

INTRODUCTION TO SPRINTING

On the following pages you will find some notes which will hopefully answer many of the questions you may have about starting to compete in speed events.

In previous years these have taken the form of presentations but today we want to make it all about the fun bit.....driving. There are many experienced competitors present who will be pleased to answer any questions you may have. Take the opportunity to speak to them.

But most important of all.....HAVE FUN.

Northampton Motorsport
Lotus Seven Club
Speed Championship
2019



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Whilst you must refer to the full regulations for technical details in order to ensure compliance, the following provides a summary overview of the championship class structure for 2020. Please note that this is provisional pending possible changes in the tyre regulations

	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7
Engine Capacity	<=1600 cc	<= 1800 cc	<= 1800 cc	All Permitted	All Permitted	All Permitted	All Permitted
Gearbox	4 or 5 Speed	4, 5 or 6 Speed	4, 5 or 6 Speed	All Permitted	4, 5 or 6 Speed Non Car Seq	All Permitted	All Permitted
Engine Type	Any Single Cam, Rover K, Sigma, Xflow, Suzuki 660cc	Any Sin	Any Single Cam, Rover K, Sigma, Xflow, Zetec	All Permitted	All Permitted	All Permitted	All Permitted
Forced Induction	Suzuki 660cc only	Not Permitted	Not Permitted	Permitted	Permitted	Permitted	Permitted
Tyres	MSA List 1A Radial <=14"	MSA List 1A Radial	MSA List 1A or 1B Radial	MSA List 1A or 1B Radial	MSA List 1C	MSA List 1C	All Permitted
Power (BHP)	<= 130	<=155	<=150 + 5% Tolerance	All Permitted	<= 210 +5% Tolerance	All Permitted	All Permitted
Driver Aids	None	None	None	None	All Permitted	All Permitted	All Permitted
Frontal Head Restraint	Optional	Optional	Optional	Optional	Mandatory	Mandatory	Mandatory
MSA Category	Road Going Specialist Production	Road Going Specialist Production	Road Going Specialist Production	Road Going Specialist Production	Modified Specialist Production	Modified Specialist Production	Modified Specialist Production

General Technical Requirements

Cars in classes 1 to 6 must run in a fully road legal condition (i.e. with correct lighting and all other technical requirements, and MOT where applicable, with the exception of tyre selection in Classes 5 and 6).

Cars in classes 1 to 5 must be taxed & insured for road use.

Cars with a daytime only MOT will not be accepted in classes 1 to 6. Competitors are advised that they may be asked to provide documentary proof of a current MOT at an event.

Cars in classes 1 to 4 must have normally aspirated engines, with the exception of the 160/165 in class 1.

Cars in any class may use engine modifications that improve engine reliability and longevity, e.g. forged pistons, uprated valve springs, gaskets and bearings, providing no performance gain is achieved.

Cars in classes 1 to 6 must have a usable passenger seat and working road legal seat belt installed.
In the interests of environmental protection, all cars will be subject to a maximum noise limit of 108dB at 2/3 maximum revs at 0.5m at all rounds unless specified otherwise in the Supplementary Regulations for the specific round.

All competitors will be provided with two championship decals and these must be fitted to all competing cars in an externally visible position.

General Technical Requirements

All cars must comply with the Sprints, Hill Climbs and Drag Racing (S) and Competitors: Safety (K) Regulations of the MSA Yearbook which is updated each year.

All cars up to 2000cc must be fitted with a Safety Rollover Structure (ROPS) which meets the Competitors: Safety (K) Regulation 1.6.1.(a) of the 2017 MSA Yearbook

All cars over 2000cc must be fitted with a Safety Rollover Structure which meets the Competitors: Safety (K) Regulation 1.6.1.(b) or 1.6.1.(C) of the 2017 MSA Yearbook

The Safety Rollover Structure MUST have any removable members fitted (e.g. the 'petty strut' on the Caterham FIA rollover bar) and must have the relevant Homologation certificate. Competitors are advised that the traditional standard roll-over bar as supplied by Caterham does not meet these requirements. Any car without a compliant ROPS that arrives at an event will NOT be allowed to compete.

Tyre warming is not permitted by any competitor competing within the L7C Speed Championship at any round – even though it may be allowed by the organisers of specific events.

Getting Started

MotorSport UK Competition License

Non Race National B licence is required
Apply online at www.msauk.org or by post
Apply in good time before the season starts

Register for the Lotus 7 Club Speed Championship

On line registration on the competitors area of the club web site
You can compete in Curborough events as a non championship clubman's entry.
Registered competitors receive a t shirt and a handbook.

Costs

MS UK Licence £43
Championship entry fee £25
Event entry fees £100 - £130
Race wear approx £600
Car preparation?
Travel and accommodation?
Trailer?

Getting Started

Entering for events

Links to entry forms and regs in the Competitors area page of the L7C website.
Enter as early as possible, some events fill up.
Final instructions sent out approx 1 week before the event.

Travel and accommodation

Arrive early enough not to be rushed.....track walk, sign on, scrutineering
Consider staying the night before.....camping or hotel.
You can usually leave your 7 at the venue the night before if staying in a hotel.

Trailer

Not essential, but many competitors use them; drive your 7 to early events to minimise start-up costs.
Brian James Minno trailer fits a standard single garage, can be bought s/h for about £1,000 (often advertised on Blatchat).
Benefits: no worry about damage or breakdown of your 7, more relaxed / comfortable journey to and from the venue, especially in bad weather.

Safety Equipment

This advice is correct at the time of writing, always refer to the MotorSport UK yearbook for current regulations before investing in any item of safety equipment.

Helmets

Correct standards: FIA 8860-2004 or SNELL SA2005 onwards.

Helmets should be carefully selected and it is recommended that you buy the best that you can afford; ensuring that it is a snug fit. The same size helmet from different manufacturers will not always fit you in the same way, so one may be suitable and the other not.

Always make sure that the chin strap is tight to minimise the risk of the helmet coming off in an accident.

Look after the helmet; if you drop it then it may be rendered unsafe, since the interior layers may easily deform even if the outer layers appear undamaged – the same applies if you knock the helmet during an incident, in which case it is advised that you replace it.

Safety Equipment

Clothing

Mandatory:

Overalls: one-piece, FIA1986 or FIA 8856-2000

Gloves to ISO 6940 standard

Optional:

Fireproof underwear, socks, balclava.

Safety Harness

At least a 4 point harness is recommended.

When fastening your harness, connect the lap strap first, ensuring that it sits over the pelvic bone and that you pull it very tight, twice. Next, connect the shoulder straps and pull them as tightly as you can, and then some more. The lap strap must always be fastened and fully tightened before the shoulder straps are connected and tightened. Straps need to be really tight because in a heavy impact they are designed to stretch a small amount, but that stretch should never of itself lead to an impact with the windscreen or steering wheel. Ensure that any harness adjusters are well clear of any slots where the straps pass through the seat, to ensure the harness mounts take the load rather than the seat.

Safety Equipment

Roll Over Protection System (ROPS)

Cars must be fitted with a minimum of a FIA or Track Day Roll bar with the petty strut fitted and must have the relevant Homologation certificate, normally a sticker on the petty strut. Many competitors use a full cage, these must also have the relevant homologation certificate. There are disadvantages of a cage when the car is used on the road.

The top of your helmet when normally seated in the car must be at least 50mm below an imaginary line drawn between the top of the roll hoop and the forward structure of the car.

Frontal Head Restraint (FHR)

Optional for classes 1 to 4, mandatory in classes 5 to 7.

Suppliers

For helmets and clothing

Demon Tweaks

Grand Prix Racewear

Merlin Motorsport

Safety Equipment

Roll Bars and Cages can often be found advertised on BlatChat as members upgrade to a cage or convert an ex competition for road use.

This advice is not exhaustive, for further information ask the Competition Secretary (email compsec@lotus7.club) or post on the Club Speed events section of BlatChat.

Event Preparation and Arriving - Checklist

Paperwork

Final Instructions and Passes
V5, MoT & Insurance Certificates
MS UK Licence – is it signed?
Club Membership & Speed Championship Card
Car Safety Equipment

Car Safety Equipment

FIA Bar and Petty Strut
Rollcage
Protective Padding
Headrest
Ignition or Battery Cut Out Switch Label
Earth Lead Yellow Tape
Four Point Harness
FHR (classes 1-4 optional, 5-7 mandatory)
Fire Extinguisher (optional)

Car Preparation

Timing Strut
Race Numbers
Fluids
Tyre Pressures & Wheel Nuts
Battery +ve Terminal, is it Secure and covered?
Throttle Return Springs (if required)
Oil Catch Tank (if required)
Spanner Check
Empty the boot

Tools and Equipment

Foot pump
Tyre Pressure Gauge
Gaffer Tape
Cable Ties
Torque Wrench
Oil and Coolant
Tools

Event Preparation and Arriving - Checklist

Exchange Banter with Fellow Competitors

Preparing for Bad Weather

Weather Forecasts
Crash Helmet
Windscreen & Wipers
Overshoes
Waterproofs
Eze-Up
Umbrella's
Tonneau Cover

What to do When you Arrive

Park in Allocated Paddock Space
Find your 'Buddy'
Sign On
Prepare for Scrutineering
Walk the Course
Attend the drivers briefing
Prepare for First Run

Signing On

Sign-on BEFORE scrutineering - you will need :-
Your MSA Competition Licence (you will be fined for not producing your Licence; this is £67.00 per event)
Speed Championship Registered Contender card
Club Membership card

Event Preparation and Arriving - Checklist

Scrutineering

You will need to present the following to the Scrutineer:

- Your Crash helmet
- Frontal Head Restraint (FHR), being used.
(Remember this is compulsory for some classes.)
- Overalls (Race Suit)
- Gloves
- Appropriate documents (MOT, evidence of road tax, etc)
- Your competition vehicle - You will need to remove the bonnet for inspection

The Scrutineer will issue you with either a ticket (which will be collected from you when you line up) or a sticker (which should be affixed to the car and will be inspected before you will be allowed access to the start line)

Preparing for the First Run

Check Running Order in Finals

Allow Plenty of Time

Check Car – Bonnet Catches

Get Comfortable in the Car

Take Time to Think About the Course

Follow Paddock Marshals Instructions

Marshals, Scrutineers and Event Organisers

Volunteers - Please treat with respect

Remember: No Volunteers = No Event

At the event, starting and improving

Lining Up in order:

Familiarise yourself with the cars in front of you and their paddock positions

Know where to line up and follow the paddock marshal's instructions

Line up in numerical order

You must be belted in the car with your helmet on when leaving your paddock position.

Start Procedure

No tyre warming is allowed for our events regardless of the local regulations of the venue

When directed move slowly to the start line and follow the marshal's instructions.

Marshals will align your timing strut with the timing beam and hold you in position.

On the green light go as soon as possible.

Your time starts when the car moves, not when the light turns green.

Track Boundaries

If all four wheels of the car go off the track you will not record a time (NTR).

Track boundaries are defined by white lines and/or grass. Familiarise yourself with these on the track walk.

Whilst the convention is that it is allowable to have two wheels off, specific track limit rules may vary from circuit to circuit, for example Castle Combe fail a run for any wheels off the track.

At the event, starting and improving

Cones and Markers

These are often positioned to prevent you cutting corners and gaining an advantage. Time penalties usually apply for hitting them, and they can damage your car.

Red Flags

Slow down immediately and be prepared to stop.
Follow the marshal's instructions.
If you did not cause the red flag you will get a rerun.

Some events run with multiple cars on the course. Overtaking is never allowed, if you catch a slower car you should request a rerun. Normally sufficient distance is allowed between cars to prevent this happening

At the event, starting and improving

Improving your times

Talk to fellow competitors , gain some tips.

Some venues give split times. Compare these with your competitors to see where they are faster (or slower).

In car video using GoPro or similar camera can help you analyse your driving

Data Logging allows you to compare runs.

If you can, walk the course again with a fellow competitor over lunch and compare notes

Plan your next run, decide how you can improve and focus on that.

Whilst lining up, visualise your next run and how it could be better...(e.g brake later, take more kerb, different gear)

Changes to the car during the event

You may want to change tyre pressures, suspension and damper settings in an attempt to improve the car.

Make only minor changes on the day otherwise you will need to learn to drive the car again and there are not enough runs for that.....Usually it your driving that needs the improvement!

Engine Power Vs Driving Skill

It takes a surprising amount of extra power to make a significant improvement in times. A good driver in a class 3 car has been known to beat all of class 4....same tyres and 50 bhp less. Driving skill is where most competitors find improvement. Don't spend a lot of money improving the car until you are sure you are making the most of what you have.