Organisation of Radio Race Car Associations of Queensland Inc.

Technical Rules
Nitro Tourer

Details	
Section	Nitro Tourer
Type	Technical Specification
Class	1/10 200mm Tourer Car
Release Date	October 2012

Version		
1.0		Initial setup from National and international governing bodys track and technical rules. Rules available from http..//www.ifmar.org/pdf/ifmar_wc_10_track_2008.pdf
1.1	Oct 2012	Orrca Qld starts Gas Tourer remodel for nitro tourer Used layout From Gas Tourer technical specification for uniformity amongst rules sets for ORRCA QLD inc
		Any changes will be marked in red text

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TECHNICAL SPECIFICATIONS
200mm Gas Tourer

1. General

1.1 The official measurements in these Technical Specifications are the metric measurements.

1.2 All measurements in these rules are Maximum or minimum values

1.3 It is the responsibility of the driver to ensure that their car complies with the rules and regulations at all times it is on the track. The organiser may check any car at any time during the event for compliance with the regulations.

1.4 The class run will be the 200mm Nitro Touring Car

2. Engine

2.1 The engine shall have a total capacity of not more than 2.11 cc (0.12 Cu.In)

2.2 The engines shall be air cooled with a front rotary valve, two stroke inductions.

2.3 The engine shall have a maximum of four (4) ports in the liner, including the exhaust port, seen with the piston at its lowest position. Additional slits or openings in the liner are allowed as long as they do not reach the top of the piston at its lowest position

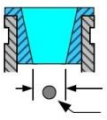
2.4 No form of induction is allowed

2.5 No form of variable timing is allowed

2.6 The piston shirt may only be relieved on the crankshaft counterweight side. No additional openings in the piston are allowed.

2.7 Only glow plug ignition is allowed. Standard or conical glow plugs are allowed

2.8 The carburettor size is to be a maximum diameter of 5.50mm, as measured directly above the spray bar or needle of the carburettor.



Max 5.50mm
Spray bar (Needle)

2.9 Standard pull-start is optional. Any form of starting the engine is allowed.

2.10 **Engine Allowance**

2.10.1 A competitor may use a maximum of two (2) engines during qualifying and finals

2.10.2 At least one engine must be sealed by technical inspection before qualification rounds commence

2.10.3 If a engine has not been marked through technical inspection prior to the commencement of qualifying, the engine that is currently in the chassis will be mark as the first engine

2.10.4 The engine back plate of each engine will be marked and sealed for the duration of the event. The seal will have different indicators for each engine

2.10.5 Each engine may be opened once for maintenance. Maintenance means that one or more components may be replaced, or maintained, within the engine before the engine is resealed. (example Bearing change, rod change) This will also in clued a single rebuild per engine

2.10.6 Each engine can only be rebuild once, once qualifying has started

2.10.7 At the completion of the final or heat, any engine found to have a broken seal will result in the competitor being disqualify from the event

2.10.8 Unsealed engines used during practice are not counted towards the competitors engine allowance

3. Exhaust

3.1 Homologated muffler that meets an approved double chamber design, including silencer chamber, and be fitted with a homologated INS box and must be used.

3.2 The muffler and INS box must be IFMAR listed as homogulated by ROAR, EFRA, FEMCA or FAMAR, and must bear its homologation number for the entire event

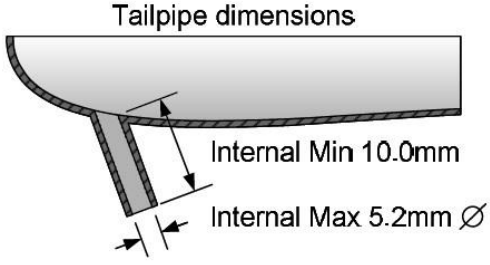
3.3 The muffler and the fitted INS box may not produce more than Eighty Five (85) decibels measured at Ten (10) metres distance and One (1) meter high

3.4 A muffler and INS box must be used, if a car is deemed too loud the car must be stopped and the noise level reduced to 85db before it can return to the track. The Race Director has final say on noise levels.

3.5 The outlet of the tail pipe must be projected horizontally or downward.

3.6 Tall Pipe Dimensions

Maximum Internal Diameter	5.20mm
Minimum Internal Length	10.00mm
This dimension includes a tolerance to account for manufacturing variations in commercially available tubing.	



3.7 The shape of the muffler has to be of a straight circular rotated type. Any other

shape like oval, bent or any other form that is not reproducible by a lathe is not allowed.

4. Chassis

4.1 The car will be Four wheel drive (4WD)

4.2 A body must be fitted to the chassis while driving on the track

4.3 Only one (1) brake, working on the central power transmission, is allowed. No second, pressurised or individual brake system(s) for front and/or rear axles or single wheels is allowed.

4.4 Maximum 2-speed gearbox allowed.

4.5 All cars must have a de-clutching device and have an operating brake capable of stopping the car And holding the car motionless with the engine running.

4.6 Aerial support must be flexible (Carbon, GRP, Steel, Ect are not allowed)

4.7 Foam or Rubber tyres may be used. Any material used in, or on, the tyres must not damage the racing surface. Treatment of the tyres with additives is prohibited.

4.8 Wheels must be fixed by a screw or nut to the axle. The axle and fixing screw or nut in the wheel rim may not extend beyond the maximum track width of 200mm. Quick change wheel systems are not allowed.

4.9 The front bumper must follow the body contour and must be constructed so as to minimise injury that may result from being hit by a car. The bumper must be made from foam rubber or a flexible plastic material.

4.10 Only two (2) servos are allowed

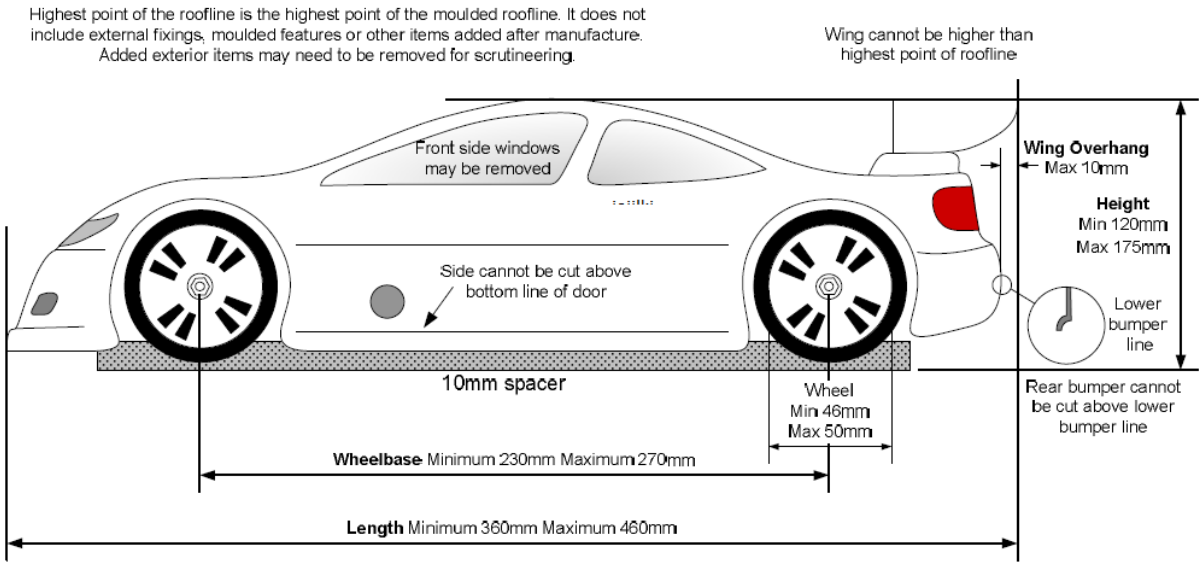
4.11 Minimum weight without fuel **1650g** (including transponder)

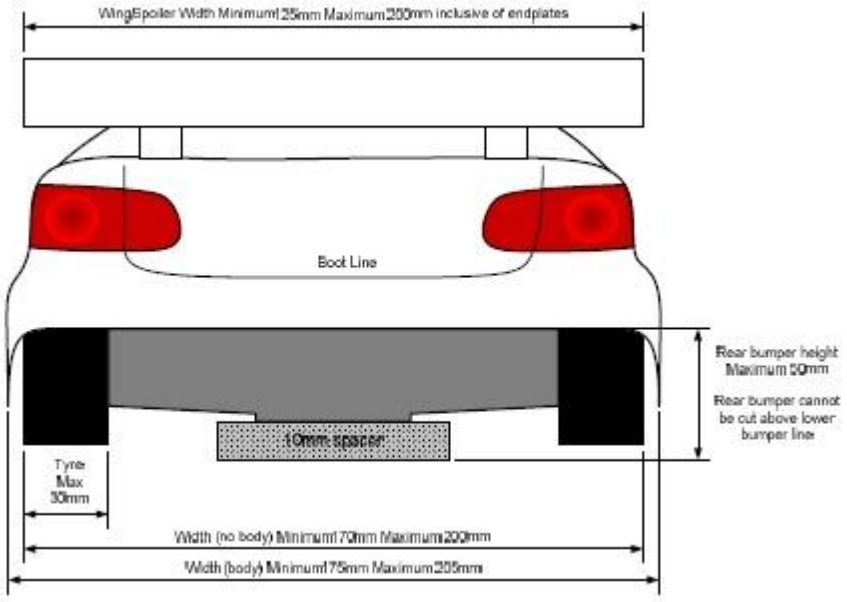
4.12 Under body/chassis aerodynamic aids of any nature are not allowed

4.13 Roll-bars (roll over bars) must be mounted under the body

4.14 General Dimensions:

General Dimension Table	Minimum (mm)	Maximum (mm)
Wheel Base	230.00	270.00
Width (without body)	170.00	200.00
Width (with body)	175.00	205.00
Length (including body and wing)	360.00	460.00
Height (to top of roof measured with a 10.00mm spacer under the chassis plate on level)	120.00	175.00
Wing width including endplates	125.00	200.00
Wing Chord		50.00
Wing endplates – equal size		35.00mm x 50.00mm
Wing over hang (at rear)		10.00
Wheel diameter (excluding tyre bead)	46.00	50.00
Wheel width (including bead)	-	30.00 + 1mm **Tolerance**
Tyre width (across sidewalls)		31.00


Highest point of the roofline is the highest point of the moulded roofline. It does not include external fixings, moulded features or other items added after manufacture. Added exterior items may need to be removed for scrutineering.
Wing cannot be higher than highest point of roofline
Front side windows may be removed
Side cannot be cut above bottom line of door
10mm spacer
Wheel Min 46mm Max 50mm
Wheelbase Minimum 230mm Maximum 270mm
Length Minimum 360mm Maximum 460mm
Wing Overhang Max 10mm
Height Min 120mm Max 175mm
Lower bumper line
Rear bumper cannot be cut above lower bumper line


Wing/Spoiler Width Minimum 125mm Maximum 200mm inclusive of endplates
Boot Line
Rear bumper height Maximum 50mm
Rear bumper cannot be cut above lower bumper line
10mm spacer
Tyre Max 30mm
Width (no body) Minimum 170mm Maximum 220mm
Width (body) Minimum 175mm Maximum 225mm

5. Body

5.1 Touring car 200mm (sedan) bodies, 2 and 4-door versions allowed, as raced in International Touring Car series. No GT or Sports car bodies allowed.

5.2 For Technical inspection it is necessary that all body shells can be identified by means of a Manufactures and / or homologation number issued by a Bloc. This number must be moulded in or Near the front windshield and must be visible at all times. See IFMAR, ROAR, FEMCA or FAMAR for approved body lists.

5.3 Only the muffler outlet or tailpipe, antenna, body posts and transponder mount may protrude outside the body shell. Where the muffler outlet or tailpipe protrudes through the body, it must be within the maximum width without body of 200mm

5.4 The body and spoiler and or wing must be made from a flexible material and be painted. A painted sun visor is allowable on the top of the front windscreen. The lines of a contrasting colour may be painted along the outer edge of any window, within the marked widow line. All remaining window space must remain clear and not be painted over in either solid or semi transparent colour.

5.5 Details of all front and rear lights and widows must be clearly contrasted from the surrounding paintwork. Where present, details such as grills and air intakes should be clearly contrasted from the surrounding paintwork.

5.6 Bodies are not to be cut above the lower bumper line at the front or the back or above the bottom line of the doors

5.7 The rear of the body may not be cut away higher than 50.00mm measured with a 10.00mm spacer under the chassis plate

5.8 All bodies must have the front and rear wheel arches cut out for the wheels if the original was so designed

5.9 Only the following openings and sizes are permitted in the body shell;

5.9.1 One opening may be made in the front windscreen with a maximum dimension of 60.00mm in any direction not intruding into the roof, bonnet or front pillars

5.9.2 Any Additional openings of 50.00mm may be made above the fuel filler cap when viewed from above. Where this opening intrudes into the front windscreen the 60.00mm opening in 5.9.1 cannot be used

5.9.3 The minimum distance between any opening is 5.0mm

5.9.4 An opening with a maximum diameter of 15.00mm is allowed above the cooling head, for easy access for a glow plug starter

5.9.5 Additional openings may be made for body posts, radio antenna, carburettor access and a transponder to a maximum diameter of 10.00mm. On chassis where an additional 3rd front body post is fitted, that body post may protrude through and additional opening in the front windscreen. Where the radio antenna is mounted under the front widescreen, the antenna may pass through an additional opening in the front windscreen.

5.9.6 An opening for the exhaust must be no greater than 25.0mm in any direction. Where the exhaust opening cuts through the side lower edge of the body, a slotted opening is allowed.

5.9.7 Front side windows and rear window may be removed to the line of teach widow. For cars with pull start engines, the rear side window may be removed instead of the front side window.

5.9.8 Body bracing may be fitted under the body, however the body must remain within the maximum body to dimensions and must conform to rule 4.12

5.10 The height of the body and wig and spoiler is to be measured with the chassis on a 10.00mm spacer. The body height measurement is taken from the highest point of the roofline and excludes items such as fixings and moulded features

5.11 Wings/Spoilers

5.11.1 One (1) wing and one (1) spoiler may be mounted to any car (if the original full-size car had more, it is allowed to do the same).

5.11.2 Wings and or spoilers (excluding end plates) are to be of single moulded construction (no flat-packs/bend your own

5.11.3 Winds and spoilers must be mounted to the body in the same place as was intended by the body manufacturer. Wing and spoiler must not be fixed to body with piano wire

5.11.4 Additional dams may be added to the wing/spoiler providing they are within the allowable dimensions of the spoiler.

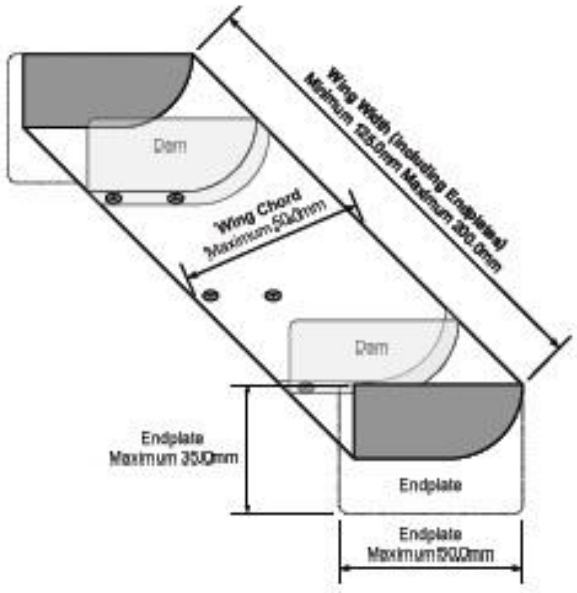
5.11.5 The Minimum width of wing spoiler including endplates is 125.00mm. Maximum width of the wing/spoiler including endplates is 200.00mm

5.11.6 Maximum size of endplates is 35.00mm x 50.00mm

5.11.7 The wing/spoiler (including endplates) overhang must not exceed 10.00mm at the furthest point, to be measured from the rear most part of the rear bumper to the rear most part of the wing/spoiler and endplates

5.11.8 The height and angle of the wing/spoiler may be adjusted but the wing/spoiler, including endplates must not extend higher than the roofline

5.11.9 The maximum chord of the Wing/Spoiler is 50.00mm



6. Fuel

6.1 Fuel will contain only methanol, oil lubricant and nitro methane (a maximum of 16% measured in Volume) must be used. Any other additives are strictly prohibited.

6.2 The specific gravity of the mixture may not be heavier than 0.87. An IFMAR approved fuel tester, e.g. Nitromax 16 will be used to verify the fuel's conformity to the rules

6.3 Fuel capacity to be 75.00ml including fuel tank, fuel tubing up to the carburettor, filters, ect. No loose inserts are allowed inside of tank

6.4 Any fuel capacity found to be illegal (over 75ml) after a heat or final shall be inspected for a second time after a initial 'cool down' period of fifteen (15) minutes. The fuel tank, fuel tubing up to the carburettor filters, ect may be removed from the car. This 'cool down' period is only necessary in the case of temperatures above 20 degrees.

7. Technical Exclusions

7.1 Use of electronic gyroscopes is not allowed.

7.2 Not more than two servos

7.3 A passive data recording or information system to record functions of the car can only be used up to the end of controlled practice

7.4 The use of traction control devices, active suspension devices and steering control aided by gyroscopes/ g-force sensors is strictly forbidden

7.5 Not allowed:

7.5.1 4 wheel brakes.

7.5.2 Liquid cooled engines.

7.5.3 Hydraulic systems.

7.5.4 No more than 2-speed transmissions.

7.5.5 Quick change wheel systems are not allowed