

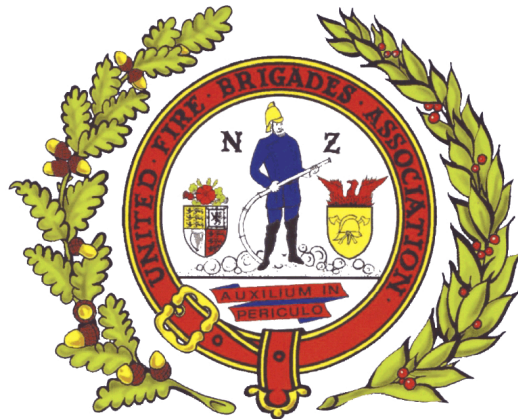


**U.F.B.A**

UNITED FIRE BRIGADES'  
ASSOCIATION OF NEW ZEALAND

# **Index to General Conditions, Requirements and Specifications for Driving Challenges**

**April 2011**



**U.F.B.A**

UNITED FIRE BRIGADES'  
ASSOCIATION OF NEW ZEALAND



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# ENTRY REQUIREMENTS

## DRIVERS

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- The maximum competitors eligible to compete at the National Driving Challenge will be seventy five (75).
- ALL competitors must have a full class 2 licence.
- The UFBA Technical Panel shall reserve the right to add “wild card” entries to make up the numbers if required.
- The UFBA Technical Panel shall also have the right to restrict entries should this prove necessary.

## UNIFORM

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- All participants shall wear New Zealand Fire Service level 1 uniform (except for helmets and gloves) or New Zealand Fire Service dark blues.
- Participants from Rural and Industrial Brigades shall wear their level 1 uniform or recognised equivalent.

## THE CHALLENGE

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The Driving Challenge shall consist of:

- 1) A set of multi choice questions taken from the Heavy Traffic Class 2 Road Code, the New Zealand Fire Service drivers manual, basic pump operation, ECO control, AND
- 2) Driving skills from the New Zealand Fire Service skills manual.

# EQUIPMENT

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1. 3 Sets Lights
2. Power leads, multi boxes
3. 3 generators (if power NOT readily available)
4. 5/6 fire appliances
5. Break gun attachment (enough charges for at least twice the amount of competitors)
6. 100 cones (a mix of small and large)
7. 3 lengths 150 x 25 timber at 5.100m long (2 lengths parallel parking – 1 length baby parking)
8. 50-60 lm 100 x 50mm timber for attaching bay parking and parallel parking together
9. 3” x 4” nails for fixings, make up \* 2 right angle frames  
1m x 1m (for estimating clearance) using 100 x 50 timber (\* Not too high, keep height lower to fit below mudguard)
10. Pallets for bay parking:  
8 at 2000 wide x 1200 high for SIDES  
2 at 1600 wide x 1200 high for ENDS  
4 at 1200 wide x 1200 high (support wings)
11. Pallets for parallel parking – 4 at 1200 x 1200mm
12. Score sheets as sample and contestant number
13. Caravan or similar for field secretary with power
14. Large tent for catering (tables, chairs, etc.)
15. Toilet facilities
16. 2 strip markers 10.2m long (hose and reflectors)
17. Clipboards (8 to 10)
18. ID for competitors (clear card holders) numbered
19. GPS unit
20. Stopwatches (2)
21. Portable radios (6)
22. Hi Viz vests (20)
23. Tape measures

# GENERAL CONDITIONS

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- 1) The wearing of seatbelts is compulsory. Failure to do so will result in disqualification from that exercise.
- 2) Competitors must use mirrors when reversing at all times. Heads out of windows will not be permitted.
- 3) When the lane changing scenarios are used, a target time will be set by an appointed driving instructor. This time shall remain unknown to all competitors. If a competitor completes the course 30 seconds faster or slower than the hidden time, then they shall be judged accordingly by that judge.
- 4) ALL officials have been instructed on the procedures to be taken should it be found necessary to alter a score sheet.
- 5) Any competitor found interfering with or altering their score sheet will be disqualified.
- 6) The questionnaire will be completed before commencing any of the practical driving skills.
- 7) The JUDICIAL COMMITTEE shall consist of one UFBA Board member and at least two members of the UFBA Technical Panel.
- 8) Any protest must be lodged within fifteen (15) minutes after completion of the evolution. Such protest must be lodged on the appropriate form which shall be available from the Field Secretary and must be accompanied by a fee of \$40.
- 9) The Judicial Committees decision shall be final.
- 10) All diagrams and measurements within the current rules are a guideline and are subject to the final decision on the day by the judges and Judicial Committee to ensure that the challenge is feasible and safe for all involved.
- 11) At the conclusion of each evolution and after the judge has signed your score sheet, you will proceed to the next evolution and continue on this basis until all evolutions have been completed.
- 12) All competitors will be allocated their respective starting point at each evolution by the judge in charge of that evolution.
- 13) ALL competitors shall compete in the spirit of fair play. In the unlikely event that a competitor is identified as not competing fairly, their score may be penalised at the discretion of the Judicial Committee.
- 14) Officials must initial, enter the time the competitor completed the exercise, then complete the score sheet – this will then be initialled by the competitor.

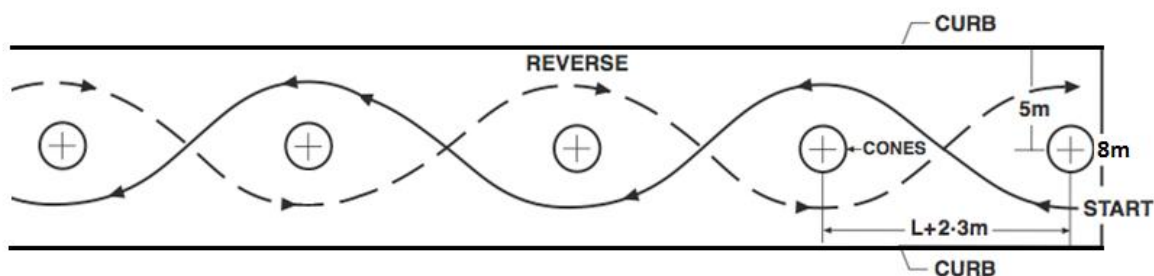
# OFFICIALS

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Examiner/Marker for written questionnaire	1
Field Secretary	2
Judges	
Exercise 1	1
Exercise 2	1
Exercise 3	2
Exercise 4	2
Exercise 5	1
Exercises 6, 7, 8 & 9	4
Exercise 10	2
<b>Total Judges</b>	<b>15</b>
Spare	2
Equipment Officer (Fix Lights)	1
<b>Total Officials</b>	<b>21</b>

Once appointed to an exercise, judges will remain in that position until the completion of the Challenge.

## EXERCISE No 1: SERPENTINE COURSE (110 points possible)

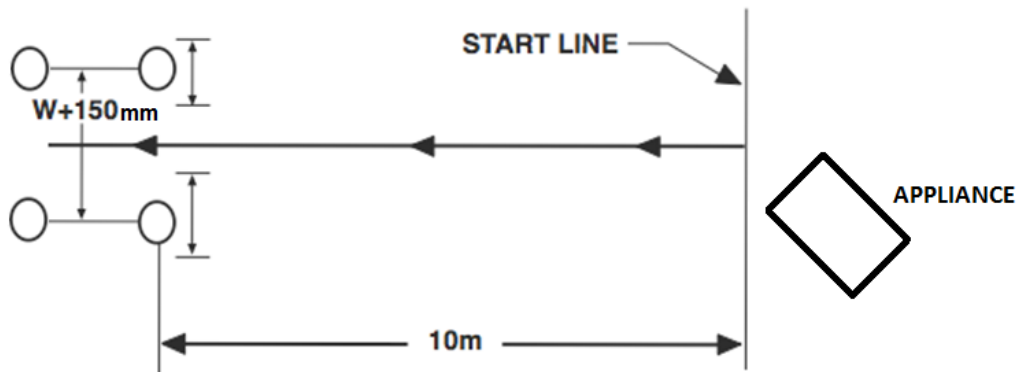


The driver must negotiate the course in a continuous motion in each direction. The driver will proceed forward through the course starting on the left-hand side of the course and then reverse the appliance back through the course from the opposite side to which they exited i.e. the right-hand side of the course.

The driver will be judged for overall ability, efficiency, aptitude and smoothness of operation.

Points will be lost for re-alignment (forward or reverse), failure to keep within boundaries and overall ability. **The driver will be rewarded 10 Bonus Points for zero penalties.**

## EXERCISE No 2: ESTIMATING CLEARANCE (110 points possible)



Starting from an angled position, the driver will manoeuvre his/her appliance to a point 10m from the markers and stop. Both markers will be placed by the judge. The driver will then give instructions for the marker to be moved to a position, which he/she estimates to be equivalent to the overall width of his/her vehicle plus 150mm maximum.

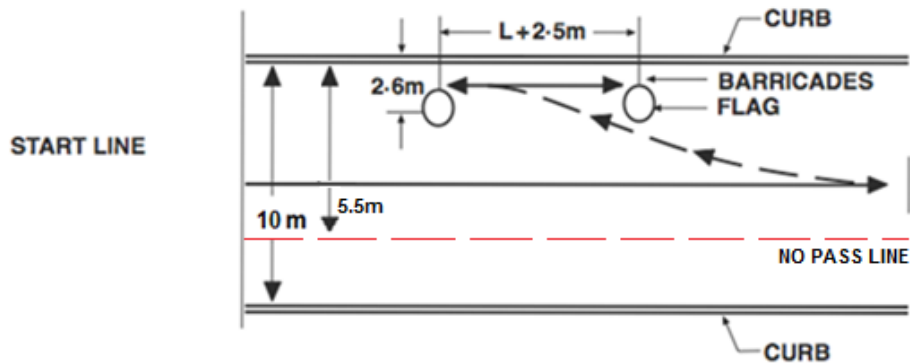
He/she will then accelerate his/her vehicle up to the markers and stop within the confines of the markers.

Points will be lost as per the attached assessment score sheet for this exercise. **The driver will be rewarded 10 Bonus Points for zero penalties.**

### Notes

1. Both sides will be measured (from the tyre to the marker) and the side that is the greatest is the side the penalties will be taken.
2. The driver's side window must be up.

## EXERCISE No 3: PARALLEL PARKING (110 points possible)



The driver will manoeuvre the appliance forward of site for backing, then reverse into area outlined by barricades.

The driver is permitted to pull ahead or reverse as often as required to park the appliance.

Once parked the appliance's position will be measured.

After measurement, the driver will manoeuvre the appliance from the parking area with a maximum of two forward and two backward motions and then reverse past the start line.

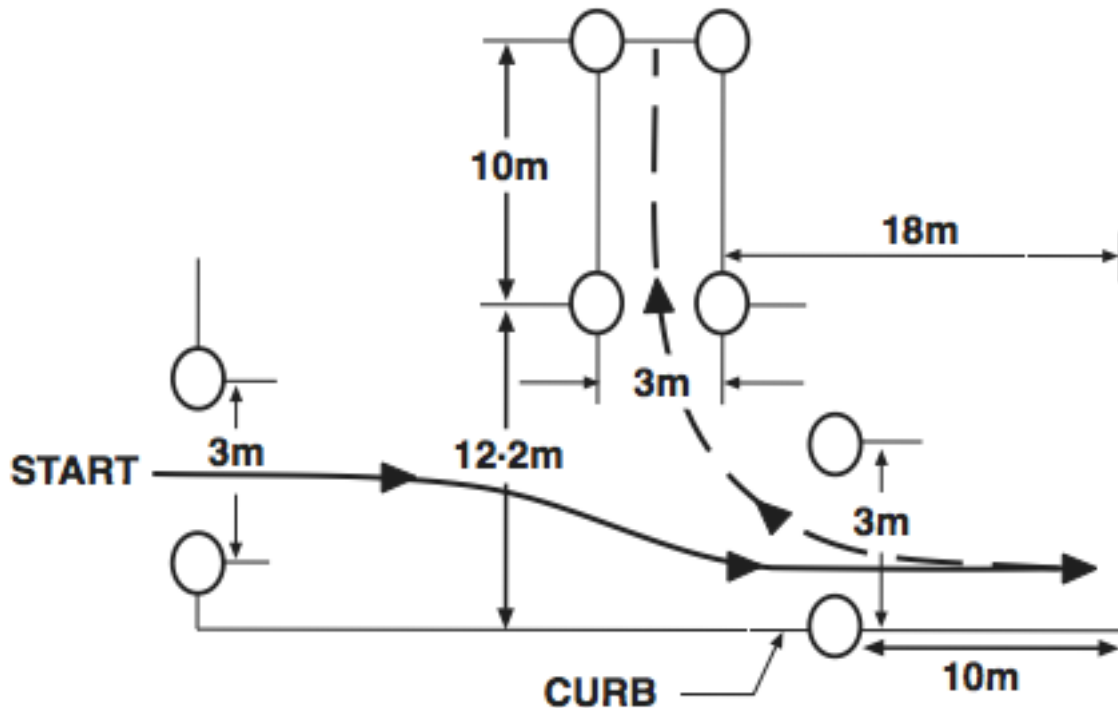
Points will be lost for:

- Striking a barricade
- Striking the curb with a tyre
- Measuring will be made from centre of farthest fender from curb
- Appliance not being properly centred, 300mm variation permitted 10 points
- Measuring spot on fenders to be marked by tape 400mm tolerance
- Any part of the vehicle that passes over the no pass line incurs a penalty of 15 points.

The driver will also be judged for overall ability, efficiency, aptitude and smoothness of operation maximum 12 point penalty. **The driver will be rewarded 10 Bonus Points for zero penalties.**

This exercise has a time limit of 4 minutes. Once 4 minutes has elapsed, the driver will be told to stop and the measurements taken.

## EXERCISE No 4: BAY PARKING (110 points possible)



Driver starts between the cones at the start line, moves forward into bay until the rear of the appliance is past the cones, then reverses into the bay without striking curb, cones, side boundary or rear barricade. The driver will be instructed to stop and measurements will be made. **Once measurements are made, the driver will then drive forward from where he/she has just come and reverse through the start cones.**

Points will be lost for:

- Striking or crossing curbs
- Each realignment
- Striking a side marker
- Striking the rear barricade
- Being off-centre from the side boundaries

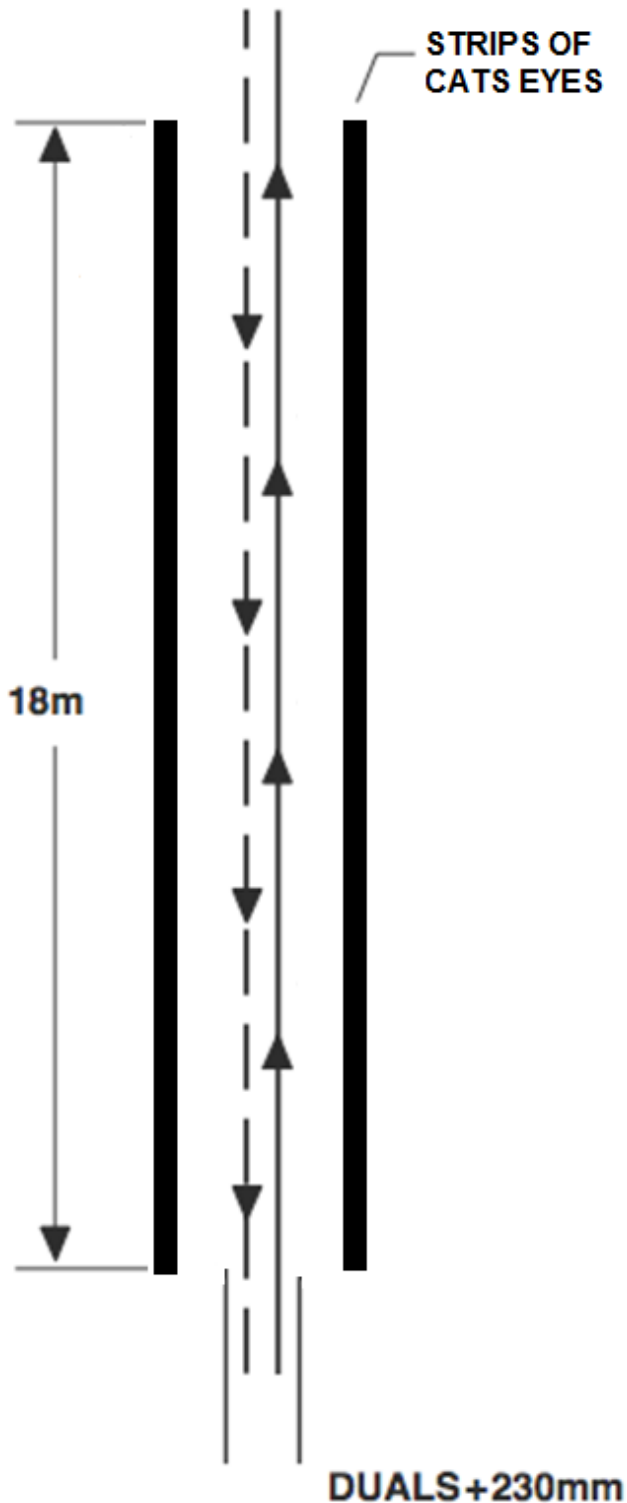
The appliance must be stopped within 450mm of the rear barricade and properly centred within the side boundary markers.

A variation of 50mm is permitted for centring the appliance.

The driver will also be judged for overall ability, efficiency, aptitude and smoothness of operation. **The driver will be rewarded 10 Bonus Points for zero penalties.**

# EXERCISE No 5: STRAIGHT LINE DRIVING (110 points possible)

Forward and Backward



The driver will proceed through the course in one continuous motion forward, and return in one continuous reverse motion.

On the forward movement, the left set of wheels will pass between the markers and on the reverse or return movement, the right wheels will pass between the markers.

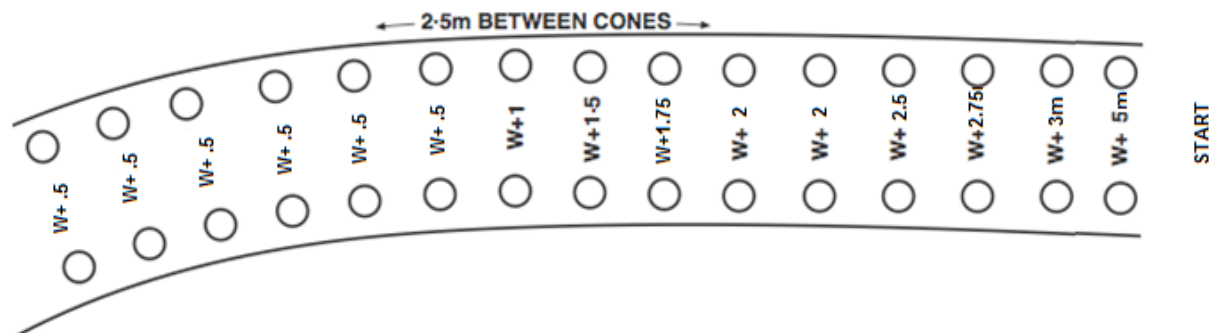
Points will be lost for:

- Each stop or realignment (20 points)
- Striking a marker (10 points)
- Stopping (20 points)
- Negotiating the markers with the wrong set of wheels (**no score**)

The driver will also be judged for overall ability, efficiency, aptitude and smoothness of operation.

The driver will be rewarded 10 Bonus Points for zero penalties.

## EXERCISE No 6: SHRINKING CHICANE (105 points possible)



The driver must negotiate the chicane in a continuous motion at a speed not less than 50km.

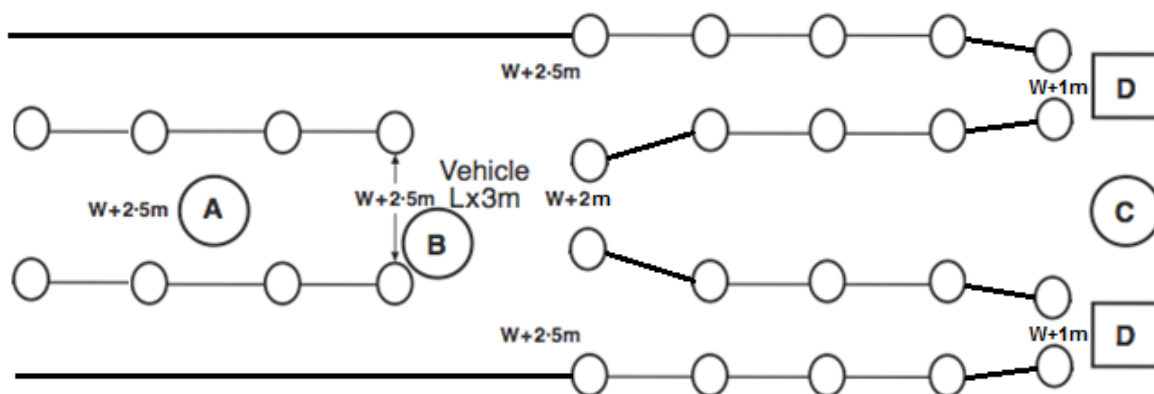
The vehicle must keep within the boundaries throughout the entire manoeuvre.

Points will be lost for:

- Speed less than 50Km/h
- Striking a marker
- Moving any part of the vehicle outside the coned boundary

The driver will also be judged for overall ability, efficiency and smoothness of operation. **The driver will be rewarded 5 Bonus Points for zero penalties.**

## EXERCISE No 7: LANE CHANGE (105 points possible)



The driver must approach Lane A at not less than 50Km/h. As the driver approaches point B, a green light at point C will indicate which lane the driver must use to exit at point D. The driver must manoeuvre left or right as indicated by the lights.

Points will be lost for:

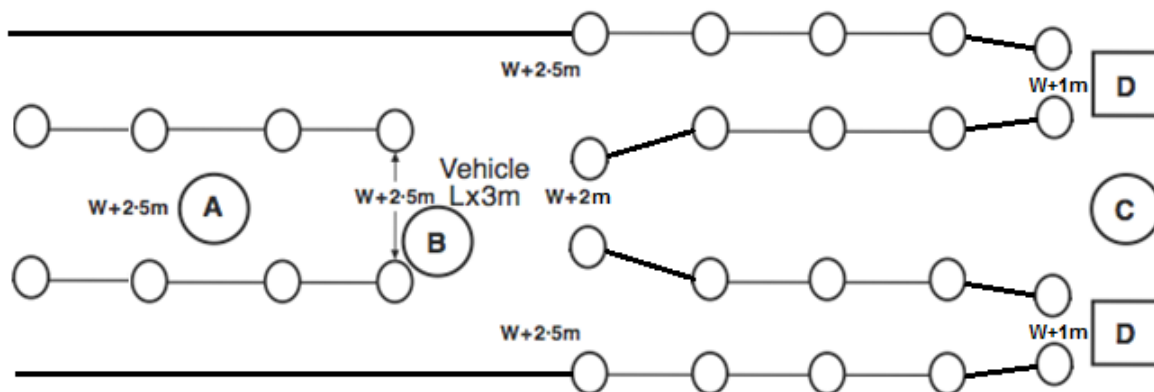
- Speed less than 50Km/h
- Striking a marker
- Manoeuvres into the wrong lane
- Moving outside the boundaries of the course

The driver will also be judged on overall ability, efficiency and smoothness of operation. **The driver will be rewarded 5 Bonus Points for zero penalties.**

### Note:

If the driver exceeds 55km, the official will call "abort" and no points will be scored in this exercise.

## EXERCISE No 8: LANE CHANGE (105 points possible)



The driver must approach Lane A at not less than 50Km/h. As the driver approaches point B, a green light at point C will indicate which lane the driver must use to exit at point D. The driver must manoeuvre left or right as indicated by the lights.

Points will be lost for:

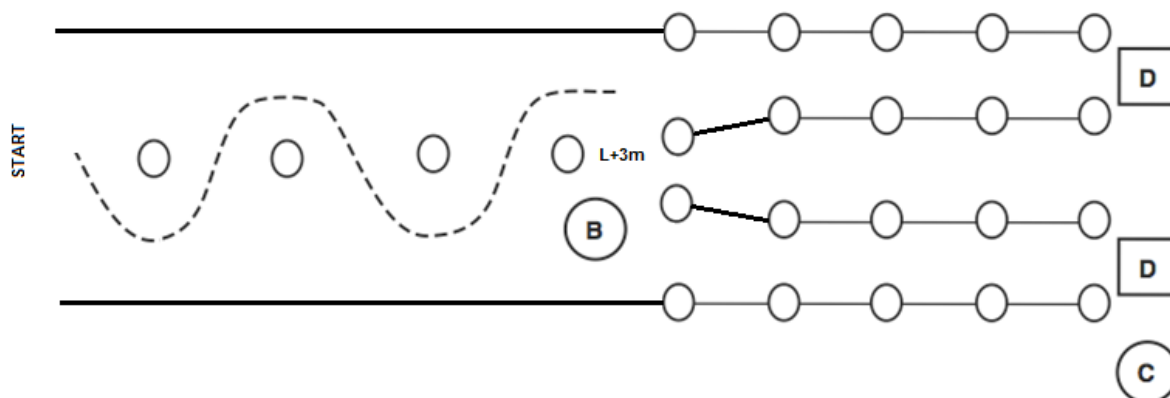
- Speed less than 50Km/h
- Striking a marker
- Manoeuvres into the wrong lane
- Moving outside the boundaries of the course

The driver will also be judged on overall ability, efficiency and smoothness of operation. **The driver will be rewarded 5 Bonus Points for zero penalties.**

### Note:

If the driver exceeds 55km, the official will call “abort” and no points will be scored in this exercise.

## EXERCISE No 9: WEAVING LANE CHANGE (105 points possible)



The driver will approach cones at not less than 50Km/h and drive between cones. As the driver approaches point B, a green light at point C will indicate which lane the driver must use to exit at point D. The driver must manoeuvre left or right as indicated by the lights.

Points will be lost for:

- Speed less than 50Km/h
- Striking a marker
- Manoeuvres into the wrong lane
- Moving outside the boundaries of the course

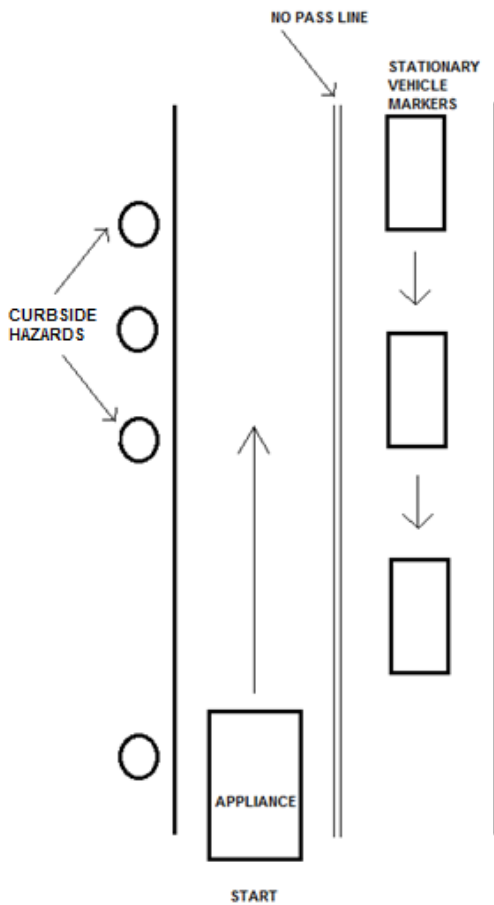
The driver will also be judged on overall ability, efficiency and smoothness of operation. **The driver will be rewarded 5 Bonus Points for zero penalties.**

### **Note:**

If the driver exceeds 55km, the official will call “abort” and no points will be scored in this exercise.

# EXERCISE No 10: BRAKING

*Points will be deducted for reaction time and stopping distance x number of competitors*



With the appliance travelling at 50 kph, the braking light will be activated by the instructor when he sees the movement of a curbside hazard.

The reaction time and the total stopping time will be taken from the readout of the braking unit.

# SCORE SHEET – EXERCISE 1

## Serpentine Course

Maximum possible points **110**

**COMPETITOR NUMBER:** \_\_\_\_\_

<b>Fault</b>	<b>Penalty</b>	<b>Points Lost</b>
Wheel striking curb	15 each	
Re-alignment forward or reverse	15 each	
Striking a marker	20 each	
Overall ability (1) Smoothness (2) Judgement or cornering (3) Vehicle control (4) Steering (Maximum penalty 12)	3 each	
<b>TOTAL POINTS</b>		
<b>Bonus 10 points for zero penalties</b>		

Time .....

Officials Initials .....

Competitors Initials .....

## EXERCISE 2 – ESTIMATING CLEARANCES

### Ready Reckoner to Calculate Penalty

<b>Distance</b>	<b>Penalty</b>
400mm	100
375mm	90
350mm	80
325mm	70
300mm	60
275mm	50
250mm	40
225mm	30
200mm	20
175mm	10
150mm	0

## SCORE SHEET – EXERCISE 2

### Estimating Clearances

*Maximum possible points 110*

**COMPETITOR NUMBER:** \_\_\_\_\_

Fault	Penalty	Points Lost
Striking a marker	100	
Width as per ready reckoner sheet provided		
Overall ability (1) Smoothness (2) Judgement or cornering (3) Vehicle control (4) Steering (Maximum penalty 12)	3 each	
<b>TOTAL POINTS</b>		
<b>Bonus 10 points for zero penalties</b>		

Time .....

Officials Initials .....

Competitors Initials .....

## **EXERCISE 3 – PARALLEL PARKING**

### **Curb to Truck**

*Ready Reckoner to Calculate Penalty*

<b>Distance</b>	<b>Penalty</b>
900mm	100
850mm	90
800mm	80
750mm	70
700mm	60
650mm	50
600mm	40
550mm	30
500mm	20
450mm	10

## **EXERCISE 3 – PARALLEL PARKING**

### **Appliance Not Properly Centered**

*Ready Reckoner to Calculate Penalty*

<b>Distance</b>	<b>Penalty</b>
750mm	100
700mm	90
650mm	80
600mm	70
550mm	60
500mm	50
450mm	40
400mm	30
350mm	20
300mm	10

## SCORE SHEET – EXERCISE 3

### Parallel Parking

*Maximum possible points 110*

**COMPETITOR NUMBER:** \_\_\_\_\_

<b>Fault</b>	<b>Penalty</b>	<b>Points Lost</b>
Striking a barricade	30 each	
Striking a curb	15 each	
<b>Any part of vehicle crossing the no pass line</b>	<b>15</b>	
Vehicle not properly centred (300mm variation allowed)		
Distance as per ready reckoner provided		
>2 movements each direction on exiting		
Overall ability (1) Smoothness (2) Judgement or cornering (3) Vehicle control (4) Steering (Maximum penalty 12)	3 each	
<b>TOTAL POINTS</b>		
<b>Bonus 10 points for zero penalties</b>		

Time .....

Officials Initials .....

Competitors Initials .....

## EXERCISE 4 – BAY PARKING

### *Ready Reckoner to Calculate Penalty*

Distance from back wall of garage	Penalty
950mm	100
925mm	95
900mm	90
875mm	85
850mm	80
825mm	75
800mm	70
775mm	65
750mm	60
725mm	55
700mm	50
675mm	45
650mm	40
625mm	35
600mm	30
575mm	25
550mm	20
525mm	15
500mm	10
475mm	5
450mm	0

Variation from side boundary	Penalty
550mm	100
500mm	90
450mm	80
400mm	70
350mm	60
300mm	50
250mm	40
200mm	30
150mm	20
100mm	10

To calculate variation depending on truck width: Take the truck width away from the bay width, divide the answer by two to get the centered distance from the side of the truck to the side of the bay. When it is centered, if the truck ends up 100 mm or more from the centered distance, it is a penalty. (I.e. Bay width 3 metres Truck width 2.4 metres =  $600 \text{ mm} / 2 = 300\text{mm}$  centered distance so a measurement of 200 mm or 400 mm from the bay side incurs a 10 point penalty.)

# SCORE SHEET – EXERCISE 4

## Bay Parking

Maximum possible points **110**

**COMPETITOR NUMBER:** \_\_\_\_\_

<b>Fault</b>	<b>Penalty</b>	<b>Points Lost</b>
Striking the curb	25 each	
Re-alignment forward or reverse	10 each	
Striking rear barricade	100	
Striking side marker or cone	25 each	
Distance as per ready reckoner provided		
Overall ability (1) Smoothness (2) Judgement or cornering (3) Vehicle control (4) Steering (Maximum penalty 12)	3 each	
<b>TOTAL POINTS</b>		
<b>Bonus 10 points for zero penalties</b>		

Time .....

Officials Initials .....

Competitors Initials .....

# SCORE SHEET – EXERCISE 5

## Straight Line Driving

Maximum possible points **110**

**COMPETITOR NUMBER:** \_\_\_\_\_

<b>Fault</b>	<b>Penalty</b>	<b>Points Lost</b>
Stopping	20	
Re-alignment forward or reverse	20 each	
Striking a marker	10 each	
Wrong set of wheels used	100	
<b>TOTAL POINTS</b>		
<b>Bonus 10 points for zero penalties</b>		

Time .....

Officials Initials .....

Competitors Initials .....

## SCORE SHEET EXERCISES 6 – 9

**COMPETITOR NUMBER:** \_\_\_\_\_

### EXERCISE 6 – Shrinking Chicane

PART A

Fault	Penalty	Points Lost
Speed less than 50km	20	
Striking a marker	10 each	
Moving outside coned boundary	50	
Points Lost		
<b>TOTAL POINTS</b>		

PART B 0=excellent 5=poor

OVERALL Ability. Maximum 5 points each	Score
Steering	
Cornering	
Vehicle Control	
Bonus for zero penalties (5 points)	
<b>TOTAL POINTS</b>	

<b>TOTAL Score Part A + Part B</b>	
------------------------------------	--

### EXERCISE 7 – Lane Change

PART A

Fault	Penalty	Points Lost
Speed less than 50km	20	
Striking a marker	10 each	
Moving outside boundaries of course	50	
Wrong Lane	100	
Points Lost		
<b>TOTAL POINTS</b>		

PART B 0=excellent 5=poor

OVERALL Ability. Maximum 5 points each	Score
Steering	
Cornering	
Vehicle Control	
Bonus for zero penalties (5 points)	
<b>TOTAL POINTS</b>	

<b>TOTAL Score Part A + Part B</b>	
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### EXERCISE 8 – Lane Change

PART A

Fault	Penalty	Points Lost
Speed less than 50km	20	
Striking a marker	10 each	
Moving outside boundaries of course	50	
Wrong Lane	100	
Points Lost		
<b>TOTAL POINTS</b>		

PART B 0=excellent 5=poor

OVERALL Ability. Maximum 5 points each	Score
Steering	
Cornering	
Vehicle Control	
Bonus for zero penalties (5 points)	
<b>TOTAL POINTS</b>	

<b>TOTAL Score Part A + Part B</b>	
------------------------------------	--

### EXERCISE 9 – Weaving Lane Change

PART A

Fault	Penalty	Points Lost
Speed less than 50km	20	
Striking a marker	10 each	
Moving outside boundaries of course	50	
Wrong Lane	100	
Points Lost		
<b>TOTAL POINTS</b>		

PART B 0=excellent 5=poor

OVERALL Ability. Maximum 5 points each	Score
Steering	
Cornering	
Vehicle Control	
Bonus for zero penalties (5 points)	
<b>TOTAL POINTS</b>	

<b>TOTAL Score Part A + Part B</b>	
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# SCORE SHEET – EXERCISE 10

## Braking

*Maximum possible points 100*

**COMPETITOR NUMBER:** \_\_\_\_\_

<b>Fault</b>	<b>Penalty</b>	<b>Points Lost</b>
Speed less than 50km/hr	20	
Vehicle control (collision avoidance)	0 – 20	
Reaction time	0 – 30	
Reaction time distance (RTD)		
Stopping distance	0 – 30	
<b>TOTAL POINTS</b>		

Time .....

Officials Initials .....

Competitors Initials .....

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