

# KEEN BROS.

## DRIVER TRAINING

CARS - BIKES - TRUCKS



### KEEN BROS. GERALDTON

Approved Provider for the Department of Transport: 501

Registered Training Organisation: 52388

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## MC - MULTI COMBINATION

### Learner Guide

**TLIC4006 Drive multi-combination vehicle** (Release date: 29 February 2016)

**TLIB0002 Carry out vehicle inspection** (Release date: 04 July 2018)

**TLIB2008 Carry out inspection of trailers** (Release date: 29 February 2016)

## **Welcome to Keen Bros.**

Keen Bros. in Geraldton is a Heavy Vehicle Training and Assessment centre. Dedicated to delivering the highest standard of driver training, all training packages are designed to ensure they meet industry expectations.

The key to Keen Bros' success is the commitment of our nationally qualified Trainers and Assessors delivering driver training in a supportive and encouraging environment. Our trainers and assessors have over 15 years experience each in the transport and logistics industry enhancing the practical experience received during each training course.

At Keen Bros. we will include all Training and Assessment to obtain a full Department of Transport heavy vehicle licence in the chosen licence category.

- Multi Combination [Training and Assessment]

TLIC4006 Drive multi-combination vehicle (Release date: 29 February 2016)

TLIB0002 Carry out vehicle inspection (Release date: 04 July 2018)

TLIB2008 Carry out inspection of trailers (Release date: 29 February 2016)

Note: Successful completion of this course and receipt of your Statement of Attainment does not guarantee you a Multiple Combination Drivers Licence. You must complete all aspects of training and assessment and be issued a Statement of Attainment for all three Units of Competency listed above to be eligible to sit for your DoT MC Driver's Licence practical assessment, which can be completed at Keen Bros. or any Department of Transport W.A. approved training provider. Keen Bros. Dot Approved provider no. 501.

- Keen Bros - Multi-Combination licence courses are custom designed to develop vital driving skills and knowledge. Highly qualified trainers deliver this training course as:
- One day course with Assessment [Skill recognition assessment of experienced and competent HR or HC Drivers]
- Two day course with Assessment [Non experienced drivers]
- Hourly Training Sessions



## **What you need**

- Current drivers licences (C Class at least 3 years) and (HR or HC at least 1 year)
- Study all Training Manuals
- Familiarity with current road rules
- Appropriate clothing, fully enclosed shoes
- Water and food

## **What you get**

- Vehicle familiarisation and inspection
- Critical skills in vehicle control , manoeuvring, cornering and stopping.
- Techniques on changing a non synchromesh Transmission including Professional shifting.
- Safe driving techniques on hazard identification
- Advanced observation skill and mirror use.
- General road application of speed and lane selection
- Reference of relative theory to MC
- Reversing skills
- Practice of all criteria for Multi-combination Assessment
- All training prior to testing
- Maximising the training benefits to aid in the successful completion of the course
- On successful completion of the licence testing you will receive a certificate of competence enabling you to be issued a Department of Transport licence

## **All Keen Bros. Training and Assessing heavy vehicle courses also cover aspects of**

- OH&S
- Vehicle inspection, start up and shutdown
- Vehicle movement, stopping, gear changing and turning
- Critical road craft driving skills
- Defensive driving skills including Fuel Management Practices
- Road law Refresher

## **Keen Bros. Geraldton's Terms And Conditions**

By enrolling in any course you are agreeing to the terms and conditions outlined below.

## **Course Requirements**

All courses require a minimum level of English, general health and fitness to complete .It is the clients responsibility to ensure they are met prior to participating in any course. Failure to do so will result in **not** being able to participate.

## Medical Requirements

You must let us know if you are taking medication or suffer from eyesight defects, hearing loss, or any other **medical** condition as you will require a Department of Transport medical clearance certificate. Failure to obtain a clearance will result in you **not** being able to participate in the course.

## Licence Requirements

You must hold a current Western Australian Department of Transport **drivers licence** prior to commencement.

## Hygiene & Clothing

Personal hygiene is important as you will be spending significant time in close contact with others. Clients who don't meet hygiene standards will be removed from the course and no refund will be given. Mandatory clothing requirements are closed in footwear.

## Drugs and Alcohol

It is essential that all clients arrive for their courses drug and alcohol free. Students may be asked to take a Breathalyser or Drug Test at any time during the courses. The client will not be permitted to participate and no refund will be given if **Drugs or Alcohol are suspected or detected**.

## Program of Delivery including Recognition of Prior Learning

All training course options require the pre-reading of learner guide and completion of a written pre-test which must be completed prior to beginning of training. All training and assessment activities are to be implemented one on one, I.E. one trainer/assessor for each student, UOC verbal assessment and UOC practical observation will be conducted as part of the driving assessment in the MC vehicle.

Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
1-2 Day Course	2-3 Day Course	1 - 2 Day Course	2 - 3 Day Course	2 - 3 Day Course	2 - 4 Day Course
This option is for someone with a HC licence and experience in driving it	This option is for someone with a HR licence and with some experience	This option is for someone with a HC licence with experience and with Road Ranger experience	This option is for someone with HR licence and Road Ranger experience	This option is for someone with a HR licence and with minimal Road Ranger experience	This option is for someone with a HR licence with no Road Ranger experience
Time Frame	Time Frame	Time Frame	Time Frame	Time Frame	Time Frame
5 Hours of training with a 3 hour assessment at the end of the training	8 Hours of training with a 3 hour assessment at the end of the training	5 Hours of training with a 3 hour assessment at the end of the training	8 Hours of training with a 3 hour assessment at the end of the training	10 Hours of training with a 3 hour assessment at the end of the training	12 Hours of training with a 3 hour assessment at the end of the training

## READY FOR ASSESSMENT

Your trainer will help you decide if you are ready for assessment

### **Assessment will be discontinued when**

- In the judgment of the assessor, the candidate is not capable of taking the assessment
- If the vehicle is not roadworthy or appropriate for the class of license assessment
- Candidate attempts to intimidate the Assessor or a bribe or inducement is offered
- The vehicle breaks down during the assessment
  
- In the judgment of the assessor, something that would not normally be present during the assessment adversely affects the authenticity, fairness, reliability or validity of the assessment
- In the judgment of the assessor, the candidate behaves in a manner that is not consistent with appropriate conduct or safe and lawful driving practices, including
  - failing to comply with the directions of Police, Pilot, Traffic Controller
  - failing to STOP at a STOP sign or a RED light
  - failure to execute hill descent in a safe and controlled manner

### **The Assessor will record “Not Yet Competent” when the**

- Assessor has to intervene or give assistance to avoid a potentially dangerous situation
- Candidate disobeys a mandatory road sign
- Candidate exceeds the speed limit
- Candidate disobeys any traffic regulation that immediately or potentially threatens safety
- Candidate drives without a seatbelt
- Candidate fails to respond to a crisis or potential crisis that would normally be anticipated by an experienced driver
- Candidate causes a crisis or potential crisis
- Candidate removes both hands from the steering wheel while the vehicle is in motion
- Candidate has more than 1/3 of the vehicle on the wrong side of the road (except for turns)
- Candidate refuses to attempt any part of the assessment
- Candidate refuses to follow any reasonable direction by the Assessor
- Candidate hits kerb frequently
- Candidate coasts for an extended period (out of gear)

## **Re-Assessment**

Learners are required to complete both the theory assessment and the practical assessment to be found competent for this unit of competency

The practical assessment checklist has two columns for the award of Competent (C) or Not Yet Competent (NYC)

If a student is deemed NYC for part or all of the theory or practical assessment, reassessment must be offered and conducted in accordance with the Keen Brothers Reassessment Policy, in consultation with the Learner and Assessor.

## **MC ASSESSMENT**

### **UNCOUPLING (DROPPING OFF) A SEMI**

#### **Level and firm surface**

- ◆ Before uncoupling make sure your rig is parked in a level area on a surface which is firm enough to support the trailer landing gear and its load.
- ◆ Prime mover and semi-trailer in a straight line
- ◆ Apply parking brakes and trailer brakes
- ◆ Chock the trailer wheels (if required)
- ◆ **Parking on flat ground** – you should always try to drop your trailer on flat ground.
- ◆ Chocks should not be necessary on trailers fitted with spring brakes (Maxi-brakes) but are a sensible precaution and should be used if available, even on flat ground.
- ◆ **Parking on a grade** – ALWAYS USE CHOCKS IF IT IS NECESSARY TO PARK A TRAILER ON A GRADE. It is best to chock the semi-trailer's front axle in case the landing legs collapse and the rear axle(s) lifts.

#### **Precautions for soft ground surface**

- ◆ Place suitably strong timber or other flat supports beneath the landing gear if the ground surface is not firm enough to support the weight of the trailer and its load. (The landing gear is likely to sink into loose dirt, mud, gravel and hot bitumen.)

#### **Disconnect hoses and cables**

- ◆ Disconnect the air hoses and electrical cables from the trailer. Stow them properly on the prime mover making sure that the connectors are kept free of dust and water and that they cannot become caught up on the tailshaft.

## Lower the landing gear

- ◆ Lower the landing gear until the supports are firmly in contact with the ground. Continue winding, and as you do so, the rear of the prime mover will rise on its suspension as semi-trailer weight is transferred to the landing gear. You should stop winding when the prime mover ceases rising or you can just see air between the trailer skid plate and the turntable

## Release the turntable jaws

- ◆ If the release handle cannot be moved, the jaws may be under load. Take the pressure off by gently rocking the prime mover forward and back then try to release again.

## Separation

- ◆ Double check that the trailer brake hoses and electric cables are disconnected and stowed. Then release the prime mover parking brake and slowly drive forward in a straight line making sure the trailer stays put.

**WARNING :** If the front of the trailer starts to go down and the turntable comes up at the front as you are moving forward. **STOP!** Find out why while the prime mover is still holding up the front of the semi-trailer.

## COUPLING (PICKING UP) A SEMI-TRAILER

### Position the prime mover

- ◆ Reverse the prime mover into position straight in front of the trailer. The prime mover and trailer should be in a straight line when coupling.
- ◆ Use the mirrors to help you line up on the trailer, stop the prime mover just in front and apply the parking brake.

**WARNING :** backing under a trailer from the side can push the trailer sideways and damage or collapse the landing gear.



## Inspect the coupling

- ♦ Check the trailer skid plate, king pin, turntable and jaws for damage.
- ♦ Make sure the turntable jaws are open.
- ♦ If the trailer has a block welded to the skid plate about 30cm to the rear of the king pin, make sure the turntable is the type that turns and is unlocked.
- ♦ The turntable will need to be locked in position for trailers without the block. Make sure the top of the turntable is well greased when it is used in the locked position.

## Immobilise the trailer

- ♦ Place chocks behind at least one wheel. If the trailer is equipped with spring brakes, the parking brakes should already be on.

**WARNING :** **Never** try to back a prime mover under a semi-trailer without first ensuring it will stay put. 'Chasing' a trailer which moves during coupling is a dangerous and irresponsible practice. **Don't do it.**

## Trailer height

- ♦ Check that the turntable and king pin are lined up. Check that the height of the trailer skid plate is slightly lower than the centre of the turntable. About 5 centimetres is ideal.

**CAUTION :** if the trailer is too low the prime mover chassis or edge of the turntable can hit the trailer front instead of going under. If too high, the turntable may not properly latch on to the kingpin, or the turntable could even pass beneath the kingpin allowing the prime mover cab to hit the trailer.

- ♦ Adjust the trailer height or re-position the vehicle if necessary. Check that the air hoses and cables are well clear and will not be caught when the prime mover is reversed into its final position.

## Coupling up

- ◆ Slowly reverse the prime mover under the trailer until the turntable jaws lock around the kingpin. You should hear (and possibly feel) this, as the jaws close and lock into place.
- ◆ **Visual check that trailer is locked on**
- ◆ Get out and check that the turntable jaws have locked on to the kingpin. Make sure that the head of the pin is not sitting on top of the jaws.
- ◆ Make sure the trailer is sitting firmly on the turntable by checking that no gap exists between the turntable and trailer skid plate. If a gap is visible, the trailer may have been set too high. Try lowering the trailer on the landing gear slightly and the gap should close. If not, check to see what the problem is.

## Check release lever

- ◆ Check that the coupling release lever is in the 'locked' position.

## Raising the landing gear

- ◆ Raise the landing gear. Keep winding until it is fully raised. Make sure the handle is properly stowed.

## Give trailer a tug test

- ◆ Check that the trailer is locked on, by attempting to move off in first gear with the trailer brakes on, if not fitted with spring type brakes. The prime mover should not move. Repeat this check to be absolutely sure.

**CAUTION :** Make sure the trailer does not move with the landing legs down or they may be damaged.

## Connect hoses and cables

- ◆ Connect the air hoses and electrical cables making sure they are properly supported to avoid damage.

## **Secure the vehicle**

- ◆ Apply the parking brakes and turn on emergency brake and side and tail lights for a trailer light check.

## **Activate the trailer brakes**

- ◆ American and some Japanese prime movers require you to supply air to the trailer brakes by switching the tractor protection valve from 'emergency' to 'normal'. Apply and release the trailer brakes to check their operation. You should hear the air release and linkages operate.
- ◆ If not, switch trailer brakes hose connections and try again. If still not, see if the prime mover has manual shut off valves on its trailer brake plumbing.

## **Clearance checks**

- ◆ Check that there is enough clearance for normal movement between the prime mover (frame and wheels) and the trailer frame. Check also that there is enough clearance between the landing gear and the rear of the truck frame to allow for turning.

## **Air leaks and trailer light check**

- ◆ Run the engine until the air pressure has reached its maximum in the air tanks. Switch off engine, fully apply the trailer brakes and walk around the vehicle listening for air leaks and checking trailer lights.

## **Remove and stow wheel chocks (if used).**

## **Prime Mover Checks/Inspections**

An accurate record of the results of the pre-trip inspection is made.

**This assessment will be as per the Learner's Guide.**

### **Prime Mover (Paperwork)**

- ◆ Confirm currency of vehicle Registration and accuracy of details
- ◆ Confirm currency of B Double/Road Train permits
- ◆ Check “Con Notes” or load “Manifest” to make yourself aware of the type of goods being carried (eg dangerous goods)
- ◆ Be aware of vehicle height, weight and length (if any specifications are exceeded, ensure that the appropriate permits are carried).

### **Prime Mover (External)**

Lower bull bar (if fitted) and tilt/open the front cab.

#### **Check the following fluid levels :**

- ◆ Engine oil
- ◆ Radiator water
- ◆ Power steering oil
- ◆ Windscreen washer water
- ◆ Battery water level
- ◆ Clutch level
- ◆ Brake level (if applicable)

#### **Check/inspect the following :**

- ◆ Engine for oil, water, fuel or hydraulic leaks
- ◆ All ancillary drive belts and pulleys for damage and security
- ◆ Engine/gearbox mounts and linkages for wear and security
- ◆ Control linkages and cables for security and operation
- ◆ Exhaust manifold, turbocharger (if fitted) and exhaust piping
- ◆ Front suspension mounts, springs and retaining bolts/nuts for security
- ◆ Steering linkages and joints for wear and security
- ◆ Front wheel hub seals (inner)for signs of grease marks
- ◆ Lower/close cab and raise bull bar, ensuring both are locked properly.
- ◆ Cabin for damage, rust/corrosion and security to attachments.
- ◆ Condition and security of mirrors, headlights, indicators and auxiliary lights
- ◆ Cab steps and grip handles for security, damage and rust/corrosion
- ◆ Lockers, stowage compartments and doors ensuring serviceability of latches.
- ◆ Spare wheel is in good condition, tyre inflated and secured in position.
- ◆ Tyre inflation pressures and spacing between wheels
- ◆ Tyres for sidewall and tread damage, tread depth and foreign objects.
- ◆ Wheel nuts and wedges are tight and have no signs of movement (rust marks).
- ◆ Wheel rims for wear and damage.
- ◆ Mudguards, mudflaps are secure and undamaged
- ◆ Air hoses, couplings and supports for leaks or damage and security.

- ◆ Confirm that the ABS connector plug is correctly fitted.
- ◆ Electrical leads, plugs and connections are secure and not broken/frayed.
- ◆ Shut-off valve open.
- ◆ Fuel tank(s) for security, leaks and damage.
- ◆ Fuel tank(s) level
- ◆ Turntable for lubrication and damage and release lever and jaws are open
- ◆ Turntable moves freely or is locked, depending on trailer configuration
- ◆ Air tank(s), fittings and lines for security and damaged.
- ◆ Air tank(s) open drain valve (s) to remove any water/oil contaminants
- ◆ Rear suspension for wear, damage, and retaining bolts/nuts for security
- ◆ Brake servo's, lines and linkages for wear, leaks and damage.
- ◆ Parking, headlight, indicator/hazard, and clearance lights are working satisfactorily.
- ◆ All plates and signs are visible, readable and in correct quantities.
- ◆ Vehicle posture to ensure the chassis is 'even' with the wheels.
- ◆ Tow hitch and pin for security, damage, wear, rust/corrosion and operation
- ◆ Confirm vehicle tool kit including wheel change tools is complete.
- ◆ Serviceability and security of fire extinguisher(s), first aid kit and warning equipment
- ◆ Tyre changing tools and vehicle tool kit for serviceability.
- ◆ Jacking equipment for operation/serviceability and their load capacity.
- ◆ Bars, chains, tarps, straps and ropes for serviceability and quantity.
  
- ◆ **Prime Mover Checks/Inspections**

<b>Prime Mover (Cabin Checks and Adjustments)</b>
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- ◆ 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
- ◆ Cabin is clean and tidy and any loose items are secured
- ◆ Check drivers seat for security and all modes of operation (adjustment)
- ◆ Controls are located and identified
- ◆ Check that the park brake is working
- ◆ Confirm that brakes are fully applied
- ◆ Turn on the ignition; (computerised trucks go through their test procedures)
- ◆ Start the engine safely, (ensuring gearbox is first disengaged)

**Check and monitor the following gauges/warning lights : (*after start-up*)**

- ◆ Engine oil pressure/temperature
- ◆ Alternator charging
- ◆ Air pressure (brake system)
- ◆ Water temperature
- ◆ Exhaust temperature
- ◆ Fuel quantity
- ◆ Ancillary warning devices (visual and audible)

**If applicable check the following :**

Water level

Gearbox oil level/temperature

Differential oil temperature

- ◆ Confirm opening and closing functions of all windows
- ◆ Check that windscreen wipers and washers are working satisfactorily
- ◆ Check condition of windscreen and side glass for damage and clarity
- ◆ **Check operation of the following systems :**
  - Headlights (high and low beam)
  - Parking and side lights
  - Brake lights
  - Indicator and hazard lights
  - Horn
  - Climate control and demisters (settings are appropriate for anticipated conditions)

**B Double (Trailer A) Checks**

<b>B Double (Trailer A) (Paperwork)</b>
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Confirm currency of trailer Registration and accuracy of details

- ◆ Check “Con Notes” or load “Manifest” to make yourself aware of the type of goods being carried (eg dangerous goods)
- ◆ Be aware of vehicle height, weight and length (if any specifications are exceeded, ensure that the appropriate permits are carried).

<b>B Double (Trailer A) (External)</b>
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- ◆ Check King Pin and skid plate for damage or wear
- ◆ Check king pin for size compatibility to turntable
  - Check landing gear legs for damage, security, rust/corrosion and ease of operation
  - Lockers, stowage compartments and doors ensuring serviceability of latches.
  - Spare wheel is in good condition, tyre inflated and secured in position.
- ◆ Check condition/operation of park, brake, indicator/hazard and clearance lights
- ◆ Check presence and legibility of plates and advisory signs
  - Tyre inflation pressures and spacing between wheels
  - Tyres for sidewall and tread damage, tread depth and foreign objects.
- ◆ All wheel nuts and wedges are tight and have no signs of movement (rust marks).
- ◆ Wheel rims for wear and damage.
  - Mudguards, mud flaps are secure and undamaged
- ◆ Air hoses, couplings and supports for leaks or damage and security.
- ◆ Confirm that the ABS connector plug is correctly fitted.
- ◆ Electrical leads, plugs and connections are secure and not broken/frayed.
- ◆ Shut-off valve open
  - Air tank(s), fittings and lines for security and damaged.
  - Air tank(s) open drain valve (s) to remove any water/oil contaminates.
- ◆ Rear suspension for wear, damage, and loose fittings.
- ◆ Brake servo's, lines and linkages for wear, leaks and damage.
- ◆ Vehicle posture to ensure the chassis is 'even' with the wheels.
- ◆ Tow hitch and pin for security, damage, wear, rust/corrosion and operation
- ◆ Tow couplings for security, damage, wear, rust/corrosion and operation.
- ◆ Check tray and chassis for cracks, damage, and rust/corrosion
  - Tyre changing tools and vehicle tool kit for serviceability
  - Jacking equipment for operation/serviceability and their load capacity.
  - Bars, chains, tarps, straps and ropes for serviceability and quantity.
- ◆ Check the trailer load for security and weight distribution and re-check tie-down ropes/chains

## Trailer B Checks

### Trailer B (Paperwork)

Confirm currency of trailer Registration and accuracy of details

- ◆ Check “Con Notes” or load “Manifests” to make yourself aware of the type of goods being carried (eg dangerous goods)
- ◆ Be aware of vehicle height, weight and length (if any specifications are exceeded, ensure that the appropriate permits are carried).

### Trailer B (External)

- ◆ Check King Pin and skid plate for damage or wear
- ◆ Check king pin for size compatibility to turntable
  - Check landing gear legs for damage, security, rust/corrosion and ease of operation
  - Lockers, stowage compartments and doors ensuring serviceability of latches.
  - Spare wheel is in good condition, tyre inflated and secured in position.
- ◆ Check condition/operation of park, brake, indicator/hazard and clearance lights
- ◆ Check presence and legibility of plates and advisory signs
  - Tyre inflation pressures and spacing between wheels
  - Tyres for sidewall and tread damage, tread depth and foreign objects.
- ◆ All wheel nuts and wedges are tight and have no signs of movement (rust marks).
- ◆ Wheel rims for wear and damage.
  - Mudguards, mudflaps are secure and undamaged
- ◆ Air hoses, couplings and supports for leaks or damage and security.
- ◆ Confirm that the ABS connector plug is correctly fitted.
- ◆ Electrical leads, plugs and connections are secure and not broken/frayed.
- ◆ Shut-off valve open
  - Air tank(s), fittings and lines for security and damaged.
  - Air tank(s) open drain valve (s) to remove any water/oil contaminates.
- ◆ Rear suspension for wear, damage, and loose fittings.
- ◆ Brake servo's, lines and linkages for wear, leaks and damage.
- ◆ Vehicle posture to ensure the chassis is 'even' with the wheels.
- ◆ Tow couplings for security, damage, wear, rust/corrosion and operation.
- ◆ Check tray and chassis for cracks, damage, and rust/corrosion
- ◆ Tyre changing tools and vehicle tool kit for serviceability.
- ◆ Jacking equipment for operation/serviceability and their load capacity.
- ◆ Bars, chains, tarps, straps and ropes for serviceability and quantity.
- ◆ Check the trailer load for security and weight distribution and re-check tie-down ropes/chains



<b>Summary</b>
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- Complete the pre-Departure Check sheet according to training assessment standards
- Take corrective action on those matters, which are the driver's responsibility
- Report all other faults to the appropriate company personnel, so that corrective action may be taken
- Observe all Occupational Health and Safety measures while conducting the pre-departure check

Note : This assessment will be as per the Learner's Guide.

### **The chain of responsibility – where are you in the chain?**

All parties in the road transport supply chain are responsible for preventing a breach of road transport laws. This is called the chain of responsibility. It recognizes the effects of the actions, inactions and demands of off-the-road parties in the transport chain. All parties in the supply chain – consignor/dispatcher, packer, loader, consignee/receiver, manager, as well as the driver and operator – must take positive steps to prevent a breach of the road transport mass, dimension and loading and driving hours laws.

### **Roles and responsibilities**

The different positions in the chain of responsibility are outlined below:

#### **Consignor/dispatcher**

Dispatches goods for delivery. Must make sure that your delivery request doesn't require a truck driver to:

- Transport goods that go beyond vehicle dimension or mass limits.
- Inappropriately secure the load.
- Exceed the permitted number of driving hours.
- Fail to have minimum rest periods.
- Exceed the speed limits.

#### **Consignee/receiver**

- Orders and/or accepts the goods being delivered. Has the same responsibilities as the consignor/dispatcher plus:
- Must not knowingly encourage or reward a breach of the mass, dimension, load restraint or driving hours laws.

## **Loader**

- Loads goods onto the vehicle. Must make sure the vehicle's load:
- Doesn't exceed the dimension or mass limits.
- Cannot become unstable, move or fall off the vehicle.

## **Packer**

Packs goods to be loaded onto the vehicle. Must make sure that when goods are packed:

- Documentation of the load is accurate, not false or misleading.
- Any goods packed in freight containers don't exceed the container's gross weight or safety approval rating.

## **Driver**

- Transports the load to its destination. Must maintain current obligations to make sure:
- The vehicle does not exceed dimension or mass limits.
- The load is appropriately restrained.
- All required equipment is properly fitted to the vehicle.
- Required rest breaks are taken and driving hours regulations and speed limits are observed.
- Safe and responsible driving behavior is demonstrated at all times.

## **Operator/manager**

Operates and/or manages the business dispatching the goods. Is responsible for making sure that:

- Rosters do not require truck drivers to exceed the permitted number of driving hours.
- Accurate records are kept of drivers' activities, including driving, work and rest times.
- Vehicle speed limiters are functioning.
- Loads do not exceed dimension or mass limits and are properly restrained using appropriate restraint equipment.

## **1. Terminology**

- GCM: Gross Combination Mass
- GVM: Gross Vehicle Mass
- ATM: Aggregate Trailer Mass

## **2. What does HVO consider a Heavy Vehicle?**

- a vehicle with a GVM exceeding 4.5t;
- a combination that includes a vehicle with a GVM exceeding 4.5t; and
- a load on a vehicle described above.

## **3. What is a Restricted Access Vehicle (RAV)?**

- is a vehicle that alone or together with any load, exceeds one or more of the following limits:
- a mass limit prescribed in Part 3 of the Road Traffic (Vehicle Standards) Regulations 2002; or
- one of the following dimension limits:
  - a width of 2.5m;
  - a height of 4.3m;
  - a length of 12.5m in the case of a motor vehicle that is not part of a combination; or
  - a length of 19m in the case of a combination;
  - any other dimension limit specified in the:
    - Road Traffic (Vehicle Standards) Regulations 2002 or
    - Road Traffic (Vehicle Standards) Rules 2002.

## **4. What is a general access (as of right) vehicle?**

- is any vehicle that is not a Restricted Access Vehicle (RAV)
- These vehicles generally do not require any permits or exemptions from regulatory requirements

## **5. What is an Axle Group?**

- is a single axle group, tandem (bogie) axle group, twin steer axle group, tri-axle group or a quad axle group
- Different axle groups have certain requirements in relation to minimum and maximum axle spacing's
- Definitions for each type of axle group are located in Schedule 1 Road Traffic (Vehicle Standards) Regulations 2002

## **6. What are the regulation dimension limits?**

- Vehicles can be built to various dimensions, which are controlled by the:
  - Road Traffic (Vehicle Standards) Regulations 2002;
  - Road Traffic (Vehicle Standards) Rules 2002; and
  - Australian Design Rules (ADRs)
- Some of the more common dimensions are:
  - 4.6m high for vehicle built to carry livestock;
  - 2.5m wide for most vehicles;

- 12.5m long for motor vehicles, except an articulated or controlled access bus.
- Regulation dimensions should not be confused when a vehicle requires a p

## 7. What are the regulation mass limits?

- Detailed axle mass limits see Road Traffic (Vehicle Standards) Regulations 2002
- Axle mass limits for the most common axle groups:

Axles and Tires	Maximum axle group load
Single Steer 2 Tyres	6.0t
Twin steer axle group 4 tyres	10.0t for non load sharing suspension 11.0t for load sharing suspension
Single axle 4 tyres	9.0t 9.0t when fitted to a pig trailer
Tandem axle group Single tyres (4)	14.0t (tyre section width >450mm) 13.3t (tyre section width <450mm but >375mm) 11.0t (tyre section width <375mm)
Tandem axle group Dual tyres (8)	16.5t 16.5t when fitted to a pig trailer
Tri-axle group Single tyres (6)	20.0t (tyre section width >375mm) 18.0t fitted to a pig trailer (tyre section width >375mm) 15.0t (tyre section width <375mm)
Tri-axle group Dual tyres (12)	20.0t 18.0t fitted to a pig trailer

- Vehicles must not exceed any manufacturers limit
- The least value should be noted for components such as:
  - tyre pressure;
  - tyre rating;
  - axle rating;
  - axle spacing;
  - gross vehicle mass (GVM)
  - gross trailer mass (GTM)
  - aggregate trailer mass (ATM); and
  - gross combination mass (GCM)

## 8. What is a Road Train?

Means a combination, except a B-Double, consisting of a motor-vehicle towing at least 2 trailers (counting as a single trailer a converter dolly supporting a semi-trailer).

## 9. What is a Turntable/Fifth Wheel?

A device (except the upper rotating element and the king pin, which are parts of a semi trailer) used with a prime mover semi-trailer, or converter dolly

- Device allows quick coupling and uncoupling and provides for articulation
- Turntable is a load-bearing plate that supports vertical and horizontal loads, and is coupled to the semi-trailer's kingpin and locked into place by a set of jaws

turntable/fifth wheel



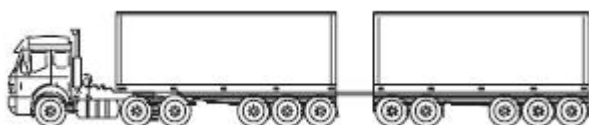
## 10. What is a Semi-trailer?

- Is a load carrying trailer that has its axle group towards the rear of the trailer
- Its forward connection is by means of a kingpin to either a prime-mover, converter dolly or lead semi-trailer, this arrangement allows up to half of the trailers load to be carried by the prime-mover/convertoor dolly/lead semi-trailer

semi-trailer



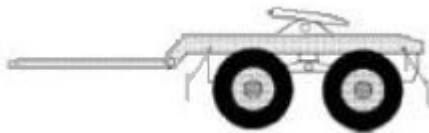
road train with two (2) semi-trailers and one (1) converter dolly



### **11. What is a Converter Dolly?**

- Is a short trailer with its forward connection by a drawbar, the drawbar normally pivots vertically
- Dolly's are only equipped with a turntable
- Dolly's are designed to carry some of the load of an attached semi-trailer rather than a load itself
- Road trains are an example of where a converter dolly is used as part of the combination

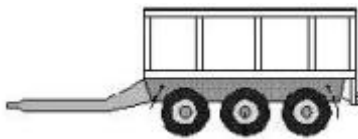
converter dolly



### **12. What is a Pig Trailer?**

- Is a load carrying trailer that has an axle group near its centre
- Forward connection is by a drawbar, which is normally rigid

pig trailer



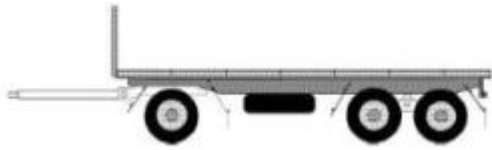
rigid truck and pig trailer combination



### **13. What is a Dog Trailer?**

- Is a combination for a fixed or converter dolly with a semi-trailer

## Dog Trailer

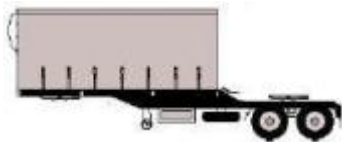


triple road train with 2 dog trailers



### 14. What is a B-Double?

- Is a prime-mover towing two semi-trailers
- First trailer is a lead semi-trailer ("A trailer"), second is a conventional semi-trailer ("B trailer")
- Lead semi-trailer (A trailer) has a turntable at its rear, this means another semi-trailer can connect without the use of a converter dolly
- B-triple are variations of this concept where three semi-trailers are connected



### Who can I contact for more information?

Heavy vehicle Operations Help Desk

- Tel: 9311 8450
- E-mail [hvo@mainroads.wa.gov.au](mailto:hvo@mainroads.wa.gov.au)

## FATIGUE MANAGEMENT FOR COMMERCIAL VEHICLE DRIVERS

This code of practice explains how the requirements apply to people who are responsible for the operation of commercial vehicles in workplaces and to commercial vehicle drivers themselves.

This section of the code provides information on who is affected by the regulations. It looks at the types of commercial vehicles that are included and explains some of the terms used.

The following terms are defined in the regulations:

- commercial vehicle;
- commercial vehicle driver;
- driver fatigue management plan;
- responsible person at a workplace; and
- work time.

In this code of practice, the term “commercial vehicle operating standard” is also used. It is sometimes referred to as “the operating standard”. This is not defined in the regulations but has been used to easily reference all the hours of work time, breaks from driving and hours of nonwork time set out in regulation 3.132.

Words that are not defined in the regulations have their common dictionary meaning.

### What is a commercial vehicle?

The definition of a “commercial vehicle” in these regulations includes the following types of vehicles. These vehicles are only covered by the regulations if the driver of the vehicle fits the definition of a “commercial vehicle driver”.

**Omnibus** an “omnibus” which is a motor vehicle used or intended to be used to carry passengers for hire or reward. It includes vehicles operated by the Crown, or an agency of the Crown, but does not include a taxi or vehicle licensed as a taxi-car. An omnibus can be a vehicle of any size;

**School bus** a “school bus” which is a motor vehicle equipped to carry more than eight adults and used solely or principally to pick up and transport school children;

**Mobile plant** any item of mobile plant with a Gross Vehicle Mass (GVM) of more than 4.5 tonnes. “Mobile plant” is not defined but includes machinery that is self-propelled, on wheels or tracks and is controlled by an operator who is located on the plant. Examples include, but are not limited to, mobile cranes, earthmoving machinery and tractors;

**Integrated mobile plant** any motor vehicle with a GVM of more than 4.5 tonnes that is designed to carry, or is carrying, a large item of equipment that is “integrated”. This means that the item of equipment is permanently attached to the motor vehicle and equipment is not off-loaded when it is used. Examples include, but are not limited to, drilling rigs, elevating work platforms and cranes mounted on vehicles; and

**Goods vehicle** any other motor vehicle with a GVM of more than 4.5 tonnes that is used or intended to be used to carry “goods” of all types for hire or reward. The term “goods” includes fuel, containers, cars, machinery, construction and building materials, waste, livestock and farm produce such as grain. Hired or leased vehicles and vehicles owned by a business to carry its own goods are included.

Vehicles such as the Western Australia Police Random Breath Testing Unit, firefighting vehicles and other emergency vehicles are not included in this group.



## What is a commercial vehicle driver?

The definition of a “commercial vehicle driver” and the definition of “work time” should be considered together. A “commercial vehicle driver” is a person who drives a “commercial vehicle”

AND whose “work time” fits into one of the following categories:

- work time is more than 60 hours per week;
- for more than once per week, work time is more than 10 hours out of any 24 hour period; or
- more than once per week, work time includes the period from midnight to 5.00am.

As soon as a commercial vehicle driver exceeds the hours of work in any one of the categories above, the regulations come into effect. This means that commercial vehicle drivers who undertake occasional work and who work long hours for a few weeks at a time (eg seasonal work) or for a few days per week could be required to comply with the regulations for driving commercial vehicles.

For example, the operator of a business in the country may drive a commercial vehicle to Perth twice a week to deliver goods and pick up supplies. If the round trip involves more than 10 hours of work time and it is completed in 24 hours or less, the operator is a commercial vehicle driver in accordance with the second dot point above.

## What is work time?

“Work time” is defined in regulation 3.130 and in relation to driving a commercial vehicle, includes:

- (a) time spent doing work incidental to the driving;
- (b) time spent operating the mobile plant, where the commercial vehicle is plant;
- (c) time spent operating mobile plant transported on the commercial vehicle; and
- (d) a break from driving, mobile plant operation or incidental work lasting less than 30 minutes.

The operating standard relies on three important concepts: work time, non-work time and breaks from driving.

**“Work time”** includes driving and all the activities that are associated with driving a commercial vehicle.

It includes time spent loading and unloading, completing any paperwork related to picking up and delivering the load; checking the load; refuelling; checking tyres; maintaining and cleaning the vehicle; and talking to supervisors and other drivers about the work arrangements.

Some of the time spent driving the commercial vehicle may be off-road. For example, a transport driver may have to drive through private property to collect goods. This off-road driving and the time spent loading the goods would be work time.

Work time also includes breaks from driving of less than 30 minutes.

**“breaks from driving”** can include toilet stops, rest and meals.

**“non-work time”** means more than 30 minutes time off at home, away from the vehicle or, if on a trip in the vehicle, includes sleep in an appropriate sleeper berth. It does not include driving and work incidental to driving.

Refer to Appendix Two for a table to assist in determining if you are covered under the Regulations.

## **Impact of working hours on fatigue**

Common transport industry work practices include working long hours, prolonged night work, working irregular hours, having little or poor sleep and early starting times. Many commercial vehicle drivers work more than 12 hours per day and a working week of over 70 hours is common practice, which makes them particularly susceptible to fatigue.

The risk of falling asleep at the wheel increases when drivers are driving at times when they would normally be asleep, particularly in the pre-dawn hours. There is also an increased crash risk during the mid-afternoon “siesta hours”.

The risk of accidents also increases with the length of shift. The risk of a crash generated by two twelve-hour shifts is equal to the risk of six eight-hour shifts.

Controlling fatigue requires cooperation between employers and employees. Control strategies need to be implemented to reduce the risk of crashes as a result of fatigue.

## ***Operating standard for solo drivers***

At least 20 minutes of breaks from driving for every five hours of work time including a break of at least 10 consecutive minutes during or at the end of five hours.

No more than 168 hours of work time in any 14 day period.

At least 27 hours of non-work time in any 72 hour period, including at least three periods of at least seven continuous hours of non-work time.

No more than 17 hours between non-work periods of at least seven continuous hours.

If there is shiftwork on five or more consecutive days, at least 24 continuous hours of non-work time between shift changes.

**Note: All of the items above and one of the options below must be complied with, so far as is practicable.**

EITHER

At least two periods of 24 continuous hours non-work time in any 14 day period.

OR

At least four periods of 24 continuous hours non-work time in any 28 day period (provided hours of work do not exceed 144 hours in any 14 day period within the 28 days).

It is important to refer to the relevant sections of this code of practice for information and examples before checking rosters or driving records for compliance with the items in this table.

## Sample Questions for Review

Question		Key points may include (Assessor to indicate students correct responses)
1.	Why is a pre-operational, post start, shut down vehicle and trailer check and clean important?	For the safety of you the driver, the passengers and other road users  An unroadworthy vehicle will be taken off the road until it is repaired; this will result in lost income and towing expenses.
2.	What workplace policies and procedures apply to performing a pre-operational vehicle and trailer check?	Workplace OHS procedures  Workplace vehicle procedures, duty of care and pre-operational checklist  Vehicle fault reporting procedures and documentation requirements environmental procedures for disposal of waste materials e.g. oil vehicle operating handbook and manufacturer guidelines.
3.	What is a defect that you should pick up in the pre-operational, post start and shut down check that could make your vehicle and trailer unroadworthy?	Brakes & brake lights not working  Tyre tread too low number plates obscured  Faulty controls, instruments and indicators  Others according to state or territory specific regulations  Vehicle monitoring device
4.	Where are your company vehicle records kept?	Workplace specific information
5.	What vehicle records do you need to complete before driving off to start your shift?	Workplace specific information  e.g. pre-start operation checklist; driving & operational instructions
6.	Who should you report vehicle and trailer defects or malfunctions to?	Workplace specific information e.g. Supervisor
7.	Why it is important to check tyre pressure?	Tyre pressure affects vehicle safety, including vehicle handling and overheating  Tyre pressure affects fuel efficiency prevents damage to tyres
8.	What are some of the associated equipment you may have to inspect and clean on your vehicle and trailer?	Tail gate loaders  Electronic doors  Gates  Ramps stairs  Hydraulic lifters
9.	What safety measures should be taken	Check on a cold vehicle where possible Relieve pressure before removing radiator cap Visually check header tank or sight glass (if fitted). Reasons why:

	when checking the radiator and why?	Cooling system operates at a high pressure. Sudden release of pressure of an engine near operating temperature can cause coolant to boil and spray steam and coolant Potential for scalding and injury
10.	What legislation and workplace requirements apply to the operation of the vehicle and its load?	Road Transport Acts, regulations, codes and licence/permit requirements dealing with the obligations and responsibilities of the driver, consigner and owner when operating the vehicle and carrying specific loads  Dangerous goods declaration  Acts and regulations dealing with environmental protection (e.g. containment and clean-up of spills involving dangerous goods)  OH&S Act, regulations and workplace procedures (e.g. waste collection and safe disposal)  Workplace procedures for pre-operational checks, vehicle operations, log books, emergency response, reporting of faults
11.	What transmission type is your vehicle?	Synchromesh, need to change gears manually Non-synchromesh, need to control engine revs, double declutching Automatic.
12.	What are three (3) causes of fatigue?	Lack of sleep Performing physically exhausting work Working long hours Not enough rest breaks during a shift Working too many shifts without rest days Working night shifts Poor sleep patterns, interrupted sleep Extensive activities outside work hours
13.	How can you tell if you are fatigued?	Not feeling refreshed Falling asleep Loss of concentration Yawning Errors in decision making and judgement Trouble seeing, including hallucinations in extreme cases Taking extended sleep during days off Frequent naps
14.	How does fatigue affect your ability to drive?	Slower reaction time Reduced driving ability Poor signalling Less awareness of traffic Poor steering Poor fuel economy
15.	What are some of the possible consequences to both you and your employer of driving while fatigued?	Accident Loss of life. Trauma and stress on family and friends from loss No income or lost income increase in insurance premiums to cover accident costs Reduced workplace profits which can lead to less work available
16.	What should you do if your mobile phone rings while you are driving?	Follow state or territory regulations
17.	What is eco	Managing operation of vehicle in such a way as to maximise efficiency and

	driving?	<p>effectiveness of vehicle, including:</p> <p>engine management o brake management o ancillary brakes</p> <p>gear selection</p> <p>using air-conditioning only when necessary</p> <p>not idling engine for extended periods of time when not in use</p> <p>anticipating traffic flow to prevent driving in traffic congestion</p>
18.	What are 5 driving hazards that may occur while operating a multi Combination vehicle?	<p>Wet or icy roads, fog or high winds</p> <p>Oil, debris or animals on the road</p> <p>Vehicle fire, leaking fuel</p> <p>Faulty brakes</p> <p>Inappropriately parked vehicles on the side of the road</p> <p>Faulty steering mechanism</p> <p>Pedestrians crossing road</p> <p>Flooded roads</p> <p>Other road users</p> <p>Multi traffic</p> <p>Time of day (e.g. Sun glare)</p>
19.	What actions should you take in the event of a driving emergency?	<p>Report the incident to the relevant emergency services</p> <p>Report the incident to your base or prime contractor</p> <p>Follow procedures in the emergency procedures or company emergency plan</p> <p>Provide reasonable assistance to emergency services</p> <p>Prevent other vehicles from coming closer than the specified safe distance</p> <p>Warn people who may be at risk</p> <p>Prevent or minimise escape of dangerous goods and their entry into drains, sewers or natural watercourses</p>
20.	How can you manage stressful driving situations?	<p>Concentrate on using efficient and defensive driving techniques</p> <p>Carefully manage fatigue, diet and prescribed medication</p>
21.	What tools do you use to navigate successfully to designated location?	<p>Map reading</p> <p>Satellite navigation device</p> <p>Ask client, supervisor or local en route</p>