



SPECIFICATIONS

Updated: August 2006

Car Specifications

1. CHASSIS AND ROLL CAGE
2. SEATS AND SEAT BELTS
3. ENGINE
4. SUSPENSION
5. TRANSMISSION
6. STEERING
7. BRAKES
8. ELECTRICS
9. BUMPERS
10. WHEELS AND TYRES
11. FUEL SYSTEM
12. BODY
13. WORKMANSHIP

Safety Equipment

1. RACE SUITS
2. HARNESS
3. HELMETS
4. CAGENETS

SPECIFICATIONS

CAR

- a) **INTERPRETATION:** Interpretation of these specifications is to be at the sole discretion of the LSA Technical Committee.
- b) **LIMITED SPRINTCARS:** Will be examined under LSA specifications in accordance with general rules and regulations.
- c) **MACHINE EXAMINING:** All cars are to be at track at _____ stated times, all cars to be passed by Machine Examiner prior to entering any race or test run on any track

- d) **TRACK WORTHINESS:** It is responsibility of the owner or driver to ensure that his car has been examined and passed as track worthy.
- e) **SIZE:** Wheelbase 2030mm-2260mm, maximum track width 1650mm.
- f) **WORKING PARTS:** All working parts to be suitably pinned or locked with lock nuts. No titanium parts allowed on any part of Sprintcars.
- g) **WEIGHT RULE:** To be a minimum of **1750**lbs with driver.

1. CHASSIS AND ROLL CAGE

a) Chassis

All cars to be constructed of recognised top grade materials only, with welding and method of attachment of all parts and components to be of a professional standard. It shall be entirely safe and track worthy. All steel pipe or section must be used and no coated or plated material shall be welded.

Chassis rails must be at least 2mm thickness, minimum OD 32mm, factory manufactured chassis and chrome molley chassis are allowed, **NO** Monocoque type chassis allowed. Chassis is not to accommodate offset engines. All cars must have a full chassis.

b) Roll Cage

Vehicle must have a main roll cage of boiler tube or similar, and not less than 38mm OD x 3.2mm wall thickness. Chrome Molley 35mm OD x 2.5mm wall thickness.

Bar or plate to be fitted to prevent motor coming back into cab.

Head Clearance and Protection

In a normal driving position, clearance measured from the top of helmet to the top of roll cage should be a minimum of 80mm.

2. SEATS AND SEAT BELTS

a) Seats

All vehicles to use aluminium high back bucket seat with raised and reinforced side or sides. All seats to be bolted securely in place with a minimum of four (4) 5/16" Grade 8 bolts, fitted with large diameter body washers. A plate of at least 3mm to be fitted under the seat if an open drive-line is used.

If the seat base and lower section of the seat is made from 3mm aluminium, no plate need be fitted under seat.

A 32mm OD pipe to run transverse in the roll cage beneath the seat. This is to prevent the differential, or quick-change from coming forward into the base of the seat.

Minimum size thickness:	Chrome Molley	2.5mm
	Steel	3.2mm

b) Seat Belts

Seat belts to be a minimum of full 5 point break away harness type, of nylon only and to be of approved ASA Standard. Buckle to be of a quick release lever type.

Mounting bolts to be a minimum of 9.5mm. Belts to be securely fastened to chassis or roll cage. Shoulder straps to be secured to shoulder height and to be as close to centre of the back as possible. Approved Sprintcar wrap arounds or clip-on seat belts acceptable.

Size to be 75 mm minimum width.

3. ENGINE

- a) Limited Sprintcars cannot have forced induction engines (Turbo and Supercharging).
- b) Limited Sprintcars to have a maximum engine size of 361ci which is STD stroke, but maximum 060 O/S bore, no stroker crank in engines over 350ci, including any and all reconditioning and modifications.
- c) Passenger or truck steel cranks or cast iron or OE after market equivalent. No performance cranks allowed. No lightweight cranks allowed. No limited edition cranks accepted.
- d) **DIVISION TWO** - Engines to be 350 or 327 with flat top pistons and 307 engines with 12.5 to 1. All engines to use 1 x 750 Holley carburetors only.
- e) All V8 engines must use carburetors with a maximum of 4 throats, eg. 4 x 1, 2 x 2, 1 x 4. NO FUEL INJECTION.
- f) No factory racing engines will be allowed.
- g) No Roller Cam, Followers or Rev Kits allowed. No mushroom cam followers.
- h) Cast Iron cylinder heads and cast iron blocks only must be used.
- i) Any steel con-rod can be used.
- j) High compression pistons to be a maximum of 12.5 to 1 compression ratio.
- k) Engine specifications frozen for three (3) years until the AGM 2008
- l) Intake Manifold to have fitted an inspection plug of no less than 16mm for the purpose of camshaft inspection
- m) **Throttle Returns**
To be fitted with two (2) independent return springs, to be linkage operated, no cables. Pedal to have toe clip.
- n) **Exhaust System**
Exhaust pipe/ extractors **1 7/8** only allowed to be used to extend to at least half way down to the side of the cockpit. Not to extend past rear of the car.
To be protected where necessary to avoid burns.
Any less than three (3) bolts securing mufflers to the extractors must have safety chains attached.
- o) **Radiator Hoses**
Canvas reinforced type must use screw type clips.
Areoclip type are acceptable.

4. SUSPENSION

Suspension may be of any approved type. All cars to have an operative shock absorber on each wheel. Rear axle to be either Fully Floating or Quick Change Differentials.

- a) Cars using rear axles (except Quick Change Differentials) with disc brakes must use wheel studs 9/16" minimum diameter or 6 x 1/2" wheel studs, holes in disc and hubs to be drilled to the correct interference fit. Counter sinking of wheel stud holes must be of the correct angle for the wheel nuts being used. Any wheel spacers used to be made from solid plate – no washers, with studs replaced to give full nut depth with countersinking to suit nuts.

Any driver fitting incorrect spacers and wheel nuts will be fined (\$50.00) and suspended fro 2 LSA race meetings.

- b) Front and rear axle hubs or approved racing hubs must not extend beyond outer edges of rims. Front stub axle nuts to be split pinned. Front axle if constructed of round tube to be at least 4mm wall thickness by 38mm ID cold drawn seamless tube, or mild steel. Chrome molley axles are acceptable. King pin eyes to be wrapped, king pin size to be a minimum of 19mm.:

5. TRANSMISSION

- a) May be of any acceptable Sprintcar type.
- b) Tail shaft not to be exposed in cockpit, it is to be completely covered.
- c) Differential to be locked. Approved racing differentials and quick changes may be used. Friction clutches are optional.
- d) Sides of scatter shield must be fully closed. Scatter shield of 4mm steel or 5mm aluminium thickness must be fitted to cars not using a quick change. If vehicle tail shaft used, slip yoke must be used. Scatter shield must run from the engine plate to the front of the seat plate.
- e) All cars running a torque tube, to have a safety hoop welded, bolted or wrapped to the lower rails, circling drive line below driver's seat.

6. STEERING

Any safe form of steering may be used, joints and attachments to be in A1 condition. Steering box to be mounted well clear of driver's legs and **knee guards to be fitted**. All joints and rods to be suitably brassed and joints sleeved. All nuts to be locked or pinned and tapered pins are to be fitted to tapered holes. No bronze welding permitted. There must be no more than 75mm play on steering wheel. Steering ratio to be a maximum of 1 1/2 turns lock to lock. Sector shaft not to be welded.

Vehicles using Holden front hub and stub assemblies to replace standard plain arm bolts with 7/16" high tensile Grade 5 or Grade 8 bolts. Steering box to be mounted – minimum of **three (3)** points. Steering box shaft if welded must be spigotted.

Power steering is allowed.

Centre steering wheel pad to be used. No protrusions to be allowed near knees or legs.

7 BRAKES

To have a minimum of two (2) hydraulic operating callipers one (1) on each wheel, or one (1) front and one (1) rear to be foot operated.

8 ELECTRICS

Switches

Ignition and electric fuel pump to be operated from a single switch. To be mounted in a prominent, visible position on the dash and clearly marked **ON-OFF**.

9 BUMPERS

Knurled bars, no projections, and must not exceed outside edge of rear tyres. Front and rear pusher bars to be fitted approximately axle height off the ground. Side knurled bars to run from front of engine block to rear wheels, to be secured with a minimum of ¼" HT bolts at all points. To be mounted at a maximum of three (3) points to form a wedge shape configuration with the widest two (2) points mounted in front of the rear wheels.

10 WHEELS AND TYRES

a. Front wheels to be secured by no less than 5 nuts of at least 11mm diameter. Threads to come to outside of nuts. Knock offs allowed. Mag wheels must use mag wheel nuts. Approved Sprintcar hubs using 3 x 5/8" pins may be used. Hubs other than racing hubs may also use 3 x 5/8" wheelstuds.

b. Steel centres (plate) to be a minimum of 8mm plate. Approved steel racing rims allowed with aluminium centres and full aluminium rear wheels allowed. Factory pressed off road centres to be a minimum of 6.35mm.

c. Right rear rim and tyre size is unrestricted. Caution should be shown in relation to width and diameter in comparison to diameter of wheel stud pattern. Inside (left hand) rear rim and tyre sizes are unrestricted.

FUEL SYSTEM

a) Fuel

Alcohol fuel only permitted – fuel containing petroleum based additives, nitromethane or other oxygen producing additives are not permitted. Specific gravity will comply with so-cal fuel test table. All fuels are subject to testing at any time and deviation or violation of these specifications will result in immediate disqualification.

At any given time analysis shall be taken of fuel, and if any additive greater than 3% in an oil based component is found to give added ability to the engine, this will also be classified as a disqualification.

The use and fitting of nitrous oxide injection systems are prohibited.

Lines

No plastic fuel line permitted. Nylon reinforced neoprene fuel lines are permitted or approved lines. They must be adequately clamped and secured well clear of manifolds. All cars must have a tap in fuel line, within easy reach of the driver when seated in driving position. Tap handle externally of body panels and clearly marked **ON** and **OFF**. Type of fuel being used, eg, "**Methanol**" is to be clearly marked next to fuel tap or tank filler.

Fuel Tank

Fuel cells with bladders are mandatory, with breather to be fitted and fuel cell to be secured by a minimum of four (4) securing bolts.

12 BODY

Fire Wall

Cap to be protected completely from engine bay, from engine plate to minimum inside top edge of bonnet with fire wall.

Flooring

All cars to have a substantial floor with a minimum of 3mm thick plate from the fire wall to the front of the seat and at least bolted in a minimum of four (4) places using 6.4mm HT bolts.

Bonnets

Must be securely fastened to the body or frame by a minimum of three (3) mounting points.

Airfoil Wing

Top wing mandatory. Front wing optional. No tail or side aerodynamic devices will be permitted. The top wing must be mounted with at least four (4) 8mm HT bolts. The wing is not to exceed 1550mm wide or 1550mm long and only 25 feet plain area and to be positioned top rear of vehicle but maximum overhang not to exceed outer edge of both rear tyres. Front wing width not to exceed front inside edge of tyres and to be mounted low on body, maximum length one metre.

No hydraulically operated wing is permitted.

Racing Numbers

To be a minimum of 305mm high with a gap of 50mm between each digit and are to be a minimum of 50mm wide. They are to be placed on three (3) visible places on the car, and on the inside or outside sheet top left corner of the top wing. The driver's name/track name is to be painted on the car in letters not less than 50mm high. The club initials "LSA" or Limited Sprintcar is to be also displayed in letters not less than 100mm high.

13. WORKMANSHIP

All vehicles are to be presented in good condition with paint, signwriting and allocated numbers, etc, in as neat a condition as possible. The Association reserves the right to reject outright any Limited Sprintcar which in their opinion does not conform or reach the required high standard of presentation, maintenance, appearance and mechanical suitability.

SAFETY EQUIPMENT

1. RACE SUITS

Race suits are to be an approved fire retardant material. Double or triple layer suits only are to be used. In the case of double layer suits then woollen underwear must be worn. Balaclava and/or a helmet skirt of approved fire retardant material, arm restraints, fire resistant gloves, socks and neck brace must be worn. Ankle length leather boots or approved fire proof driving shoes must be worn. Helmets must be secured at all times when actually in motion.

2. HARNESS

A full 5 pin harness is to correctly worm and fastened at all times when in motion.

3. HELMETS

A driver is to wear a safety helmet at all times while the vehicle is in motion. Helmets are to have Australian Standards approved or Snell approved stickers and are to be in good condition.

4. CAGE NETS

An approved safety net is to be fitted to the right hand side of the roll cage at all times.

Following a recommendation from the June 2006 NASR Safety Conference, drivers are reminded that by the 2007/2008 racing season there will be moves by LSA to adopt the SFI Foundation and FIA specifications as the minimum standard for speedway apparel.

Some of those standards are:

- Driving suits meet the SFI 3.2A/5 or higher or FIA 8856-2000
- Fire resistant boots, socks, balaclava and underwear meeting SFI 3.3 or FIA 8856-2000
- Gloves meeting FIA 8856-2000 or ISO 6940
- Seatbelts meeting SFI 16.1
- Helmets that comply with Snell SA2000 or later