Vehicle Controls Guide

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Motorcycle components and controls

Recognise the motorcycle components, locate each hand and foot control, and explain which controls work together.

Read the diagram from the operator's position

Use the rider's view: left and right are the rider's left and right when seated and facing forward. The source shows motorcycles and a three-wheeled example; identify a component by its function and position, not by the vehicle's colour or body shape.

The numbered diagram describes the illustrated geared motorcycle. The manual also names an electric scooter in its scope, but does not provide a separate scooter control table or operating procedure. Do not assume every scooter has the illustrated clutch, gear lever or foot brake.



The numbered controls and their functions

- 1 - Gear lever: the illustrated foot control used to select a gear.
- 2 - Clutch: the left-hand lever that disengages the engine from the gearbox and is used with the gear lever.
- 3 - Left and right rear-view mirrors: observe traffic behind the motorcycle.
- 4 - Front brake: the right-hand lever applies the front brake and activates the stop lamp.
- 5 - Throttle: the right-hand twist grip controls engine speed and regulates fuel supply to the engine.
- 6 - Indicator switch: signals an intention to turn or change direction.

- 7 - Rear brake: the illustrated foot-operated brake; do not confuse it with the front-brake lever.
- 8 - Handlebars: control the direction of the motorcycle.
- 9 - Fuel tank: identify it in front of the seat; it is not a brake or a steering control.

Changing gears and controlling speed

A gear change involves the gear lever 1 and clutch 2 together. The lever selects the gear; the clutch disengages the engine from the gearbox. Naming only the throttle does not identify the gear-changing controls.

The throttle 5 increases or decreases engine speed. The manual's complete speed-control combination is front brake 4, throttle 5 and rear brake 7. Reducing the throttle and applying a brake are different actions, even though both affect speed.

Stopping and stopping distance

To stop the motorcycle, the source pairs front brake 4 with rear brake 7. Immediately before a complete standstill, its combination also includes clutch 2: controls 2, 4 and 7. This distinguishes braking from the additional clutch action at the end of a stop.

Stopping distance becomes longer on a wet road, at a higher speed and when carrying a passenger. All three conditions increase the stopping distance in the source example. Do not assume the same stopping distance after changing any of these conditions.

Observation, signalling and changing direction

Mirrors 3 show traffic behind you, indicator switch 6 communicates your intention, and handlebars 8 change direction. These are different jobs: switching on an indicator does not turn the motorcycle, and looking in a mirror does not warn other road users.

For a sharp turn, the source identifies controls 1, 2, 3, 4, 5, 7 and 8: gear lever, clutch, mirrors, both brakes, throttle and handlebars. This is a set of controls involved in the manoeuvre, not an instruction to operate all of them simultaneously.

Worked situations and recap

Example: you want to signal a left turn while checking traffic behind. Use mirrors 3 to observe and the indicator switch 6 to signal. The handlebars 8 perform the steering; they do not replace the observation or signal.

Example: a question asks for the controls used to stop, then asks what is included immediately before standstill. The first answer is 4 and 7; the second is 2, 4 and 7. Read the stage of the action, not just the word "stop".

Recap: identify all nine numbers without guessing from appearance; separate hand and foot controls; distinguish observation, communication, gear changing, steering and braking. Then explain why wet conditions, speed and a passenger change the stopping situation.

Light-vehicle controls: manual and automatic

Read a light-vehicle control diagram, distinguish manual and automatic layouts, and connect each control to a driving task.

Read the diagram from the operator’s position

Read the light-vehicle diagrams from the driver’s seat. The steering wheel is on the right in these examples. Use the numbered diagram with the component table: illustrations of different vehicles show that switches and levers need not have identical shapes or positions.



Compare manual and automatic layouts

In the illustrated manual layout, the three pedals are clutch 8 on the left, brake 9 in the middle and accelerator 10 on the right. Gear lever 6 and parking brake 7 are separate controls. A pedal’s position is not its function: learn both.

The automatic layout has brake 9 and accelerator 10, but no clutch pedal 8. Its gear selector operates differently from a manual gear lever. Do not add a missing clutch to an automatic diagram simply because the control numbers continue from 7 to 9.

The source notes that some vehicles have a foot-operated parking brake. “Parking brake” describes the function; “hand brake” does not guarantee that every vehicle uses a hand lever. The pedal or lever must be distinguished from service brake 9.



The numbered controls and their functions

- 1 - Centre rear-view mirror: observe traffic behind through the interior mirror.
- 2 - Windscreen wiper: clears the front windscreen, including when rain reduces visibility.
- 3 - Exterior rear-view mirrors: observe traffic to the rear and sides; choose the right-hand mirror when checking the right rear side.
- 4 - Steering wheel: changes the direction of the vehicle.
- 5 - Indicator switch: communicates an intended left or right turn or change of direction.
- 6 - Gear lever or selector: selects the gear; a manual gear change also involves clutch 8.
- 7 - Parking brake: holds a parked vehicle stationary.
- 8 - Clutch: assists engagement or disengagement of a gear in a manual vehicle; it is absent from the automatic layout.
- 9 - Service brake: the foot control that reduces speed or brings the vehicle to a stop.
- 10 - Accelerator: the foot control that increases speed; it is not a hand control.
- 11 - Horn: warns other road users to help avoid a collision.

Changing gears and controlling speed

In a manual vehicle, gear changing uses gear lever 6 and clutch 8 together. The lever selects a gear while the clutch assists engagement or disengagement. The light-vehicle sample also identifies the clutch as the control used to avoid stalling immediately before a complete standstill.

Check the centre mirror 1 before changing speed or applying the brake, as the source's light-vehicle examples require. Brake 9 slows or stops the vehicle; accelerator 10 increases speed. Looking behind helps you understand the traffic situation before that change.

Stopping and parking

Use service brake 9 to slow or stop a moving vehicle, including the source's emergency-stop identification question. Use parking brake 7 to keep the vehicle stationary after parking or when leaving it unattended. Do not confuse stopping the vehicle with holding it parked.

Stopping distance becomes longer on a wet road and at a higher speed. A passenger or load also increases the stopping distance in the source examples. Do not assume the same stopping distance after changing any of these conditions.

Observation, signalling and changing direction

Before changing direction, observe through the relevant mirrors and use indicator 5 to communicate the intended direction. Steering wheel 4 then changes direction. Centre mirror 1 and exterior mirrors 3 together cover the source's rear-and-side observation requirement.

For a sharp turn in the manual light vehicle, the source lists 1, 4, 6, 8, 9 and 10: centre mirror, steering wheel, gear lever, clutch, brake and accelerator. Learn what each contributes. The list is not a command to press every pedal at once.

Worked situations and recap

Example: rain begins while you need to slow down. The wipers 2 address the windscreen, mirror 1 supplies rearward information, and brake 9 reduces speed. The wet surface also makes stopping distance longer. One control cannot perform all four jobs.

Example: you move from the manual diagram to the automatic diagram. The missing control is clutch 8. Brake 9 and accelerator 10 remain, and the parking brake still has a separate holding function.

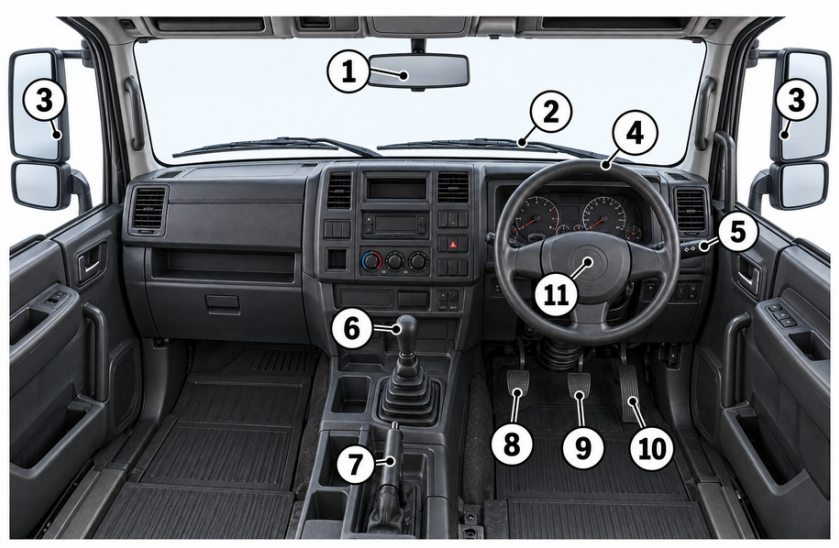
Recap: locate every numbered control, explain manual versus automatic pedals, distinguish service and parking brakes, and match observation, signalling, visibility and gear changing to the correct controls. Apply the stopping-distance conditions to the complete situation.

Heavy-vehicle controls: manual and automatic

Recognise heavy-vehicle cab and pedal layouts and explain the controls used for observation, manoeuvring, stopping and holding the vehicle.

Read the diagram from the operator's position

Read the heavy-vehicle diagrams from the driver's seat. Compare the cab overview with the dashboard and pedal illustrations. The large external mirrors, steering controls and pedals must be identified by their functions, not by copying the shape of a light-car dashboard.

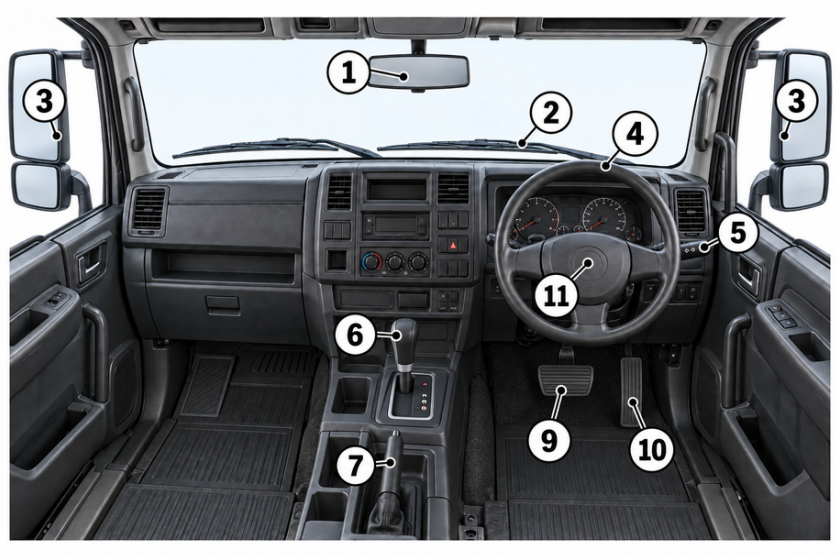


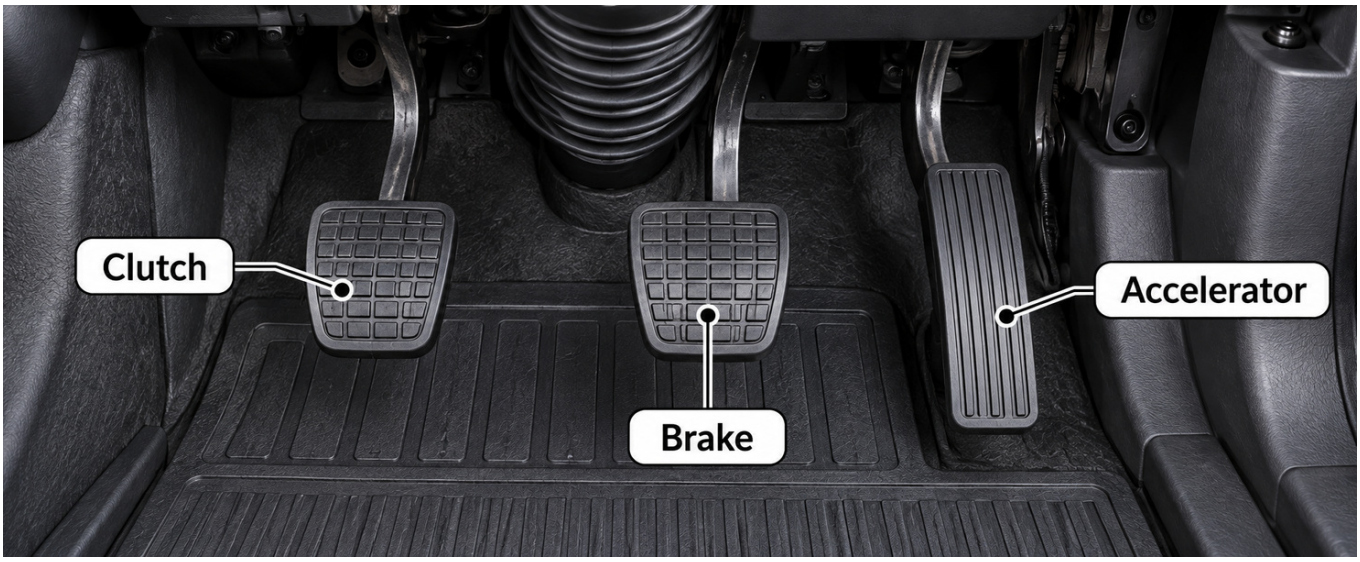
Compare manual and automatic layouts

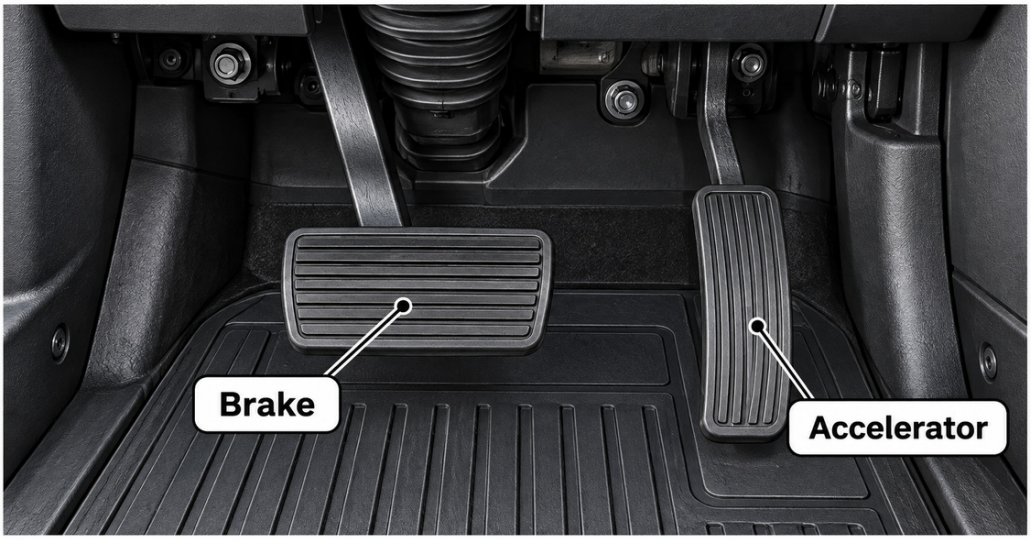
In the illustrated manual layout, the three pedals are clutch 8 on the left, brake 9 in the middle and accelerator 10 on the right. Gear lever 6 and parking brake 7 are separate controls. A pedal's position is not its function: learn both.

The automatic layout has brake 9 and accelerator 10, but no clutch pedal 8. Its gear selector operates differently from a manual gear lever. Do not add a missing clutch to an automatic diagram simply because the control numbers continue from 7 to 9.

The heavy manual pedal illustration shows clutch, brake and accelerator; the automatic illustration shows only brake and accelerator. The retained manual does not teach air-brake pressure checks, retarders or an automatic-selector sequence. Those systems need their own vehicle-specific instruction.







The numbered controls and their functions

- 1 - Centre rear-view mirror: observe traffic behind through the interior mirror.
- 2 - Windscreen wiper: clears the front windscreen, including when rain reduces visibility.
- 3 - Exterior rear-view mirrors: observe traffic to the rear and sides; choose the right-hand mirror when checking the right rear side.
- 4 - Steering wheel: changes the direction of the vehicle.
- 5 - Indicator switch: communicates an intended left or right turn or change of direction.
- 6 - Gear lever or selector: selects the gear; a manual gear change also involves clutch 8.
- 7 - Parking brake: holds a parked vehicle stationary.
- 8 - Clutch: assists engagement or disengagement of a gear in a manual vehicle; it is absent from the automatic layout.
- 9 - Service brake: the foot control that reduces speed or brings the vehicle to a stop.
- 10 - Accelerator: the foot control that increases speed; it is not a hand control.
- 11 - Horn: warns other road users to help avoid a collision.

Changing gears and controlling speed

The heavy-vehicle sample identifies clutch 8 as assisting gear changes and pairs it with gear lever 6 when selecting another gear. It does not mean that the clutch alone selects a gear. Accelerator 10 is the separate foot control identified in the source for increasing or decreasing speed.

Stopping, parking and an incline

Service brake 9 slows or stops the heavy vehicle. Parking brake 7 keeps a parked vehicle from moving; the source also identifies 7 for preventing rollback when stopped on a steep incline. Do not replace that holding function with accelerator 10.

The source’s heavy-vehicle stopping-distance example identifies three increases: a wet road, higher speed and a loaded vehicle. All three apply. Recognising the correct brake does not mean the vehicle will stop in the same distance under every condition.

Observation, signalling and changing direction

For an intended direction change, the heavy-vehicle source explicitly groups centre mirror 1, exterior mirrors 3 and indicator 5. Observation and signalling are separate from steering with wheel 4. An indicator cannot establish that the path is clear.

For a sharp turn in the manual heavy vehicle, the source lists 1, 3, 4, 6, 8, 9 and 10. Unlike the light-vehicle sample list, it explicitly includes exterior mirrors 3. Learn the observation, steering, gear and speed-control functions rather than treating the list as simultaneous actions.

Worked situations and recap

Example: the heavy vehicle has stopped on a steep incline and must not roll backwards. The source identifies parking brake 7 for that holding task. This is different from identifying brake 9 as the control that slowed the moving vehicle.

Example: you intend to change direction in a loaded heavy vehicle. Identify mirrors 1 and 3 and indicator 5 before distinguishing steering wheel 4 from the gear and speed controls. The load is also a reason to expect a longer stopping distance.

Recap: compare both heavy-vehicle pedal layouts; identify hand and foot controls; explain mirror-and-indicator combinations, manual gear changes, steering, stopping and holding on an incline. Do not assume every heavy vehicle has identical equipment.

Sources

Sources checked: 2026-10-16

Department of Transport - SA Learner Driver Manual: Vehicle Components and Controls (pages: 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15)

https://www.natis.gov.za/images/learners/3_Vehicle_Controls_Manual_v100_Jun_2012.pdf

Read online

Motorcycle components and controls
https://k53-app.co.za/en/study/code-1-vehicle-controls

Light-vehicle controls: manual and automatic
https://k53-app.co.za/en/study/code-2-vehicle-controls

Heavy-vehicle controls: manual and automatic
https://k53-app.co.za/en/study/code-3-vehicle-controls

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