surface;
- bridges; or
- animals.

Timely means the driver:

- is able to respond and complete manoeuvres in a smooth and steady manner; or
- does not have to employ contingencies as a result of late planning or decision making.

**3.4.3 Pedestrians are responded to in a legal and timely manner.**

Pedestrians may be:

- between or near parked vehicles;
- on footpath;
- on median strip;
- on road way; or
- at crossings.

Timely means the driver:

- is able to respond and complete manoeuvres in a smooth and steady manner; or
- does not have to employ contingencies as a result of late planning or decision making.

**3.4.4 Low speed vehicles are responded to in a legal and timely manner.**

Low speed vehicle could include:

- cyclists;
- skateboarders/roller bladers;
- mopeds;
- powered wheelchairs; and
- tractors or other plant machinery.

Timely means the driver:

- is able to respond and complete manoeuvres in a smooth and steady manner; or
- does not have to employ contingencies as a result of late planning or decision making.

## 3.5 Drives efficiently in traffic system

Competent drivers can interact and co-operate with
other drivers to assist traffic flow. Their actions do not surprise other drivers or cause other drivers unnecessary inconvenience.

**3.5.1 Driver's actions do not cause alterations in normal driving behaviour of other road users.**

Normal driving behaviour means:

- Other drivers and road users [complying with road rules] should not have to brake, accelerate, change direction or otherwise change their behaviour significantly to accommodate this driver's actions.

Situations could involve:

- selecting gaps in traffic on an intersecting road;
- moving into the traffic stream;
- merging;
- changing lanes; and
- overtaking.

**3.5.2 Co-operation with other road users is shown.**

Situations requiring co-operation would include merging, lane changing, vehicles entering traffic [especially in busy conditions], assisting others when they have 'got it wrong' [e.g.. Attempting a U-turn without sufficient room], waiting for pedestrian stragglers on crossings.

**3.5.3 When responding to situations that may require adjusting speed, brakes and accelerator are regulated early and smoothly.**

This performance criterion is essentially a smooth driving and conservation measure for fuel and brakes.

Situations could include:

- traffic lights in the distance turn red;
- hills and curves; and
- approach to slower moving traffic.

## 3.6 Responds to conditions of poor visibility

**3.6.1 Speed is adjusted so that stopping distance is within limit of clear visibility.**

**3.6.2 Headlights are used effectively.**

- Headlights must be dipped within 200 metres of approaching vehicles or immediately the headlights of the approaching vehicle are dipped or when driving a minimum of 200 metres behind another vehicle.
- At night drivers should use high and low beams to their advantage while avoiding unnecessary discomfort to other road users.
- Headlights should be dipped at crests of hills, intersections and before corners to assist in detecting other road users.
- In poor light conditions during the day, lights should be turned on to make the vehicle more conspicuous.

**3.6.3 At night when responding to glare, speed, position and mirrors are adjusted and eyes are directed to the appropriate zone.**

- Appropriate zone is to the left of the road.

**3.6.4 For night driving, vehicle is prepared for driving in darkness, windscreen clean, lights operating and correctly adjusted**.

# Unit 4 - Minimise conflict

| Element | Performance Criteria |
|---|---|
| **1. Adjusts to environment.** | 1. Baseline speed is adjusted to suit the environment.<br>2. Path is matched to the environment. |
| **2. Responds to situations within the environment.** | 1. Eyes are directed to hazards posing an immediate threat.<br>2. Vehicle is positioned for best visibility.<br>3. Speed and sight distance are matched to provide time and space for safe response.<br>4. Vehicle's position is adjusted to provide space from potential threat.<br>5. Timely responses that compensate for possible unsafe actions by road users are made.<br>6. The driver's own deviations from safe, legal and reasonable behaviour are immediately corrected |
| **3. Avoids stressful/difficult environments.** | 1. Vehicle is stopped until conditions improve.<br>2. An alternative route is used |
| **4. Responds to stressful/difficult situations.** | 1. Speed is reduced and conservative decisions are made in novel or complex driving situations.<br>2. Familiarisation procedures are followed when driving unfamiliar vehicle.<br>3. Distractions within the vehicle affecting performance are compensated for.<br>4. Conservative decisions are made in response to own uncertainty.<br>5. Appropriate responses are made as a result of pressure from other road users.<br>6. Safe responses are made in response to traffic frustration's. |
| **5. Manages motivations.** | 1. Valuing life and property is reflected in driving.<br>2. Strategies minimising the adverse effects of emotions on safe driving are employed.<br>3. An examined rationale that evaluates the benefits and costs of both risky behaviour and cautious behaviour is applied to driving. |

## 4.1 Adjusts to environment

As the driving environment changes drivers should adjust so they are able to deal with the types of hazards that could be expected in that environment. This is often described as driving to the conditions.

This element considers performance over a period rather than at a specific point The driving environment can change quickly but once changed it generally remains stable for a while. For example, a narrow city street with cars parked either side might become a wide-open road on the other side of an intersection and then remain stable for a number of blocks. This element is assessed where the environment is stable.

**4.1.1 Baseline speed is adjusted to suit the environment.**

Baseline speed is the general speed setting that will permit the driver to:

- deal with the types of hazards that could be expected in the particular environment; and
- integrate with other road users.

In adjusting speed the driver will consider traffic, weather and road surface conditions. Where speed is to be lowered for an environment it must be done before entering it. Where speed is increased for an environment it should be done as it is entered.
Timely responses to changes in the environment will require the driver to look and think ahead of real time.

**4.1.2 Path is matched to the environment.**

As the environment changes the driver should adopt
a path that suits the conditions. In determining a suitable path the driver will consider legal requirements, space from potential threats, and visibility.

The driver's path positions the vehicle safely for:

- parked vehicles (minimum space to allow for an opening door of a car - 1.5m);
- repeating hazards on either side of the road;
- opposing traffic.

The path will normally be in the most travelled section of road (usually where lanes are not marked); and on multi-laned roads, in the left lane when possible.

Hazard means:

- Anything which is potentially dangerous. There are three main types:
- physical features such as intersections, roundabouts, bends or hill crests;
- risks arising from the position or movement of other road users; and
- problems arising from variations in the road surface, weather conditions and visibility.

## 4.2 Responds to Situations within the environment

Within a general driving environment there will be situations within specific situations or hazards that the driver must the environment attend and respond to.

These hazards may occur when other road users don't comply with the law or safe and reasonable driving and their path might cross the driver's. The unsafe actions of other road users can be compensated for by the driver maintaining space between his or her vehicle and the other road user: This is the basic principle of defensive driving. The criteria in this element have proactive or interactive dimensions. Proactive responses are when the driver starts to avoid a possible conflict before one can even be seen, such as slowing down for a blind intersection or hill crest even though it may be legal to proceed.

Interactive responses are when the driver sees another road user and makes ongoing adjustments to his or her driving as the situation unfolds. In both situations the driver is responding to the situation by applying a 'just in case' approach.

Where one situation after another arises, for example, in busy streets, driving will become very active. However, good performance in this area will not look busy-the driver will be responding very early to hazards and his or her actions will mostly be subtle.
In all cases the driver will keep enough space to avoid a crash even though the action may well prove to be unnecessary.

**4.2.1 Eyes are directed to hazards posing an immediate threat.**

These are hazards where there is the potential for the driver's path to meet another road user's path. Including:

- locations such as blind intersections and curves;
- pedestrians and cyclists;
- vehicles:
- blocking view,
- manoeuvring (opposing turning right,
- pulling out from side of road, waiting at give way signs),
- closing in from behind;
- railway crossings.

Assessors should look to see the driver move his or her head and or direct the eyes to immediate hazards. However, this process does not provide reliable evidence whether the driver has perceived the hazard.

**4.2.2 Vehicle is positioned for best visibility.**

Where it is both safe and legal the driver will adjust the vehicle's position to see more and improve other's view of the vehicle.

Examples are: dropping back from similar sized vehicles to see more of the road ahead; moving more towards the centre of the road at a blind intersection or the left to increase sight distance.

**4.2.3 Speed and sight distance is matched to provide time and space for safe response.**

Sight distance is the distance the driver can see ahead and to the sides. Typically sight distance is restricted at the approach to:

- blind intersections;
- blind curves;
- hill crests; and
- vehicles parked on the side of the road.

An example is braking at the approach to a blind intersection until the driver can see it is safe to continue. It is safe when the view into the side road (sight distance) reveals there are no road users who could enter the intersection at the same time as the driver. The same principle applies to blind curves and hill crests; the driver should be able to stop in the distance he or she can see in the clear space ahead.

**4.2.4 Vehicle's position is adjusted to provide space from potential threat.**

This response may be proactive or interactive.
Examples of proactive responses would be positioning the vehicle to the left when approaching a hill crest or moving more towards the centre of the road when approaching a row of parked vehicles.
An interactive response would be moving to increase available space from another road user such as a pedestrian on the side of the road or a vehicle approaching hugging the centre line.

**4.2.5 Timely responses that compensate for possible unsafe actions by road users are made.**

Timely responses mean:

- The driver would be able to brake, accelerate or reposition the vehicle smoothly to avoid a crash.

This criterion requires the driver to operate ahead of real time. This means looking at and monitoring the changing situation, predicting how it might change and adjusting responses accordingly.

Responses could include:

- backing off the accelerator;
- tentative or initial braking;
- progressively firm braking; and
- increasing space from a hazard by steering away from it.

In some situations the appropriate response may even be to accelerate (for example, when a vehicle is closing in quickly from behind). Crash statistics recorded by road user movement (RUM) give a good indication of where road users make mistakes. These situations should be considered during assessment.

**4.2.6 The driver's own deviations from safe, legal and reasonable behaviour are immediately corrected.**

Competent drivers make mistakes but correct themselves before deviating significantly from correct performance.

## 4.3 Avoids stressful/difficult environments

**4.3.1 Vehicle is stopped until conditions improve.**

This criterion applies to adverse weather,
road and traffic conditions.

**4.3.2 An alternative route is used.**

This criterion applies to:

- adverse weather and road surface conditions;
- particular environments that the driver considers difficult or unsafe because of local traffic conditions; and
- environments that are beyond the driver's capabilities of dealing.

## 4.4 Responds to stressful situations.

**4.4.1 Speed is reduced and conservative decisions are made in novel or complex driving situations.**

Novel situations are those that differ significantly to those the driver has previously experienced. Speed should be reduced to the point the driver has the capacity to process and respond to information. Drivers unable to do this typically change speed and direction late and abruptly. They also break smooth flow.
Familiarisation procedures are followed when driving unfamiliar vehicle.

Familiarisation procedures can include:

- practising locating and using controls and switches before moving off;
- keeping speed down;
- making conservative decisions;
- exercising greater caution when overtaking;
- cornering; and
- selecting gaps.

**4.4.2 Distractions within the vehicle affecting performance are compensated for.**

Compensating actions can include:

- turning the radio/cassette/cd down or off;
- asking passengers to be quiet;
- ceasing a conversation; or
- pulling over to deal with any problems.

**4.4.3 Conservative decisions are made in response to own uncertainty.**

This can include being uncertain about an overtaking manoeuvre or selecting a gap. Conservative decisions are ones that minimise the risk, generally this will involve responses such as hanging back instead of overtaking, or waiting for the next gap in traffic.

**4.4.4 Appropriate responses are made as a result of pressure from other road users. Inappropriate responses to other road users can cause conflict.**

Appropriate responses include:

- self talk to guide through appropriate action;
- deep breathing;
- directing attention to other driving tasks;
- adopting neutral phrases to describe other road users' behaviour;
- pulling over to let the other driver past; or
- selecting an alternative route.

**4.4.5 Safe responses are made in response to traffic frustration's.**

Responses can include:

- selecting an alternative route;
- maintaining safe following distances;
- deep breathing;
- adopting neutral phrases to describe other road users' behaviour; and
- practising self talk that highlights the benefits of cautious behaviour and the costs of risky behaviour.

**4.5 Manages motivations**

Motivation is a 'hidden' element of human behaviour, it can only be implied and cannot be seen.

It is an element that contributes to competence but cannot be measured as performance. Thus competency standards rarely contain specific elements dealing with this part of behaviour.

Driving is a self-directed activity in a dynamic environment. Drivers choose to behave the way they do. Therefore, motivation is a critical aspect of driving. The element, manages motivations, describes aspects of behaviour that are considered by road safety researchers to be very important.

A valid and reliable method of assessing and measuring this element may not be available at this time. However, the element may be used to guide training and education programs.

**4.5.1 Valuing life and property is reflected in driving.**

Personal safety values influence motivation and the choices drivers make. Safe drivers value life and property. They have a need to avoid being harmed and causing harm.

**4.5.2 Strategies minimising the adverse effects of emotions on safe driving are employed.**

Emotions, which might adversely affect safe driving, could include:

- aggression;
- depression;
- unhappiness;
- happiness;
- frustration;
- impatience; and
- anxiety from worries.

Strategies could include:

- a self-talk technique rationalising the situation;
- deep breathing;
- pulling over;
- stopping and making a phone call; or
- selecting an alternative route.

**4.5.3 An examined rationale that evaluates the benefits and costs of both risky behaviour and cautious behaviour is applied to driving.**

Motivation internally energises and directs an individual's behaviour. Strong safety motivations can make up for gaps in ability better than high levels of ability can make up for gaps in motivation.

Motivation theory suggests the perceived costs of behaving one way and the benefits of behaving another way influence how people act.

There are costs and benefits associated with both risk taking and behaving cautiously. Safe driving behaviour results when the driver perceives cautious behaviour as being more worthwhile than risky behaviour. Frequently drivers don't think their behaviour through; they don't have an examined rationale.

# Unit 5 - Manage Crisis

| Elements | Performance Criteria |
|---|---|
| **5.1 Avoids imminent crash.** | 1. Other road users are alerted to imminent danger.<br>2. When other road users start to violate orderly behaviour, sufficient stopping space is maintained to avoid crashing.<br>3. When road obstructions prevent a safe passage, sufficient stopping space is maintained to avoid crashing.<br>4. When sufficient stopping space has not been maintained to avoid an imminent conflict, the escape route with minimum chance of harm is selected.<br>5. When the driver has unintentionally driven off the carriageway while travelling straight, action is taken to return to the carriageway safely.<br>6. When the driver has unintentionally entered a curve too fast, action is taken to minimise the potential for loss of control. |
| **5.2 Uses and co-ordinates inputs to retain or restore control of the vehicle.** | 1. A reserve of tyre grip is maintained.<br>2. A front wheel skid is immediately detected and action taken to regain a reserve of grip.<br>3. A rear wheel skid is immediately detected and action taken to regain a reserve of grip.<br>4. An all wheel skid is immediately detected and action taken to regain a reserve of grip.<br>5. The Anti-lock Braking System (where fitted) is used in evasive manoeuvres requiring braking and braking combined with steering.<br>6. Aqua planing is detected and action taken to regain a reserve of grip. |
| **5.3 Follows procedures in the event of a crash.** | 1. Immediate and appropriate action is taken to prevent further injury or damage.<br>2. Legal and insurance requirements are met. |
| **5.4 Follows procedures in the event of own vehicle breaking down.** | 1. Vehicle malfunctions are detected and vehicle is stopped safely.<br>2. Following a breakdown, immediate and appropriate action is taken to ensure personal safety and that of other road users.<br>3. Minor running repairs are carried out. |

## 5.1 Avoids imminent crash

Crashes are rare events. Even defensive drivers will be surprised by road users actually violating orderly behaviour. Defensive drivers keep enough space in reserve to avoid a crash, should their own or another driver's judgement fail.

**5.1.1 Other road users are alerted to imminent danger.**

This may involve sounding the horn or flashing head lights.

Imminent danger includes:

- brake failure;
- tyre failure;
- fire;

- traffic emergency  [e.g. oncoming vehicle on incorrect side of road]; or
- skids.

**5.1.2 When other road users start to violate orderly behaviour, sufficient stopping space is maintained to avoid crashing.**

Stopping is considered safer than swerving to avoid a crash provided sufficient space is available.

**5.1.3 When sufficient stopping space has not been maintained to avoid an imminent conflict, the safest alternative to braking is chosen.**

Swerving is not a reliable option. The consequences of swerving must be considered.

Escape routes can include:

- another lane change;
- the road shoulder; or
- leaving the road.

**5.1.4 When the driver has unintentionally driven off the carriageway while travelling straight, action is taken to return to the carriageway safely.**

Action would include:

- maintaining a steady speed and course parallel to the carriageway;
- locating a smooth road edge to rejoin the carriageway; and
- steering back to the carriageway gradually.

**5.1.5 When the driver has unintentionally entered a curve too fast, action is taken to correct the error.**

Action can include:

- braking if the vehicle is still travelling straight then easing pressure off the brakes on entering the turn;
- easing off the accelerator and braking gently if the vehicle has already entered the turn; and
- looking towards the exit of the curve.

## 5.2 Uses and co-ordinates inputs to retain or restore control of the vehicle

This element addresses skid avoidance and control.

A skid means:

- The grip of one or more tyres is less than what is required for the driver to have complete control over the vehicle's speed and direction.

If the driver adjusts proactively and responsively to changes in the environment he or she should never get into a skid. If a tyre does skid it means the driver has made a serious error. However, errors do happen and a dimension of competence is having a contingency to deal with mistakes; hence this element is included in the Standard.

Training and assessing skid avoidance and control is problematic. Road Safety research has identified that drivers trained in these skills may be more likely to crash than those that receive no such training. The research suggests that skid training causes drivers to mis-calibrate their perceived ability with their actual ability. They tend to think they have more skill to control a situation than they actually have.
For this reason the Driver Competency Standard cautions against conducting such training and assessment unless the methods used can clearly demonstrate a scientifically robust and educationally sound rationale.

**5.2.1 A reserve of tyre grip is maintained.**

An imminent crisis will invariably require an evasive manoeuvre such as braking or swerving. The driver's responses should not cause the tyres to skid. A reserve of grip can be maintained by carefully co-ordinating inputs.

**5.2.2 A skid is immediately detected and action taken to regain a reserve of grip.**

**5.2.3 The Anti-lock Braking System (where fitted) is used in evasive manoeuvres requiring braking and braking combined with steering.**

An anti-lock braking system senses when a wheel has reached locking point, and automatically releases brake pressure regardless of how hard the driver is pushing the brake pedal and then reapplies the pressure as soon as the wheel starts to rotate again. The primary purpose of ABS is to assist the driver to retain control of steering during evasive braking and steering.

**5.3 Follows procedures in the event of a crash**

**5.3.1 Immediate and appropriate action is taken to prevent further injury or damage**.

Appropriate action includes:

- stopping and switching off the engine;
- activating hazard warning lights;
- protecting the area [using warning devices];
- caring for the injured; and
- using required procedures if carrying dangerous goods.

**5.3.2 Legal and insurance requirements are met.**

This will include:

- notifying police when: someone has been injured, or property damage exceeds $3000, or the owner or any property damaged is not present at the scene of the accident;
- exchanging names, addresses, registration numbers and insurance details as appropriate;
- locating witnesses; and
- noting accident details as required for insurance report.

## 5.4 Follows procedures in the event of own vehicle breaking down

**5.4.1 Vehicle malfunctions are detected and vehicle is stopped safely.**

Malfunctions might include:

- brakes failing;
- tyres failing; or
- breaking the windscreen.

**5.4.2 Following a breakdown immediate and appropriate action is taken to ensure personal safety and that of other road users.**

Appropriate action includes:

- moving off the road if possible;
- stopping and switching off the engine;

- activating hazard warning lights;
- locating warning signs legally; and
- notifying employer and local authority.

**5.4.3 Minor running repairs are carried out.**

This may include:

- changing a flat tyre; or
- clearing a broken windscreen.

# Unit 6 - Evaluate and adjust driving

| Elements | Performance Criteria |
|---|---|
| **6.1 Monitors and improves performance.** | 1. Driving is adjusted immediately in response to breakdown in performance.<br>2. Driving is adjusted after errors.<br>3. Repetition of errors is avoided.<br>4. A safe driving benchmark is used to judge performance. |
| **6.2 Monitors and modifies behaviour.** | 1. Inappropriate exposure to risk is detected and driving adjusted.<br>2. Behaviour inconsistent with legal driving is detected and driving adjusted.<br>3. Driving behaviour reflects a thinking style that recognises the part the self plays in driving incidents.<br>4. Caution is demonstrated towards risks and risky driving regardless of positive prior experiences.<br>5. Conservative behaviour is maintained regardless of the safety features fitted to the vehicle. |
| **6.3 Monitors other road users behaviour.** | 1. When reflecting on the behaviour of other road users an examined rationale is employed.<br>2. Observations of other drivers' errors are used to enhance driver's own ability to deal with similar events in the future. |
| **6.4 Monitors and responds to risk factors.** | 1. Increased risk in driving at night is acknowledged.<br>2. When alcohol or a drug that can adversely affect driving performance is present in the body, the vehicle is not driven.<br>3. When peers are present in the vehicle safe behaviour is maintained.<br>4. Driver fatigue is recognised and responded to.<br>5. Effective strategies for minimising fatigue are applied. |

## 6.1 Monitors and improves performance

**6.1.1 Driving is adjusted immediately in response to a breakdown in performance.**

Key issue here:

The driver is having difficulty processing and responding to information.

Symptoms of deteriorating performance include:

- sudden braking or steering movements;
- failure to respond to other road users or environmental conditions;
- fixated vision;
- clenched grip;
- sweating;
- shallow breathing; or
- rigid posture.

Adjustments to driving include:

- increased scanning of driving environment;
- limiting behaviour to the driving task [not eating, drinking, smoking or using mobile phone];
- excluding distractions [requesting passengers to be quiet, turning down sound system]; or
- taking a rest break.

**6.1.2 Driving is adjusted after errors.**

Error means:

- When the driver's performance at a task does not match competent performance.

Evidence for this is when the driver can indicate that an error occurred and describe the adjustment they made in response.

**6.1.3 Repetition of errors is avoided.**

Error means:

- When the driver's performance at a task does not match competent performance. They must do something to prevent it happening again. The key issue is being able to improve performance through feedback and self-evaluation.

**The steps are:**

- identify the error;
- identify the source of the error, was it lack of physical skill, not having enough available attention to perform the task, not having a mental program [cognitive schema] to perform the task or was it lack of motivation?;
- analyse the difference between what happened and what should have happened; and
- take action to avoid repeating the error.

**6.1.4 A safe driving benchmark is used to judge performance.**

Research suggests that drivers estimate their own performance using subjective judgements of other drivers. This creates an optimistic assessment of their own ability and promotes over confidence. A valid and reliable method of assessing and measuring this criterion may not be available at this time. However, the element may be used to guide training and education programs.

## 6.2 Monitors and modifies behaviour

**6.2.1 Inappropriate exposure to risk is detected and driving adjusted.**

Inappropriate risk-taking or risky behaviour is any behaviour that could result in an outcome that would be inconsistent with the driver's safety values.

**6.2.2 Behaviour inconsistent with legal driving is detected and driving adjusted.**

**6.2.3 Driving behaviour reflects a thinking style that recognises the part the self plays in driving incidents.**

Driving incidents are events that the driver would prefer not to occur. When people explain these events in a way which recognises the part the self plays in driving incidents, we may call this thinking style a 'my mistake' view of driving. It can help drivers learn from their mistakes.

This process is described by causal attribution theory, which suggests the way people attribute cause to events influences their behaviour.

Drivers can be questioned after driving incidents to reveal their thinking style. Their answers will indicate whether they have a 'My mistake' view or a, 'I had nothing to do with it' view. Explaining to drivers the benefits of a 'my mistake' view can cause them to modify their thinking style.

**6.2.4 Caution is demonstrated towards risks and risky driving regardless of positive prior experiences.**

Driving is a potentially dangerous activity; but experience teaches drivers that it is a particularly safe activity; crashes and even near misses, for most drivers, are extremely rare events. Theory of habituation and conditioning suggests that drivers will perceive events as less risky the more they are exposed to risk events in which they experience positive outcomes.

Safe driving practice requires drivers to be cautious about risks regardless of how often they have been exposed to the risk event or similar risk events in the past.

**6.2.5 Conservative behaviour is maintained regardless of the safety features fitted to the vehicle.**

Safety features may include:

- supplementary restraint systems;
- anti-lock brakes;
- traction control; or
- high performance road holding and road handling features.

Behaviour adaptation theory suggests people may inappropriately adapt their behaviour to changes in the design of vehicles.

Studies have shown that some drivers with ABS fitted to their vehicles drive faster in wet conditions and follow closer to other cars than they did before they had ABS. They adapt their behaviour to suit the vehicle rather than benefit from increased safety margins. They end up being at the same level of risk as if they are driving a vehicle without that safety feature.

## 6.3 Monitors other road users' behaviour

**6.3.1 When reflecting on the behaviour of other road users an examined rationale is employed.**

Research suggests that drivers rate their performance using subjective judgements of other drivers. This leads them to optimistically assess their own ability and promotes overconfidence.

Drivers who reflect on other drivers' performance will gain value for themselves if they think through the reasons for their behaviour; consider similar weaknesses in their own behaviour; and take note of the drivers who are doing the right thing (most do).

**6.3.2 Observations of other drivers' errors are used to enhance drivers' own ability to deal with similar events in the future.**

Errors, regardless of who makes them, are a source of feedback. The more constructive feedback drivers receive the more opportunities there are for them to improve.

## 6.4 Monitors and responds to risk factors

**6.4.1 Increased risk in driving at night is acknowledged.**

**6.4.2 When alcohol, or a drug that can adversely affect driving performance is present in the body, the vehicle is not driven.**

**6.4.3 Driver fatigue is recognised and responded to.**

Symptoms of driver fatigue include:

- trouble keeping the head up;
- wandering, disconnected thoughts;
- eyes closing for a moment or going out of focus;
- beginning to blink;
- cannot stop yawning;
- cannot remember driving the last few kilometres;
- drifting over the centre line or on to the gravel at the side of the road;
- missing a road sign;
- missing an exit;
- missing a gear;
- seeing 'mirages' ahead;
- braking too late; or
- slowing unintentionally.

Responding to fatigue includes:

- stopping as soon as practicable;
- resting; or
- sleeping.

**6.4.5 Effective strategies for minimising fatigue are applied.**

Effective strategies includes:

- planning trips carefully to provide adequate time for sleep, rest and food;
- talking to the family well in advance of departure time so that necessary sleep is obtained;
- being realistic about how much sleep is needed to be a safe driver and make sure it is obtained;
- starting the journey without sleep debt;
- understanding your own body clock and know when you are likely to be at your least alert, for example between 0100hrs and 0600 hrs;
- taking regular naps, 20 minutes is a good time;
- keeping the cab at a comfortable temperature, but not too warm;
- getting fresh air into the cab;
- listening to music, talk-back radio or talking books or chatting on the CB radio;
- playing mental games such as calculating distances;
- taking regular breaks (every 2 hours) to stretch, walk and check the vehicle;
- learning to recognise the signs of sleepiness and pull over as soon as possible for a short nap;
- eating sensibly and exercise regularly;
- drinking plenty of water;
- never drinking alcohol when working;
- discussing fatigue with the family so that they can provide support and understand the need to get adequate sleep; and
- seeking medical advice if there are any doubts that there may be sleep pattern problems or problems with general health.