



HISTORIC SPORTS CAR CLUB

Silverstone Circuit. Silverstone. Nr Towcester. Northamptonshire. NN12 8TN

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HSCC Classic Formula 3 Championship Regulations 2018

Eligible Cars:

The HSCC CF3 Championship is open to genuine Formula 3 racing cars originally built and raced between 1/1/71 and 31/12/84. Cars may use 2-litre or 1600cc engines used in period, fitted with air restrictors. Only very minor alterations from original specifications are permitted. All cars use the same type and compound of Avon control tyres. There are also invitation classes open to Formula Ford 2000 cars built prior to 31/12/83 All cars must have current FIA or HSCC Vehicle Identification Forms.

Class Structure for HSCC Classic Formula 3 Championship

Class A: 2 litre F3 cars built and raced between 1st January 1974 and 31st December 1984.

Class B: 1600cc F3 cars built and raced between 1st January 1971 and 31st December 1973.

Class C: Invitation class for Formula Ford 2000 cars built prior to 31st December 1979

Class D: Invitation class for Formula Ford 2000 Cars built between 01.01.80 – 31.12.83

Classes C, & D cars are not eligible for Championship points

1. SPORTING REGULATIONS - GENERAL

1.1 Title and Jurisdiction:

The HSCC Classic Formula 3 Championship is organised and administered by The Historic Sports Car Club [HSCC] in accordance with the General Regulations of the Royal Automobile Club Motor Sports Association [MSA] (incorporating the provisions of the International Sporting Code of the FIA) and these Series Regulations.

MSA Championship Permit No. CH2018/R061 Race Status: National A/B

MSA Championship Grade: D

1.2 Officials:

1.2.1 Co-ordinator: Mr. G.D. White, HSCC, Silverstone Circuit, Silverstone, Nr Towcester, Northants, NN12 8TN.
Tel: 01327 858400

1.2.2 Eligibility Scrutineer: Mr. M. Lambkin-Smith

1.2.3 Championship Stewards: Mr Bob Birrell, Mr Mike Eagles, Mr Peter Hore

All c/o HSCC Silverstone Circuit, Silverstone, Nr. Towcester, Northamptonshire, NN12 8TN

1.3 Competitor Eligibility:

1.3.1 Entrants must:

- be fully paid-up valid membership card-holding members of the HSCC and the Classic Formula 3 Association (CF3)
- be registered for the Championship and
- in possession of a valid 2018 MSA Entrant's Licence.

1.3.2 Drivers and Entrant/Drivers must:

- be fully paid-up valid membership card-holding members of the HSCC and the Classic Formula Association (CF3) and
- be registered for the Championship and
- be in possession of a valid 2018 MSA Competition (Racing) National B Minimum in accordance with MSA Regulation Q9.1.1
- A professional driver, in possession of a valid Licence (featuring an E.U.flag) and medical, issued by the ASN of a member country of the European Union, or comparable country (H26.2.1 applies).

1.3.3 All necessary documentation, including HSCC vehicle identity document must be presented for checking at all rounds when signing-on.

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1.4 Registration:

- 1.4.1 All drivers must register as competitors for the Championship by returning the Registration Form with the Registration Fee to the Co-ordinator prior to the Final Closing date for the first round being entered.
- 1.4.2 The registration fee is £150 to be paid direct to the HSCC and includes membership of the HSCC.
- 1.4.3 Registrations will be accepted from 1st January 2018.
- 1.4.4 Registration numbers will be the permanent Competition numbers for the Championship.

1.5 Championship Events:

The Championship will be contested over 5 race meetings, if there are two races at a race meeting both will count for championship points.

Date	Circuit	Status	Org. Club
7 th – 8 th April	Donington	Clubmans	HSCC
16 th – 17 th June	Silverstone	National B	HSCC
30 th June – 1 st July	Brands Hatch	National B	HSCC
22 nd – 23 rd Sept	Brands Hatch	Clubmans	HSCC
20 th – 21 st Oct	Silverstone	Clubmans	HSCC

- 1.6.1 **Points** will be awarded, by class, number of race starters listed as classified finishers in the Final Results as follows:-

Position	6 or more in class	5 or less in class	3 or less in class
1 st	15	10	5
2 nd	12	8	3
3 rd	10	6	
4 th	9	4	
5 th	8	3	
6 th	7		
7 th	6		
8 th	5		
9 th	4		
10 th	3		

All other finishers will receive 2 points

One point will be awarded for the fastest lap in each class at each round and one point to each non-finisher.

- 1.6.2 The totals from all qualifying rounds less 2 will determine final championship points and positions.
- 1.6.3 Ties shall be resolved using the formula in Section W1.3.4 of the current MSA Yearbook.
- 1.6.4 Where the race distance has been reduced (2.6) it shall still count as a full points scoring round.
- 1.6.5 Competitors not registered for the Championship may be permitted on an individual round basis and will:
 - (a) be deemed "Guest Competitors"
 - (b) not score points and for the purpose of points scoring will be ignored
 - (c) qualify for Event awards
 - (d) comply with the eligibility criteria as prescribed in Article 1.3. above with the exception of 1.3.1(b) and 1.3.2 (b), as appropriate

1.7 Awards:

- 1.7.1 All awards are to be provided by the race organisers.
- 1.7.2 Per event: A trophy to the overall winner and trophies to first and second in each class subject to five starters in class. Trophies to first in each class will be awarded subject to three starters in each class. The overall winner's trophy also counts as a class award for these purposes.
- 1.7.3 Championship: Championship winner, 2nd overall - 6th overall will receive a trophy and to each 1st 2nd and 3rd in class a trophy, subject to 4, 6 and over 6 in class. The winner of Class B will receive the Tony Brise Trophy. To qualify for a position in the final championship results a competitor must have competed in at least 4 rounds. Other awards may be given at the Championship Organisers' discretion
- 1.7.4 Presentations: Winners' trophies are to be provided for presentation at the end of each race or at the end of the meeting presentation ceremony. Class trophies will be available from the paddock office one hour after the official results have been published.

1.7.5 Entertainment Tax Liability

Prize Money and Bonuses not applicable.

In accordance with current government legislation, the HSCC is legally obliged to withhold tax at the basic rate on all payments to non-UK resident sportsmen/women and account to HMRC using form FEU1, the quarterly return of payments made to non-resident entertainers and sportsmen/women.

That is those persons who do not have a normal permanent residence in the UK. The UK does not include the Isle of Man, Channel Isles or Eire. This means that, as the organiser, the HSCC is required to deduct tax at the current rate applicable from any such payments they may make to non-UK residents.

Under certain circumstances, it may be possible for competitors to enter into an agreement with the Inland Revenue to limit tax withheld. Any application for such an arrangement must be made in writing and not later than 30 days before the payment is due.

For further information contact- HMRC Personal Tax International, Foreign Entertainers Unit, St John's House, Merton Road, Liverpool. L75 1BB. Tel: 0151 472 6488 Fax: 0151 472 6483

- 1.7.6 Title to all trophies: In the event of any Provisional Results or Championship Tables being revised after any provisional presentations and such revisions affect the distribution of any awards, the Competitors concerned must return such awards to the HSCC in good condition within 7 days.

2. CHAMPIONSHIP EVENT MEETINGS & RACE PROCEDURES

All competitors are reminded that they are racing Historic Cars, which by their nature are expensive and difficult to repair, they are part of our sporting heritage. Often parts have to be manufactured and are not available 'off the shelf'. These cars require respect as do your fellow competitors. You will be expected to race within those parameters. If you are involved in an incident you will be required to report your actions to the Clerk of the Course if called.

2.1 Entries:

- 2.1.1 Competitors are responsible for sending in correct and complete entries with the correct entry fee prior to the closing date for entries before each event.
- 2.1.2 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.
- 2.1.3 Any withdrawal of Entry or Driver/Car changes made after acceptance of any entry must be notified to the Meeting Organisers in writing (D25.1.12. applies).
- 2.1.4 The Entry Fee for each event shall be specified in the SRs and on the entry form.
- 2.1.5 Reserves will be listed in the final List of Entries published with Final Instructions or in a Bulletin.

2.2 Briefings:

Organisers should notify Competitors of the times and locations for all briefings in the Final Instructions for the meetings. Competitors must attend all briefings.

2.3 Qualification Practice:

- 2.3.1 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.
- 2.3.2 Each driver shall complete a minimum of 3 laps in the car to be raced, and in the correct session, in order to qualify (MSA Regulation Q4.5).

2.4 Races:

Should any race be disrupted the Clerk of the Course shall not be obliged to resume or rerun the race Q5.4 (1.6.4. above applies)

2.5 Starts:

- 2.5.1 All cars will be released to form up on the grid prior to the start in formation as specified on the grid sheet.
- 2.5.2 The start will be via a Standing start
- The minimum Countdown procedures/audible warning sequence shall be:-
- I. 1 minute to start of Green Flag/Pace Lap – Start Engines/Clear Grid
 - II. 30 Seconds – Visible and audible warning for start of Green Flag/Pace Lap.
 - III. A five second board will be used to indicate that the grid is complete.
 - IV. The red lights will be switched on five seconds after the board is withdrawn.
- 2.5.3 Any car removed from the grid after the one minute stage or driven into pits on Green Flag Lap shall be held in the pitlane and may start the race after the last car has passed the startline or pitlane exit, whichever is the later.
- 2.5.4 Any drivers unable to start the Green Flag/Pace Lap or start are required to indicate their situation as per MSA Regulation Q 12.13.2. In addition, any driver unable to maintain grid positions on Green Flag Lap, 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.
- 2.5.5 In the event of any starting lights failure the Starter will revert to use of the National Flag.

2.6 SESSION RED FLAG

Should the need arise to stop any race or practice, RED LIGHTS will be switched on at the Startline and RED FLAGS will be displayed at the Startline and at all Marshals' Signalling Points around the Circuit. This is the signal for all drivers to cease circulating at racing speeds, to slow to a safe and reasonable pace and to return to the pit lane, during practice, and to the starting grid area, during a race, unless otherwise directed by officials

Cars may not enter the Pits unless directed to do so. Work on cars already in the pits must cease when a race is stopped.

2.7 Pits, Paddock & Pitlane Safety:

- 2.7.1 **Pits & Paddock:** Competitors must ensure that the MSA, Circuit Management and Organising Club Safety regulations are complied with at all times.
- 2.7.2 **Pit Lane:** The outer lane or lanes are to be kept unobstructed to allow safe passage of cars, the onus shall be on all Drivers to take all due care and respect the pit lane speed limits.
- 2.7.3 **Refuelling:** May only be carried out in accordance with the MSA Q13 Regulations, Circuit Management Regulations and the Supplementary Regulations or Final Instructions issued for each Circuit/Meeting.
- 2.7.4 **Speed Limit:** Pit Lane Speed Limit will be 60 Km/h (37.2Mph)

2.8 Race Finishes:

Cars may either cross the Finishing Line or take the chequered flag in the pit lane in the interests of safety, or where a back marker has been overtaken on the winner's slowing down lap and subsequently flagged off by marshals. At circuits where such use of the pit lane represents an advantage, in terms of circuit length or speed, an appropriate time penalty will be added to the driver's race time.

After taking the Chequered Flag drivers are required to:

- I. progressively and safely slow down,
- II. remain behind any competitors ahead of them,
- III. return to the Pit Lane Entrance/Paddock Entrance as instructed,
- IV. comply with any directions given by Marshals or Officials
- V. keep helmets on and harnesses done up while on the circuits or in the pitlane.

2.9 Results

All Practice Timesheets, Grids, 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 (MSA regulation D26.3).

2.10 Timing Modules:

All cars must be fitted with a working HSCC approved transponder. Failure may result in competitors not being accredited with a qualifying time or excluded from the result as per MSA Q12.2.1

- 2.11 **Qualification Races:** If any event is oversubscribed the Organising Club may at their discretion run Qualification Races.

- 2.12 **Operation of Safety Car:** The safety car will be brought into operation and run in accordance with Section Q, Appendix 2 of the MSA General Regulations.

2.13 Onboard Cameras

The use of onboard cameras is permitted, but they must be fitted and declared at scrutineering for examination. Upon request any onboard footage must be made available to Clerk of the Course and or Stewards in the event of an incident, during the event. Cameras may not be used as a data logging device.

3. SPECIFIC CHAMPIONSHIP REGULATIONS

Nil

4. SPECIFIC CHAMPIONSHIP PENALTIES:

In accordance with Section C of the current MSA Yearbook.

4.1 Infringements of Technical Regulations:

- 4.1.1 Arising from post practice Scrutineering or Judicial Action: Minimum penalty: The provisions of MSA regulations: C3.3.
- 4.1.2 Arising from post race Scrutineering or judicial action: Minimum penalty: The provisions of MSA regulations: C3.5.1(a) & (b).
For infringements deemed to be of a more serious nature the Clerk of the Course will invoke the provisions of Regulation C3.5.1(c).

4.2 Additional specific championship penalties as set out in the Supplementary Regulations:

- 4.2.1 The Clerk of the Course(s) have the right to impose a Stop Go or Drive Through penalty, in accordance with MSA Regulation Q12.6

- 4.2.2 The Clerk of the Course or the Stewards of the Meeting, where an unfair advantage has been obtained (whether inadvertently or not), may impose a Time Penalty in accordance with MSA Regulation C2.3 (Judicial).
- 4.3 Any competitor who is penalised under the MSA Sporting Regulations at any stage of an event may, at the Clerk of the Course's Instruction, incur the following Championship penalty: -
The event will be counted as one of the events contributing to their Championship score and they will be excluded from the event. Additionally, the competitor will forfeit a total of points equal to those obtained for a class win even if this results in a minus total of points.

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. Competitors are advised to read sections: Section J of the 2018 MSA Yearbook. N.B. Specific regulations for 2000cc engine Formula 3 and 1600cc Formula 3 cars are headed 2000cc and 1600cc respectively. If no such heading is present, the regulation covers ALL competing cars.

- 5.1.1 Competitors must always make prior application to the Championship Registrar in writing with reference to the unavailability of original pattern parts, panels etc. Each such case and application will be considered by the Championship Organisers and the Eligibility Scrutineer and ruled thereon. Failure to comply may result in rejection of the car.

5.2 GENERAL DESCRIPTION:

The 2018 HSCC Classic F3 Series is for competitors participating in Single Seater Racing Cars with 1600cc F3 engines built and raced between 1.1.71 and 31.12.73 and with 2000cc F3 engines built and raced between 1.1.74 and 31.12.84. There are also invitation classes open to Formula Ford 2000 cars built prior to 31st December 1983 which must comply with historic FF2000 regulations as per 5.7.7 (excluding cars built in 1983 for sale as 1984 models and all 1983 Reynard models) All cars prior to being accepted and registered by their Association or Register must comply with these Regulations and the provisions of the Regulations. Anything outside this must be approved by the eligibility scrutineer.

5.3 SAFETY REQUIREMENTS:

The following Articles of MSA Section K Safety Criteria Regulations will apply:-

K1; K1.3.2; K2. & K2.1.4 Six Point; K3.2; Section K Appendix 1, Table 3, K4; K5; K6 -13

5.4 GENERAL TECHNICAL REQUIREMENTS AND EXCEPTIONS:

All vehicles must comply with their HSCC or FIA Identity Documents; subject to their Identity Documents indicating otherwise, vehicles must comply with Technical Regulations for competitors (Section Q Technical).

5.5 CHASSIS:

- 5.5.1 **1600cc:** Any chassis manufactured before 31.12.73 and of a type raced in 1600cc Formula 3 between 1.1.71 and 31.12.73.

2000cc: Any chassis manufactured before 31.12.84 and of a type raced in 2000cc Formula 3. 1985 Model cars, raced in 1984 as prototypes are prohibited.

- 5.5.2 No modifications, other than those in 5.1.1, are permitted without the specific approval of the Eligibility Scrutineer.

- 5.5.3 **FF2000:** The chassis must be of tubular steel construction with no stress bearing panels except bulkhead and undertray, curvature of the undertray must not exceed 2.54cm. Monocoque chassis construction is prohibited. Stress bearing panels are defined as, sheet metal affixed to the frame by welding, bonding or rivets or bolts or screws which have centres closed then 15.25cm. Bodywork must not be used as stress bearing panels.

The use of stabilised materials, composite materials using carbon and/or Kevlar reinforcement is prohibited. The chassis specification must remain fundamentally unaltered from original manufacture. Wheelbase, track and pick-up points must remain to manufacturer's specification. Ground Clearance as per (J5.20.11.) at all times, in practice & race including in any post practice or post race scrutineering. No engine oil or water tubes are permitted within the cockpit.

5.6 BODYWORK:

- 5.6.1 Bodywork must be as that originally fitted to the car. The use of composite materials using carbon and/or Kevlar reinforcement is prohibited.

1600cc: It is permitted to update the bodywork of a particular chassis to that used by the same manufacturer up to and including the last 1600cc Formula 3 race in 1973 (eg. a March 713 may have March 733 bodywork). However it should be understood that bodywork not originally fitted to the chassis may invalidate HSCC and/or FIA Vehicle Identity Documents.

The rear wing and the method of mounting must be as original.

The use of composite materials using carbon and/or Kevlar reinforcement is prohibited.

Enclosure of the sides of the engine or the use of any undertray under the engine bay is prohibited even if these items were a "period" modification.

No modifications are permitted without the specific approval of the Eligibility Scrutineer and Classic F3 Association.

All 2000cc F3 cars built between 01.01.81 and 31.12.84 are prohibited from having any ground effects.

The bottom of the car should be flat between the rear edge of each complete front wheel and the front edge of each complete rear wheel. The flat bottom must be a solid hard and rigid uniform surface, clearly visible under the car and fixed rigidly (no degree of movement is permitted) to the car. The maximum thickness of the material used shall be no more than 5mms, but the minimum ground clearance will be 40mms. Side pods must be as original and may not be modified in any way, so as to create an aerodynamic advantage. Any additions to the bodywork of any car that may be considered to create an aerodynamic advantage and cannot be proved to have been used in period, are not permitted. All Ralt RT3 cars are considered to be of 81 -84 manufacture even if their production date was during 1980

FF2000 Modifications Permitted

It is permitted to make any modification for which the primary purpose is safety or driver comfort.

Cars may be updated to the specification of the latest model built by the manufacturer which appears in the list of eligible vehicles.

5.6.2 **FF2000 Modifications Prohibited.**

The use of composite materials using carbon and/or Kevlar reinforcement is prohibited.

It is not permitted to construct any suspension member in the form of an aerofoil or to incorporate a spoiler in the construction of any suspension member.

FF2000 Bodywork must be of a type with a proven competition history for that type of car.

Wings must be of a proven period design and must respect period dimensions for the chassis type in question.

There is a maximum rear wing height of 90cm measured from the ground.

5.7 **ENGINE:**

5.7.1 **1600cc:** The engine block and cylinder head castings with machining completed shall be those of an engine equipping a road car model of which the series production was at least 5000 units annually. The original engine block and cylinder head may be modified freely by removal of material. The addition of material is specifically excluded. However, it is permitted to sleeve an engine that was not originally fitted with sleeves. The type of crankshaft bearings shall not be modified (e.g. the replacement of a plain bearing by a roller bearing is forbidden).

2000cc: The only engines permitted are units having a maximum capacity of 2000cc and of a type used in period and in a chassis permitted to be used. Development engines or accessories (i.e. programmable electronic ignition) developed prior to 31.12.84 for use after 31.12.84 are not permitted. As an example, this will be a VW engine with the extra-long intake manifold developed by Speiss for electronic fuel injection, even if the engine has been converted to mechanical injection.

FF2000 The only permitted engine is the Ford NE series 2 Litre SOHC with 2 Venturi carburettors with nominal bore 90.84mm + 0.5mm rebore allowance and stroke 76.95mm Production tolerances are permitted providing the total swept volume does not exceed 2025cc. Engines will be mounted upright and aligned fore and aft in the chassis.

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 castings may be allowed with the written approval of the eligibility scrutineer responsible for the Formula.

Balancing of reciprocating and rotating parts is permitted only by removal of metal from locations so provided by the manufacturer.

Pump, fan and generator drive pulleys and their retention bolts, washers and belts are free. Mechanical tachometer drives may be fitted Generators are optional.

The use of non-standard replacement fasteners, nuts bolts, screws, studs and washers which are not connected with or which do not support any moving parts of the engine or its compulsorily retained accessories is permitted. The use of thread locking compounds is permitted.

Gaskets are free except for cylinder head and carburettor to inlet manifold gaskets which must be dimensionally identical to original Ford gaskets - see note under compression ratio.

Any process of cleaning may be used on any component providing the surface finish, which must remain standard, is not affected.

Forced induction prohibited.

The air cleaner may be removed or replaced and a trumpet fitted.

Carburettor Type: Weber 32/36 DGV and DGAV. Number on engine | Number of Main Venturi 2

Maximum dia. of carb outlet to inlet manifold 32.0/36.0mm. Maximum dia. of Main Venturi 26.0/27.0mm

It is permitted to change jets, open both throttles together, remove cold start devices and diffuser bar, fit internal and / or external anti-surgepipes, remove seals on emission control carburettors.

No other modifications are permitted, chokes must remain standard and no polishing or reprofiling is permitted.

Any means of reducing intake air temperature is prohibited. Any form of water injection is prohibited.

Flexible mounts for the carburettor may be incorporated providing they do not exceed a maximum of 25.4mm from flange to flange The bore of the casting must remain untouched and in its original condition.

The carburettor seat face may be machined to horizontal in the fore and aft plane. The water passage in the inlet manifold may be blanked off or plugged.

The manifold may be machined externally sufficiently to clear the throttle mechanism in the case of both throttles being opened together.

CYLINDER BLOCKS

It is permitted, as means of repair, to replace damaged cylinder bores with cast iron cylinder liners, all to standard dimensions.

Localised machining of the cylinder block is permitted to allow fitting of the dry sump system.

The crankcase breather may be altered or removed, but all breathers must discharge into a catch tank.

Cylinder blocks may be machined to maintain deck height.

CYLINDER HEADS

Non-standard camshaft covers are permitted providing they in no way improve the performance of the engine. Water passages are not permitted in cam covers. Standard valve spring retainers must be used, only single valve springs are permitted. Shims are permitted otherwise valve springs are free.

The only permitted camshafts are the standard Ford production camshafts for 2000SOHC NE engines. The camshaft and rockers must remain entirely unmodified. They must be fully manufactured and ground by the Ford Motor Co. It is prohibited to grind camshafts from blanks or regrind or reprofile. Tuftriding or Parkerising is permitted.

The key/keyway in the camshaft pulley may be offset.

Cylinder head face may be skimmed.

Maximum valve lift at determined points by camshaft rotation will be established by using a low rate substitute valve spring (load characteristics 12lb at 1.417in, 30lb at 1.000in), with zero tappet clearance.

Valves must remain standard, no reprofiling or polishing is permitted. The original 45deg. seat angle must be retained.

Maximum face diameter inlet 42.2mm Maximum face diameter exhaust 36.2mm.

Overall length inlet 111.15 - = 0.5mm. Overall length exhaust 110.55 - = 0.5mm.

Maximum valve stem diameter 8.4mm.

It is permissible to reshape inlet and exhaust ports by removal of metal within limits. Addition of material in any form is prohibited. Maximum port dimension at manifold head face inlet diameter 39.5mm exhaust 35.5mm x 27mm Sizes may only be exceeded if the castings are oversize, in such cases the castings must be seen to be original and untouched. An external oil drain pipe from the cylinder head is permitted. The fitting of a union by drilling and tapping is permitted. It is permitted, as means of repair, to replace damaged valve guides and valve seats by replacement cast iron valve guides and cast iron valve seat inserts all to standard dimensions. Inlet and exhaust port diameter may be exceeded if the original casting is visible and untouched at the gasket face.

COMPRESSION RATIO

The maximum compression ratio will be controlled as follows:

Minimum combustion volume in cylinder head 50cc

Standard Ford cylinder head gaskets part nos 70HM6051 BiA, 70HM6051 B3B, 70HM6051 GiA: minimum compressed thickness 0.9mm minimum diameter of cylinder aperture 92.0mm or dimensionally identical aftermarket gasket.

Pistons must not protrude above cylinder block surface at TDC. Cylinder block face may only be machined flat.

PISTONS

Pistons must be standard Ford or absolutely identical aftermarket production pistons, unmodified in any way except for balancing and as detailed.

All three piston rings must be fitted, piston rings must be standard production or similar approved pattern replacements, i.e. the compression rings must be one piece, single homogeneous material type with conventional plain gaps, chromium plating of the top ring is optional, the oil control rings must be either single piece twin land type or apex three piece (two rails and an expander) Molybdenum faced top compression rings are permitted. To achieve balance, material may be removed from the internal surfaces at any location below the lowest point of the gudgeon pin. All external surface, dimensions and profiles must remain standard with the exception of the top surface of the piston crown which may be subjected to simple machining to achieve balance and the objectives of the section entitled "Compression ratio" Minimum weight of pistons, plus rings, connection rod, connection rod bolts and nuts, less big end bearings 1255grms.

CONNECTING RODS

Connecting rods must be standard Ford part. Machining is permitted to remove metal from the balancing bosses to achieve balance only. Tuftriding, Parkerising, shot-peening, shot-blasting and polishing are permitted.

It is permitted to radius the area around the big-end retaining bolt heads and nuts. Big end bolts part no. 905500 are permitted as are similar aftermarket big end bolts.

CRANKSHAFT

A standard crankshaft must be used. Spot machining to achieve balance is permitted. Tuftriding Parkerising, shot-peening, shot blasting and polishing are permitted. Crankshaft minimum weight 28lbs. It is not permitted to alter the number of bearings or fit bearings of less than standard production width. Standard oversize and undersize bearings are permitted

FLYWHEEL AND CLUTCH

The flywheel must be a standard component. To achieve minimum weight and balance materials may be removed from the originally machined surfaces, rim/flange etc. For rectification the clutch mating face may be resurfaced. Cast surfaces must remain in original condition. Friction material is free. The clutch must be a standard Ford road car unit or aftermarket replacement of identical diameter and type. Flywheel bolts are free and locating dowels are permitted. It is permitted to secure the starter ring to the flywheel. Flywheel and clutch assembly minimum permitted weight 12.5kg (including all flywheel and crankshaft securing bolts).

ENGINE SEALING

All engines must have provision for scrutineer's wire seals. 1/16in holes pre-drilled in readily accessible locations on installed engines must be available.

- a) Sump - two holes through the cylinder block/sump joint flange, one either side of the engine.
- b) Cam Cover - at least two retaining screw heads must be cross drilled
- c) Cam Timing Pulley - retaining bolt 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 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.

5.7.3 Engine Location as per original.

5.7.4 Oil/Water/Cooling system is free, but the water cooling radiator/s must remain in its original location.

5.7.5 Induction Systems

1600cc: The induction system is free but it shall mandatorily be fitted with a throttling flange of 3mm in length and with a parallel orifice of 21.5mm diameter. Through this restrictor all the air feeding the engine must pass. The restrictor shall be made of metal or metallic alloy. The airbox must be of the original pattern as used in the period and be constructed of material as used in period. A jig will be used to fit over the existing airbox. It is prescribed that the entire inlet system, including manifolds, injectors or carburettors, airbox and restrictor must fit into a box of 1m long by 110mm wide by 150mm high. No supercharging device shall be allowed even if a series production one was fitted to the original engine. The total induction system must be capable of holding a vacuum of 3in Hg (mercury) as tested on the Classic Formula 3 Association pump.

2000cc: The induction system must be of original mechanical injection type. All air feeding the engine must pass through a throttling flange of 3mm minimum length, and having a parallel hole of 24mm diameter maximum. The airbox must be of the original pattern as used in the period and be constructed of material as used in period. A jig will be used to fit over the existing airbox. It is prescribed that the entire inlet system, including manifolds, injectors or carburettors, airbox and restrictor must fit into a box of 1m long by 110mm wide by 150mm high. The total airbox system must be capable of sustaining a vacuum of 5" Hg (mercury) when using a pump drawing a maximum of .9cfm of free air.

All cars: Action to be taken in the event of any car failing to achieve between 50% and 100% of the relevant vacuum readings will be at the sole discretion of the eligibility scrutineer/registrar

5.7.6 EXHAUSTS The exhaust system and manifold are free, within Vehicle Regulations.

5.7.7 Ignition Systems

1600cc: Ignition systems are free except electronic engine management systems are excluded.

2000cc: The ignition system must be as originally fitted, management systems are not allowed.

DISTRIBUTORS

Distributors are free providing they retain the original drive and location. The distributor is defined as the component which triggers the LT current and distributes the HT ignition current. The ignition timing may only be varied by vacuum and/or mechanical means. It is prohibited to use any other method or component to trigger, distribute or time the ignition. It is permitted to mount a simple indicating pointer to the engine to facilitate the timing of the distributor with respect to the crankshaft/flywheel

5.7.8 FUEL PUMPS

Only the standard mechanical fuel pump for the engine is permitted. Fuel pipes are free. Fuel cooling radiators are permitted, within safety regulations, but must be mounted within the main chassis frame.

5.8 SUSPENSION:

5.8.1 Suspension as original. Remanufactured or replacement suspension components shall be dimensionally as original, but material thickness may be changed in the interests of safety. The suspension shall utilise only the original pick-up points unless these were modified and used on the chassis and raced in a Formula 3 1600cc race prior to 31.12.73 and 2000cc prior to 31/12/80.

FF2000: All parts must be of steel or ferrous material, with the exception of springs, hubs, hub adapters, hub carriers, bearings and bushes, spring caps, abutment nuts, anti-roll bar links, shock absorber caps and nuts. Remote reservoir and / or light alloy dampers are prohibited.

5.8.2 No modification permitted without consultation and ratification by the Classic Formula 3 Association and Eligibility Scrutineer.

The use of any additional anti squat/anti droop devices is strictly prohibited.

Dampers shall be of the same type in terms of appearance as originally fitted to the car and shall be mounted to the original mounting points. Remote reservoirs or any form of external control system are excluded. The use of more than one spring per corner is prohibited.

5.8.3 Minimum wheelbase: 2000mm

Minimum track: 1200mm

5.9 TRANSMISSION:

5.9.1 1600cc: The gearbox and differential casings shall be those of a car manufactured in at least 5,000 units in 12 consecutive months of a model recognised by the FIA, but not necessarily the model from which the engine has been taken.

2000cc: Gearbox and final drive must be of the type originally fitted to the car.

FF2000: The gearbox must not contain more than four forward gears and include an operable reverse gear, capable of being engaged by the driver whilst normally seated. The ratios are free

5.9.2 Torque biasing, limited slip and locked differentials are prohibited. Non-ferrous differential components prohibited.

5.10 ELECTRICS:

5.10.2. A rear fog light shall be fitted as MSA Regulations Section (K5.)

5.10.3 Battery type and location is free.

5.10.4 The engine must be fitted with an operable electric starter motor (compressed air starters are prohibited).

The electrical system shall be fitted with a safety cut out switch as per K8 MSA Technical Regulations.

5.11 BRAKES:

- 5.11.1 The braking system must be as that originally fitted to the car.
- 5.11.2 No modifications are permitted without the specific approval of the Eligibility Scrutineer.
FF2000: Light alloy brake calipers prohibited, otherwise free.
FSV: Brake Lining and or brake pad material is free the following parts must be standard VW Brake Disc and Brake Caliper

5.12 WHEELS/STEERING:

- 5.12.1. Wheels should comply with current FIA Appendix J for Formula 3.
Centre lock wheel retaining nuts must be fitted with safety ('R') clips and painted in a bright colour. Aircraft type self-locking nuts are not acceptable as an alternative.
- 5.12.2 Aerodynamic plates are expressly forbidden.
FF2000: Rear wheel steering prohibited, otherwise free.
- 5.12.3 Wheels may be constructed from aluminium alloys or magnesium alloys.
Note: Competitors are reminded that alloy/mag wheels can have a tendency to crack, especially the older ones. For safety reasons, please keep a check on your wheels.
- 5.12.4 Rim dimensions:
Front 13" dia x 8.5" wide maximum: Rear 13" dia x 10" wide maximum.
FF2000 13in diameter wheels with maximum front rim width 6in and rear 8in are the only wheels permitted
Material is free providing it is metal.

5.13 TYRES:

- 5.13.1 Only tyres as specified in 5.13.2 and 5.13.3 are permitted.

5.13.2 2000 F3

AVON

Dry Front 7.5/210 x 13 7342 A37

Rear 9.2/220 x 13 7343 A37

Wet Front 7.5/210 x 13 7277 A22

Rear 9.2/220 x 13 7277 A22

1600 F3

AVON

Dry Front 7.5/210 x 13 7342 A37

Rear 9.2/220 x 13 7343 A37

Wet Front 7.5/210 x 13 7277 A22

Rear 9.2/220 x 13 7277 A22

FF2000

The only permitted tyres are:

AVON

Dry Front: 6.5 /21.0 X 13 Spec no. 8814

Wet Front 160/530 R13 Spec no. 13593M

Wet Front 6.5 /21.0 X 13 Spec no. 8829 *

AVON

Dry Rear 8.2 /22.0 X 13 Spec no. 8815

Wet Rear 180/565 R13 Spec no. 13594M

Wet Rear 8.2 /22.0 X 13 Spec no. 8831 *

* Note – the tyres marked thus are permissible in 2018 ONLY. These tyres may only be used as a complete set and not mixed with the 13593M and 13594M spec tyres.

- 5.13.3 The use of tyre heating/heat retention devices, tyre treatments and compounds is prohibited.

5.14 WEIGHTS: (excluding driver)

- 5.14.1 Weight is the weight of the vehicle as it finishes the race, but excludes the driver.
- 5.14.2 1600cc: The weight of the car shall not be less than 420kg
2000cc: The weight of the car must not be less than 440 kg, for cars built prior to 31.12.79. For cars raced between 01.01.80 and 31.12.84 shall not be less than 455kgs.
FF2000: The weight of the car shall not be less than 440kg for cars built up to 31.12.83

5.15 FUEL TANK / FUEL:

- 5.15.1 The fuel tank should be located in the same position as that originally fitted to the car. On safety grounds, it

may be relocated subject to approval by the Eligibility Scrutineer. **Competitors should be aware that bag tanks are lifed for 5 years from date of manufacture for FIA events only.**

- 5.15.2 Fuel tank capacity is free.
- 5.15.3 Fuel must be in accordance with MSA regulations - see Section B Nomenclature & Definitions. parts (a) or (b)
- 5.15.4 FF2000: Tanks outside the chassis frame must comply with FIA Spec/FT3 Inboard tanks, covered externally with fireproof coating, are acceptable for events of less than 70km.
A metal tank coated with GRP does not comply
Maximum capacity 41 litres unless carried in FIA Spec/FT3 tank.
- 5.16 SILENCING:** All vehicles must comply with MSA Regulation J5.17 and are also subject to individual circuit requirements if specified in Supplementary Regulations. i.e.108db
- 5.16.1 FF2000: A mandatory silencer, Ford part no: 9095317 must be fitted and must comply with MSA Regulation J.5.17.
- 5.17 NUMBERS AND CHAMPIONSHIP DECALS:**
- 5.17.1 Positions
As per MSA Yearbook Section J3 and Drawing 4. Individual sponsor's decals are limited to two per vehicle. All competing cars must display at least two HSCC badges one on each side of the car and a minimum of one CF3 badge. If at any time the Championship has a sponsor – sponsors' decals when provided must be displayed (one each side of car) failure to comply may result in championship points being deducted for any round where no decals were applied. Individual advertising as per MSA Regulations H28.1.1 – H28.1.6 Cars running in Classes B and C shall display that letter after their allocated racing number for identification.
- 5.18 MISCELLANEOUS:**
In case of official protest all engines shall have provision for sealing as listed:
Sump: Two holes through block/sump joint flange on both sides of the engine.
Cambox: Two retaining bolts cross drilled.
At least the first three finishers in each class in the race shall go directly to the scrutineering bay following any slowing down lap.
The responsibility for ensuring attendance at post race scrutineering is entirely that of the competitor. Any competitor failing to make their vehicle available for inspection to the scrutineers when directed, will be reported to the Clerk of the Course MSA Regulation C3.2
Any competitor failing to comply with either the letter or the spirit of the formula will be reported to the Clerk of the Course by the eligibility scrutineer/registrar for any further action.

6. APPENDICES

The following Commercial Undertakings are not subject to the Judicial procedures of either the Series Stewards and/or the MSA/MSA

6.1 Race Organising Clubs and Contacts

HISTORIC SPORTS CAR CLUB – Silverstone Circuit, Silverstone, Towcester, Northants, NN12 8TN
(T) 01327 858400 (F) 01327 858500 email: office@hsc.org.uk
website: www.hsc.org.uk

CHAMPIONSHIP COMMITTEE – Please direct all communication through the HSCC Office.

Chairman: Hugh Price
Eligibility Registrar: Richard Ranson