



Sport Specials Championship 2014

Sporting & Technical Regulations

FINAL VERSION - Page 1 of 14 - Issued 03/01/14

1: SPORTING REGULATIONS - GENERAL

1.1: TITLE & JURISDICTION:

The **SPORT SPECIALS CHAMPIONSHIP** is organised and administered by the 750 Motor Club Ltd in accordance with the General Regulations of the Royal Automobile Club Motor Sports Association (incorporating the provisions of the International Sporting Code of the FIA) and these Championship Regulations.

1. MSA Championship Permit No: CH2014/R022

2. MSA Championship Grade: D.

3: Race Status: Clubman/National B.

1.2: OFFICIALS:

1. Co-Ordinator: G.Groombridge, The Conservatory Suite, Donington Park, Castle Donington, Derby. DE74 2RP. (☎ 01332 814548; ✉ giles@750mc.co.uk).

2. Eligibility Scrutineers: M. Lambkin-Smith.

3. Championship Stewards:

K.Messer R. Knight I.Sowman.

1.3: COMPETITOR ELIGIBILITY:

1. Entrants must be fully paid up valid membership card holding members of the 750 Motor Club Ltd and possess a valid current year's MSA Entrants Licence.

2. Drivers must be fully paid up valid membership card holding members of the 750 Motor Club Ltd, be registered for the Championship and hold a valid MSA National B (or higher grade) Race Licence or be a professional driver in possession of a valid Licence (featuring an E.U flag) & medical issued by the ASN of a member country of the European Union (MSA regulation H26.2.1.

Additionally drivers competing in Class SR (SR & GT) must be fully paid up members of the Sports Racing & GT Challenge, Co-ordinator: Jane Sandell, 76A Station Way, Buckhurst Hill, Essex, IG9 6LL.

3. All necessary documentation must be presented for checking at all rounds when signing-on.

1.4: REGISTRATION:

1. All drivers must register for the championship by returning the Registration Form with the Registration Fee to the Coordinator prior to the Final Closing date for the first round being entered.

2. The Registration Fee is **£120.00** payable to the 750 Motor Club upon registration.

3. Registrations will be accepted from 1st January 2014 until the closing date for the last round of the championship.

4. Registration numbers will be the permanent Competition number for the Championship.

5. If any competitor wishes to change to a different car from the one originally registered for the championship, a completed registration form with registration fee must be sent to the Co-ordinator. If the vehicle is in the same class as the one originally registered then, with the approval of the Co-ordinator, championship points already scored may be transferred. If the new vehicle is in a different class, then points will not be transferred .

1.5: CHAMPIONSHIP ROUNDS:

The **SPORT SPECIALS CHAMPIONSHIP** will be contested over the following rounds:

Date	Circuit	Round/s
26 th April	Brands Hatch	2
25 th May	Snetterton 300	2
5 th / 6 th July	Rockingham	2
26 th / 27 th July	Anglesey	2
23 rd / 24 th August	Silverstone	2
13 th / 14 th Sept	Cadwell Park	2
4 th October	Donington	2

1.6: SCORING:

1. Points will be awarded to Competitors listed in the Final Results in each Class as follows:- 15; 12; 10; 9; 8; 7; 6; 5; 4; 3; all other finishers **2.** All non-finishers **1.** Fastest race lap in each class **1.** If there are less than 5 starters in a class, the points scoring will be:- 12; 10; 9; 8. **2.** If there is only one starter in a class, there will be no point awarded for fastest lap.

2. The totals from all qualifying rounds run (excluding any races which are abandoned and which are not replaced) less 2 will determine the final championship points positions.

3. Ties for end-of-season award winning places shall be resolved, when more than one competitor have equal totals, by taking into account the highest number of 1st places, 2nd places etc from the races they are counting as their best total (i.e. their finishing position in **dropped rounds** do not get taken into account). If that fails to find a winner their highest or subsequent highest dropped scores will be added to their existing total score until a conclusive result is found.

1.7: AWARDS:

1. All awards are to be provided by the Organising Club unless agreed otherwise.

2. Per Round: Awards of 1st, 2nd and 3rd in class will be given, subject to the number of starters as follows:- 2 to 4 starters -1st in Class only; 5 to 7 starters - 1st & 2nd in class only; 8 or more starters - 1st, 2nd & 3rd in class. **There will be an award for the highest placed Mazda MX150R.**

3. Championship: Subject to a minimum of 5 race starts, trophies to:- 1st, 2nd & 3rd overall. Class A and B only

All classes: Subject to a minimum of 5 race starts, trophies to:-1st, 2nd & 3rd in each class. **There will be an award for the highest placed Mazda MX150R.**

Best prepared car.

4. Bonuses:

Per Round: not applicable. Championship: not applicable.

5. Presentations: Garlands and Trophies are to be provided for presentation at the end of each race.

6. Entertainment Tax Liability. Not applicable.

7. Title to all Trophies: In the event of any Provisional Results or Championship Tables being revised after any provisional presentations and such revisions affecting the distribution of any awards the Competitors concerned must return such awards to the 750 Motor Club Competitions Secretary in good condition within 7 days.

2: SPORTING REGULATIONS - JUDICIAL PROCEDURES

Rounds & Championship: In accordance with Section C of the current year's MSA Yearbook and 4.2. of these regulations.

3: SPORTING REGULATIONS -

CHAMPIONSHIP RACE MEETINGS & RACE PROCEDURES

3.1: ENTRIES:

1. Competitors are responsible for sending in correct and complete entries with the correct entry fees prior to the close of entry dates as per the entry forms.

2. Incorrect or incomplete entries (including driver to be nominated entries) are to be held in abeyance until they are complete and correct and the date of receipt for acceptance of entry purposes shall be the date on which the Secretary of the Meeting receives the missing or corrected information or fee.

3. Any withdrawal of entry or driver/car changes made after acceptance of any entry must be notified to the Secretary of the Meeting in writing. If driver/vehicle changes are made after the publication of Entry Lists with Final Instructions, the Competitor concerned will be accepted in accordance with D25.1.12.

4. The entry fee for each round shall be as per the Supplementary Regulations.

5. In the event of any rounds being oversubscribed the Organising Club may, in liaison with the Championship Coordinator, at their discretion run Qualification races. For Qualification Race procedures see 3.13 of these regulations.

6. Reserves are to be nominated on the Final List of Entries published with the Final Instructions or Amendment Sheet Bulletins. Reserves will practice and replace non-qualified (including drivers practising out-of-session or qualifying by virtue of having raced at the circuit within the previous 12 months), withdrawn or retired entries in Reserve Number order irrespective of class. If reserves are given Grid Places prior to issue of the first Grid Sheets for any round, the times set in practice shall determine their grid positions. If Reserves are given places after publication of the grid sheet and prior to cars being collected in the Official "Assembly Area" they will be placed at the rear of the grid and

be started without any time delay. Otherwise they will be held in the Pitlane and be released to start the race after the last car to start the Green Flag Lap or last car to take the start has passed the startline or pitlane exit whichever is the later. Such approval to start MUST be obtained from the Clerk of Course.

7. Acceptance of Entries: Up to Closing Day, Race meeting organisers may accept up to the maximum number of starters permitted on the Track Licence for the circuit ("the maximum"). If entries received by closing day exceed the maximum, selection will be made in order of receipt. Those in excess of the maximum and up to 20% more will be treated as 'reserves'. If the maximum has not been reached by closing day, entries received after that date will be accepted strictly in order of receipt until the maximum is reached.

3.2: BRIEFINGS:

Organisers must notify competitors of the times and locations for all briefings in the Final Instructions or Official Race Day Bulletins for the meetings. Competitors must attend all briefings.

3.3: PRACTICE:

Practice sessions will be as per MSA Regulations Q4.5. Should any practice session be disrupted, the Clerk of the Course shall not be obliged to resume the session or re-run sessions to achieve the championship criteria and the decision of the Clerk of the Course shall be final.

3.4: QUALIFICATION:

Each driver should complete a minimum of 3 laps practice in the car to be raced and in the correct session in order to qualify for selection and order of precedence as set out in MSA regulation Q4.5. Drivers practising out-of-session or qualifying by virtue of having raced at the circuit within the previous 12 months will be placed at the back of the grid. The Clerk of the Course and/or Stewards of the Meeting have the right to exclude any driver whose practice times or driving are considered to be unsatisfactory - as per MSA Regulation Q4.5.

3.5: RACES:

The standard minimum scheduled race distance shall be 13 minutes plus 1 lap but should any race distance be reduced at the discretion of the Clerk of the Course or Stewards of the Meeting, it shall still count as a full points-scoring round.

3.6: STARTS:

Unless modified by the Organising Club's Standing Regulations, the following regulations shall apply:-

1. There will be a minimum elapsed period of 3 minutes from cars being released from the Assembly Area to the start of the race or, if applicable, the green flag lap.
2. Start Procedure: In normal circumstances there will be no green flag lap. A 'two minute' board will be shown on the startline; engines should be started at this stage and the grid cleared of any pit crew. A 'one minute' board will be shown, followed by a '30 second' board; a '5 second' board will be displayed; approximately 5 seconds after this board is withdrawn the red lights will be switched on; after between 2 seconds and 7 seconds they will be switched off to start the race. In the event of the failure of these lights a National Flag will be used to start the race.

In circumstances where a green flag is used, it will be waved from the startline to commence the green flag lap. The pole position driver should set a reasonable pace during this lap and slow down on approaching the startline to allow the grid to close up. Drivers should resume their correct grid positions with the minimum of delay. Any drivers unable to start the green flag lap or start the race are required to indicate their situation as per MSA regulation Q12.13.2. Drivers may make up any lost grid position during this green flag lap, BUT any drivers unable to maintain grid position to the extent that ALL other cars are ahead of them, may complete the green flag lap but MUST remain at the rear of the last row of the grid but ahead of any cars to be started with a time delay.

A '5 second' board will be displayed when the grid is stationary. Approximately 5 seconds after this board is withdrawn the red lights will be switched on; after between 2 seconds and 7 seconds they will

be switched off to start the race. In the event of the failure of these lights a National Flag will be used to start the race.

3. Any car removed from the grid or driven into the pits after leaving the Assembly Area shall be held in the pitlane and may start the race after the last car to take the start from the grid has passed the startline or pit exit lane whichever is the later.

4. Excessive weaving to warm-up tyres - using more than 50% of the track width - and falling back in order to accelerate and practice starts, is prohibited.

3.7: RACE STOPS:

As per MSA Regulation Q5.4 to 5.4.3 of the current MSA Yearbook.

3.8: RE-SCRUTINY:

All vehicles reported involved in contact incidents during races or practice must be re-presented to the Scrutineers before continuing in the races or practice.

3.9: PITS AND PITLANE SAFETY:

1. Pits: Entrants must ensure that the MSA, Circuit Management and Organising Club Safety Regulations are complied with at all times.
2. Pitlane: The outer lane or lanes are to be kept unobstructed to allow safe passage of cars at all times. The onus shall be on all drivers to take all due care and drive at minimum speeds in pit lanes.
3. Refuelling may only be carried out in accordance with the MSA Regulation Q13, Circuit Management regulations and the SRs or Final Instructions issued for each Circuit/Meeting.

3.10: RACE FINISHES:

After taking the chequered flag drivers are required to: - Progressively and safely slow down, remain behind any competitors ahead of them, return to the pitlane entrance as instructed, comply with any directions given by Marshals or Officials and to keep their helmets on and harnesses done up while on the circuit or in the pitlane.

3.11: RESULTS:

All Practice timesheets, grid sheets and Race Results are to be deemed PROVISIONAL until all vehicles are released by Scrutineers after post-practice/race scrutineering and/or after completion of any judicial or technical procedures.

3.12: TIMING MODULES:

The 750 Motor Club utilises AMB transponder-based timing and competitors **must** have a compatible transponder fitted and working and advise the race organisers of its number prior to the event. The transponder is a TRANX 260 Direct Powered and is available from HS Sports Ltd - 01260 275708.

3.13: QUALIFICATION RACES:

If on closing date the number of entries received is appreciably more than the maximum number of starters permitted, the race meeting organisers will endeavour if feasible within the timetable, to run practice sessions and races to accommodate all entries, but are not obliged to do so; this would be by way of separating classes.

3.14: CANCELLED/ABANDONED RACES:

There may be occasions when, due to circumstances on the day, a scheduled race is not run, a race meeting is abandoned or the circuit curfew is reached. The 750 Motor Club has the right to replace those races at another race meeting in the same season; preference will be given to a race meeting where the affected formula is already scheduled to race. This will be done via issue of a Championship Bulletin. No change of vehicle or class will be permitted without the permission of the Championship Stewards and then only in exceptional circumstances.

A: The qualifying session for a race/s does not take place.

Entry for the replacement race will be restricted to those who were 'signed on' for the race which is being replaced. A separate qualifying session will normally be held. If no space can be found for a replacement race, the number of championship scoring rounds will be adjusted accordingly.

B: The qualifying session for a race/s has taken place, but the race did not come under starters orders.



Entry for the replacement race will be restricted to those who were qualified for the race which is being replaced; the grid for the cancelled race will be used for the replacement race. If no space can be found for a replacement race, the number of championship scoring rounds will be adjusted accordingly.

C & D below apply if a race is 'red flagged' once.

C: A race is 'red flagged' before the leader has completed two laps, but there is no time available to restart the race.

Entry for the replacement race will be restricted to those who would have been able to restart the race which is being replaced; the grid for the cancelled race will be used for the replacement race. If no space can be found for a replacement race, the number of championship scoring rounds will be adjusted accordingly.

D: A race is 'red flagged' after the leader has completed two laps but less than 75% of its duration, but there is no time available to implement MSA regulation Q5.4.2.

If the Clerk of Course decides that a replacement race should be run it will be in accordance with MSA regulation Q5.4.2. If no space can be found for a replacement race, a result will be declared retrospectively based on the order of crossing the finish line at one lap less than at the first time of the showing of the red flag and only cars which were under their own power at the showing of the red flag will be classified.

If a race is 'red flagged' twice and the second red flag is before the leader has completed two laps, the Clerk of Course may decide to rerun the race on the same day subject to circuit curfew but is not obliged to do so. If the decision is taken that it should not be rerun on the day or it cannot because of circuit curfew, it will be considered an abandoned race and the number of championship scoring rounds will be adjusted accordingly.

3.15: Additional Sporting Regulations issued for the Championship.

1. Any driver competing in the Championship may be called before a meeting of the Championship Stewards who, at their discretion, may take further action that could include exclusion from part or all of the Championship.
2. The Organisers will use any evidence available to them to request that the Championship Stewards investigate any drivers who are deemed to show poor driving standards or bring the championship into disrepute in any such manner through on and / or off track incidents. This will include any complaints made officially by registered competitors.
3. Championship Stewards are also empowered to consider any request from the Championship co-ordinator to penalise any Competitor for any breach of Championship regulations and, after holding a formal hearing if they deem it necessary, to impose a penalty in accordance with MSA Regulation C.2.1.1 (subject to the rights of appeal provided for in Section C).
4. One or more of the following may be imposed by the Championship Stewards as appropriate:
 - a) Reprimand.
 - b) Fine. This may be also applied in the case of a driver receiving three reprimands from the Championship Stewards in one season.
 - c) Time Penalty.
 - d) Suspension from all or part of the Championship. This may also be applied in the case of a driver receiving two fines from the Championship Stewards in one season.
 - e) Disqualification.

4: CHAMPIONSHIP RACE PENALTIES:

4.1: INFRINGEMENT OF TECHNICAL REGULATIONS:

1. Arising from post-practice scrutineering or judicial action: Should a vehicle be found ineligible, the Clerk of Course will impose the penalty set out in MSA Regulation C3.3.
2. Arising from post-race scrutineering or judicial action: Should a vehicle be found ineligible, the Clerk of Course will impose the penalties set out in MSA Regulation C3.5.1 a & b and may impose the

penalty set out in MSA Regulation C3.5.1 c. Technical infringements may be referred to the Championship Stewards for further action/penalties.

3. Additional specific Championship penalties: See 4.2.2.

4.2: INFRINGEMENT OF NON-TECHNICAL MSA REGULATIONS and the Sporting Regulations issued for the Championship:

1. In the case of a driver being excluded from a race, the Clerk of Course will impose the penalties set out in MSA Regulation C3.5.1 a & b and may impose the penalty set out in MSA Regulation C3.5.1 c.
2. In order to maintain standards of conduct, the Championship Organisers will monitor all Officials/Observers reports of adverse behaviour at race meetings. If any individual is included on two such reports during one racing season the Championship Organisers will request the Clerk of Course at future race meetings to consider specific observation of that driver's conduct.
3. The Clerk of Course may impose a 'Stop-Go' or 'Drive through' penalty during a race, in accordance with MSA Regulation Q12.6.
4. Any Competitor who is penalised under the Championship Sporting Regulations at any stage of a Championship event and receives an allocation of penalty points on their race licence in accordance with MSA regulations, will receive a grid slot penalty at the next round in which they compete following the allocation of penalty points, equal to the number of penalty points which were allocated. Double headers will be considered as two separate rounds; however if the decision to allocate penalty points is delayed such that further round/s of the Championship have taken place since the offence, the grid slot penalty will be implemented at the next round in which they compete after the allocation of the penalty points.
The penalty will mean that a Competitor will be moved back grid slot places from their grid position (e.g. if a Competitor with a three grid slot penalty had a qualifying time that was good enough for pole position then the Competitor will start fourth on the grid). If for any reason the imposition of this grid penalty is impractical (such as the competitor's qualifying time, starting from the pitlane etc) or the offence occurs at the final meeting of the season, a time penalty of 5 seconds will be added to the elapsed race time of the competitor.
5. Additional specific Championship penalties as per 3.15 of these regulations.

5: TECHNICAL REGULATIONS

5.1: INTRODUCTION:

The following Technical Regulations are set out in accordance with the MSA specified format and it should be clearly understood that if the following texts do not clearly specify that you can do it, you must work on the principle that you cannot. The fact that some modifications are mentioned as prohibited does not imply that others are allowed.

5.2: GENERAL DESCRIPTION:

The **SPORT SPECIALS CHAMPIONSHIP** is for Competitors participating in cars as defined below. All vehicles must be of sound construction and mechanical condition and be well maintained. There is no requirement for an MOT Certificate, Road Tax or Insurance. Cars will run in four classes:-

- A): Ford 2000cc, 16 Valve (Duratec DHE 420) engine in its 145PS form.
- B) :Ford 'Zetec' engines as specified within 5.7.C.1, incorporating Westfield Cup Class (see Appendix A) and Tiger Sports Cars Zetec (see Appendix B).
- C): Roadgoing two-seater sports specials with a maximum power to weight ratio of 340bhp/tonne (**Power at flywheel and weight including driver with helmet, overalls etc**). Normally aspirated engines only, limited slip differentials permitted, no 4 wheel drive. This class is intended to encompass a variety of cars, including 'one-off' specials, incorporating Tiger Sports Cars (see Appendix B) and also Caterhams with a maximum power to weight ratio of 340bhp/tonne (**Power at flywheel and weight including driver with helmet, overalls etc**).

subject to the approval of the Championship Organisers
SR): Sports Racing & GT For cars complying with the sporting and technical regulations of the Sports Racing & GT Challenge.

5.3: SAFETY REQUIREMENTS:

The following Articles of MSA Section K Safety Criteria Regulations will



apply: - Drawing 60 (i) with reference to K1.6.4; cars over 2000cc must have a cage as per drawing 5 or 6; K5, K6, K8 – K14.
Extinguishers must comply with MSA regulation K 3.1.2 a). Seat belts must be FIA homologated and as per K2.1.2 , 2.1.3. or 2.1.4.

5.4: GENERAL TECHNICAL REQUIREMENTS & EXCEPTIONS:

1. All cars must comply with the requirements of sections J and Q19 of the current MSA Yearbook. All vehicles must be of sound construction and mechanical condition and be well maintained. There is no requirement for an MOT Certificate, Road Tax or Insurance.

As a minimum, two mirrors must be fitted, each with a minimum surface area of 50 sq cms and giving a clear view to the rear, one on each side of the centreline of the vehicle.

STANDARD: The word 'standard' used within these technical regulations as a description of components is to be interpreted as per 'Standard Part' defined in Section B – Nomenclature & definitions in the MSA Blue Book. Checking will be by comparison to spare parts supplied by the manufacturer's official agent or by any other means necessary to ensure compliance.

2. The Championship Organisers will allocate a rolling road dyno truck that may be used to assist the Eligibility Scrutineer. At any time the Championship Organisers or the Eligibility Scrutineer reserves the right to test a vehicle on the allocated rolling road dyno machine. The Eligibility Scrutineer may use any data from the rolling road dyno machine. Competitors by registering for the Championship agree to sign any associated indemnities to allow their car to be tested on the dyno.

3. The use of the rolling road dyno will measure power "at the wheels" but by measuring the rolling losses on the run down and adding these to the "at the wheels" figure a theoretical flywheel figure will be obtained and this figure will be used to confirm compliance with these Championship regulations.

5.5: CHASSIS:

Front or rear-engined cars are permitted.

TOWING EYES with a minimum internal diameter of 60mm as detailed in Q19.1.3 must be fitted, no higher than 18" from ground level; (note the tow eye may be of either a suitable rigid or flexible material bolted to the chassis).

5.6: BODYWORK – classes A, B, and C Roadgoing two-seater sports specials:

1. Modifications Permitted:

1. **General:** Free

2. **Interior:** The cockpit seen in plan view must be symmetrical about the longitudinal axis of the car. The dimensions of the passenger seat space, elbow space, foot and leg room in terms of length, width, height and volume must be at least 75% of that provided for the driver; only a fire extinguisher, a battery and any rollbar bracing may impinge upon the passenger space. Tandem seating is not permitted. It is permissible to remove interior trim and passenger seat.

3. **Exterior:**

ALL VEHICLES: The engine (including carburettor & throttle bodies) and transmission must be fully enclosed. It is permitted for the air exit from a front-mounted radiator to exhaust through the top surface of the bodywork without any covering but the ducting between the bodywork and the radiator must ensure that the radiator hoses and piping are fully shielded from this ducting.

FRONT ENGINED CARS: Air filters may protrude through the bonnet without the need for any cover but must have an effective seal between them and the bonnet; any other holes in the upper surface of the bodywork forward of the steering wheel plus any holes in the side surfaces of the bodywork forward of the steering wheel above a longitudinal line joining the top of the front and rear wheel rims, must be covered with solid bodywork having only a forward facing opening, forward facing louvers or with a metallic gauze with a maximum hole size of 1mm; holes solely for the exhaust system do not require any cover/gauze but must be a reasonably close fit.

ALL VEHICLES must be fitted with a windscreen or an aeroscreen of minimum vertical height, measured at its attachment to the bodywork, of 75mm and a minimum width of 250mm. The passenger space may be covered by a removable tonneau cover, fitted no higher than the top edge of the bodywork. Soft-tops/hoods do not have to comply with

the silhouette ruling (4.). Any car fitted with a soft-top or hardtop will be considered to be a closed car and must be fitted with a full width and height windscreen and rear screen. Front spoilers/splitters may be fitted but must not extend beyond the plan view of the bodywork. Cars which do not have full width front bodywork may be fitted with a front spoiler/splitter provided it does not extend more than 75mm beyond the plan profile of the front nose cone. Rear spoilers continuous with the bodywork may be fitted but must be no higher than 75mm above the bodywork immediately to the rear of the driver/passenger opening and must not extend beyond plan view.

4. Silhouette: Class A, B & C Roadgoing two seater sports specials

The silhouette is free within that specified in 3)

Class C Caterhams

The silhouette must remain unaltered. Front and/or Rear spoilers are not permitted.

5. Ground Clearance:

Under no circumstance can any part of the bodywork, or of the suspended part of the car with the exception of the exhaust system, be below a horizontal plane passing 75mm above the ground, the car being in normal racing trim with the driver aboard. A gauge of 75mm may be used by Scrutineers before or after races or practice to check the ground clearance.

2. Modifications Prohibited:

1. **General:** Kevlar, carbon-fibre and titanium materials are not permitted.

2. **Interior.** It is not permitted to mount fuel tanks within the passenger space.

3. **Exterior: Aerofoils are not permitted.** No adjustable aerodynamic devices are permitted. Wheel arch extensions if used must be integrated with the body with smooth contour changes.

4. **Silhouette: Class A & B and Roadgoing two-seater sports specials in class C:** Any rear underbody diffuser/undertray must not extend beyond the plan view.

Class C Caterhams No modifications are permitted

5. **Ground Clearance:** Side-skirts or bridging devices are not permitted.

5.7: ENGINE:

All engines must be based on series production car engines; forced induction is not permitted in any class.

Location

Relocation of the engine is permitted provided no modifications are required to the original chassis or bulkheads (other than holes for cables or pipes). Rear-engined cars must mount the engine (and transmission) transversely which must have been mounted transversely in the donor car.

5.7. A. Class A: All engines other than Duratec.

Not Applicable

5.7. B: Class A: Duratec ENGINE (Ford 2000cc, 16 Valve (Duratec DHE 420) engine in its 145PS form)

The addition of any material, be it metal, plastic, or composite etc. by any means be it welding, bonding, encapsulation or encasement to any component is prohibited. However, specific repair of the mounting points of the cylinder block to the transmission or chassis is allowed, whilst other casting repairs may be allowed with prior written approval of the Eligibility Scrutineer responsible for the Formula.

Water pump pulleys and generator drive pulleys and their retention bolts, washers and belts are free. Mechanical tachometer drives may be fitted. The use of non-standard replacement fasteners, nuts, bolts, screws, studs and washers is permitted. Freedom granted to any fastener does not allow for freedom to move items relative to each other. For components that are granted the freedom for the fitting of a key or dowel, then material may be removed to allow the fitting of the key or dowel. Only one hole or keyway per component is allowed. The use of thread locking compounds is permitted. Gaskets are free except for the cylinder head gaskets which must be standard Ford

manufacture or Standard pattern for the engine. Any process of cleaning may be used on any component providing the surface finish, which must remain standard, is not affected. The expression "Standard", "Standard production" or similar expression is deemed to imply that the part has been manufactured by Ford, or a Ford Motor Company Ltd. authorised sub contractor, for specific use on a specific model of the vehicle or engine. Consequently for these rules only parts manufactured specifically for the Ford 2000cc, 16 Valve engine (Duratec DHE 420) in its 145PS form, may be used. Any machining marks on cast components resulting from manufacturing procedures will not cause disqualification. Any production deburring or imperfection removal during initial manufacture may not be modified or extended. The Scrutineer's decision will be final (based on advice from Ford Manufacturing) if a dispute arises regarding the amount of tool or other marks that are evident in any particular component. The exterior surfaces only (of the complete engine assembly) of ferrous parts and the exterior surface of the aluminium cam cover may be protected by paint or similar means. No internal component or surface may be coated by any protective finish. No rework may be carried out on any component unless specifically authorised by the regulations. The engine and associated parts must remain exactly as produced by the Ford Motor Company unless expressly detailed in these regulations. If the regulation allows a change, then that authorisation would allow the change to be carried out. However any statement defining minimum weight or dimensions does not grant permission for rework to obtain these minimum values, unless carried out in accordance with these regulations. Only Ford standard parts (parts manufactured by Ford or a Ford Motor Company authorised sub contractor) specifically for the 2000cc, 145PS version of the Duratec DHE 420 engine can be used in this series. No treatment that alters in any way the surface finish, hardness, or other property of the original production component is allowed. The only exception to this is any deposit derived from the lubrication and combustion processes naturally occurring during the running of the engine. If in doubt contact the eligibility scrutineer or championship co-ordinator.

5.7.B.1 Modifications Permitted:

- a) **Engine.** The only permitted engine is the Ford 2000cc, 16 Valve (Duratec DHE 420) engine in its 145PS form with nominal bore 87.5mm and stroke 83.1mm. Production tolerances are permitted providing the total swept volume does not exceed 2000cc.
- b) **Fuel injection.**
 - i) Inlet Manifold: Free.
 - ii) Throttle Bodies: Aftermarket fuel injection with maximum 45.01mm parallel butterfly throttle bodies; the parallel section must be at least 30mm long equally disposed around the butterfly. The 750 Motor Club reserves the right to alter the maximum throttle body size or specify the fitment of restrictor plates to equalise performance, giving 21 days notice.
 - iii) Fuel Injectors: Free subject to a maximum of 1 per cylinder.
 - iv) Fuel Injection and management system: as per 5.7.B.14 d).
- c) **Carburettors**
 - i) Inlet manifold: Free.
 - ii) Maximum size: Carburettors to be twin 48 Weber or Dellorto side-draught with 38mm chokes; chokes may be machined to the correct size from a smaller original. The 750 Motor Club reserves the right to alter the maximum choke size to equalise performance, giving 21 days notice.
 - iii) Management system as per 5.7.B.14 d).

5.7.B.2 Exhaust System: Must comply with MSA Regulation J5.16.5 & J5.17 in the current MSA Yearbook. The exhaust manifold is free. All cars must be fitted with a catalytic converter in the exhaust system.

5.7.B.3 Cylinder Block

- a) It is permitted, as means of repair, to replace cylinder bores with cast iron cylinder liners, in standard material and to standard dimensions. The liners must remain dry liners. The centre line of the cylinder bores must remain within Ford production tolerance. No offsetting of the cylinder bores is allowed. 'Nikasil' or any other types of bore plating / treatments are prohibited.
- b) The crankcase breather may be modified, including removal, as long as no air and/or oil escape from this area other than through pipework to a catch tank.

- c) The cylinder block may be machined to maintain deck height whilst respecting 5.7.B.5 c)

5.7.B.4 Cylinder Head including Valves and Valve Gear:

- a) It is permitted, as means of repair, to replace damaged valve guides and valve seats by replacement valve guides and valve seat inserts all to standard dimensions.
- b) No work which removes, adds, replaces, or transfers material is allowed on the cylinder head with the following exceptions:
 - i) Simple cleaning which does not alter in any way the shape of the component.
 - ii) Minimal material removal from the head face to correct combustion chamber volume and/or reclaim head flatness. No internal rework of any combustion chamber is permitted.
 - iii) Any replacement valve seat insert must be fitted in a position that retains the standard closed valve position.
 - iv) Threads may be cut in the standard injector holes so that threaded blanking plugs can be fitted.
- c) The cam cover assembly cannot be modified or replaced.
- d) All valve train components, other than camshaft, valve springs and simple shims under valve springs, may not be modified or replaced. The replacement tappets from Ford are permitted to accommodate valve train wear, but cannot be modified in any way unless to adjust lash length within the standard Ford range.
- e) Valves must remain standard, no re-profiling or polishing is permitted. The original 45 degrees (90 degrees included) seat angle must be maintained.
- f) Distance apart at centres (inlet) 37.25 ± 0.5 mm.
- g) Distance apart at centres (exhaust) 36.00 ± 0.5 mm.
- h) Maximum face diameter (inlet) 35.15 mm.
- i) Maximum face diameter (exhaust) 30.15 mm.
- j) Overall length (inlet) 103.85 ± 0.5 mm.
- k) Overall length (exhaust) 105.05 ± 0.5 mm.
- l) Standard valve stem seals must be retained.
- m) Valve seat dimensions shall remain standard.
- n) The Exhaust Gas Recirculation (EGR) port may be sealed or filled by any means.

5.7.B.5 Compression Ratio: The maximum compression ratio will be controlled as follows:

- a) Minimum combustion volume in the cylinder head (with the race spark plug fitted) = 42cc.
- b) Standard Ford cylinder head gasket with a minimum compressed thickness of 0.45 mm, and a minimum diameter of cylinder aperture of 89.00 mm.
- c) With the piston at Top Dead Centre, the piston top must remain below the top of the block (deck) by a minimum of 0.375mm (0.015"). The measurement shall be taken from the flat squish deck of the piston (not the concave bowl), to the deck height (top) of the block, without fitment of a head gasket. This measurement shall be taken in 2 positions at the extreme fore and aft of the piston in line with the piston pin. An average of the 2 measurements will be used to determine the actual dimension.
- d) The combustion chamber cannot be cleaned of carbon prior to a compression ratio check being undertaken. However, if the measured compression ratio is outside of tolerance, the eligibility scrutineer, at his discretion may allow the combustion chamber and/or piston crown to be de-carbonized in a controlled manner, prior to re-test and calculation. In all cases, this second measurement will be taken and recorded as final.

5.7.B.6 Camshaft

- a) The only permitted camshaft is the Kent Camshaft Pt. No. **KC750DUR145**. It must be fully manufactured and ground by Kent Camshafts Ltd. It is prohibited to grind from blanks, regrind or re-profile. The serial number of the camshaft must be notified to the 750 Motor Club on the championship registration form.
- b) Only the production surface finish is permitted. Shot peening, shot blasting or polishing are prohibited. It is prohibited to modify the timing slots in the cam ends. Cam timing free. Vernier Timing Pulleys may NOT be fitted.

5.7.B.7 Pistons

- a) Pistons must be standard production pistons (Part No. 1S7G-6110-DE1), or standard pattern parts unmodified in any way.

- b) All three piston rings must be fitted and piston rings must be standard production items or standard form pattern parts. The minimum weight of the connecting rod and piston assembly shall be 910 gms. (Complete piston with rings and pin, connecting rod and cap with bolts but excluding crankshaft bearings).

- c) The piston cooling oil squirt jets and the oil feed galleries to them must be retained and unmodified in any way.

5.7.B.8 Connecting Rods

- a) Connecting rods must be standard (Ford Part No. 1S7G-6200-AG) unmodified in any way. Polishing is prohibited. The minimum weight of the connecting rod and piston assembly shall be 910 gms. (Complete piston with rings and pin, and connecting rod and cap with bolts but excluding crankshaft bearings). Connecting-rod bolts are free.

5.7.B.9 Crankshaft

- a) A standard crankshaft must be used. Polishing is prohibited. Crankshaft minimum weight is 13.6kg (including gearbox spigot bearing). Crankshaft journals must remain within Ford positional tolerances if a repair regrind is carried out.
- b) Crankshaft pulley and damper must be retained. Additional drives to alternator etc. may use this pulley, or extra pulleys mounted in front of the crankshaft damper.
- c) It is not permitted to alter the number of bearings or fit bearings of less than standard production width.
- d) The crank journals may be reground for reclaim, as long as the minimum crank weight is respected. Standard oversize and undersize bearings are permitted.
- e) The crankshaft timing chain sprocket and front pulley/damper may be fixed to the crankshaft by woodruff key or dowel.

5.7.B.10 Flywheel and Clutch

- a) The flywheel and ring gear must have a minimum weight of 4.6kgs (e.g. Burton FD250) and be suitable for and use a 216mm (8.5") clutch. Clutch assembly cover to remain standard or standard pattern but must remain conventional single diaphragm spring driven plate with four or more spring assemblies; organic friction material only is permitted; spline form and size free.

5.7.B.11 Lubrication System

- a) Wet sump lubrication must be retained; the sump and the oil pick up pipe may be modified or replaced. Existing standard production oilways, linings or oil grooves may be enlarged but no additional ones are permitted. Addition of material to facilitate an increase in oilway size is not permitted. Standard bearings (production or production reclaim sizes) must be retained and cannot be modified. Chamfering of the entry/exit holes of oilways is permitted; oil coolers are free.

5.7.B.12 Cooling System

A liquid cooling system is mandatory. The standard production water pump must be retained and be the only mechanical method of circulating water although, through freedom on the drive to the pump, its rotational speed may be changed. The radiator and associated pipes are free. Thermostat and bypass pipes are free. Electric pumps are not permitted.

5.7.B.13 Fuel System

- a) The fuel pressure in the engine fuel injector rail must remain in conformity with these regulations at all times. Checking will be as quoted in the Ford Motor Company workshop manual for 145PS version of engine in conjunction with the requirements of 5.7.B.13 b) below.
- b) With the manifold vacuum pipe NOT connected to the pressure regulator, maximum fuel pressure = 2.5 bar (except carburetted engines)

5.7.B.14 Ignition System

- a) Spark plugs are free provided they fit the engine without any modification to the cylinder head or the spark plug and that the spark plugs place the spark gap in the same position as the production spark plug within the combustion chamber.
- b) The coil unit is free.
- c) ECU is free but must have a rev limit of 7500rpm.
- d) The engine management wiring loom is free. Any loom used must not alter the normal electrical characteristics of the inputs, outputs or sensors in any way.

Class B: Zetec ENGINE

5.7.C.1 Ford Zetec: code RDA/RDB (105 spec), ROB/RQC (130 spec), RKA/RKB/RKC (115 spec) engines or cylinder heads are permitted subject to using 928M/958M heads. RKF/RKH/RKJ/RKK engines or cylinder heads are not permitted. No alterations to the standard engine specifications are permitted. Any modification is therefore prohibited, unless specifically allowed by these Regulations.

5.7.C.2 CYLINDER BLOCK:

It is permitted as a means of repair to replace cylinder bores with cast iron cylinder liners, in standard material and to standard dimensions. The centre line of the cylinder bores must remain within Ford production tolerances. No offsetting of the cylinder bores is allowed. Max bore 80.60mm plus 0.5mm rebore allowance using standard pattern pistons.

5.7.C.3 CYLINDER HEAD: (Either of two cylinder heads is permitted; these are identified as the correct type of cylinder head by the casting number on the vertical face of the head, just above the exhaust manifold; the number should be prefixed by 928M or 958M). It is permitted, as a means of repair, to replace damaged valve guides and valve seats by replacing valve guides and valve seat inserts all to standard dimensions. No work which removes, adds, replaces, or transfers material is allowed on the cylinder head, except for simple cleaning which does not alter in any way the shape of the component, and minimal material from the head face to correct combustion chamber volume and/or reclaim head face flatness whilst maintaining the minimum combustion volume in the cylinder head (with spark plug fitted) 42.4cc. None of the valve train components may be modified or replaced. The hydraulic tappets cannot be modified in any way; it is not permitted to lock up the hydraulics within the tappets; valves must remain standard no reprofiling or polishing is permitted; standard seat angles must be maintained; standard valve stem seals must be retained. Inlet and exhaust ports to remain 'as cast'. Valve springs are free.

5.7.C.4 COMPRESSION RATIO: The maximum compression ratio will be controlled as follows:- Minimum combustion volume in the cylinder head with spark plug fitted = 42.4cc. Standard Ford cylinder head gasket with a minimum compressed thickness of 1.54 mm. Minimum diameter of cylinder aperture 82.00 mm. The piston may protrude a maximum of 0.65 mm out of the cylinder block with the piston at TDC. The cylinder block, head face surface may be machined to maintain deck height.

5.7.C.5 INDUCTION / EXHAUST SYSTEM: Fuel injection is not permitted. Inlet manifold is free. Carburetors to be twin 40DCOE Weber with maximum of 36mm chokes; chokes may be machined to the correct size from a smaller original. Exhaust manifold design is free.

5.7.C.7 CAMSHAFT: The only permitted camshafts are the Kent Cams DH 61/63 Inlet and DH 62/64 exhaust, the KC75061234 inlet and exhaust, or the (uprated) Kent Camshaft KC750FZ134 inlet and exhaust. The serial number of the camshafts must be notified to the 750 Motor Club on the championship registration form. Camshafts must be fitted in the manufacturer's intended position. The camshafts must remain entirely unmodified; they must be fully manufactured and ground by Kent Cams. Camshaft timing free; cams may be dowelled to sprockets. Vernier Timing Pulleys may be fitted.

5.7.C.8 PISTONS: Pistons must be standard production Ford Zetec 1800cc pistons or standard pattern parts unmodified in any way except for balancing. All three piston rings must be fitted and piston rings must be standard Ford production rings or standard pattern parts. The combustion chamber face of the piston cannot be modified, other than a machining cut at 90 degrees to the stroke in order to obtain correct piston to top of block dimensions.

5.7.C.9 CONNECTING RODS: Ford Zetec 1800cc connecting rods must be standard. Machining is permitted to remove metal from the big end cap to achieve balance only; polishing is prohibited. Connecting rod bolts are free.

5.7.C.10 CRANKSHAFT: A standard Ford Zetec 1800cc crankshaft must be used; max stroke 88.00mm. Spot machining by radial drilling or milling to achieve balance is permitted. Polishing is prohibited. Crankshaft journals must remain within Ford positional tolerances if a repair and/or regrind is carried out. The crank journals may be reground for reclaim as long as standard undersize bearings are used.

5.7.C.11 FLYWHEEL & CLUTCH: Standard flywheel and ring gear to be used; these may be lightened subject to a minimum combined weight of 8kgs. Clutch assembly (cover and plate) to remain standard or standard pattern but must remain conventional single diaphragm spring and driven plate with four or more spring assemblies; organic friction material only is permitted.

5.7.C.12 SUMP: Design and material free, but must be 'wet' sump.

5.7.C.13 Oil/Water cooling: Any system may be used for oil and water-cooling provided radiators are within the overall periphery of the vehicle.

5.7.C.14 Exhaust systems: Must comply with MSA Regulation J5.16.5 & J5.17 in the current MSA Yearbook. All cars must be fitted with a catalytic converter in the exhaust system.

5.7.C.15 Ignition systems: Free 3D mapping permitted

5.7.C.16 Fuel delivery systems: No restrictions.

5.7.D.1 Class B: Westfield Cup Class

5.7.D.2 Cup Class Cars with 2000cc Ford Zetec Engines:

Only engines which have been supplied by the Westfield factory are eligible.

The use of spark plugs part number 2955002 is mandatory.

The engine management unit (ECU) must be part number 4073064, supplied by Westfield Sportscars.

The throttle position sensor must remain standard and in its original position.

Dry sumps are permitted.

5.7.D.3 Cup Class Cars with 1800cc Ford Zetec Engines:

Cars must use the standard Ford Zetec 1800cc Twin Cam 16 valve engine, twin 40DCOE carburettor and max 38mm chokes, balanced crank assembly, standard cam shaft and valves, pistons and con rods. Bore and stroke must remain as standard not exceeding 1800cc. All engine components must be original Ford, including the water pump, and to the standard 1800cc Zetec specification. Dry sump is permitted. No polishing or porting to cylinder head is permitted. Minimum weight of flywheel is 7kg. It is permitted to fit replacement pistons sourced from aftermarket suppliers provided that they are a direct replacement for the Ford item.

It will be the responsibility of the driver / entrant to provide documentation to prove the authenticity and origin of any part of the engine. For further clarification / s, see Appendix B.

Any ECU management system may be used. Ignition Timing and performance programming is free. Drive pulleys on camshafts, crankshaft and water pump are free.

5.7.D.4 Cup Class: Prohibited Modifications:

Forced induction is prohibited. Competition pistons are prohibited.

No other modification is permitted

5.7.D.5 Cup Class: Engine Location:

The engine must remain in its original position, using standard Westfield engine mounts.

5.7.D.6 Oil/Water:

Cup Class: The cooling system is free but the radiator must remain in its original position. The fitting of an oil cooler within the periphery of the bodywork is permitted. It is not permissible to fit an electric water pump

5.7.D.7 Induction system:

Cup Class: Inlet manifold free. Carburettor chokes - maximum size 38mm inside diameter

All cars: Must utilise a commercially available foam type air filter system. Air boxes and direct air intake systems are prohibited.

Any form of device to accelerate the air flow into the air filter is prohibited

5.7.D.8 Exhaust Systems:

Cup Class:

2000cc Ford Zetec engine cars must use the Westfield supplied system (part nos 1712051 & 1711091). No modifications are permitted.

1800cc Ford Zetec engine cars, the exhaust is free providing it complies with MSA technical and noise regulations.

5.7.D.9 Ignition System:

The ignition system is free.

5.7.D.10 Fuel Delivery Systems:

The Fuel Delivery System is free.

5.7.E.1 Class B: Tiger Sports Cars Zetec

5.7.E.2 Zetec Engines: No alterations to the standard engine specifications are permitted. Any modification is therefore prohibited, unless specifically allowed by these regulations.

5.7.E.3 Cylinder Block It is permitted as a means of repair to replace cylinder bores with cast iron liners, in standard material and to standard dimensions. The centre line of the cylinder bores must remain within Ford production tolerances. No offsetting of the cylinder bores is allowed. Max rebore oversize +0.5mm using standard pattern pistons.

5.7.E.4 Cylinder Head It is permitted as a means of repair, to replace damaged valve guides and valve seats by replacing valve guides and valve seat inserts all to standard dimensions. No work which removes, adds, replaces, or transfers material is allowed on the cylinder head, except for simple cleaning which does not alter in any way the shape of the component, and minimal material from the head face to correct combustion chamber volume and/or reclaim head face flatness. None of the valve train components may be modified or replaced. The hydraulic or solid tappets cannot be modified in anyway; it is not permitted to lock up the hydraulics within hydraulic tappets; valves must remain standard, no re-profiling or polishing is permitted; standard seat angles must be maintained; standard valve stem seals must be retained. Inlet and exhaust ports to remain 'as cast'.

5.7.E.5 Camshaft: The camshafts must remain entirely unmodified; they must be fully manufactured and ground by the Ford Motor Company. Camshaft timing as standard manufacturer's settings.

5.7.E.6 Pistons: Pistons must be standard production Ford Zetec 1800cc or 2000cc pistons or standard pattern parts unmodified in any way except for balancing. All three piston rings must be fitted and piston rings must be standard Ford production rings or standard pattern parts. The combustion chamber face of the piston cannot be modified, other than a machining cut at 90 degrees to the stroke in order to obtain correct piston to top of block dimensions.

5.7.E.7 Connecting Rods: Ford Zetec 1800cc or 2000cc connecting rods must be standard; big end bolts are free. Machining is permitted to remove metal from the big end cap to achieve balance only; polishing is prohibited.

5.7.E.8 Crankshaft: A standard Ford Zetec 1800cc or 2000cc crankshaft must be used. Spot machining by radial drilling or milling to achieve balance is permitted. Polishing is prohibited. Crankshaft journals must remain within Ford positional tolerances if a repair regrind is carried out. The crank journals may be reground for reclaim as long as standard undersize bearings are used.

5.7.E.9 Flywheel & Clutch: Lightweight Tiger flywheel and ring gear may be used. Clutch assembly (cover and plate) to remain standard Tiger fitment and must remain conventional single diaphragm spring and driven plate with four or more spring assemblies; organic friction material only is permitted.

5.7.E.10 Sump: Design and material free, but must be 'wet' sump

5.7.E.11 Induction Systems:

Inlet manifold is free but removal of material in order to 'match' to cylinder head is not permitted. Carburettors to be twin 45DCOE Weber with maximum choke size of 40mm. Carburettor jets are free.

5.7.E.12 Exhaust Systems: Unrestricted within the provisions of MSA Regulations J 5.16.1 -5.18.11.

5.7.E.13 Ignition Systems:

Only Weber Alpha ECU is permitted. Maximum rev limit is 7200rpm. ECU must be accessible at all times to enable checks by the Championship organisers or their appointed representatives. ECUs may be exchanged prior to any race at the organisers discretion.

5.7.E.14 Fuel delivery system : Unrestricted

5.7.F.1 Class C

Roadgoing two-seater sports specials:

The principle of this class is to limit the power to weight ratio to 340bhp/tonne (power at flywheel and weight including driver with helmet, overalls etc). All registered competitors would be required to submit a power curve for the car fitted with the engine being used

clearly identified. This form together with a weight certificate must be supplied with the completed registration form before the first race. Engines may be modified in any way subject to the restrictions of 5.7.D.2. Engine cylinder block, crankshaft and cylinder heads must be from the same model. Cylinder heads may be modified by the removal of material. The addition of material in any form is prohibited. Design and material of sump is free. Dry sump systems permitted. Crankshaft, conrods and bolts are free.

Caterhams

Modifications Permitted: R300, R400 and other Caterhams subject to approval of Championship Organisers limited to 340bhp/tonne (power at flywheel and weight including driver with helmet, overalls etc); competitors must submit a power curve for the car fitted with the engine being used, clearly identified. This form together with a weight certificate must be supplied with the completed registration form before the first race.

5.7.F.2 Modifications Prohibited:

Engine capacity maximum 3651ccs two valve or 4 valve per cylinder, 4, 6 or 8 cylinder. Rotary engines are not permitted. Rebore allowance all two valve engines, except Ford Crossflow, no more than +0.060". Ford Crossflow engines running at 1700cc subject to a maximum bore of 83.5mm. Multivalve engines have a +0.5mm rebore allowance. Crankshaft stroke must remain standard. Dry sump lubrication is permitted

5.7.F.3 Oil/Water cooling:

Any system may be used for oil and water-cooling provided radiators are within the overall periphery of the vehicle.

5.7.F.4 Induction Systems:

Free but engine must be normally aspirated. Turbocharging and supercharging are not permitted. The 750 MC reserves the right to implement a maximum choke size, throttle body size or specify the fitment of restrictor plates giving 21 days notice.

5.7.F.5 Exhaust systems:

Must comply with Regulation J5.16.5 & J5.17 in the current MSA Yearbook. All cars manufactured after 31/12/99 must be fitted with a catalytic converter in the exhaust system.

5.7.F.6 Ignition systems:

Ignition systems are free.

5.7.F.7 Fuel delivery systems:

No restrictions.

5.8: SUSPENSIONS:

1. Permitted modifications:

The type of suspension system, both front and rear, including springing medium and pick up points is free. Dampers are free. Rose-joints may be used.

2. Prohibited modifications:

Controls which could allow adjustment of anti-roll bars by the driver whilst normally seated are prohibited.

3. Wheelbase/track:

Class A, B, and C

Wheelbase free subject to MSA requirements

5.9.A: TRANSMISSIONS: Class A & B

1. Permitted modifications – classes A & B:

Cars may be either front or rear wheel drive. The gearbox and differential must be from a series production car. Front engined, rear wheel drive cars must utilise the original type of transmission as fitted to the car by the manufacturer which may be either:-

- A live axle from a front-engined series production car.
- An independent rear suspension system of which the final drive must be identifiable as being from a front-engined series production car. Differential housing is free.

Rear engined cars must utilise the original transmission as fitted to the donor engine by the manufacturer, which must have been fitted transversely in the donor car and be fitted transversely in the competing car.

2. Prohibited modifications – classes A & B:

Four wheel drive is not permitted. Transaxles (ie combined gearbox/final drive, eg those fitted to 9-series Porsche, 3-series Volvo

and any similar systems) are not permitted. The use of a propshaft/driveshaft between engine and gearbox is not permitted. Torque biasing, locked, limited slip differentials and electronic traction control are not permitted even if fitted as standard to the vehicle.

3. Transmissions & Drive ratios – classes A & B:

Gearbox and final drive ratios are free, but specialist competition transmissions are not permitted and synchromesh must be retained. Maximum number of forward ratios 5, plus mandatory reverse. Sequential change and auto-select gearboxes are not permitted. Flat shift launch controls not permitted.

5.9.B: TRANSMISSIONS: Class C

1. Modifications permitted: Cars may be either front or rear wheel drive. The gearbox and differential must be from a series production car. Torque biasing, locked, limited slip differentials and electronic traction control are permitted.

2. Prohibited modifications – Four wheel drive is not permitted. Transaxles including Hewland and similar specialist competitions gearboxes are not permitted. The use of a propshaft/driveshaft between engine and gearbox is not permitted.

3. Transmissions & Drive ratios – Gearbox and final drive ratios are free, but specialist competition transmissions are not permitted and synchromesh must be retained. Maximum number of forward ratios 6, plus mandatory reverse. Sequential change and Robotized/auto-select gearboxes are not permitted. Flat shift launch controls not permitted. Rear engined cars must utilise the original transmission as fitted to the donor engine by the manufacturer, which must have been fitted transversely in the donor car and be fitted transversely in the competing car.

5.10: ELECTRICS

1. Exterior Lighting: All cars must be fitted with two rear brake lights which must be fully functional at all times, all other exterior lights are optional with the exception of 5.10:2 and the following:- if fully functioning front headlamps are not fitted a pair of Daytime Running Lamps must be fitted, whichever is fitted must be switched on and working at all times that the Rear Warning Lamp (5.10:2) is in use. Blown bulbs/fuses may be replaced for scrutineering purposes.

2. Rear Warning Light: An LED rear fog light to EU regulation 7, an FIA homologated LED rear warning light, or an LED stop light to EU regulation 38 is mandatory and must be mounted directly to the rear or the underside of the rear roll hoop, within 10cms of the centreline of the vehicle. Any manufacturer fitted rear fog light must not be switched on unless it complies fully with this regulation.

3. Batteries: A battery and starter motor capable of repetitive starts must be fitted and be operable by the driver whilst normally seated.

4. Generators: A fully working alternator/generator must be fitted and electrically connected so that the standard battery charging function is providing a charge to the onboard battery.

5.11.A: BRAKES – Classes A & B

1. Permitted Modifications: Aluminium alloy brake callipers with a maximum of 4 'pots' may be used, subject to only one calliper per wheel. Adjustment of brake-balance by the driver whilst normally seated is permitted. Handbrake not required.

2. Prohibited Modifications: ABS systems are prohibited. Carbon discs are prohibited.

5.11.B: BRAKES – Class C

1. Permitted Modifications: Brake callipers free, subject to only one calliper per wheel with a maximum of 6 pots. Adjustment of the brake balance by the driver whilst normally seated is permitted.

2. Prohibited Modifications: ABS systems are prohibited. Carbon or ceramic discs are prohibited.

5.12.A: WHEELS / STEERING – Classes A and B

1. Permitted Options: Steering system is unrestricted. Wheels are free subject to dimensions below.

2. Prohibited Options:

3. Construction & Materials: No restrictions.

4. Dimensions: Diameter free. Width max per wheel 7" front & rear.

5.12.B: WHEELS / STEERING – Class C

- Permitted Options:** Steering system is unrestricted. Wheels are free subject to dimensions below.
- Prohibited Options:**
- Construction & Materials:** No restrictions.
- Dimensions:** Diameter free. Width max combined total for 4 wheels 28".

5.13.A: TYRES – Classes A & B

- Specifications:** The only permitted tyres are the Yokohama A032R in H or S compound or AO48R in M compound. Diameter and aspect ratio are free. Tyre width maximum 205. No alteration to the tyre from the manufacturer's specification is permitted. Re-cutting, re-grooving or in any other way modifying the tread pattern is not permitted. All the manufacturer's data must be clearly visible. Buffing of sidewalls to remove data is prohibited. Tyres must be to MoT requirements in every respect. The use of tyre heating/heat retention devices, tyre treatments and compounds is prohibited.
- Nominated Manufacturers:** Yokohama.

5.13.B: TYRES – Class C

- Specifications:** Any MSA List 1A or 1B tyre is permitted. Diameter, width and aspect ratio are free. No alteration to the tyre from the manufacturer's specification is permitted. Re-cutting, re-grooving or in any other way modifying the tread pattern is not permitted. All the manufacturer's data must be clearly visible. Buffing of sidewalls to remove data is prohibited. Tyres must be to MoT requirements in every respect. The use of tyre heating/heat retention devices, tyre treatments and compounds is prohibited.
- Nominated Manufacturers:** Free

5.14: VEHICLE WEIGHT:

- Minimum weights, excluding driver and including driver with helmet overalls etc (shown in brackets), are:-
Class A: 510kgs (600kgs)
Class B: 510kgs (600kgs)
Class C No minimum weight. The weight must be such that the power to weight ratio does not exceed 340bhp/tonne (**power at flywheel and weight including driver with helmet, overalls etc**). Note competitor must supply a weight certificate, (car driver and drivers' equipment) and power certificate with the completed registration form before the first race.

5.15: FUEL TANK / FUEL

- Types:** Fuel tanks are free but safety tanks are recommended. A non-return valve must be incorporated in the vent system.
- Locations:** It is permissible to relocate fuel tanks within MSA regulations, provided it does not contravene 5.6.2.2. On safety grounds none of the fuel filler pipework, the filler cap or associated fittings may be attached to the external bodywork.
- Fuel:** Only petrol as defined in Section B Nomenclature & Definitions, Pump Fuel a) section of the MSA Yearbook for the current year and complying with BS4040, BSEN228 or BS7800 may be used; fuel which exceeds the stated RON (max) levels in Appendix 1 of Section B Nomenclature & Definitions is prohibited even if it is sold/promoted as being legal for UK Competition and/or obtainable from 'roadside' pumps. The use of additives by competitors which boost the octane rating (RON) in any petrol is prohibited. At the end of practice and the race at least 3 litres of petrol from the tank of the competing car must be available to the scrutineers for analysis. Compliance with minimum weight for the car will be taken before the petrol is removed.

5.16: SILENCING:

All vehicles must comply with the relevant maximum noise limits set out in MSA Blue Book regulation J. Chart 5.18.

5.17: NUMBERS & CHAMPIONSHIP DECALS

- Positions:** Race numbers must be displayed on each side of the vehicle alongside the cockpit/driver and as far forward on the front of the vehicle as possible. 750 Motor Club decals must be affixed prominently near all number backgrounds. Class letters must be affixed near the number backgrounds. Championship Sponsor's decals (where applicable) must be affixed in or near the positions detailed on the diagram supplied with those decals. 750 Motor Club and Championship Sponsor's decals must take preference to any other decals. Failure to comply will render the vehicle and driver ineligible to race.
- Suppliers:** Sponsors and Club decals will be available at the first championship race in which the vehicle is entered.

A: Westfield Cup cars

5. TECHNICAL REGULATIONS

5.1 Introduction:

The following Technical Regulations are set out in accordance with the MSA specified format and it should be clearly understood that if the following texts do not clearly specify that you can do it you should work on the principle that you cannot. All references to the MSA Yearbook (Blue Book) relate to the current edition.

5.1.2 Where the word "standard" is used in these regulations, in relation to a part or parts manufactured by Westfield Sportscars Ltd, that part or those parts shall be totally standard and as produced by the manufacturer, unmodified in any way.

5.1.3 "Race" Body Kits are not eligible.

5.1.4 The Series Eligibility Scrutineer reserves the right to seal and subsequently dismantle any part of the competing car. Should the car be found to be ineligible any rebuilding costs will be borne by the competitor of that car.

5.2 General Description:

Cup Class: Any Westfield car previously eligible for 2009 Classes A or B (Westfield AeroRace car with 2000cc Ford Zetec engine, Westfield SE, SEi, SEi Wide and ZEi vehicles with standard Ford Zetec 1800cc Twin Cam 16 valve engine).

Cup Class cars may, at the discretion of the Series Eligibility Scrutineer, be required to be power-tested and have their engines and ECUs sealed.

Cup Class cars will be required to meet a maximum power-to-weight ratio (with driver) of 280bhp per tonne (cars may be ballasted to achieve this).

5.3. Safety Requirements:

5.3.1 The following Articles of MSA Safety Criteria Regulations will apply:

K3.1.2(a), K3.1.4, K5, K6, K8, K9, K10, K11, K12, K13, K14. In addition the following will apply:

For cars with an AeroRace chassis, a "full cage" to MSA Regulation K1 + (ROPS Ref No 2148) supplied by Westfield Sportscars (Part Number 4633025) is mandatory.

For cars using any other Westfield chassis, a "full cage" to MSA Regulation K1 + (Drp 8) is mandatory. If a bolt-on front end cage to work with the rollbar is used on a wide body car, this must be as supplied by Caged Ltd, directly. For narrow bodied cars, the point of supply for the bolt-on front end cage is free.

Side intrusion: The body section alongside the driver must be filled with expanding two part foam between the inner and outer body panels and from the front to rear end plates, adjacent to the front bulkhead and rear wheel arch. A means to allow inspection by scrutineers must be available.

A full harness safety belt must be fitted complying with K2.1.3 or 2.1.4. Belts designed to pick up on the correct points on the chassis are available from Westfield Sportscars.

It is mandatory for all cars to be fitted with a minimum of a 2.25 litre AFFF plumbed in or equivalent fire extinguisher system – K3.1.4

An electrical master switch complying with K8, and capable of isolating the battery and ignition systems, must be fitted in such a position that it can be operated from both inside and outside the car.

The electrical cut-out must be marked by a red spark on a blue triangle.

5.4 General Technical Requirements & Exceptions:

Vehicles running in Cup Class must conform to the specification of a standard vehicle as supplied by Westfield Sportscars with the exception of adjustments as permitted by these regulations.

5.4.1 All vehicles must comply with these regulations and any relevant MSA technical regulations.

5.4.2 The appearance and condition of all vehicles must be satisfactory to the scrutineers and Series Organisers at all times.

5.4.3 Cars must be fitted with at least two mirrors, giving a clear view to the rear, one to each side of the centre line of the vehicle.

5.4.4 All engines should have provision for Scrutineers wire seals. 1/16 in holes, pre-drilled in readily accessible locations on installed engines must be available.

(a) Sump - two holes through the cylinder block / sump flange, one either side of the engine

(b) Timing Cover - at least two retaining screw heads must be cross drilled.

(c) Rocker Cover - at least two retaining screw heads must be cross drilled.

(d) Inlet Manifold - at least two retaining bolt heads to the cylinder head must be cross drilled.

(e) Carburettor - at least two retaining nuts to the cylinder head must be cross drilled.

(f) Bell Housing - at least two retaining bolts to the engine must be cross drilled to enable the clutch and flywheel to be adequately sealed OR competitors must be prepared to remove either engine or transmission to enable sealing of clutch and flywheel, in which case at least two clutch cover retaining bolts must be cross drilled. Failure to comply renders the engine ineligible.

5.4.5 Titanium components are prohibited.

5.5 Chassis:

5.5.1 The chassis must be as supplied by Westfield Sportscars and may not be modified.

5.5.2 The chassis tubes must not be used to carry liquids.

5.5.3 It is permissible to add or remove material from the chassis if the car has been involved in an accident, causing chassis damage.

5.5.6 For Westfield SE, SEi, SEi Wide and ZEi vehicles only, long trailing arms of 36 inches maximum length are allowed

5.6 Body:

5.6.1 The minimum ground clearance must not be less than 4" (100mm), measured from the underside of the chassis rail (front and rear) to the ground and measured with the driver out.

5.6.2 Plastic screws may be used (part no BM5 x 25) in place of the standard steel screws supplied to retain the rear wings.

5.6.3 The silhouette of the car must remain as standard.

5.6.4 The removal of the spare wheel carrier is mandatory.

5.6.5 The only panels which may be fitted to the chassis are the Westfield supplied standard aluminium panels detailed in the vehicle build manual.

5.6.6 The driver's seat may be changed and is free subject to compliance with MSA Regulation J5.3 but the driver's head with helmet on must be at least 5cms below the top of the rollcage.

5.6.7 Carbon effect protectors supplied by Westfield Sportscars may be fitted to the rear wings. Carbon fibre rear wing protectors are prohibited.

5.6.8 Hoods and sidescreens are prohibited.

It is permitted to cut holes to allow the passage of pipes or wiring through the bodywork / panelling and holes for securing body panels using alternative methods of fixing to that used by the factory.

5.6.10 Vehicles may only use:

Exterior and interior body panels supplied by Westfield Sportscars. Standard Wings or Carbon effect front wings (part no 5584018) supplied by Westfield Sportscars. Nose cone supplied by Westfield Sportscars.

Original or Carbon effect dash as supplied by Westfield Sportscars

5.6.11 Modifications permitted:

Vehicles with an AeroRace chassis must have a half aero screen supplied by Westfield Sportscars.

Westfield SE, SEi, SEi Wide and ZEi Vehicles may use either a full-width or half aero screen supplied by Westfield Sportscars.

A passenger seat may be fitted

Body panels and update kits may only be modified to assist cooling by means of louvres and must comply with 5.4.2 of these regulations.

Carpets and trim may be removed.

5.6.13 Modifications Prohibited.

Carbon fibre components are prohibited, even where such components are sourced from Westfield Sportscars.

"Race" body Kits are not allowed (see 5.1.3.)

Oil or water pipes or containers are not allowed in the drivers or passengers compartment.

Aerofoils, nose fins, splitters, aerodynamic devices, additional under floor trays, underfloor venturi devices and holes or louvers in the rear panel are prohibited. (See 5.1.3.)

5.6.14 In compliance with MSA Regulation J5.2.1 all vehicles must have fitted a gaiter around the gearlever isolating the passenger compartment from the engine / gearbox area

5.7 Engine:

5.7.1 Cup Class vehicles only:

(i) Any vehicle, at the discretion of the Series Eligibility Scrutineer (or nominated deputy) may, at any time, be required to undergo an engine bhp power-test at either Northampton Motorsport or Minister Race Engines, or another facility approved by the Championship Organisers. The results of this test must be made known to the Championship Organisers and The Series Eligibility Scrutineer (or nominated deputy). The engine and ECU must then be sealed prior to the car leaving the test facility. If, as a result of the test, a driver / entrant decides to have an engine rebuild, it must be presented for re-test and sealing before becoming eligible for this Class.

It will be the responsibility of the driver / entrant to present the car for testing within 14 days of the request and all associated costs (test fee, transportation) will be the responsibility of the driver / entrant.

The calculation of the Power-to-weight ratio will be made on the basis of the results of this test, together with the last recorded weight of the car, together with driver, helmet, gloves and overalls, made by the Series Eligibility Scrutineer (or nominated deputy) during the current season.

(ii) If a driver / entrant with a sealed engine requires engine maintenance or investigation to be undertaken, or if an engine requires a rebuild, the Series Eligibility Scrutineer (or nominated deputy), together with the Championship Organisers must be informed. If any engine work is undertaken, procedure (i) above must be adhered to, unless dispensation is granted by The Series Eligibility Scrutineer (or nominated deputy).

5.7.2 Cup Class Cars with 2000cc Ford Zetec Engines:

Only engines which have been supplied by the Westfield factory are eligible.

The use of spark plugs part number 2955002 is mandatory.

The engine management unit (ECU) must be part number 4073064, supplied by Westfield Sportscars.

The throttle position sensor must remain standard and in its original position.

Dry sumps are permitted.

5.7.3 Cup Class Cars with 1800cc Ford Zetec Engines:

Cars must use the standard Ford Zetec 1800cc Twin Cam 16 valve engine, twin 40DCOE carburettor and max 38mm chokes, balanced crank assembly, standard cam shaft and valves, pistons and con rods. Bore and stroke must remain as standard not exceeding 1800cc. All engine components must be original Ford, including the water pump, and to the standard 1800cc Zetec specification. Dry sump is permitted. No polishing or porting to cylinder head is permitted. Minimum weight of flywheel is 7kg. It is permitted to fit replacement pistons sourced from aftermarket suppliers provided that they are a direct replacement for the Ford item.

It will be the responsibility of the driver / entrant to provide documentation to prove the authenticity and origin of any part of the engine. For further clarification / s, see Appendix B.

Any ECU management system may be used. Ignition Timing and performance programming is free. Drive pulleys on camshafts, crankshaft and water pump are free.

5.7.7 Cup Class: Prohibited Modifications:

Forced induction is prohibited. Competition pistons are prohibited.

No other modification is permitted

5.7.8 Cup Class: Engine Location:

The engine must remain in its original position, using standard Westfield engine mounts.

5.7.9 Oil/Water:

Cup Class: The cooling system is free but the radiator must remain in



its original position. The fitting of an oil cooler within the periphery of the bodywork is permitted. It is not permissible to fit an electric water pump

5.7.10 Induction system:

Cup Class: Inlet manifold free. Carburettor chokes - maximum size 38mm inside diameter

All cars: Must utilise a commercially available foam type air filter system. Air boxes and direct air intake systems are prohibited. Any form of device to accelerate the air flow into the air filter is prohibited

5.7.11 Exhaust Systems:

Cup Class:

2000cc Ford Zetec engine cars must use the Westfield supplied system (part nos 1712051 & 1711091). No modifications are permitted.

1800cc Ford Zetec engine cars, the exhaust is free providing it complies with MSA technical and noise regulations.

5.7.12 Ignition System:

The ignition system is free.

5.7.13 Fuel Delivery Systems:

The Fuel Delivery System is free.

5.8. Suspension:

Cup Class: Vehicles may use either the Westfield Sportscars supplied standard-track suspension in respect of all components (wishbones part nos 3712052, 3711052, 4311152, 4312204, 4312205) and their positioning, or upgrade to the Westfield Sportscars supplied wide-track front wishbones.

Damper choice is free providing that the original mountings are used without modification. Light alloy dampers, or those with separate reservoirs for gas/fluid are prohibited. Spring type and rates are free. Westfield Sportscars supply front and rear anti-roll bars, part no 3702017 (front) 3702025 (rear) and these may either be fitted or disconnected. Drivers / entrants may choose to adopt a free design of both front and rear anti-roll bars if they wish.

5.8.1 Permitted Modifications:

All Cars: Ride height may be adjusted subject to minimum ride height requirements detailed in article 5.6.1.

It is permissible to adjust front and rear camber angles by means of the adjustable length top wishbones

Cup Class: It is permissible to fit a Westfield supplied rose joint kit to cars not with an AeroRace chassis. The original suspension pick up points must be used.

5.8.2 Prohibited Modifications:

All Cars: Except for those items listed above, no other modifications are allowed. Only standard Westfield suspension parts may be used. No material may be added or removed.

5.8.3 Wheelbase/Track:

All Cars: The wheelbase and track dimensions must remain standard according to the build specification and as manufactured by Westfield Sportscars for that particular model.

5.9. Transmission:

The gearbox must contain no more than five forward ratios and include an operable reverse gear, capable of being engaged by the driver whilst normally seated.

The gearbox and final drive must remain in their original positions.

The clutch must be from a production car and be of the single plate type. The clutch friction material is free.

5.9.1 Permitted Modifications:

All Cars: It is permitted to fit a clutch pedal stop if required. The design and supply of this is free.

It is permitted to fit a brake pedal stop if required. The design and supply of this is free. The design and supply of the gear knob is free.

5.9.2 Prohibited Modifications:

All Cars: Transaxles and sequential boxes are prohibited.

Limited slip differentials are prohibited.

5.9.3 Transmission & Drive Ratios:

Gearbox and final drive ratios are free

5.10 Electrics:

All power feed to the vehicle and engine looms must be connected via the master battery switch.

Cup Class: Vehicles are advised to run either the standard Westfield dash or the Potenza Digital Dash upgrade (with associated instrumentation and looms as supplied by Westfield Sportscars).

However, final dash and instrumentation choice is free.

Vehicles are advised to run the Westfield race loom.

Vehicles may run any commercially available data-logging system.

5.10.1 Lighting

Cup Class: Vehicles must run a single rear brake light and fog light (high-intensity light) in the standard positions. Drivers / entrants may choose to run with additional lighting (headlights, repeaters, sided brake lights) but if they so choose, both brake lights must be in full working order.

5.10.2 All cars must be fitted with a high intensity rear light according to MSA regulation K5.

5.10.3 The battery, starter motor and charging systems must be retained in their entirety and be in working order. Attention is drawn to MSA regulation J5.14.1 concerning batteries positioned in the cockpit of the car.

5.10.4 Batteries must be gel type lead acid.

5.11 Brakes:

Vehicles may use either the standard braking system as supplied by Westfield Sportscars or standard, non-alloy brake components from mass production cars. Friction material is free (see 5.11.1). The onus is on the competitor to prove to the Series Eligibility Scrutineer (or deputy) the origin of any brake component.

A bias braking system may be used and the make of this is free. It is permitted to drill holes in the chassis to fit such a system.

5.11.1 Prohibited Modifications:

All cars: The cross drilling and / or surface scoring of discs

5.12 Wheels / Steering:

Cup Class: It is permitted to fit the Westfield Sportscars supplied quick release upper steering column.

Standard-Track vehicles must use either the Westfield Sportscars Steering Rack Assembly for standard track cars (part no. 5211005), or the steering rack may come from a standard production car, but may be modified to allow fitting. Wide-Track vehicles must use a steering rack supplied by Westfield Sportscars.

Westfield SE, SEi, SEi Wide and ZEi vehicles may fit rose-joint kits

The steering wheel is free. Vehicles may use the quick-release system, part 5231015. Vehicles must run on 13" wheels. Only commercially available steel or alloy wheels are permitted. Only complete sets of wheels are permitted.

5.12.1 Prohibited Modifications: Except as mentioned above no other modifications or options are permitted.

5.13. Tyres:

Toyo Tyres are the official tyre supplier to the Series.

Cup Class: A single, control, all weather tyre will be used in this Class; Toyo Proxes R888 185/60 VR13 80V GG

An alternative rear tyre, Toyo Proxes R888 205/60 VR13 86V GG may be used.

5.14 Weights:

5.14.1 Minimum weight

Cup Class: The minimum weight for Cup Class cars is 600kg, with driver on board and fully suited for competition including helmet and gloves.

All ballast required must be attached to the chassis in accordance with J5.15 using a minimum of 4 mounting points using bolts with a minimum diameter of 8mm, each with steel washers of at least 400mm² surface area and 3mm thickness.

5.14.2 After Round 1, the Organisers reserve the right to alter the minimum weight for each Class and such alterations may differ for each class. In addition, after Round 7 a similar review will take place. Where such an alteration is made, the competitors concerned will be expected to present their car at the next round entered having made the required alteration, in accordance with 5.14.1 above.

5.15 Fuel System / Fuel:

5.15.1 Fuel tank type

Cup Class: Either the standard fuel tank or one complying to MSA regulations must be used.

5.15.2 Fuel tank location

All Classes: The fuel tank must be located in the same general area as envisaged by the vehicle manufacturer.

On the grounds of safety it is mandatory that fuel tanks currently fitted behind the rear axle/differential be removed to a new position above the rear axle/differential. Details regarding this modification can be issued by Westfield Sportscars Ltd, including the availability of a complete replacement tank should competitors feel that their existing fuel tank is inadequate or unsuitable to be moved. The breather must

be fitted with a non-return valve and must be contained within the confines of the body. It is not permitted to attach the breather to the exterior part of the safety cage.

5.15.3 Fuel type

All Classes: Competitors may use only pump fuel, as defined in MSA Yearbook.

All Classes: To allow for the possibility of MSA fuel testing (MSA Blue Book J5.13.7) all cars newly built from 2010 must be fitted with a dry-break fuel sampling kit. Kits are available from Westfield Sportscars or recognised motorsport factors suppliers.

5.16 Silencing:

5.16.1 All Vehicles must at all times comply with silencing regulations specified in the MSA Yearbook Section J.

B: Tiger Sports Cars

5. TECHNICAL REGULATIONS

5.1. INTRODUCTION:

The following Technical Regulations are set out in accordance with the MSA specified format and it should be clearly understood that if the following texts do not clearly specify that you can do it you should work on the principle that you cannot.

5.1.1 All cars must comply with the requirements of sections J and Q19 of the current MSA Yearbook. The general principle for eligibility shall be that the cars are standard or modified versions of front engined Tiger sportscar models, including any original manufacturer produced or approved options for the year and models which were/are available from the manufacturer.

5.1.2 The onus concerning eligibility and provision of original manufacturer documented proof of eligibility shall rest with competitors at all times, and competitors are advised to check with the Eligibility Scrutineer if they have any doubts or queries concerning the eligibility of their cars

5.2. GENERAL DESCRIPTION:

Tiger Racing Challenge is for competitors participating in 2 Wheel drive Tiger sports cars.

Class TA. Open Class. All Tiger models (except Storm), up to 2000cc, multi-valve, Ford engines (not including Duratec).

Class TB. Zetec / 8v Class. All Tiger models (except Storm), up to 2000cc Ford Zetec 16v. All Tiger models (except Storm), up to 2100cc, 2 valves per cylinder.

Class TC. Duratec Class. All Tiger models (except Storm) up to 2000cc, multi-valve, Ford engines including Duratec HE derivative.

5.3. SAFETY REQUIREMENTS:

Classes TA, TB & TC must be fitted with Tiger Racing Ltd supplied full roll cage.

5.3.1 The following Articles of MSA Section K Safety Criteria Regulations will apply:- K2.1.2, 2.1.3 or 2.1.4; K5, K6, K8 – 14. Extinguishers must comply with MSA regulation K 3.1.2 a). Seat belts must be FIA homologated.

5.4. GENERAL TECHNICAL REQUIREMENTS & EXCEPTIONS:

5.4.1. The class capacity may not be exceeded.

5.4.2. The use of proprietary racing tyres (slick or treaded) is not permitted.

5.4.3 External Identification of the Model. All cars must be externally recognisable as the model entered.

5.4.4 *Number not used.*

5.4.5 Sequential gearboxes are not permitted.

5.5 CHASSIS:

Modification to design only allowed with written permission from Tiger Racing Ltd provided the requirements of REGULATIONS OF THE MSA are complied with excepting as modified by these regulations.

The basic construction type and material (e.g. a steel tube frame) must remain as standard.

It is prohibited to cut any holes or remove any fixed panels from the standard floor pan, front or rear inner or outer wheel arches, front or rear bulkheads (engine to habitacle and habitacle to boot) for the purpose of mounting or giving clearance to suspension components.

It is only permitted to make holes for the passage cables, fuel, water, oil, hydraulic, instrument or fire extinguisher line. All redundant holes must be covered with metal plates.

5.6. BODYWORK:

5.6.1. MODIFICATIONS PERMITTED

5.6.1.1. General: Extensive modifications are permitted provided that, unless modified by these championship regulations, the requirements of REGULATIONS OF THE MSA are complied with.

5.6.1.1 Interior: Unrestricted except as modified below.

(a) The driver's seat is unrestricted but should incorporate a head restraint.

(b) It is permitted to remove the floor carpets, underfelt, sound insulation, and the front passenger seats.

(c) It is permitted to carry out modifications on the instrument panel and all the driving controls.

5.6.1.3. Exterior:

All Classes: Material of external body panels may be changed.

All classes: The engine (including carburettor bodies) and transmission must be fully enclosed. It is permitted for the air exit from a front-mounted radiator to exhaust through the top surface of the bodywork without any covering but the ducting between the bodywork and the radiator must ensure that the radiator hoses and piping are fully shielded from this ducting. Air filters may protrude through the bonnet without the need for any cover but must have an effective seal between them and the bonnet; any other holes in the upper surface of the bodywork forward of the steering wheel plus any holes in the side surfaces of the bodywork forward of the steering wheel above a longitudinal line joining the top of the front and rear wheel rims, must be covered with solid bodywork having only a forward facing opening, forward facing louvers or with a metallic gauze with a maximum hole size of 1mm; holes solely for the exhaust system do not require any cover/gauze but must be a reasonably close fit.

Replacement of the front and rear wings and front body panels by lightweight material panels is permitted providing they exactly retain the standard silhouette, of factory supplied items, in side elevation. The silhouette as seen in side elevation must remain unaltered above the wheel hub centres of the original car, except for engine bonnet/cover. The removal of all exterior chrome/decorative parts is allowed with the exception of the headlamp trim.

Two forward facing headlights must be fitted and be operational.

Brake/stop lights must be operational on all cars. The stoplights must only work as a result of applying the brakes and the fitting of any type of other switching device is prohibited.

All vehicles must be fitted with either a windscreen or an aeroscreen which must be either laminated or of plastic minimum 4mm thick.

Windscreens/aeroscreens must be of minimum vertical height, measured at its attachment to the bodywork, of 75mm and a minimum width of 250mm.

The passenger space may be covered by a removable tonneau of soft, flexible material, fitted no higher than the top edge of the bodywork.

5.6.1.4. Silhouette:

Must remain unaltered with the exception of bonnet modifications allowed in 5.6.1.3

5.6.2 MODIFICATIONS PROHIBITED



5.6.2.1 General:

The drivers seat positioning must be to one side of the internal bodyshell width centre line, so that at least 75% of the drivers seat is to one side of the width centre line of the vehicle.

5.6.2.2 Interior: It is not permitted to mount fuel tanks within the passenger space.

5.6.2.3 Exterior: Aerofoils, spoilers and side pods are not permitted. No adjustable aerodynamic devices are permitted. Wheel arch extensions are not permitted. The plan view of the vehicle must remain unchanged from the original.

5.6.2.4. Silhouette:

The silhouette must remain unchanged with the exception of modifications allowed in 5.6.1.3

5.6.2.4 Ground Clearance: Must not be less than 4cm. No part of the underside or components thereof must come into contact with the ground should any tyre become fully deflated.

5.7. ENGINE

5.7.1 Permitted Modifications:

Class TA, Class TB 8v Engines & Class TC: Unlimited modifications are permitted. All engines MUST however have been derived from a Ford Production Petrol car. Modification to all components is permitted. Dry sump lubrication is permitted.

Class TB Zetec Engines: No alterations to the standard engine specifications are permitted. Any modification is therefore prohibited, unless specifically allowed by these regulations.

Cylinder Block It is permitted as a means of repair to replace cylinder bores with cast iron liners, in standard material and to standard dimensions. The centre line of the cylinder bores must remain within Ford production tolerances. No offsetting of the cylinder bores is allowed. Max rebore oversize +0.5mm using standard pattern pistons.

Cylinder Head It is permitted as a means of repair, to replace damaged valve guides and valve seats by replacing valve guides and valve seat inserts all to standard dimensions. No work which removes, adds, replaces, or transfers material is allowed on the cylinder head, except for simple cleaning which does not alter in any way the shape of the component, and minimal material from the head face to correct combustion chamber volume and/or reclaim head face flatness. None of the valve train components may be modified or replaced. The hydraulic or solid tappets cannot be modified in anyway; it is not permitted to lock up the hydraulics within hydraulic tappets; valves must remain standard, no re-profiling or polishing is permitted; standard seat angles must be maintained; standard valve stem seals must be retained. Inlet and exhaust ports to remain 'as cast'.

Camshaft: The camshafts must remain entirely unmodified; they must be fully manufactured and ground by the Ford Motor Company. Camshaft timing as standard manufacturer's settings.

Pistons: Pistons must be standard production Ford Zetec 1800cc or 2000cc pistons or standard pattern parts unmodified in any way except for balancing. All three piston rings must be fitted and piston rings must be standard Ford production rings or standard pattern parts. The combustion chamber face of the piston cannot be modified, other than a machining cut at 90 degrees to the stroke in order to obtain correct piston to top of block dimensions.

Connecting Rods: Ford Zetec 1800cc or 2000cc connecting rods must be standard; big end bolts are free. Machining is permitted to remove metal from the big end cap to achieve balance only; polishing is prohibited.

Crankshaft: A standard Ford Zetec 1800cc or 2000cc crankshaft must be used. Spot machining by radial drilling or milling to achieve balance is permitted. Polishing is prohibited. Crankshaft journals must remain within Ford positional tolerances if a repair regrind is carried out. The crank journals may be reground for reclaim as long as standard undersize bearings are used.

Flywheel & Clutch: Lightweight Tiger flywheel and ring gear may be used. Clutch assembly (cover and plate) to remain standard Tiger

fitment and must remain conventional single diaphragm spring and driven plate with four or more spring assemblies; organic friction material only is permitted.

Sump: Design and material free, but must be 'wet' sump

Class TC: Unlimited modifications are permitted. All engines MUST however have been derived from a Ford Duratec HE engine. Modification to all components is permitted. Dry sump lubrication is permitted.

Prohibited Modifications:

All classes: No forced induction is permitted.

Class TA: Maximum engine capacity is 2000cc, four valve per cylinder. No more than +1mm rebore is permitted. Ford Duratec HE engines are not permitted in this class.

Class TB Zetec Engines: Ford Focus ST170 derivative is not permitted in this class.

Class TB 8v Engines: Maximum engine capacity is 2100cc, two valve per cylinder.

Class TC: Maximum engine capacity is 2000cc, four valve per cylinder. No more than +1mm rebore is permitted. Ford Duratec HE engines are permitted in this class.

5.7.3 Location:

Must remain in the same basic position (e.g. front) as standard, although localised relocation is permitted.

5.7.4. Oil/Water Cooling:

Unrestricted: Oil coolers and additional water radiators are permitted providing they are located within the periphery of the bodywork.

5.7.5. Induction Systems:

Class TA, Class TB 8v Engines & Class TC : Unrestricted.

Class TB Zetec Engines: Inlet manifold is free but removal of material in order to 'match' to cylinder head is not permitted. Carburettors to be twin 45DCOE Weber with maximum choke size of 40mm. Carburettor jets are free.

5.7.6 Exhaust Systems: Unrestricted within the provisions of MSA Regulations J 5.16.1 -5.18.11.

5.7.7 Ignition Systems:

Class TA, Class TB 8v Engines & Class TC: Unrestricted

Class TB Zetec Engines: Only Weber Alpha ECU is permitted. Maximum rev limit is 7200rpm. ECU must be accessible at all times to enable checks by the Championship organisers or their appointed representatives. ECUs may be exchanged prior to any race at the organisers discretion.

5.7.8 Fuel delivery system : Unrestricted

5.8. SUSPENSIONS

5.8.1. Permitted Modifications: Unlimited modification permitted, including replacement by non-original specification parts except as detailed in 5.8.2.

5.8.2 Prohibited modifications: Unrestricted except as modified below.

All classes: Suspension is unrestricted, but standard pick-up points must be retained. Only wishbones produced by Tiger Racing Ltd may be used. Additions or modifications of springs, shock absorbers and suspension heights are permitted. The fitting of adjustable suspension components is permitted.



5.8.3. Wheel Base/ Track: The wheelbase must remain as per original car within a tolerance of 5cm.

5.9. TRANSMISSIONS

5.9.1. Permitted Modifications:

Unlimited modification permitted, including replacement by non-original specification parts, or total replacement by a non-original unit.

5.9.2. Prohibited Modifications: Location of gearbox and or final drive is unrestricted except as specified in 5.9.2.1 and 5.7.3. Sequential gearboxes are not permitted.

5.9.2.1. Class TA, Class TB 8v Engines & Class TC:

Differential and gearbox are unrestricted providing that they remain in the original location within 5cm. The differential casing must be externally identifiable as that fitted to the original homologated model. Transaxles are prohibited.

Prohibited Modifications: Any form of traction control device other than limited slip or locked differentials.

Class TB Zetec Engines: Differential and gearbox are unrestricted providing that they remain in the original location within 5cm. The differential casing must be externally identifiable as that fitted to the original homologated model. Transaxles are prohibited.

Prohibited Modifications: Any form of traction control device including limited slip or locked differentials is NOT permitted.

5.9.3 Transmission and Drive Ratios: No Restriction

5.10. ELECTRICS

5.10.1. Exterior Lighting: MSA J5.14.3 applies.

5.10.2. Rear Fog Light: A High Intensity rearward facing light must be fitted - see MSA K5.1 – K5.2.

5.10.3 Batteries: The battery may be of non-original specification and be relocated as desired within the provisions of MSA J5.14.1.

5.10.4 Generators: Electrical generators must be fitted and in working order as per MSA J5.14.3.

5.11. BRAKES

5.11.1. Permitted Modifications: Unlimited modification permitted, including replacement by non-original specification parts in accordance with MSA J5.6.1 – J5.6.2

5.11.2. Prohibited Modifications:

All classes: Must not be fitted with carbon material parts.

5.12. WHEELS/STEERING

5.12.1. Permitted options: Unlimited modification permitted including replacement by non-original specification parts. Competitors' attention is drawn to MSA J5.7.1 – J5.7.5 & Q19.6.

5.12.2 Prohibited Modifications: Unrestricted

5.13. TYRES

5.13.1. Specifications: Toyo tyres in compliance with MSA Regulations & MSA C(e) lists 1A or 1B must be used. It is recommended that Toyo R888 tyres in 'SG' compound are used in adverse/wet weather conditions. **No racing slicks are permitted. No cutting of tyres is permitted.**

Maximum tyre width (all classes) – 215 (e.g. 215/50R15)

5.14. WEIGHTS: There are no applicable weight restrictions.

5.15. FUEL TANK/FUEL

5.15.1. Types: Within the provisions of MSA J5.13.1 – 5.13.8 Fuel tanks positions are free.

5.15.2. Fuel: "Pump Fuel" - as defined in the current MSA Yearbook Technical Regulations. **The use of octane booster is prohibited.**

5.16. SILENCING

5.16.1. Specification: Vehicles must be silenced in accordance with MSA J5.18.1 – J5.18.11.

5.17. NUMBERS/DECALS

5.17.1. Positions: MSA J4.1 applies regarding competition numbers and backgrounds which must be displayed to the satisfaction of the Timekeepers.

