

# ***NZRC SPEEDWAY QUARTER SCALE RULEBOOK***



## **CONTENTS:**

***1: GENERAL***

***2: RACING RULES***

***3: DIRT MODIFIED***

***4: SPRINT CARS***

***5: SPEEDCAR/MIDGET***

***6: SALOON***

# **1                    *GENERAL***

## **1/1:**

All drivers must be financial club members and affiliated to NZRCA, otherwise they may not be permitted to race. (Visitors permitted to attend two meetings before payment of membership required).

## **1/2:**

All race cars to meet current specifications for that class. Race cars new to the Speedway class that do not comply may be permitted to run at the discretion of a unanimous acceptance by other competitors.

## **1/3:**

All competitors entering a National title meeting must have run in at least three quarterscale speedway events to qualify.

## **1/4:**

No smoking on the track or drivers stand.

## **1/5:**

Covered footwear required within the pit area. (No jandals).

## **1/6:**

Fire extinguishers are located in the pit area and next to the starter's flags.

## **1/7:**

Cars are to be started and stopped at the pit gate.

## **1/8:**

No cars are to be driven in the pit area.

## **1/9:**

All cars must be in a safe running condition prior to entering the track.

## **1/10:**

Any car which continually stalls will be disqualified on the third occurrence.

**1/11:**

Cars may be subjected to scrutineering before competing in an event.

**1/12:**

Pit gate to remain closed when cars are running on the track.

**1/13:**

The HBLSS rules covering protests, Driver conduct and driving standards are the same as in the NZRC General Rule Book and can be found at

**<http://www.nzrca.co.nz/wp-content/uploads/2015/01/General-Rules-2015.pdf>**

**2: RACING RULES**

**2/1:**

Whilst any person is on the track all cars are to remain stationary.

**2/2:**

No circle work on the grass infield.

**2/3:**

All races will be rolling starts.

**2/4:**

Lapped cars will hold their line to allow ease of passage for lapping cars.

**2/5:**

A driver causing a race stoppage is to go to the rear of field on the restart. In the case of a multiple incident whoever's car became undriveable first is deemed the cause of the race stoppage.

**2/6:**

A driver going on the infield during a race, when re-entering the track, must not advantage their position and must do so in a safe manner.

**2/7:**

No repair work to be done on the infield.

**2/8:**

Cars that have retired from a race will not be allowed to restart.

**2/9:**

All restarts except complete restarts will be single file.

**2/10:**

Avoid excessively noisy tune ups in the pit area.

**2/11:**

Racing is under the control of the flag person. All decisions are final and no discussion will be entered into.

**2/12:**

At the beginning of a race, and only after the pit gate is closed, cars may perform a warm up lap at low speed. Cars must line up in their allocated grid positions at the marker on turn two, once instructed by the flag person. Cars are then to remain stationary until directed to move.

**2/13:**

Whilst rolling around for a start the pole sitter sets the pace.  
Any driver who cannot maintain their line during a start may be sent to the rear of field. No overtaking is permitted until the green flag/siren.  
If no siren is sounded reform and roll around for another lap.  
Any person deemed to be driving erratically or in a dangerous manner may be excluded from racing.

**2/14:**

Green flag/siren (short blast) - race start/restart.  
Red flag/siren (long blast) - cars to stop and not to move until the track is clear.  
White flag - one lap remaining.  
Chequered flag - race end.

### **3: DIRT MODIFIED**

#### **3/1: General**

Open to all two wheel drive commercially available buggies.

All measurements are measured from the extreme points.

Body is Mandatory.

Alloy components that resemble commercially available and fitted to the approved vehicle are allowed.

#### **3/2: Radio**

2.4Ghz controllers only allowed.

No radio aids or enhancements are allowed.

D boxes and/or Gyro's are not allowed.

ONE only Transponder is to be fitted as near as possible behind front axle

#### **3/3: Engine**

Maximum engine capacity is 25.9cc.

Zenoah G2D70 / G230RC / G240RC / G260RC / G270RC / SIKKTOY23 or like CY engine.

Fitment of 25.4cc kit is allowed.

Engine must remain standard as per manufacturer's specifications.

Porting and polishing is not allowed.

Stuffed crank is not permitted.

A 12mm block is permitted to be fitted between the carby and inlet manifold to allow rotation of carby.

A 31mm block is permitted to be if it also replaces the inlet manifold to allow the rotation of the carby.

Non standard air filter is allowed.

Boost bottles are not permitted.

Standard ignition system including spark plug lead only allowed.

Kill switch must be fitted and operational.

Kill switch must be designated by a blue triangle.

Third channel / remote kill switch is recommended but not mandatory .

Reed valve engine is not allowed.

Recoil starter must be fitted and operational.

### **3/4: Clutch**

Must be fitted and operational.

Only manufacturers standard clutch from listed engines are allowed.

Aftermarket clutches are not allowed.

### **3/5: Exhaust**

Non standard exhaust system is permitted.

Exhaust must be contained within body.

Engine noise must not exceed 95dBA measured from approximately 10m from the model using an NZRCS approved measuring device.

### **3/6: Brakes**

Must be fitted and operational.

Only manufacturer's standard braking system allowed.

Four wheel braking system is not allowed.

### **3/7: Body Dimensions**

Appearance must resemble full size V8 Dirt Modified Speedway Car

Must be based on Baja 5B, HPI / HPI SS / Rovani / King Motor models

only Body is mandatory see body specifications below

Aluminium upgrade to replace plastic parts permitted

All measurement for this model are measured from extreme points

BODY LENGTH; Maximum 870mm

BODY WIDTH FRONT; Maximum 480mm

BODY WIDTH REAR; Maximum 510mm

BODY: must be made from Plastic / Aluminium or fiberglass

BODY: Maximum thickness of body material Plastic 3mm / Aluminium & Fiberglass 1.2mm

BODY: Maximum width 480mm

Front of body

1. Bull nose style must have 40mm vertical flat section at front

2. Slant style must have double row vertical nerf bar but be no wider than front nose of body.

**3/8: Crash and nerf bars**

Front crash bars are not allowed other than the one mentioned in 3/7 front of body.

Rear bar may be fitted but must stay within confines of body.

Bars must be maximum 8mm diameter steel or 10mm diameter aluminium.

**3/9: Wheels and tyres**

Aftermarket copies of original product is allowed however must have the same dimension's as the original.

**3/10: Wings**

Wings are not allowed, but a rear spoiler may be part of the body but not protrude outside of body and be no more than 25mm high

**3/11: Driveline**

2 wheel drive only allowed.

Locked differential is not allowed.

Alloy differential as fitted to HPI Baja 5bSS is allowed.

Friction enhancing devices are not allowed.

Multi speed gearbox is not allowed.

**3/12: Front axle**

Standard as per manufacturer.

**3/13: Suspension**

Standard as per manufacturer.

Shock oil and springs are not restricted

Maximum of 4 shocks only.

**3/14: Fuel tank**

Must be mounted securely within the body of the model.

Must be made of leak proof material.

**3/15: Fuel**

Unleaded / premium unleaded with two stroke oil additive is only allowed.  
Methanol, nitro, av gas, non commercial aftermarket fuel and  
non 2 stroke oil additives are not allowed.

**3/16: Race numbers**

Must be minimum 75mm high and 50mm wide.  
Must be fitted to both sides of body in a contrasting colour.  
Number to have approved letter code adjacent.

**3/17: Approved Letter Codes**

- A** Western Springs, Waikaraka Park and Rosebank
- B** Meeanee
- C** Ruapuna, Woodford Glen and Moore Park
- D** Dunedin
- E** Blenheim
- G** Gisborne
- GM** Greymouth
- H** Huntly
- I** Oreti Park and Riverside
- K** Kihikihi
- M** Baypark
- N** Nelson
- P** Palmerston North
- R** Rotorua
- S** Stratford
- T** Cromwell
- V** Wanganui
- W** Wellington
- Y** Westport
- NZ** New Zealand Championship Place getter (1-3)



### **3/18: Inspection**

NZRCS officials retain the right to inspect any vehicles.

Vehicles may be inspected prior to a blue ribbon( regional or NZ championship ) event at the discretion of NZRCS officials.

Vehicles may be inspected at the completion of any event other than a fun day at the discretion of NZRCS officials.

Penalties will apply if any vehicle is found to be in breach of any rule.

Refusal to comply with an inspection instruction from any NZRCS official will deem the vehicle to be illegal and subject to a penalty.

Any costs incurred during an inspection are at the owners expense.

Vehicle must be dismantled by the owner under the supervision of an NZRCS official.

#### **Note**

Anything not included and detailed in these rules and specifications is deemed to be illegal. Written request must be submitted to NZRCS officials for evaluation and technical clarification. Once accepted it will be put to a vote of the members of the section prior to inclusion to these rules. (Version 2015:1)

NZRC Speedway Large Scale Rulebook

## **4: ¼ SCALE SPRINTCAR**

### **4/1: General**

Appearance to resemble a full size sprintcar.

Must be fitted with wings and nerf bars to resemble full size sprintcar.

All measurements are measured from the extreme points.

### **4/2: Radio**

2.4Ghz controllers only allowed.

No radio aids or enhancements are allowed.

D boxes and/or Gyro's are not allowed.

ONE only Transponder is to be fitted as near as possible behind front axle

### **4/3: Engine**

Maximum engine capacity is 25.9cc.

Zenoah G2D70 / G230RC / G240RC / G260RC / G270RC / SIKKTOY23 or like CY engine.

Fitment of 25.4cc kit is allowed.

Engine must remain standard as per manufacturer's specifications.

Porting and polishing is not allowed.

Stuffed crank is not permitted.

A 12mm block is permitted to be fitted between the carby and inlet manifold to allow rotation of carby.

A 31mm block is permitted to be if it also replaces the inlet manifold to allow the rotation of the carby.

Non standard air filter is allowed.

Boost bottles are not permitted.

Standard ignition system from any of the listed engines including spark plug lead only allowed.

Kill switch must be fitted and operational.

Kill switch must be designated by a blue triangle.

Third channel / remote kill switch is recommended but not mandatory .

Recoil starter must be fitted and operational.

Reedvalve engine is not allowed.

#### **4/4: Clutch**

Must be fitted and operational.

Only manufacturers standard clutch from listed engines are allowed.

Aftermarket clutches are not allowed.

#### **4/5: Exhaust**

Non standard exhaust system is permitted.

Exhaust must not be longer than the body and must be contained within the side nerf bars.

Engine noise must not exceed 95dBA measured from approximately 10m from the model using an NZRCS approved measuring device.

#### **4/6: Brakes**

Must be fitted and operational.

No restriction on types or number of brakes fitted.

#### **4/7: Model dimension**

Maximum o/a car length is 1000mm.

Maximum o/a car width is 510mm, measured to outside of tyres.

Minimum chassis height is 300mm.

Maximum chassis height is 335mm.

Minimum wheelbase is 510mm.

Maximum wheelbase is 610mm.

Maximum chassis tube size is 13mm.

Maximum Thickness of Plate chassis is 7mm.

#### **4/8: Wheels and tyres**

Maximum wheel size is 115mm

Maximum front tyre diameter is 155mm.

Maximum front tyre width is 55mm.

Maximum rear tyre diameter is 180mm.

Maximum rear tyre width is 105mm.

#### **4/9: Wings**

Must have top wing fitted at all times to compete.

Top wing option 1 is 385mm long and 385mm wide including side boards.

Top wing option 2 is 460mm long and 330mm wide including side boards.

Top wing side boards must be maximum 460mm long and 180mm high.

Front wing must be maximum 160mm long and 230mm wide including side boards.

Front wing side boards must be maximum 160mm long and 80mm high.

#### **4/10: Driveline**

Two wheel drive only allowed.

Solid rear live axle only allowed.

Independent suspension is not allowed.

Multispeed gearbox is not allowed.

#### **4/11: Front axle**

Beam axle is only allowed.

Independent suspension is not allowed.

#### **4/12: Suspension**

Coilover or torsion bar is allowed in any combination front and rear.

Independent suspension is not allowed.

#### **4/13: Fuel tank**

Must be mounted securely within the body of the model.

Must be made of leak-proof material.

#### **4/14: Fuel**

Unleaded / premium unleaded with two stroke oil additive is only allowed.

Methanol, nitro, av gas, non commercial aftermarket fuel and non 2 stroke oil additives are not allowed.

#### **4/15: Crash and nerf bars**

Front, rear and side bars must be fitted and are to resemble those fitted to real size sprintcars.

Bars must be maximum 8mm diameter steel or 10mm diameter aluminium.

**4/15: Race numbers**

Must be minimum 75mm high and 50mm wide.

Must be fitted to both side wing boards in a contrasting colour.

Must be fitted to both sides of tail tank in a contrasting colour.

**4/16: Approved Letter Codes**

**A** Western Springs, Waikaraka Park and Rosebank

**B** Meeanee

**C** Ruapuna, Woodford Glen and Moore Park

**D** Dunedin

**E** Blenheim

**G** Gisborne

**GM** Greymouth

**H** Huntly

**I** Oreti Park and Riverside

**K** Kihikihi

**M** Baypark

**N** Nelson

**P** Palmerston North

**R** Rotorua

**S** Stratford

**T** Cromwell

**V** Wanganui

**W** Wellington

**Y** Westport

**NZ** New Zealand Championship Place getter (1-3)

#### **4/17: Inspection**

NZRCS officials retain the right to inspect any vehicles.

Vehicles may be inspected prior to a blue ribbon( regional or NZ championship ) event at the discretion of NZRCS officials.

Vehicles may be inspected at the completion of any event other than a fun day at the discretion of NZRCS officials.

Penalties will apply if any vehicle is found to be in breach of any rule.

Refusal to comply with an inspection instruction from any NZRCS official will deem the vehicle to be illegal and subject to a penalty.

Any costs incurred during an inspection are at the owners expense.

Vehicle must be dismantled by the owner under the supervision of an NZRCS official.

#### **Note**

Anything not included and detailed in these rules and specifications is deemed to be illegal. Written request must be submitted to NZRCS officials for evaluation and technical clarification. Once accepted it will be put to a vote of the members of the section prior to inclusion to these rules. (Version 2015:1)

NZRC Speedway Large Scale Rulebook

## **5: SPEEDCAR / MIDGET SPECIFICATIONS**

### **5/1: GENERAL**

Appearance must resemble full size speedway Midget / Speedcar, modern or vintage style.

Cars must be based on Smartech / Carson Style Chassis / River Hobbies Crocodile / FG Marder / Hobby pro Mutilator, Chassis only

Alloy components that resemble commercially available and fitted to the approved vehicle are allowed.

### **5/2: MODEL DIMENSIONS**

Maximum Overall length = 850mm

Maximum Body width = 250mm

Maximum Wheelbase as per manufacturer = 476mm

Maximum Width Front = 425mm

Maximum Width Rear = 450mm

Maximum Height from chassis 330mm

### **5/3: ENGINE**

Maximum Engine Capacity = 23cc as supplied by manufacturer

Zenoah G230RC / G240RC / or like CY 23cc engines are allowed

Engine must remain standard as per manufacturer's specifications

Non Standard Air Filter can be fitted

Carburetor must be standard as per engine manufacturer, Inlet manifold may be changed maximum thickness including gaskets 31mm

Exhaust must be standard can type as per engine manufacturer, no power pipes

Engine noise must not exceed 95dba measured from 10M from model using an approved measuring device.

### **5/4: DRIVELINE**

Differential must be standard, No locked or adjustable differentials

Metal Gear upgrades are permitted

Single Speed gearbox only gear ratios may be changed

Gear ratios: **DIFF:** 16 - 48 tooth combination only

**SIDE GEARS:** between 19/48 = 2.52 ratio & 21/45 = 2.14 ratio

Clutch must remain standard as per manufacturer

**5/5: BRAKES**

Brakes are to remain standard, no hydraulic or 4 wheel systems allowed

**5/6: SUSPENSION**

Shock absorbers are open to all aftermarket replacements of same length as original shocks

Mounting points for shocks may be moved on to chassis / cage

Maximum of 4 shocks only

**5/7: WHEELS AND TYRES**

Tire size max = 170mm diameter x 80mm wide

Wheel adaptors are permitted

**5/8: FUEL / TANK**

Fuel = Unleaded / Premium Unleaded with oil additive only. No other fuels or additives are allowed.

Tank = Must be made of leak proof material and mounted securely within the vehicle

**5/9: CRASH / NERF BARS / CAGE**

Cage to be constructed of Maximum 3/8" or 10mm steel tubing

Must have rear and side crash bars, side bars must not be wider than rear wheel width / front bar is optional

Wings are NOT allowed

**5/10: KILL SWITCH**

Must be fitted and operational and identified by a blue triangle on body

Third Channel / remote kill switch is recommended but not mandatory

**5/11: RADIO / ELECTRICS**

2.4Ghz controllers only allowed.

No radio aids or enhancements are allowed.

D boxes and/or Gyro's are not allowed.

ONE only Transponder is to be fitted as near as possible behind front axle



**5/12: RACE NUMBERS**

Must be 70mm high x 50mm wide each number (with the exception of number 1 which is 70mm high x width to scale)

Must be fitted to both sides of tail tank, and on front of car in contrasting colors

**5/13: Approved Letter Codes**

**A** Western Springs, Waikaraka Park and Rosebank

**B** Meeanee

**C** Ruapuna, Woodford Glen and Moore Park

**D** Dunedin

**E** Blenheim

**G** Gisborne

**GM** Greymouth

**H** Huntly

**I** Oreti Park and Riverside

**K** Kihikihi

**M** Baypark

**N** Nelson

**P** Palmerston North

**R** Rotorua

**S** Stratford

**T** Cromwell

**V** Wanganui

**W** Wellington

**Y** Westport

**NZ** New Zealand Championship Place getter (1-3)

#### **5/14: Inspection**

NZRCS officials retain the right to inspect any vehicles.

Vehicles may be inspected prior to a blue ribbon( regional or NZ championship ) event at the discretion of NZRCS officials.

Vehicles may be inspected at the completion of any event other than a fun day at the discretion of NZRCS officials.

Penalties will apply if any vehicle is found to be in breach of any rule.

Refusal to comply with an inspection instruction from any NZRCS official will deem the vehicle to be illegal and subject to a penalty.

Any costs incurred during an inspection are at the owners expense.

Vehicle must be dismantled by the owner under the supervision of an NZRCS official.

#### **Note**

Anything not included and detailed in these rules and specifications is deemed to be illegal. Written request must be submitted to NCRCS officials for evaluation and technical clarification. Once accepted it will be put to a vote of the members of the section prior to inclusion to these rules. (Version 2015:1)

NZRC Speedway Large Scale Rulebook

## **6:** **SALOONS**

### **6/1:** **General**

Appearance to resemble a full size Saloon or Super Saloon.

### **6/2:** **Radio**

2.4Ghz controllers only allowed.

No radio aids or enhancements are allowed.

D boxes and/or Gyro's are not allowed.

ONE only Transponder is to be fitted as near as possible behind front axle

### **6/3:** **Engine**

Maximum engine capacity is 25.9cc.

Zenoah G2D70 / G230RC / G240RC / G260RC / G270RC / SIKKTOY23 or like CY engine.

Fitment of 25.4cc kit is allowed.

Engine must remain standard as per manufacturer's specifications.

Porting and polishing is not allowed.

Stuffed crank is not permitted.

A 12mm block is permitted to be fitted between the carby and inlet manifold to allow rotation of carby.

A 31mm block is permitted to be if it also replaces the inlet manifold to allow the rotation of the carby.

Non standard air filter is allowed.

Boost bottles are not permitted.

Standard ignition system from any of the listed engines including spark plug lead only allowed.

Kill switch must be fitted and operational.

Kill switch must be fitted on top right hand rear of roll cage.

Kill switch must be designated by a blue triangle.

Recoil starter must be fitted and operational.

Reedvalve engine is not allowed.

### **6/4** **Clutch**

Must be fitted and operational.

Only manufacturers standard clutch from listed engines are allowed.

Aftermarket clutches are not allowed.

**6/5** **Exhaust**

Non standard exhaust system is permitted.

Exhaust must not be longer than the body and must be contained within the side nerf bars.

Engine noise must not exceed 95dBA measured from approximately 10m from the model using an NZRCS approved measuring device.

**6/6:** **Brakes**

Must be fitted and operational.

No restriction on types or number of brakes fitted.

**6/7:** **Saloon car Dimension**

Maximum over all car length is 1220mm.

Maximum over all car width is 510mm, measured to outside of tyres.

Maximum car height is 345mm.

Minimum wheelbase is 610mm.

Maximum wheelbase is 665mm.

**6/8:** **Wheels and tyres**

Maximum wheel size is 115mm.

Maximum front tyre diameter is 155mm.

Maximum front tyre width is 80mm.

Maximum rear tyre diameter is 180mm.

Maximum rear tyre width is 105mm.

Tyres shall not protrude more than 10mm outside the body when measured with the wheels set parallel to the body.

**6/9:** **Wings**

No higher than roofline.

Side dams no higher than roof line.

**6/10: Driveline**

Two wheel drive only allowed.

Solid rear axle or locked Diff.

Independent suspension is allowed- must be locked Diff.

Multispeed gearbox is not allowed.

**6/11: Front axle**

Beam axle is allowed.

Independent suspension is allowed.

**6/12: Suspension**

Coil over or torsion bar is allowed in any combination front and rear.

**6/13: Fuel tank**

Must be mounted securely within the body of the model.

Must be made of leak proof material.

**6/14: Fuel**

Unleaded / premium unleaded with two stroke oil additive is only allowed.

Methanol, nitro, av gas, non commercial aftermarket fuel and non 2 stroke oil additives are not allowed.

**6/15: Crash and nerf bars**

Not applicable.

**6/16: Race numbers**

Must be minimum 75mm high and 50mm wide.

Must be fitted to both sides of body in a contrasting colour.

Number to have approved letter code adjacent.

**6/17:**                      **Approved Letter Codes**

A Western Springs, Waikaraka Park and Rosebank  
B Meeanee  
C Ruapuna, Woodford Glen and Moore Park  
D Dunedin  
E Blenheim  
G Gisborne  
GM Greymouth  
H Huntly  
I Oreti Park and Riverside  
K Kihikihi  
M Baypark  
N Nelson  
P Palmerston North  
R Rotorua  
S Stratford  
T Cromwell  
V Wanganui  
W Wellington  
Y Westport  
NZ New Zealand Championship Placegetter (1-3)

**6/18: Inspection**

NZRCS officials retain the right to inspect any vehicles.

Vehicles may be inspected prior to a blue ribbon( regional or NZ championship ) event at the discretion of NZRCS officials.

Vehicles may be inspected at the completion of any event other than a fun day at the discretion of NZRCS officials.

Penalties will apply if any vehicle is found to be in breach of any rule.

Refusal to comply with an inspection instruction from any NZRCS official will deem the vehicle to be illegal and subject to a penalty.

Any costs incurred during an inspection are at the owners expense.

Vehicle must be dismantled by the owner under the supervision of an NZRCS official.

**Note**

Anything not included and detailed in these rules and specifications is deemed to be illegal. Written request must be submitted to NZRCS officials for evaluation and technical clarification. Once accepted it will be put to a vote of the members of the section prior to inclusion to these rules. (Version 2015:1)

NZRC Speedway Large Scale Rulebook