

V6 Sprints
INCORPORATED
A40435



RACE CAR SPECIFICATIONS
&
REGULATIONS
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ONLY THE SPECIFICATIONS & REGULATIONS STIPULATED IN THIS BOOK ARE PERMITTED.

DISCLAIMER

V6 SPRINTS Inc is formed and operated for the purpose heretofore stated and will not be held liable for any damages incurred by or to any individual or group of individuals in their pursuit of racing. Any person engaged in the sport of racing in any capacity assumes all risks and recognises the hazards involved and, thus releases and discharges V6 Sprints Incorporated, its Officers, Officials and Members from any and all liability and claims of any nature.

The Specifications & Regulations set forth herein are the set constraints for this Class which have been designed to provide parity and safety at all Racing Events.

The interpretation and enforcement of these Specifications and Regulations, as published herein, shall be determined by the V6 Sprints Executive Committee and their decisions will be final in all respects.

No express or implied warranty of safety shall result from the publication of or compliance with these specifications and regulations and/or subsequent modifications. In respect to safety, they are intended only as a guide for the conduct of the sport and are in no way a guarantee against injury or death to participants, crew members, spectators, track officials and any others.

All Specifications and Regulations contained herein are subject to deletions, additions, and/or modifications by directives contained in subsequent supplementary regulations, official newsletters and other publications issued by the V6 SPRINTS Inc or by a verbal directive of the Club Executive Committee.

It is the responsibility of each participant (driver, pit crew member or official) to have a copy of, and be familiar with, all relevant rules and regulations, and by competing in any race meeting, each participant is deemed to understand and has agreed to comply with and be bound by these rules.

Neither V6 Sprints Inc. nor any member acting in any capacity whatsoever, shall be liable to any prosecution or action for anything done pursuant to these rules, nor liable for any death, injury, loss or damage arising by any alleged failure to implement these rules.

All drivers will hold a current Speedway Australia licence; the licence when issued provides insurance as per the terms of Speedway Australia. It is recommended that drivers also obtain Ambulance Insurance separately.

AUTHORITY TO EXCLUDE

Notwithstanding anything contained in these specifications an appointed Machine Examiner and/or Technical officer shall have the right to exclude any vehicle from competition at any time, if in their opinion, a vehicle is not track worthy and/or could become a danger to the driver or other competitors.

UNCONVENTIONAL DESIGNS

These specifications apply to conventional Speedcar style chassis and accessories, i.e. two (2) beam axles, a chassis width not exceeding 736.6 mm (29") externally, with the driver being seated upright behind the engine with the drive line passing between the driver's legs and the body profile conforming to the majority of cars in South Australia currently competing. UNCONVENTIONAL DESIGNS ARE NOT PERMITTED.

All phases of design and construction are subject to the approval of the V6 Sprint Inc. appointed Technical officers and/or machine examiners

V6 Sprints Inc. or their appointed Technical officers and/or machine examiners may exclude any car, design or construction, which they deem unsafe or not meeting the specifications, the spirit and/or the intentions of the rules contained herein.

The following Specifications & Regulations contained herein shall be read in conjunction with the RULES & Constitution of V6 Sprints Inc

Clause 1 DIMENSIONS

1.1 WHEELBASE

- a) Minimum 1727mm - Maximum 1930mm
- b) Overall maximum length 3400mm (134in)

1.2 TRACK

Measured between tyre centres

- a) **Front:** Minimum 1067mm - Maximum 1397mm
- b) **Rear:** Minimum 1067mm - Maximum 1450mm

Clause 2 WEIGHTS

2.1 Car & driver – Minimum 545.5 kg (1200lbs) Maximum 682kg (1500lbs) – to be re-assessed for Season 25/26

2.2 Cars & driver may be weighed at any time WITHOUT NOTICE

2.3 Ballast must be securely fastened, and position approved by machine examiners

2.3.2 (Ballast) up to 5mm thick steel floor plate supported by additional mounting tabs

2.3.3 (Ballast) up to 10mm steel engine plate

2.4 Cars found to be underweight will receive an automatic 2-night ban and loss of all points for all previous race meetings competed in during current season where scales were not present.

2.5 Weight will be measured to the scales available on the day.

2.6 Should a competitor fail their first (1st) weigh test they may request one additional test. This reading shall not be questioned and will be considered correct.

Clause 3 ENGINE SPECIFICATIONS

Any aspect relating to the construction and or modification of the power plant, which is not expressly permitted in these Specifications & Regulations, is forbidden.

Modifications permitted are allowed only on the condition that the weights and or dimensions mentioned in these Regulations are adhered to.

- a) **The use of any ceramic components or ceramic coatings is prohibited (with the exception of the exhaust system)**
- b) **The use of any titanium bolts is prohibited**

3.1 The power plant to be used shall be an unaltered Mitsubishi 6G72 V6 3 litre 2 Valve per cylinder as fitted to Magna, Verada and Pajero or an identically produced power plant

3.2 Hyundai Sonata G6AT. With the exception that Hyundai camshafts and rockers are prohibited

3.3 **All after-market parts must be equivalent to O.E.M. specifications, as per standard re-conditioning practices.**

3.4 **Power plants to be used in standard form with the following exceptions;**

- a) Normal engine reconditioning procedures are permitted
- b) Blue printing of the power plant is permitted

3.5 CYLINDER BORES

- a) Maximum overbore of a standard power plant block is 1mm (40thou in).
- b) Maximum capacity 185.45c.i (3038.966cc)

Clause 3 ENGINE SPECIFICATIONS- Continued.....

3.7 PISTONS & RINGS

Pistons to be used must be flat top or dished only (No raised centres & NOT be race or Forged Series)

- a) After market equivalent or as close as possible to the original Mitsubishi Pistons
- b) Piston rings are free, with the provision that two compression rings and one segmented oil, Ring set is used on each piston
- c) Gudgeon pins as supplied with pistons are the only pins permitted
- d) Pistons must not protrude above cylinder block deck face any more than 15 thou", with the Piston at top dead centre. The piston crown may be machined to achieve correct deck clearance.
- e) The only other material that may be removed is for the purpose of balancing.

3.8 CRANKSHAFT

The crankshaft may be reground to a maximum 1.0mm undersize, with a maximum stroke of 76.0mm. Lightning of the crankshaft is prohibited; material may only be removed for the purpose of balancing. Shot peening is permitted. Crankshaft main & big end bearings are free.

3.9 CONRODS

Conrods must be genuine Mitsubishi 6G72 parts. Conrods may be resized, Shot peening is permitted. Conrod bolts & nuts may be replaced by after-market fasteners. Material may only be removed from Conrods for the purpose of balancing.

3.10 FLYWHEEL & FRONT PULLEY

- a) **Top 180 degree of flywheel to have an enclosed scatter shield to be 3mm steel or 5 mm alloy**
- b) **Flywheel & front pulley are free**

3.11 BALANCING

All rotating & reciprocating components may be balanced by the removal of metal only from the locations so provided by the manufacturer

3.12 CYLINDER HEADS

- a) **Standard head thickness 84mm.**
- b) **Minimum head thickness 82.50mm.**
- c) **Cylinder Heads may be ported. ***
- d) *** WARNING Please note: cylinder heads castings are not very thick and are easily damaged. On expert advice there is minimal horsepower gain obtained from porting.**
- e) **No modifications allowed to combustion chambers to increase compression**
- f) **Cylinder head face may be machined Angle milling is prohibited**
- g) **Valves must be standard Mitsubishi parts or OEM replacements.**
- h) **Maximum valve head Dia. Inlet 43mm Exh 35mm**
- i) **Valve springs & retainers are free, shimming of valve springs is permitted**

3.13 INLET MANIFOLD

Inlet manifold can be match ported, for a maximum distance of 15mm from the mounting face. Casting flashes may be removed

Clause 3 ENGINE SPECIFICATIONS-Continued.....

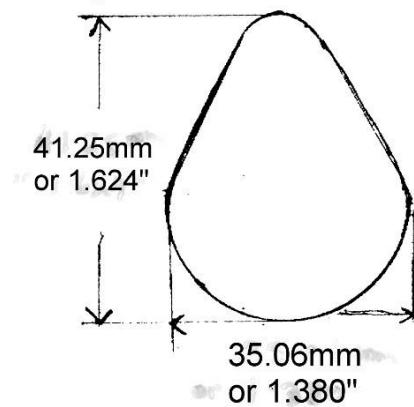
3.14 LUBRICATION

Oil filter & boss may be changed. Oil cooler is permitted, Sump may be altered to increase capacity. Oil pick-up may be altered, Baffles & screens are permitted. Oil pressure relief valve spring may be shimmed or replaced

- a) Dry sump systems are prohibited
- b) External oil pumps and Electric oil pumps are prohibited
- c) Additional oil storage reservoirs are prohibited

3.15 CAMSHAFTS

- a) V6 6G72 power plant must use unaltered Mitsubishi camshaft measuring 35.06mm across the widest part of the base circle of the cam shafts & 41.25mm from the base to the highest point of the lobe.
- b) Functioning Hydraulic Lifters – OEM compatible no modifications. No solid Lifters.
- c) Welding & cam grinding are prohibited
- d) Timing gears may be drilled to allow dialling in of camshaft. Other methods are permitted Cam gears must be in a fixed position in relation to the camshaft when operating.
- e) Timing belt and tensioners are free.



3.16 ENGINE SEALING

- a) Blue Ribbon Events: Top 5 placements Engine Seals will be checked. Any unsealed engines will have inspection seals installed by a V6 nominated Official Representative. If inspection seals are removed or tampered with then Clause 7.12 will be enforced immediately.
- b) Engine is to be sealed by an approved technical officer, with approved seals
- c) Both camshafts to be sealed, one rocker bolt to be drilled to accept seal wire & must be visible through oil filler cap. Two seals to be fitted to sump, one on each side, holes for wire to be drilled through sump & block
- d) Inspection Seals: One Rocker Cover Bolt on each side will be supplied by the Technical Committee for sealing unsealed Power Plant when needed & will be checked within 30 days of being installed.

3.17 IGNITION

- a) Point or electronic distributor
- b) Genuine Mitsubishi distributor ONLY on EFI System
- c) Any form of traction control will result in a 3 year ban

Clause 3 ENGINE SPECIFICATIONS- Continued

3.18 CARBURETTORS

- a) ARE OPEN: Any carburetor can be used
- b) MUST be running on Methanol.
- c) Original Inlet Manifold MUST be used, but any form of attaching the carburetor to the original inlet – *For Example*; Plenums or top section of manifold is open, 'ORIGINAL INLET' is the original base section of the Mitsubishi inlet system from the inlet ports on the heads to the valley of the engine forming a line of 6 ports running from the front to rear of the engine.
- d) **EFI SYSTEMS; Only Methanol is permitted** – Please refer to specifications on Clauses **3.19 to 3.20.11** for clarification.

3.19 EFI SYSTEM for 6G72 Mitsubishi V6

Computer options permitted (ECU's) are as follows:

- a) Link Atom (*Recommended as other speedway sections use these*)
- b) MicroTech

PLEASE NOTE: It is highly recommended that before you purchase any EFI equipment that you speak to Troy Zytveld at TZEE Tuning who is one of V6 Sprints EFI Consultants. (*It may save you time and money*)

3.20 Throttle Bodies are open (there is no size restrictions or number of throttle bodies).

3.20.1 Fuel Rails are open (but must be able to be fitted to the OEM base manifold without modification).

3.20.2 Manifolds and Plenums (original OEM base manifold is to be used as per V6 Sprints specs for Carbie engines, but the Plenums are open). All plenums may be inspected at any time by an V6 SPRINTS Official.

3.20.3 Injectors are open (but must be located in the OEM position and only 6 Injectors to be used)

3.20.4 Fuel Pumps are open

3.20.5 Regulators are open

3.20.6 Original Mitsubishi Distributor must be used (EFI only)

3.20.7 Coils are open.

3.20.8 NO Exhaust probes or Oxygen sensors to be used

3.20.9 Map Sensors are open and Optional

3.20.10 Throttle Position Sensors, Air Temp Sensors & Water temp sensors are all OPEN

3.20.11 No Traction control systems to be used, this will incur a 3-year racing suspension.

3.21 Engine plate

- Engine must be securely fitted to frame with a Minimum 3/8"/10mm alloy or magnesium engine plate. If front rubber mountings are used a retainer must be fitted to prevent separation. Mounting bolts to be Grade 8 or greater.

Clause 4 EXHAUST SYSTEM

- 4.1** Tuned length extractors and all coatings are permitted.
- 4.2** Exhaust protrusion above rear tyres shall not exceed 100mm (4in).
- 4.3** All cars must be fitted with an exhaust system including effective mufflers which must comply with noise regulations.
- 4.4** Exhaust not to protrude beyond the outside line of the side nerf bar.
- 4.5** Heat shields are to be fitted where necessary to protect the driver.
- 4.6** Supertrap type mufflers shall be fitted with a shield on the body side to protect the driver.
- 4.7** **MUFFLERS:**
 - a) Clamp on Mufflers are to be fitted with a safety restraint chain using 3mm minimum welded steel links or cable.
 - b) Chain to be attached to a separate anchor position to all other exhaust mounting points.
 - c) Chain to chassis frame is preferred.
 - d) Any other method shall be approved by V6 SPRINTS before installation.
- 4.8** If muffler is dislodged it shall be restrained in such manner that it does not drop under the wheel.
- 4.9** Where exhaust exits over the top of the side nerf bar, the exhaust must point rearwards. Any exhaust pointing upwards more than 24"/609mm above the lower chassis rail must be securely restrained and shielded to protect the driver.

Clause 5 STARTER MOTOR

- 5.1** Car must be fitted with an effective starter motor and sealed 12 volt Battery.
- 5.2** Starter switch capable of connecting power source to start power plant shall be fixed to the dash and must be easily accessible to driver.
- 5.3** Car starting in the dummy grid may be assisted by quad or persons

Clause 6 FUEL

- 6.1** Methanol fuel only.
- 6.2** All fuel is subject to testing at any time and any deviation or violation of this specification shall result in immediate disqualification and shall incur a penalty of forfeiture of all prize money for that meeting and all points aggregated for that season and a maximum of 12 months suspension of car and driver.
- 6.3** **FUEL ADDITIVES**
 - a) No power enhancing additives permitted.
 - b) Fuel lubrication permitted subject to V6 SPRINTS prior approval.
- 6.4** **FUEL SYSTEM**
 - a) Two independent sets of throttle springs are to be fitted to the throttle linkages, so that either spring independent of the other will return the throttle to a closed position.
 - b) A throttle return toe clip shall be fitted.
 - c) Push-pull, fully sealed accelerator cables of marine or earthmover standards are permitted.
- 6.5** **FUEL LINES;** Fuel lines to be of fire resistant type with a minimum 100psi burst pressure.
- 6.6** Grommets to be fitted to all points where fuel lines pass through any metal portion of the vehicle.
- 6.7** **FUEL FILTERS;** Fuel filters shall be metal. Glass bowls are not permitted.
- 6.8** **FUEL TAP**
 - a) A quick action fuel tap shall be fitted between the fuel tank and the engine as close as possible to tank and clearly marked 'ON / OFF' on exterior of vehicle.
 - b) A quick action fuel tap shall be fitted within easy reach of the driver clearly marked 'ON / OFF'.
 - c) The practice of locking the tap in the 'open' position is not permitted and if attempted shall result in disqualification from the event.

Clause 6 FUEL-Continued.....

6.9 Both the fuel tap positions shall be marked on the vehicle adjacent to the actual tap with "ON" "OFF" positions clearly marked. Outside tap "ON" "OFF" to be 50mm x 50mm in a contrasting colour to the body of the vehicle and must be accessible from the outside. The outside fuel tap to be bordered by a 19.05 mm (3/4) wide red strip, red cars to use yellow.

Photo example:



6.10 FUEL TANK

- a) V6 SPRINTS approved fuel tank and bladder or small capacity fuel cell may be fitted.
- b) Small capacity fuel cells to carry minimum 30Litre. larger tank recommended i.e. 60L/16gallons
- c) Fuel Cell to be mounted on a minimum 3mm (1/8in) alloy plate
- d) Fuel Cell to be unaltered from Manufacturers specifications
- e) Fuel Cell/Tank to be securely fitted within the confines of the chassis so driver sits between the power plant and the Fuel cell/ tank
- f) The tail shall have a firewall or the front of the tail shall be sealed.
- g) When mounting the fuel cell to the chassis, all mounting points must have inner and outer plates attached to the shell. These plates must be of adequate size to ensure the tank is secured safely to the chassis.
- h) Mounting fuel tanks using any portion of the access plate or nut plates bonded into the fuel bladder is strictly prohibited.
- i) Fuel cell/tail tank must have a minimum of four (4) mounts to the chassis. Min. bolt size to be 8mm.
- j) Fuel cell/tail tank must be centre-line mounted.
- k) Fuel cell/tail tank must be fitted with positive locking cap. Flush type cap or a device approved by the Technical Committee is mandatory on all fuel cell/tank fill point.
- l) Fuel Cell/tail tank requires a breather / check valve to be fitted in such manner to stop fuel escaping in the event of an accident or rollover.

6.11 FUEL PRIMER & FUEL SAFETY CUT OUT

- a) Fuel primer switches must be spring return momentary on
- b) Carburetor cars must be fitted with an oil pressure activated fuel pump safety cut out relay.
- c) Does not apply to EFI. Cars fitted with EFI must be able to automatically stop fuel pump when engine is not running

Clause 7 COOLING SYSTEMS

- 7.1** Modifications to cooling systems shall be approved by V6 SPRINTS.
- 7.2** Radiator hoses shall be canvas reinforced material and hose joints shall be secured with clamps approved by the Technical Officer.
- 7.3** Overflow tube from radiator shall not pass through cockpit.
- 7.4** A manually operated pressure relief valve shall be fitted at the highest practical point in the cooling system with the outlet directed at the ground. (Stant lever type cap)
- 7.5** Electrical or external water pump is permitted.
- 7.6** Water pump impellor may be modified

Clause 8 **WHEELS**

- 8.1** 13" aluminium wheels only.
- 8.2** Maximum width 12".
- 8.3** Wheels shall be of an approved design and material.
- 8.4** Sheet alloy centres shall be minimum 8mm thickness.
- 8.5** **WHEEL SECURING:** Wheels shall be secured by the following methods:
 - a) Wheels having a solid centre shall have locating pin holes through drilled to permit visual inspection of wheel mounted to hub.
 - b) Front wheel bolt minimum requirements shall be 3 x 10mm. 3 spoke hub must be approved by a Technical Officer.
 - c) Studs shall be retained on opposite side of the hub flange with lock nut. Broche type wheel studs are permitted.
 - d) 16mm minimum distance from stud centre to hub flange perimeter
 - e) Rear wheels knock on type shall have a minimum of 6 drive dowels, minimum standard grade 8mm x 10mm diameter with pressure plate and centre nut or be an approved splined wheel.
 - f) Minimum grade 8 standard Broche type studs are permitted as per front wheel standards.
 - g) Rear Axles Knock-on hubs must have left and right-hand application, and threads must tighten contra to the wheel direction.
 - h) All wheels to be bolted together using all bolt holes as made by the manufacturer.
 - i) Retaining pin (R clip or similar) must be a minimum of 2mm diameter and stainless steel Double HH clip is preferred (example - refer image right) through rear axles for the purpose of containing axle nut, wheel, and hub assembly in case of failure. (optional)



No fittings such as axles, hubs, nuts, caps, etc shall be permitted to protrude beyond the outer edge of the wheel rim with the exception of beadlock retaining bolts.

Dome head bolts are recommended to be used where beadlock bolts protrude beyond wheel rim.

- 8.6** **WHEEL INSERTS:** The use of wheel inserts is permitted only when beadlock type rims are fitted.

- 8.7** **Wheel Mud Covers** - Proprietary Alloy and/or composite material may be used. Minimum of 3x3/8 dzus fasteners typically. (See Local track rules – some tracks have a minimum of 5 dzus buttons or 3 Bolts

Clause 9 TYRES

- 9.1** Tyres shall be showing an unbroken tread pattern.
- 9.2** Tyres with bead screwing stud bolts, screws and nails, etc are not permitted.
- 9.3** Tyres shall be in sound condition.
- 9.4** Dual wheels or tyres are not permitted.
- 9.5** Minimum tyre pressure shall be 69kpa (10psi). Such tyre pressure does not apply if proprietary beadlocks are fitted.
- 9.6** Maximum factory branded tyre size of 84" or equivalent
- 9.7** Any Device(s) used for warming the tires prior to competition is prohibited.
- 9.8** Any solvents or chemicals applied to the tire that alter the chemical makeup of the compound or have the effect of altering tire durometer is prohibited.
- 9.9** All tyres must be designed specifically for speedway racing and must be approved by the manufacturer for its intended use.
- 9.10** Recapped tyres will not be permitted.
- 9.11** Mechanical and Digital bleeders are allowed. Air may not be introduced to the tire. Bleeders may not be controlled remotely.

Clause 10 REAR AXLE

- 10.1** Rear axle shall be a V6 SPRINTS approved racing axle. Clearance between the driver's seat and torque tube and nose of differential shall be sufficient to prevent contact between the two in the event of excessive suspension movement. Recommended Minimum 50mm (2in) clearance with the car at normal suspension setting

Clause 11 FRONT AXLE AND STEERING COMPONENTS

- 11.1** All cars shall be fitted with a tubular front axle, minimum 44.5mm (1 3 / 4in) diameter and .095thou thick of chrome moly
OR 44.5mm (1 3 / 4in) diameter 3.2mm (10 gauge) seamless drawn mild steel
- 11.2** Square tubing is not permitted.
- 11.3** Axle eyes shall be wrapped by parent metal of tube by minimum two thirds the circumference.
- 11.4** Original axle may be let into tube by minimum 102mm (4in) only if machine fitted, welded and securely pinned by minimum 8mm (5 / 16in) pin.
- 11.5** **Chrome plating of axles is not permitted.**
- 11.6** **FRONT STUB AXLES;**
 - a) Front stub axles shall be of V6 SPRINTS approved construction not fabricated by welding.
 - b) Axle nuts shall be locked using a split pin or by a locking ring.
 - c) Minimum diameter of kingpins shall be 16mm (5 / 8in).
 - d) Kingpins shall be securely locked in axle eyes or stub assembly.
- 11.7** **STEERING ASSEMBLY;**
 - a) Full circle steering wheels of V6 SPRINTS approved design and proprietary made of metal or carbon fibre are only permitted
 - b) Notwithstanding the above main construction of the wheel, containing centre spokes and rim, shall be of steel or high tensile aluminium.
 - c) Quick release steering wheel shall be fitted.
 - d) Steering ratio shall be 3 / 4 of a turn to a maximum of 1 1 / 4 turns lock to lock.
 - e) A suitable Knee guard **Must** be fitted with appropriate padding, no sharp edges, securely mounted and be approved by the V6 Sprints technical officers.

Clause 11 FRONT AXLE AND STEERING COMPONENTS-Continued.....

11.8 SHAFTS IN STEERING BOXES

- a) Shafts shall be of one piece construction.
- b) Welding is not permitted except in the case of proprietary parts which are welded during manufacture.
- c) Brazing is not permitted on steering components.
- d) Any welded components of the steering assemblies shall be crack tested at the request of the Technical Advisor or Technical Officer.

11.9 STEERING PITMAN ARM - Drop Arm

- a) Steering Pitman Arm shall be of one piece construction, splined and securely clamped to sector shaft and of high quality.
- b) The pinch clamping bolt on aluminium drop arms shall be a minimum of 10mm diameter and of high tensile strength.
- c) The pinching clamp slot in the drop arm is preferred on the full material side of the internal spline.
- d) Aluminium drop arms are to be a minimum of $\frac{3}{4}$ "/19mm in thickness and of high-grade quality, grade 6061 T6.
- e) If the alloy proprietary arm is not threaded a through bolt with a nyloc nut must be fitted.
- f) A Steering box end cap or retaining clip must be fitted to retain the alloy arm from coming off.

11.10 STEERING COMPONENTS

- a) Steering components which may have been damaged during an accident or otherwise affected for any reason shall be presented to the Technical Officer on request.

11.11 POWER STEERING

- a) Pressure hoses fitted to power steering systems shall have a burst pressure of minimum 1500psi on the pressure side.
- b) Braided hoses are not recommended for pressure applications.

CLAUSE 12 – BRAKES

12.1 Foot operated hydraulic brakes shall be fitted on all cars unless special dispensation for hand operation has been obtained from V6 SPRINTS.

12.2 Left front brake and one in board rear brake are mandatory

12.3 All brake calliper retaining bolts to be secured with Lock Wire or Nyloc style locking nuts

12.4 BRAKING SYSTEMS AND ASSEMBLIES

- a) Braking systems and assemblies shall meet a fitting and efficiency standard as required by the Technical Officer.
- b) No force loading shall be transferred to brake pad retaining pins when brakes are applied. A brake pad retaining plate is strongly recommended.

12.5 Copper tubing is not acceptable for brake lines

12.6 Brake discs are limited to being manufactured of steel, aluminium or titanium

12.7 The use of Carbon Fibre or other composite material in the braking system is not permitted.

12.8 Brake pad material is open.

12.9 Brake bias control allowed, no electric controlled brake bias adjuster (Manual adjustment only).

Clause 13 DRIVELINE

- 13.1 ALL VEHICLES** must be rear diff drive only.
- 13.2** A quick release gear locking device shall be fitted and must be operable by one hand.
- 13.3 DRIVE SHAFT**
 - a) The drive shaft shall be enclosed by a torque tube.
 - b) Location of torque tube to be retained by hoop or strap to prevent injury.
 - c) Torque Tube SFI approved Strap or Hoop is mandatory. Hoop to be of tubular steel construction, a minimum diameter of 19.05 mm (3/4") x 0.065" 4130 material or 10g carbon steel. To be integral to the frame or securely fastened i.e., as per nerf bar mounting. To be angled forward 45 degrees and as near to front edge of seat as possible.
 - d) If a SFI approved Torque Tube Strap is used it must be fitted to manufacturer's specifications
- 13.4** Driveline offset to be a maximum of 25 mm (1") either side of chassis centre line.
- 13.5** Only torque tube drivelines, utilising only one U-joint will be permitted.

Clause 14 IGNITION SWITCH and BATTERY

- 14.1** Vehicles shall be fitted with an ignition switch within easy reach of the driver and clearly marked IGN and ON / OFF position.
- 14.2** A separate starter button shall be fitted.
- 14.3** Electric fuel pump and oil pressure interlock to be wired into ignition switch.
- 14.4** A battery cut out switch suitably marked ON / OFF shall be accessible or as close as possible to Driver and/or Track Crew.
- 14.5** Battery position shall be marked with a blue triangle on body of car.
- 14.6** **Sealed 12-volt dry cell or lithium battery to be used only**, securely bolted with a minimum of 2 x 1/4" Inch size steel bolts with locking nuts and washers holding the battery box to the chassis. Battery must be bolted into the box with an alloy/metal strap or cross bolt with a locking nut or rubber strap. No plastic straps or hose clamps are permitted.

Clause 15 SUSPENSION

- 15.1** All link points were bolted must be locked securely by lock wire or Nyloc nut.
- 15.2 SHOCK ABSORBERS**; Shock absorbers shall be operative on each wheel
Cockpit adjustable shock absorbers are NOT permitted
- 15.3 STEEL or CHROMOLY HEIM JOINTS**; Steel or Chromoly heim joints shall be minimum 13mm (1 / 2in) and MUST be used on rear torsion bar arms to birdcage.
- 15.4** Torsion bar arms and torsion bar stops, - Only a pinch bolt is necessary providing it is a 3/8" bolt grade 8 or titanium. The arms and stops are to be a recognised brand of at least 6061T alloy.
- 15.5** Studs, - When used in the chassis to locate radius rods & shocks to be a minimum of 1/2" dia.
- 15.6** Bolts, - When used in the chassis to locate radius rods and shocks to be tie wired or have a nyloc or similar locking nut to fasten.
- 15.7** Bolts – thread must protrude past locking point on all lock nuts
- 15.8** Tie Wire, - the following bolts are to be tie wired unless they are a counter sunk bolts or have a secondary device to lock them. Tie wire must a minimum of .032"/0.813mm aircraft stainless steel
 - 1) Brake Caliper mounting bolts,
 - 2) Rear birdcage top and lower bolts,
 - 3) Front axle steering arms stub bolts,
 - 4) Radius rod extension plate bolt.
 - 5) All suspension and steering bolts must be tie wired or lock nutted

Clause 16 BODY ASSEMBLY

- 16.1** Body shall be soundly constructed and of good general appearance. The cockpit shall be of sufficient size to permit the driver to enter and leave with ease.
- 16.2** Cockpit side panels shall extend from top chassis rail to bottom chassis rail and rearward from the firewall to front of seat.
- 16.3** Cockpit side protection panels shall not extend upwards above the driver's shoulder height or protrude rearwards beyond the vertical roll cage upright.
- 16.4** All panels shall have safe edges. Raw edges are not permitted.
- 16.5** One inch or 25.4mm wicker/turnout allowed on all body and sail panel edges, except sun visor.
- 16.6** Any Wicker or turnout may not extend past the frame rail vertical of down tubes or cage, rearward of back of cage, or below bottom of lower frame rails.
- 16.7** All paneling must not extend past edge of frame rails more than thickness of material.
- 16.8** Only steel, aluminum, or carbon fiber floor/belly pan are permitted. The floor/belly pan may not extend rearward past the leading edge of the rear axle and must be flat from side to side without any aerodynamic aids.
- 16.9** **FIREWALLS**; All firewalls to be aluminium, fibre glass or Carbon fibre
- 16.10** **FLOOR PLATES**;
 - a) All cars shall be fitted with an independent underfoot floor plate of minimum 1.6mm aluminium or steel to extend from the engine plate and sufficiently rearwards beyond the front edge of seat. Recommended; 50mm beyond the front edge of the seat to prevent feet or legs protruding from the underside of the car.
 - b) Floor plates to be securely bolted to the chassis with a minimum of six (6) x 3/16"/4.8mm bolts and nyloc nuts.

Clause 17 SEAT

- 17.1** Driver's seat shall be high back of contoured form affording support to thighs, base of spine, back and head.
- 17.2** Seats are to be secured by a minimum of four positions using (4) x minimum 5/16"- 8mm dia. dome head grade 8 bolts with nyloc nuts and 40mm washers, two (2) in the base and two (2) in the back at approximately shoulder height.
- 17.3** Proprietary composite Kevlar/Carbon fibre seats are optional and must meet Speedway Australia's approval.
- 17.4** The seat top must be mounted on the centre line of the chassis.
- 17.5** **Head nets are mandatory, unless a full containment seat is used.**
- 17.6** **If halo fitted, left and right head supports mounted to seat are mandatory.**

Clause 18 NERFING BARS

18.1 ALL NERF BARS

- a) Nerfing bars shall be of an approved design and strength.
- b) All cars must be fitted with front, rear and both side nerfing bars. The minimum material specification is 22.5mm (7/8") diameter with a wall thickness of: - 1.6mm mild steel or, 1.6mm stainless or, 0.065" chrome moly tubing.
- c) Side nerf bars must have a Minimum of 3 mounting points.
- d) Front push-bar may have only 2 mounting points
- e) Rear nerf bars must have 4 mounting points
- f) Baskets on rear push-bars are optional.
- g) Rear nerfing bar tail must not be higher than 5"/125mm tall.
- h) Split pins are not permitted.
- i) All nerf bars are to be securely mounted and retained with a minimum of 3/16" Bolts with locking nuts fitted or pipe lynchpins as shown.



18.2 SIDE NERF BARS

- a) Side nerfing bars shall extend a maximum of 25mm outside the wall of the rear tyres and shall leave a maximum of 125mm of tyre width exposed.

Clause 19 CHASSIS

ROLL CAGE Minimum standards:

- 19.1** 4130N chrome moly 35mm (1 3 / 8in) x .095in wall seamless tube.
- 19.2** Roll cage shall be painted or powder coated only.
- 19.3** Plating of any description not permitted.
- 19.4** Chassis must not encroach upon an imaginary cylinder extending upwards from cockpit opening. Top opening of chassis to be no less than 2903sq. cm (450sq. Inch)
- 19.5** Cage frame shall extend minimum of 80mm above driver's helmet to top of roll cage
All cars shall be measured from the topside of the roll cage or halo if fitted. Not
Head protection bar
- 19.6** Main chassis must be gusseted in four (4) opposite corners of the top section by a minimum 3/4"(19mm) x 0.65 material, fitted externally to extend at least 4"/100mm from the joint of the tubing.
- 19.7** Rolled 2mm (14G) material type gussets may be fitted internally or externally. Such gussets shall be fitted and welded in to the corner of the frame in a manner least likely to endanger the driver's arms.

Clause 19 CHASSIS- Continued.....

19.8 Gussets fitted externally to extend minimum 102mm (4in) from the joint or the tubing.

19.9 Tubular gussets are permitted.

19.10 Vertical side bars (optional) shall be a minimum of 25mm (1in) x 2mm (.083in) chrome moly

19.11 Curved sections of cage frame shall be 102mm (4in) minimum internal radius with sections extending along mating section of frame as far as possible to allow maximum weld area.

19.12 The cage shall be braced to the chassis in a manner to keep the cage in an upright position.

19.13 Bracing shall be affixed as high as possible on rear section of cage frame with inverted 'V' bracing in rear aperture of frame.

19.14 Cage to chassis bracing shall be bright mild steel seamless drawn tube to minimum 19mm (3 / 4in) x 10G or equivalent 4130N Chrome moly

19.15 An inverted "V" bracing to be fitted to the rear aperture of chassis frame. This inverted V' bracing is to be a minimum of 1" x .095" on all cars built after 5-6-1996. (This also includes replacements done after this date).

19.16 Any roll cage that is cut and raised or repaired shall have the welds unground and must be supported by an internal inner sleeve which must be overlapping the weld by not less than 75mm (3 inches) each side. Inner sleeve must be plug welded 10mm from end of internal sleeve. Inner sleeve plug weld must be a minimum of 3/8-plug weld. Inner sleeve must be of same material and thickness as per roll cage material.

19.17 All welding on roll cage should be performed by a qualified welder. Documentary evidence of welder qualification may be required by Technical Officer.

- Exhaust pipe mounting brackets are permitted on lower portion of the roll cage members provided such member be adequately attached to the chassis.
- Diff oil top up tank mounted on rear roll cage upright is permitted provided it is securely fixed at the lowest practical height and does not infringe on the internal cockpit dimensions.

19.18 Head Protection bar (HPB) straight or a bent raised bar

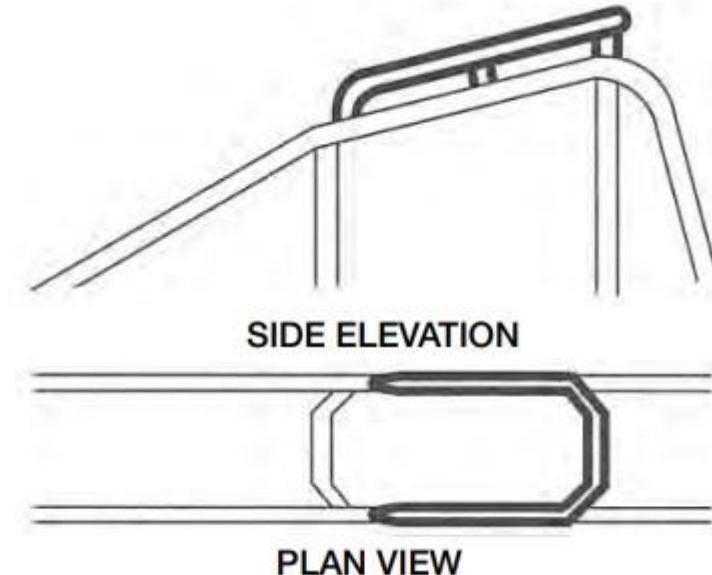
Maximum 2"/50mm high with 18"/457mm straight between bends. Minimum radius of 3½" to bends. (See Photo). With 2 off braces to rear of cage member minimum 300mm apart, only after chassis opening meets all other specifications as above. A minimum measurement of 380mm (15") is required between the HPB or raised bar and the front chassis member.

Main bars to be minimum 1"3/8 x 095" and the braces to be minimum of 1¼" x 0.83". The Head Protection Bar is optional. HPB's must be mounted to 3 spots minimum on the top of the roll cage or halo if fitted.



Clause 19 CHASSIS-Continued.....

19.21 Halo – 4130N chrome moly 35mm (1 3 / 8in) x 2.4mm (.095in) wall seamless tube
Spacers – if required to achieve head height: 35 mm (1 3/8") dia. x .095"
Maximum length 50 mm (2.0") – 4 required, spaced approx. 300 mm apart.



19.22 The clearance between the topside of the roll cage or halo if fitted and the top of the driver's helmet when fitted correctly and correctly seat belted into the seat, not including the HPB (and no roll cage padding) is a min of 80mm.

19.23 Halo's when fitted to roll cage must have gap between the existing high bar and halo of maximum 50mm.

19.24 Full containment seat mandatory with Halo fitted.

19.25 External width of chassis not to exceed 29"/736.6mm
(Excluding torsion bar tubes, shock absorber mounts and side intrusion bars)

19.26 High bars not to extend beyond front push bar mounts.

19.27 No holes whatsoever are permitted in main cockpit bars or bracing unless fitted with tube slugs.

19.28 The use of carbon fibre or any other composite material as chassis, suspension and/or driveline component is not permitted.

19.29 Any person wishing to produce a design that is a departure from common standard
Midget/Speedcar style construction must submit a finite analysis report for the roll cage/chassis structure proving their designs equal strength and must show proof of wall thickness and type of material used.

19.30 Bolt on cages are not permitted.

19.31 Side Bars (Sissy bars) are optional, but strongly recommended in a minimum of 1" x 0.095" wall thickness.

Clause 19 CHASSIS-Continued.....

19.32 No attachments to the roll cage are permitted with the exception of the following:

19.32.1 Wing Mounting components

19.32.2 Sode head support nets

19.32.3 Quick change top up tanks

19.32.4 Visor and rock shield

19.32.5 Shock absorber mounting brackets are permitted on the lower portion of the rear roll cage members. Shock absorber may include suspension unit.

19.32.6 Front and side dzus tabs on underside only

19.32.7 Removeable camera mount/s or mounting points

19.33 Torque Tube Hoop to be of tubular steel construction, a minimum diameter of 19.05 mm (3/4") x 0.065" 4130 material or 10g carbon steel. To be integral to the frame or securely fastened i.e. as per nerf bar mounting. To be angled forward approx. 45 deg and as near to front edge of seat as possible.

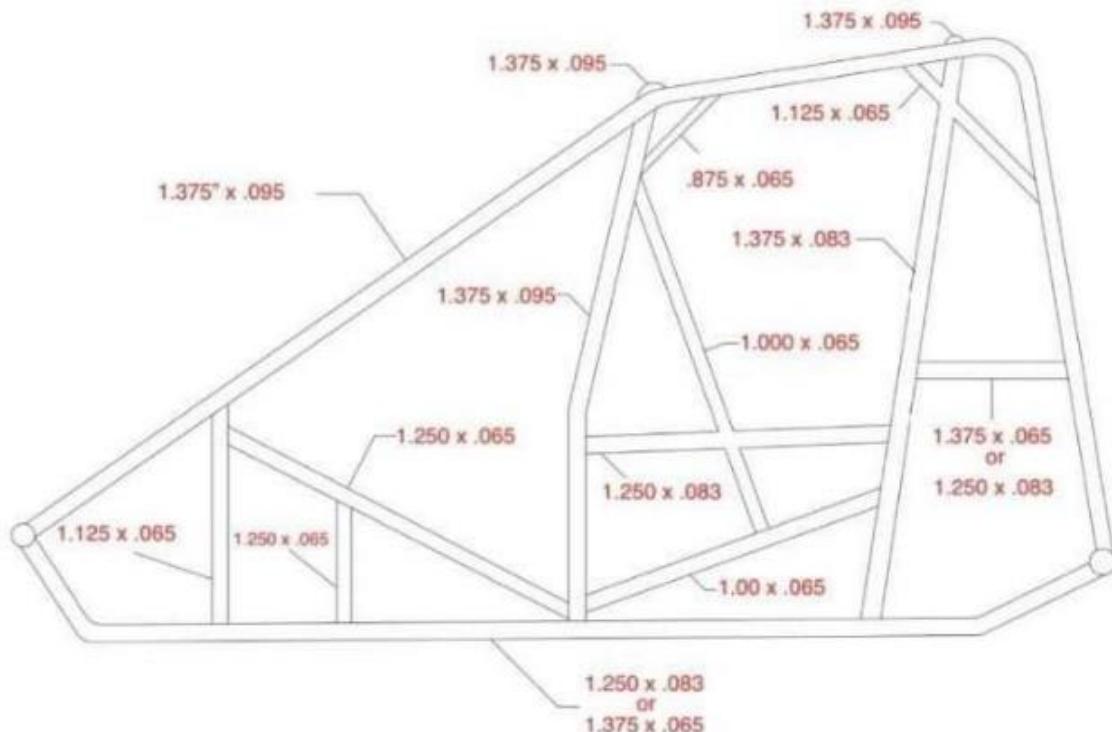
19.34 The main roll cage frame must be constructed to the minimum material standards of 4130 moly, 1 1/4" x 0.095" wall thickness seamless tube (applies to cars built pre 1-7-93). All cars constructed post 1-7-93 minimum 1 3/8" x 0.095". Recommended 0.125" if 4130-moly tubing is used. Cars constructed after 1-1-98 main uprights forming the roll cage must be a minimum of 4130 chrome moly 1 1/4" x 0.095" and/or 1- 3/8" x .083" wall thickness.

19.35 Chassis lower main rails will be a minimum material standard of 4130N chrome moly at a size of 1.250" (1-1/4") x 0.083" wall thickness, or 1.375" (1-3/8") x 0.065".

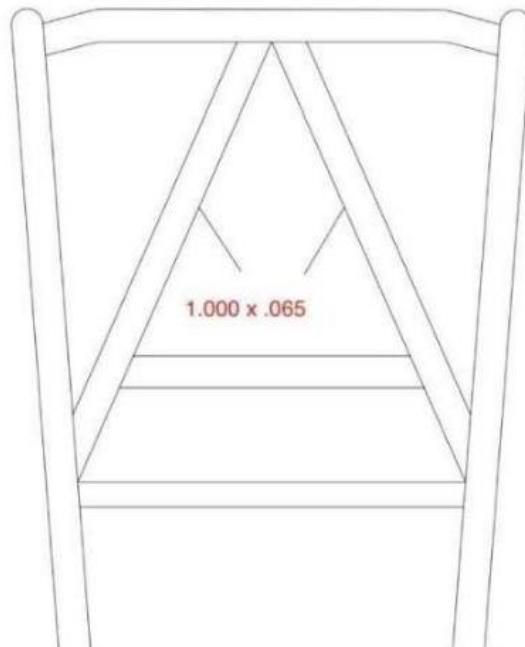
19.36 Two front main cockpit uprights to be a minimum of 4130N chrome moly at 1.375" (1-3/8") x 0.095", and the rear cockpit upright to be a minimum of 1.375" (1-3/8") x 0.083"

19.37 The fuel tank mounting cross bar to be a min of 1.375 x 0.065 OR 1.250 x 0.083.

19.38 NOTE: All chassis manufactured after 31st July 2022, are to meet the following specifications and measurements defined by the below diagram:



Clause 19 CHASSIS-Continued.....



19.39 SEAT PROTECTION BAR or PLATE – Mandatory season 24/25

- a) Under seat protection bar and/or Aluminium plate is Mandatory. Bar must be 4130 $\frac{3}{4}'' \times 0.065''$ minimum chromoly tube and welded in. Located from the left to the right of the chassis behind the driver's seat, so no part of the drive line can contact the driver's seat, back or base.
- b) Aluminium plate to extend from front/bottom seat mounting bar on chassis to lowest horizontal bar at bottom of A-Frame, Seat protection bar(if fitted) or Fuel tank mounting bar, can be rolled or folded to follow contour of seat. Must have minimum 25mm clearance from every part of the seat. Plate to be minimum 5mm thick x 200mm wide. No holes or machining of plate to reduce weight. Minimum of 4 x mounting holes, minimum 5/16 " grade 8 bolts with Nyloc nuts . Can be mounted at front using seat mounting bolts. Must be fitted so no part of the drive line can contact the driver's seat, back or base.

Clause 20 ROCKSCREENS

- 20.1** Roll cage rock-screens are required to be installed in accordance with Speedway Australia's requirement to have "Windscreen - Rock Visor Screens" MANDATORY. These must have a minimum of 3 mounting points.
- 20.2** Debris Screens must have a maximum opening of 50 mm in either a square or vertical design. To be made of metal and must be securely attached by a minimum of 4 rock screen clamps or hose clamps to the front of roll cage, above the dash at all times. Screen must sufficiently cover the open area of the roll cage directly in front of the driver.

Clause 21 AEROFOILS

- a) One overhead wing and one front wing aerofoil shall be fitted.
- b) Attachment of the top wing to be at four points. Front mounting to be 6 mm (1/4") pipe lynchpins or 5mm (3/16") bolts and locking nut Approved design clamp mounts allowed.
No split pins or R-Clips
- c) Rear mounting to use bolts and locking nuts of Minimum 8 mm (5/16")
- d) Overhead wing mountings are to be designed so that a driver is not endangered in the event of a breakage.
- e) Suspension mounted wings not permitted.
- f) To be of approved design and construction. No wooden frames or inflammable material to be used.
- g) Wicker bills – must be no more than 2" high.

21.1 OVERHEAD WING AEROFOIL (Centre section)

Length: Minimum 762mm (30in)

Width: Maximum 1220mm (48in) Minimum 838mm (33in)

21.2 OVERHEAD WING SIDE PANELS

Outer side Panel: Length: Maximum 1550mm Minimum 1016mm (40in)

Width: Maximum 660mm Minimum 330mm (13in)

Inner side Panel: Length: Maximum 1550mm Minimum 1016mm (40in)

Width: Maximum 860mm Minimum 330mm (13in)

21.3 FRONT WING AEROFOIL (centre section)

Length maximum 460mm (18in)

Width maximum 800mm (31.49in)

21.4 FRONT WING SIDE PANELS

Length maximum 560mm (22in)

Height maximum 280mm (11in)

21.5 REAR OF OVERHEAD WING CENTRE SECTION shall be no further forward than centre of front and rear roll cage cross bars.

21.6 OVERHEAD WINGS WITH SLIDERS shall have optional two control arms; One left hand side and one right hand side.

21.7 COCKPIT ADJUSTABLE TOP WINGS are permitted. Must be Hydraulically operated only using a single Hydraulic cylinder

21.8 MINIMUM THICKNESS of wing cladding shall be 0.6mm aluminium.

21.9 FRONT WING shall not protrude past front Push-bar

21.10 NO DUAL CENTRE WINGS

Clause 22 NUMBERS

22.1 Number shall be positioned on the upper rear corner of the wing on inside and outside of the left hand panel.

22.2 The car number displayed on the inside of the top left-wing panel is to be of contrasting colour and easily readable by the lap scorers.

22.3 Size and colour of any other numbers on the car are at owner's discretion.

22.4 All vehicles must display the correct number as issued by V6 Sprints SA. The numbers to be used will be 2– 99. Duplicate numbers may be used with a single letter after the number at 100mm tall only when all other numbers have been used. (Existing cars exempt)

Clause 23 DRIVER SAFETY NO flammable synthetic materials shall be worn against the skin.

23.1 DRIVING SUIT

- a) Driver shall wear a SPEEDWAY AUSTRALIA approved fire-retardant driving suit.
- b) Suit shall be of snug fit at ankles, collar and cuffs and shall be fully fastened at all times whilst the driver is in the car.
- c) Driving suit shall be in a clean and tidy condition and free of holes.
- d) Repairs shall be to professional standard.

23.2 UNDERWEAR

- 23.2.1** SPEEDWAY AUSTRALIA approved Wool or Nomex long underwear with high neck shall be worn at all times during a race and practice
- 23.2.2** SPEEDWAY AUSTRALIA approved balaclava, socks, boots, and gloves shall be worn at all times during a race and practice.

23.3 CRASH HELMET

- 23.3.1** Only a SPEEDWAY AUSTRALIA approved full face crash helmet to suit the driver's features shall be worn at all times during a race and practice. Such helmet is to be kept in good order and subject to V6 SPRINTS inspection at any time.
- 23.3.2** Shoulder to helmet straps are permitted
- 23.3.3** 80mm head clearance measured from top of roll cage.
- 23.3.4** Head clearance to be measured from the top of the helmet to the top of the High bar side rails or Halo if Fitted and have a minimum of 80mm clearance. (not to be measured from the Head Protection Bar)

23.4 EYE AND NECK PROTECTION

- 23.4.1** SPEEDWAY AUSTRALIA approved head and neck restraint must be worn
- 23.4.2** Shatterproof eye protection shall be worn at all times during a race and practice.
- 23.4.3** If spectacles are worn lenses shall be of non-splintering material.

23.5 SEAT BELTS

- 23.5.1** Two independent shoulder restraints and at least one anti-submarine crotch strap all linked to lap belts with an over-centre lever latch shall be fitted and worn at all times during a race and practice. Rotary locking centre buckles are not permitted.
- 23.5.2** Anchorage points must be wrap around style to substantial bar work. Seat belts to be fitted as per manufacturers specs and in an approved position by the V6 technical officer.
- 23.5.3** 2" shoulder belts can be used with HANS device or equivalent and must be SFI and SPEEDWAY AUSTRALIA approved.
- 23.5.4** Life of seatbelts & hardware is two (2) years (the supplier will date stamp when issued)
- 23.5.5** Sternum belts are permitted.
- 23.5.6** Belts are not to be altered in any way.
- 23.5.7** Minimum of 4" of material to protrude past buckle
- 23.5.8** Only SFI Approved 16.1 ratchet system belts may be used. No clamping system is allowed to be used to anchor or secure belts. Belts must be attached to the Chassis by either:
 - (a) Wrap around or
 - (b) Bolted with a 3/8 Steel high tensile bolt and full self-locking nut through a spudded section of the chassis.
- 23.5.9** Where the straps pass through the seat or body structure of the car, the edges of the seat or body must be rolled and/or grommeted to prevent chafing or cutting of the straps.
- 23.5.10** Harness straps to be attached directly to a strong structural member of the car which is not used to mount the seat. At the points of attachment, they should be attached to or pass over a structural member that is level or a maximum of 25 mm below the driver's shoulder. The straps should pass through the seat cleanly with the driver in position.

Clause 23 DRIVER SAFETY-Continued.....

23.6 ARM RESTRAINTS

Arm restraints are mandatory for both arms and must meet current SFI/Speedway Australia approvals. Arm restraints built into the race suit by the manufacturer are acceptable. Arm restraints to be fitted under the shoulder belts of the safety harness.

Clause 24 DRIVER COMMUNICATION

24.1 Driver Communication

- a) Raceceiver radios are required. No radio communication to driver except from track officials
- b) Wi-Fi, cellular, or satellite device (including cell phones and smart watches) in or attached to the race vehicle or the driver will not be permitted.

Clause 25 AMENDMENTS

Amendments and / or introductions to these Specifications shall be effected only by a majority of the Executive Committee present and entitled to vote as described (Article 2.11, Article 2.12).

2.1 Car & driver – Minimum 545.5 kg (1200lbs) Maximum 682kg (1500lbs) – to be re-assessed for Season 25/26

8.4 / 8.5 Direct mount front wheels without centre hubs and rear splined 31/36 wheels only – no pavement style or older style 6 pin hubs – rule to be introduced for season 26/27

22 OVERHEAD WING AEROFOIL (Centre section)

Length: Minimum 762mm (30in) Maximum ____mm (____in) – to be confirmed by season end 24/25

Clause 21 AEROFOILS – all measurements to be re-assessed and confirmed for season starting 26/27

6.10 FUEL TANK all V6 Sprints must be fitted with a Proprietary bladder type fuel tank, which must be a minimum of 18 U.S gallons. Tail tank must be a plastic molded construction with a fuel bladder. Current shape and design by approved manufacturer – rule to be introduced season starting 26/27

IF THE RULES DO NOT SPECIFICALLY ALLOW A MODIFICATION TO A STANDARD COMPONENT THEN YOU CANNOT MODIFY IT.

ONLY THE SPECIFICATIONS & REGULATIONS STIPULATED IN THIS BOOK ARE PERMITTED

The Specifications & Regulations shall be read in conjunction with the RULES & Constitution of V6 SPRINTS Inc



**V6 SPRINTS Inc.
A40435**

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AUSTRALIAN SPEEDWAY RACING RULES & REGULATIONS

DUTY OF CARE STATEMENT

This Duty of Care Statement is to be read out to the Competitors at every Driver's Meeting before the start of any Race Meeting with NO Exceptions.

It is my duty to advise you of the following.

- That Motor Racing can be dangerous; your equipment could be damaged or destroyed; and you may suffer serious personal injury or worse.
- If there is any aspect of this Race Meeting that causes you concern for your personal safety or for that of any member in which the meeting is being conducted it is your obligation to bring those concerns to the attention of the Clerk of the Course or the Chief Steward.
- If after doing this those concerns are not addressed to your satisfaction, you are advised to withdraw from this Race Meeting.
- Does everyone understand his or her obligations and rights in this regard?
- It is also my duty to advise you that at any time during this Race Meeting random drug and/or alcohol testing may take place.
- If you have any doubts as to your ability to pass such a test with a negative or zero reading you should withdraw from this Race Meeting IMMEDIATELY.
- Does anyone have any questions?