



## **A Beginners Guide to Sprinting and Hillclimbing in the WSSCC Speed Series.**

### **INTRODUCTION**

Originally conceived in 1998 the W.S.C.C. Speed Series was designed to allow Westfield owners to compete in their own cars. Subsequently the Series has developed into one of the premier speed championships whilst retaining its "Grass Roots" ethos. The W.S.C.C. Speed Series is well known in paddocks throughout the country for its friendly and helpful competitive spirit. Classes are designed to cater for all variations of Westfield's full competition cars running on slick tyres to road going cars that can be driven to the venue. In line with the Series tradition of catering for beginners each class has a Novice category. The Championship competes at many venues geographical spread throughout the U.K ensuring that there are a number of events within easy travelling distance of most competitors. An individual may enter as many or as few events as they wish though only a drivers best ten results count towards the overall Championship.

### **What are Speed Events?**

With minor exceptions, for example Oval and Grasstrack racing, all motorsport in the UK is governed by the Motor Sport Association UK (MSA UK). The MSA uses the term Speed Events to collectively describe Sprints and Hill climbs. Speed events are a friendly and low-cost form of motorsport organised by and for motoring enthusiasts. Speed events are high speed events on well prepared tracks where the performance of your car can be exploited to the full. Competitors drive the course individually against the clock. Courses vary from a lap of a racing circuit such as Castle Combe or hillclimb venues which are generally set in country parks and considered to be more challenging, not least because they are often lined by solid banks, and trees. In the interests of safety, under MSA rules, rescue crews and paramedics must be present at all events.

### **BASIC REQUIREMENTS FOR COMPETING IN SPRINTS AND HILLCLIMBS.**

You will need to be a member of an MSA affiliated car club (For example The Westfield Sports Car Club). Full details of membership benefits and how to apply can be found on the Club website ([www.wsccl.co.uk](http://www.wsccl.co.uk))

### **Registering For The Westfield Speed Series**

The WSSCC website includes a section devoted to the Westfield Speed Series and from here you can download the Regulations for the Speed Series which contain the registration form. Complete the form and send to the Competition Secretary along with the small registration fee.

## **Competition licence**

You need an MSA Competition Licence, this should be a National B, non-race licence (at the time of writing, 2011, the annual fee for a licence is £39.00). A licence can be applied for online using the MSA website [www.rnsauk.org](http://www.rnsauk.org) alternatively you can download an application form and apply by post. You do not normally need a medical for a non-race National B licence but you have to declare any medical conditions you have or have had in the past. You may also have to declare any drugs you are taking regularly. On obtaining your licence you will also receive a copy of the MSA Competitors and Officials Year Book, universally known as "The Blue Book". It contains various chapters to which you will need to refer, don't be frightened of all the facts and figures, just refer to the relevant chapters and apply some common sense. It is a veritable plethora of useful information.

## **PERSONAL EQUIPMENT**

### **Crash Helmet**

Competitors must wear a crash helmet to the appropriate Test Specification, (prices start from approximately £140) Your crash helmet must bear one of the following standards: (Blue Book Ref 1)

- FIA 8860-2004
- B.S. 6658 Type A/FR (this has a fire resistant lining)
- Snell SA2000, Snell SA2005, Snell SAH 2010, Snell SAH 2010.
- SFI Foundation 31.1 A, 31.2A.

The following are not acceptable:

- B.S. 6658 Type B (motorcycle Spec).
- Kart helmets, (they are not fire resistant).

EURO EEC Specified Helmets (typically marked E22) despite assurances you may get from motorcycle stockists are NOT acceptable for Motorsport

Always aim to buy the latest of the Snell standards as they are periodically superseded, for the same reason beware of the dealers offering a really good deal on helmets and suits as it's often because an announcement has been made that the specification is about to be superseded.

At your first meeting the Scrutineer will, if it is satisfactory for use, fix a Blue MSA Motor Sport approval sticker on the side of the helmet there is a small charge for this. Helmets are carefully checked by the Scrutineer at every meeting and must be in sound condition, a good fit and without damage to shell or securing straps, otherwise they will be withdrawn from use and retained by the Scrutineer until the end of the meeting which means you will have to borrow or buy a replacement to compete, so it pays to look after them and store them in a padded bag or box when not in use.

### **Protective Clothing**

When competing you must wear a set of flame resistant overalls, these must be manufactured using Nomex material and must be constructed of at least 2 layers. They should conform to one the following specifications and have a sewn in or embroidered label to that effect: (*Blue Book Ref 2*)

- FIA 8856-2000
- B.S. 6249 part 1 index A or B, but not Part C.
- FIA 1986 Standard
- BSEN533
- EN533: 1995 Index 3

The above specifications are listed in the 2011 Blue book but you are strongly recommended to buy a suit to the FIA 8856 standard, a suit to this specification can be obtained for around £300.

You will also need a set of flame proof gloves to specification tested to ISO 6940. These are available for around £30. (*Blue Book Ref 3*)

Although not a mandatory requirement, it is recommended that flame resistant boots, socks, balaclavas and underwear are also worn.

### **MANDATORY REQUIREMENTS FOR THE CAR**

Because Speed events are aim very much at the owner driver and are a low cost form of Motor sport surprisingly little needs to be done to a standard Westfield in order to compete.

#### **Timing Strut**

Timing at speed events is by use of a timing beam therefore a strut is required at the front of the car to break the beam. A vertical timing strut needs to be mounted at the front of the car size 254mm x 51mm with integral mounting bracketry and constructed from solid material such as metal, stiff plastic or wood and painted matt black. The strut must be positioned not less than 180mm and not more than 200mm from the ground. (*Blue Book Ref4*)

#### **Ignition Switch**

The ignition switch must have the ON and OFF positions clearly marked on the panel adjacent to the switch. In the case of steering column locks/switch a marking close by on the instrument panel will usually suffice. At a later date you may wish to fit a battery master cut-off switch which must also be clearly marked with the ON and OFF positions. This switch must be of the correct type (FIA) which does more than just break the main battery lead. It must also disconnect the ignition circuit and place a load bypass resistor in the alternator circuit otherwise the engine will continue to run off the alternator when the Battery cut off is operated. (*Blue Book Ref 5*)

#### **Head Restraints**

Cars must be fitted with head rests for road-going cars the head restraints fitted to top of high backed seats are acceptable. However any cars fitted with seats without head restraints will need pads fixed to brackets off the roll over bar. (*Blue Book Ref 6*)

#### **Oil Catch Tank**

An oil catch tank of 1 litre minimum (plastic drinks bottles are no good for holding red hot blown out oil!) must be fitted to any engine breather unless as in the case of a unmodified road-going car there is a closed engine breathing system.

## **Seat Belts**

Road-going normal 3 point diagonal shoulder and lap strap mounted at 3 points on the chassis are acceptable; however it is advisable to fit a 4 point harness. Not only are 4 point seat belts considered to be safer they will improve your driving by holding you in place more firmly such that you feel much more a part of the car. (*Blue Book Ref 7*)

## **Silencing**

All cars must be fitted with effective silencing system and will be tested at commencement of competition, Competition venues have been lost or are under threat because of previously high levels of noise. Road-going cars with normal silencing systems are usually acceptable, but systems with single small bullet silencers or large bore straight through ones might be a problem. If you think your car sounds very noisy, it might not pass the noise test in which case take a spare quieter silencer and be prepared to fit it if necessary, a restrictor can also be fitted but these may affect the power output. The test is fairly strict and it is not unknown for competitors to be stopped from competing. The Blue Book stipulates a noise level of 108decibels at 0.5 mtrs from the exhaust tail pipe measured at 2/3rds your maximum r.p.m, however, some venues have stricter limits typically Goodwood and Castle Combe. (*Blue Book Ref 8*)

## **Carburettor/ Fuel Injection Throttle Springs**

Additional throttle closing spring(s) must be fitted to those provided by the manufacturer to prevent the throttle remaining open in the event of failure of any part of the linkage from pedal to throttle. Fuel injection throttle bodies fitted as standard with two concentric springs around the end of the airflow butterfly shaft, and fully electronic "fly by wire" throttle bodies are acceptable without additional external springs. (*Blue BookRef9*)

## **Battery**

The battery should be securely mounted in the car; a standard mounting will suffice but make sure attachments are correctly fitted and tight. It is also necessary to mark the battery negative (earth) lead with yellow tape or heat shrink. This is to enable the Marshalls to easily indentify the lead in the event of an accident. (*Blue Book Ref 10*)

## **Fire Extinguishers**

These are not mandatory; however, should you wish to have one in your car either plumbed in or hand held it must be of the AFFF type.

## **YOUR FIRST EVENT**

### **Supplementary Regulations and the Entry Form**

The WSCC website lists the events counting towards the Speed Series showing the Organising club and, when they are available, a link to download the event Regulations. These will be the Supplementary Regulations and will give all the information required including the entry form. A few points of note when completing the Entry Form, ignore any references to an Entrant and complete only the Drivers details, make sure you understand which Class you need to be in as the event classes are unlikely to match the Speed Series classes. Don't worry whatever class on the day you compete in you will still score points in your chosen Speed Series Class. When completed post the entry form to the address on the form, don't forget to sign the Indemnity and include the entry fee, these can vary from £75 to £140 depending on the venue. With some clubs you can apply on-line and pay by credit card or PayPal. Some popular events are oversubscribed and submitting an entry form is no guarantee that you will get an entry. Some clubs will notify you that your entry has been accepted with others you may get a rejection just a couple of weeks before the event. A week or so before the event you will receive the Final Regulations these will give up to date Information and the timings of such things as signing on scrutineering and the Drivers briefing. Also included will be an entry list, check you are in the correct class and your competition number. If you've made a mistake and you think you are in the wrong class call the Entries Secretary they are usually sympathetic and will make a change if they can.

### **On the Day**

Before leaving home check you have all relevant event paperwork including your Licence, Club Membership Card, MOT and Insurance plus your helmet, overalls, gloves and food and drink for the day. You will also need sufficient petrol to get you there and a can with some spare fuel you don't want to compete with a tank full of fuel weighing approx 1kg per Litre, and include a tyre pump and pressure gauge, a few of the more common spares and a tool kit. A plastic sheet to put on the ground, which will also cover and protect all your spare kit and equipment from the inevitable rain, will be useful.

### **Arrival At Venue**

Arrive at the time advised and park in your allocated bay, if using a trailer observe trailer parking requirements that are generally included in the Final Regulations.

### **Signing On**

If not obvious check with fellow competitors where signing on is situated, and go there straightaway, there is often a small queue, have your MSA Licence and any other relevant paperwork with you. You will have to sign on and possibly get a documentation/scrutineering process sheet, but not always, it varies between events. Then go back to your car and prepare it for the scrutineer, this means in competition trim, not full of personal kit. If you've driven to the circuit you will need to apply your numbers fit the timing strut and remove your spare wheel, that's also weight you don't want to carry round the circuit.

### **Scrutineering**

All cars must undergo scrutineering at each event prior to competition. The primary aim of scrutineering is to ensure your car is safe to compete in. Be reassured that the scrutineer is also there to help and your car is unlikely to fail unless it has a really serious problem and fortunately this is a rare occurrence. He will check the competition number is correct - some

drivers forget to change the numbers from previous event. The scrutineer may ask if it's your first event, if not tell him and ask his advice. If it is your first he might explain what he's checking as he goes around the car- but not all scrutineers have the time to do this. Remove the bonnet just before the Scrutineer arrives at your paddock slot. He will look at the general appearance of the car as he approaches, so it's a good idea to make sure it is looking it's best, first appearances matter. He will check your helmet, overalls and gloves so have these out of their bags and ready, or better still, wear your overalls. The cockpit will be next, checking seat belts and mounting points, seat security and fixings and head restraint position, He may ask you to sit in to see that your head aligns with the restraint and does not protrude above the roll bar level. He will check the ignition switch position and marking, may check washers, wipers for operation for road-going classes. Finally, quick look around cockpit for loose objects, wires, etc.

Next the scrutineer will look at the engine compartment, looking for oil and petrol leaks, all pipework inspected he may ask and check location of petrol pump and will check carburettor/injection pull off springs. He will check battery security and look for a protective cover on Battery positive terminal and yellow tape on the negative lead and check fluid level in Brake Master Cylinder reservoir. Then a general check around engine and radiator to ensure all mountings are secure and well engineered. He will then move to the front suspension, checking the brake pipes and callipers for damage, deterioration and leaks, he will also check for excessive play in the wheel bearings and suspension joints. Moving to back of car he may check rear suspension locations and rear wheel bearings, fuel pump, fuel tank security where accessible, and effectiveness of seal in petrol filler cap. He will want to know if and where any tank breather pipes and non-return valves are located.

A useful tip is to buy a white marker pen and mark all your suspension nuts with a line across the nut and the top of the bolt or wishbones this makes it so much easier to quickly check that everything is still tight and secure between events and will give the Scrutineer confidence that the car is properly prepared.

Above are listed most of the areas a Scrutineer might check, in practice only a random selection are checked and the whole Scrutineering process takes barely 5 minutes. If there are no problems you will be given a label which you must stick or display on the car for marshals to see. If your car fails you may be asked to rectify the fault and report back for a further check of the failure item(s) before issue of the Scrutineering label. The work may take some time to rectify and may involve borrowing something or technical assistance from other competitors or the scrutineer, usually everyone is very helpful and it doesn't matter how long it takes you. The Clerk of Course will usually allow you to practice out of order as long as it's before the first timed runs commence, be sure to inform the officials of your problem they will then be expecting you to be late for your practice. The Scrutineer may pass your car but ask you to rectify or improve something for the next event, which he will expect you to do. In the unlikely event that you fail scrutineering altogether it will only be for a very serious fault, the Clerk of the Course will be notified and you may have to go home, but check with the Clerk of Course first. Be reassured total failures at scrutineering are very rare.

The first hour or so after you arrive at the circuit is frenetic but you should set aside time to walk the course drivers during which you will be visualising turn in punts, the apex of corners and trying to identify braking points, you will also want to spot any damp patches from overnight rain or any changes in surface which may catch you out.. Even the most experienced drivers walk the circuit before each event. The Final regulations will give a period of time when the course is open for Drivers to walk.

The Final Regulations will state the time of the Driver briefing, this is **not** optional and all drivers must attend. For the "first timer" this is particularly important, as it covers such things as the start procedure and peculiarities of the venue.

When being called for practice by the Paddock Marshal or circuit tannoy system, proceed without any delay in a safe manner to the assembly point. Remember you may not Practice or compete without first being passed by the Scrutineer.

### **Noise Test**

The noise test is usually carried out whilst you are in the line waiting to go for one of your practice runs when it is expected that your engine is up to running temperature. You will be asked your usual maximum R.P.M, the Scrutineer knows roughly what it should be for the type of engine and class you are in. He will tell you the 2/3rds figure and ask you to rev it up to that, but not to exceed it, hold it as steady as you can for 5 to 10 seconds whilst he uses his noise meter to check the level. You will be advised of the reading. If it is considered excessive be prepared to return to your paddock position and carry out rectification with a replacement silencer, or temporary restrictor adaptor or length of correct diameter rubber hose clamped over the exhaust pipe outlet.. You can keep on trying the noise test until it is satisfactory and you are permitted to compete. Any modifications you make to pass the noise check must remain in place throughout the meeting.

### **During Event**

Throughout the event scrutineers will be monitoring and checking cars on the track, on the start, and in the paddock for excessive noise, mechanical failures, and sometimes compliance with such things as tyre types that are approved for the event, but more importantly for your safety. Don't forget Scrutineers are there to ensure you are safe and have a great day.

Times will be published as soon as possible after your run and are usually posted on a board at the Event control. These times often include the 64ft time, a good guide as to how cleanly you are getting off the line, and there may also be a spilt time on longer circuits and maximum speed for circuits with a long straight. After the last timed run the results are published and, subject to no protests, these become final 30 minutes later. You will be sent a copy of the final results a few day after the Event but it's worth staying for the presentation of the Awards as you can be sure there will be some Westfield drivers collecting trophies and occasionally even the coveted Fastest Time of the Day (FTD) Award..

### **STILL UNSURE AND WOULD LIKE TO DISCUSS FURTHER ?**

Since its inception The W.S.C.C. Speed Series has developed into one of the most enthusiastic, competitive and best of all "FRIENDLY" championships. There are over 100 experienced drivers available who will answer any questions or queries you may have, A full fixture list is on the Club website, seek one out, go along and watch, whilst there simply approach a Speed Series competitor and ask them if they could spare you a moment, advice and comments are freely given. There is also the Club's boardroom in the Speed Series section, where much advice and comment is freely given by fellow competitors - go to [www.wsc.co.uk](http://www.wsc.co.uk)

### **WANT SOME EXPERIENCE ?**

Many circuits and clubs organise Speed Schools notably the Midland Automobile Club who hold courses at Curborough and Shelsley Walsh. Similar schools are held by other organisations at Harewood and Prescott Hillclimb venues. These are full day courses and the costs are reasonable. Instruction is by experienced drivers and often include video recording of your achievements. Give them a call, full contacts of all circuits and clubs are

contained in your club guide and fixture lists issued with your licence failing that a web search will reveal all.

### **DON'T WANT TO COMPETE. BUT WOULD LIKE TO BECOME INVOLVED ?**

Your club needs you NOW ! Track Marshals are required at all motor sport events, be close to the action, have a day out, and often there's a lunch provided and **it's all free**. If you would like more details on marshalling at a W.S.C.C. event, please contact any committee member, contacts listed on the website and in the club magazine "WESTFIELD WORLD"

### **References to the Competitors and Officials Yearbook (Blue Book) 2011**

1. K 10.3.1
2. K 9.1
3. K 14.3e
4. S 10.9
5. S 10.6.1 &K8
6. K 2.3
7. K 2.1
8. J 5.18
9. J 5.4.2
10. J 5.14.5

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