



# HISTORIC SPORTS CAR CLUB

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## HSCC Classic Formula 3 Championship Regulations 2010

### Eligible Cars:

The HSCC CF3 Championship is open to genuine Formula 3 racing cars originally built and raced between 1/1/71 and 31/12/80. 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. Ralt RT3s are specifically not eligible. There are also invitation classes open to Formula Ford 2000 cars built prior to 31/12/79 and Formula Super Vee cars with water cooled engines built prior to 31<sup>st</sup> December 1980 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 1<sup>st</sup> January 1974 and 31<sup>st</sup> December 1980.

**Class B:** 1600cc F3 cars built and raced between 1<sup>st</sup> January 1971 and 31<sup>st</sup> December 1973.

**Class C:** Invitation class for Formula Ford 2000 cars built prior to 31<sup>st</sup> December 1979

**Class D:** Invitation class for Formula Super Vee cars with water cooled engines built prior to 31<sup>st</sup> December 1980

**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. **CHR2010/078**

Race Status: National 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 268 Lea Rd, Gainsborough, Lincs DN21 1AP Tel. 01427 611734

1.2.3 Series Stewards: Mr Anthony Goddard, Mr Bob Birrell, Mr Mike Eagles

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 in possession of a valid 2010 MSA Entrants Licence.

1.3.2 All championship competitors and 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 be in possession of a valid 2010 MSA Competition (Racing) National B or above STATUS Licence.

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

#### 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. For the Classic Formula 3 Association the membership fee is £100 or for Class C FF2000 Competitors £20 payable directly to the CF3 association

1.4.3 Registrations will be accepted from 1st January 2010.

1.4.4 Registration numbers will be the permanent Competition numbers for the Championship.

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1.5 Championship Rounds: The Championship will be contested over 8 race meetings if there are two races at a race meeting both will count for championship points.

<b>Date</b>	<b>Circuit</b>	<b>Status</b>	<b>Org. Club</b>
28/3/10	Silverstone	Clubmans	HSCC
15/5/10 -16/5/10	Silverstone	Clubmans	HSCC
5/6/10 - 6//6/10	Snetterton	Clubmans	HSCC
20/6/10	Mallory Park	Clubmans	HSCC
3/7/10 – 4/7/10	Brands Hatch	Clubmans	HSCC
29//8/10-30/8/10	Oulton Park	Clubmans	HSCC
11/9/10	Brands Hatch	Clubmans	HSCC
9/10/10	Silverstone	Clubmans	HSCC

1.6.1 Points will be awarded, by class, to competitors listed as classified finishers in the Final Results as follows:-

<b>Position</b>	<b>6or more in class</b>	<b>5 or less in class</b>	<b>3 or less in class</b>
1st	15	10	5
2nd	12	8	3
3rd	10	6	
4th	9	4	
5th	8	3	
6th	7		
7th	6		
8th	5		
9th	4		
10th	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 one** will determine final championship points and positions.

### 1.7 Awards:

1.7.1 All awards are to be provided by the race organisers.

1.7.2 Per race: A trophy to the overall winner, and to first and second in class subject to three and five starters in each class the overall winners trophy also counts as a class award for these purposes.

1.7.3 Championship: Championship winner 2<sup>nd</sup> overall - 6<sup>th</sup> 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. 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 Bonuses: Not applicable

1.7.5 Presentations: Winners trophies to each class winner will be presented at the end of each race. Class trophies will be available from the paddock office 1 hour after the official results have been published.

1.7.6. Entertainment Tax Liability: 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.

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 the 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:- The Inland Revenue, Foreign Entertainers Unit, Centre for Non Residents, St John's House, Merton Road, Merseyside. L69 9BB.

1.7.7 Title to all Trophies: In the event of any Provisional Results or Series 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. SPORTING REGULATIONS - JUDICIAL 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. Competitors will be expected to race within those parameters. If involved in an incident they will be required to report their actions to the Clerk of the Course if called

2.1 Races: In accordance with Section C of the 2010 MSA Yearbook.

2.2 Series: In accordance with Section C of the 2010 MSA Yearbook.

### **3. SPORTING REGULATIONS - CHAMPIONSHIP RACE MEETINGS & RACE PROCEDURES**

#### **3.1 Entries:**

3.1.1 Competitors are responsible for sending in correct and complete entries with the correct entry fees prior to the entry closing dates which shall be at least 18 days before each round.

3.1.2 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.

3.1.3 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 publication of Entry Lists with Final Instructions the competitor concerned must apply for approval of acceptance by the Stewards of the Meeting

BEFORE Signing-On.

3.1.4 The Maximum Entry Fee for each race shall be: £500

Late entries - any entry received after the closing date will be subject to an additional fee of £25.

3.1.5 In the event of any rounds being oversubscribed the Organising Clubs, in liaison with the HSCC may at their discretion run Qualification Races. For Qualification Race Procedures see 3.13 of these regulations.

3.1.6 Reserves are to be nominated on the Final List of Entries published with Final Instructions or Amendment Sheet Bulletins. All Reserves will practice and replace 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 Areas" 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 the Course.

3.1.7 Entry Fee Refunds will be as per the policies of the Clubs organising each round - as published in their Supplementary Regulations for each round.

3.1.8 Each Race Meeting Organiser may accept up to 20% more entries than specified on the Track Licence for each Circuit and all accepted Competitors may practice.

#### **3.2 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.

#### **3.3 Practice:**

The minimum period of practice to be provided is to be as specified in the MSA Regulations in respect of circuit lengths. 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 series criteria and the decision of the Clerk of the Course shall be final.

#### **3.4 Qualification:**

Each driver should complete a minimum of three 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 the MSA regulations Q 4.5 and the Clerk of the Course and/or Stewards of the Meeting shall 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 distance shall be 15 miles whenever practicable but any race distance may be reduced at the discretion of the Clerk of the Course or Stewards of the Meeting.

The Procedure for qualification races is specified in 3.13.

#### **3.6 Starts:**

3.6.1 All race start countdowns are to have a minimum elapsed period of three minutes from the time all cars are released to form up on the grid to the start of the Green flag Lap(s) in the formation as specified on the Track Licence for each circuit.

3.6.2 The countdown procedures/audible warnings sequence shall be:-

All races will be Standing Starts unless otherwise advised in the Competitors Final Instructions.

One minute to start of Green Flag Lap - Start engines/Clear Grid.

Thirty seconds - Visible and audible warning for start of Green Flag/Pace Lap.

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

3.6.4 Any cars 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 to take the start from the grid has passed the startline or pitlane exit, whichever is the later.

3.6.5 Any drivers unable to start the Green Flag/Pace Lap or start are required to indicate their situation as per MSA Regulation Q12.13.2. Drivers may make up any lost grid position on this green flag lap, BUT any drivers unable to maintain grid position at any

point of the 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.

3.6.6 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.

3.6.7 A five second board will be used to indicate that the grid is complete. The red lights will be switched on five seconds after the board is withdrawn.

In the event of any starting lights failure the Starter will revert to use of the National Flag.

3.6.8 Start procedures at some meetings may differ from the above and if so this will be notified to all competitors in the final instructions of the meeting.

### 3.7 Race Stops

3.7.1 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 starting grid area which will automatically become a Parc Ferme area.

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.

#### 3.7.2 Case A – Less than two laps completed by Race leader.

The race will be null and void. The race will restart from the original grid positions. Competitors unable to take the restart may be replaced by reserves who will start from the back of the grid in reserve order. Gaps on the grid should not be closed up. The length of the restarted race will be determined by the Clerk of the Course.

#### 3.7.3 Case B - More than two laps completed by Race Leader but less than 75%.

The Race will restart from a grid set out by the finishing order of part one, (as per Q5.4.3.). The result of the race will be the finishing order at the end of part two. The length of the restarted race will be determined by the Clerk of the Course.

3.7.4 If the leader has completed more than 75% of the race distance or duration it shall not be restarted and the results will be declared in accordance with MSA Regulation Q5.4.3., **unless the Clerk of the Course in consultation with the Stewards of The Meeting, deems it appropriate to restart the race.**

### 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 & Pitlane Safety:

3.9.1 Pits: Entrants must ensure that the MSA, Circuit Management and Organising Club Safety Regulations are complied with at all times.

3.9.2 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 the pitlane.

3.9.3 Refueling: 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.

### 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 Pit Lane Entrance/Paddock Entrance as instructed, comply with any directions given by marshals or officials and to keep the helmets on and harnesses done up while on the circuit or in the pitlane.

### 3.11 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.

**3.12 Timing Modules:** All cars must be fitted with a working HSCC approved transponder. Failure may result in competitors not being timed or excluded from the results

**3.13 Qualification Races:** If applicable, this procedure will be set out in the Competitors Final Instructions

**3.14 Operation of Safety Car:** As per MSA Regulations Section Q Appendix 2.

## 4. CHAMPIONSHIP RACE PENALTIES:

### 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) and more serious penalty C3.5.1(c).

4.1.3 Additional specific championship penalties: According to Supplementary Regulations

### 4.2 Infringements of non-technical MSA Regulations and the Sporting Regulations issued for the Championship:

As per **2010 MSA** Judicial Procedure Regulations.

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 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 2010 MSA Yearbook. N.B. Specific regulations for 2000cc engined 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 Classic F3 Association Committee in writing with reference to the unavailability of original pattern parts, panels etc. Each such case and application will be considered by the Series Organisers and the Eligibility Scrutineer and ruled thereon. Failure to comply may result in rejection of the car and imposition of penalties as laid down in the CF3 Association Rules.

### 5.2 GENERAL DESCRIPTION:

The 2010 HSCC Classic F3 Series is for competitors participating in Formula Single Seat 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 31.12.80 (the Ralt RT3 is specifically excluded) and the onus is on the Entrant/competitor to establish this. There are also invitation classes open to Formula Ford 2000 cars built prior to 31<sup>st</sup> December 1979 which must comply with historic FF2000 regulations (see 5.7.8) and Formula Super Vee cars with water cooled engines built prior to 31<sup>st</sup> December 1980. 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.) (K11.3.2.) (K2. & K2.1.3. 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 31.12.80 and of a type raced in 2000cc Formula 3. The one exception is the Ralt RT3 which is specifically excluded.

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.

5.5.4 Formula Super Vee. Any chassis manufactured before 31.12.80 and of a type raced in Formula Super Vee.

### 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.

5.6.2 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.

5.6.3 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.

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

#### 5.6.5 FF2000 Modifications Permitted

It is permitted to make any modification of 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.

#### 5.6.6 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.

5.6.7 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.

5.6.8 Formula Super Vee Body work must be of a type with a proven competitor for that type of car. Wings must be of a period design and must respect period dimensions for the chassis type in question. There is a maximum wing height of 90cm measured from the ground, the maximum width must not exceed 95cm.

## 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 (eg. the replacement of a plain bearing by a roller bearing is forbidden).

5.7.2 2000cc: The only engines permitted are units having a maximum capacity of 2000cc and of a type used in period. (Toyota Novamotor, Triumph Dolomite, Ford Twincam, etc.) The VW engine is specifically excluded.

5.7.4 Location as per original.

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

### 5.7.6 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/registrars

### 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.

### 5.7.8 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 1 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.

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

### **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

X27mm 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.

### **LUBRICATION SYSTEMS**

The lubrication system, external to the engine, is free. Existing standard production oilways, linings or oil grooves may be enlarged or reduced, but no additional ones are permitted. Standard friction surfaces must remain unchanged. Dry sump is permitted, oil coolers are free

### **COOLING SYSTEM**

A liquid cooling system is mandatory but radiator and water pump are free provided that the water pump is mechanically operated. (i.e. non electrical) The radiator if housed in or incorporating a cool air scoop or deflector, must comply with bodywork regulations.

### **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.

### **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

### **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 G1A: 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, Parkersing, 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 Parkersing, 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.

## **Formula Super Vee**

The permitted engine must have a maximum displacement of 1600cc made from standard VW components of series production in the VW Golf, Scirocco or Passat. Valves, valve guides and valve seats are free provided the number of valves per cylinder and distances between valves is not changed. Valve springs, Valve spring caps and valve spring washers are free. VW head bolts must be used. Bolt on covers are mandatory.

Induction system . Not more than two 2-barrell or four single-barrell carburetors shall be used, fuel injection is permitted but no form of supercharging shall be used. The intake pipe to each cylinder must incorporate an air venture and a max diameter of 32mm for fuel injection and 36mm for carburetors directly ahead of the throttle butterfly, and all intake air for each cylinder must pass through it (or the entire fuel-air mixture if prepared before this point). The fuel injection system and carburetors must employ individual intake runner manifolds (4) with no plenum or balance pipe.

Cylinder Bore and Stroke Maximum bore sixe 79.78mm(3.14inch) Piston to cylinder wall clearance is unrestricted for both standard and oversize pistons. Maximum stroke 80mm.

Bearings and connecting Rods Plain Bearings may be replaced by others of the same type and dimensions. The distance between the small end and big end bearing centerlines – 5.354 inches plus .002inches (136mm plus .05mm) on production engines must not be altered. Standard VW connecting rods must be used.

Gaskets and Seals Gaskets O- Rings and seals may be replaced by other versions or omitted entirely. The sealing face of the block may be machined to permit installation of wire sealing rings around the cylinder bore opening only, thereby reinforcing the gasket. Alternator may be modified or removed. Any type of ignition system (except twin sparks) may be used.

Camshaft and Valve Gear, maybe modified provided that the position, number and driving system for the Camshaft and intermediate shaft are not changed. Pistons, Piston Pins and Rings are free provided the piston does not project beyond the upper face (sealing face) of the engine block at dead centre.

Engine mountings are free. The fan and water pumps can be modified, replaced or discarded. The coolant circuit is free. In its installed position the engine may not be tilted more than 15 degrees to the right or left from the vertical. The engine must be installed along its longitudinal axis. A single dry plate clutch is compulsory. A WV flywheel must be used.

Exhaust System. Exhaust pipes from all cylinders must lead rearwards. Their actual design or construction is free, provided the tall (outlet ) pipes are not higher than 24 inches from the ground. The ends of the pipes must not project by more than 26inches rearward of the rear axle centerline. K. bushings may be installed where none are fitted as standard, provided they are concentric

and the centerline of the bushed part is not changed. No component shall be relocated and no prohibited modifications shall result from the use of the above bushing.

### **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.

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

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

5.8.4 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.

5.8.5 Minimum wheelbase: 2000mm  
Minimum track: 1200mm

5.8.6 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.

5.8.7 FSV: Suspension as per original, rear wheel suspension must incorporate standard VW constant velocity joints. Shock absorbers shall be a maximum 2 way adjustable and shall not have remote reservoirs.

### **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.

5.9.2 The gearbox must have a maximum of 5 forward gears and an operable reverse gear.

5.9.3 Gear and final drive ratios are free. The use of a limited slip differential is permitted.

5.9.4 FF2000: The gearbox must contain not 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

Rear wheel drive only is permitted.

Final drive ratio is free

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

5.9.5 FSV: A VW gearbox housing incorporating not more than 4 forward speeds and an operational reverse gear must be used capable of being engaged whilst the driver is normally seated. Ratios are free. Limited Slip, locking differentials or fully-locked differentials are prohibited.

### **5.10 ELECTRICS:**

5.10.1 Battery type and location is free.

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

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

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

### **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.

5.11.3 FF2000: Light alloy brake callipers prohibited, otherwise free.

5.11.4 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:**

5.12.1 Rim dimensions:

Front 13" dia x 8.5" wide maximum: Rear 13" dia x 10" wide maximum.

5.12.2 Wheels should comply with current FIA Appendix J for Formula 3. Aerodynamic plates are expressly forbidden.

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. 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.

5.12.5 FF2000: Rear wheel steering prohibited, otherwise free.

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 FSV: 13in Diameter Wheels with a Maximum width front rim 6in and a Maximum Width rear 8in.

### 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

#### 5.13.3 1600 F3

AVON

Dry Front 7.0/210 x 13 7304

Rear 8.2/210 x 13 7305

Wets are free for 1600 F3

#### 5.13.4 FF2000

The only permitted tyres are:

AVON

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

Wet Front 6.5 /21.0 X 13 Spec no. 8829

FAST

Wet Front 6.7 /20.5 X 13 Spec no. 1092 GT3

AVON

Dry Rear 8.2 /22.0 X 13 Spec no. 8815

Wet Rear 8.2 /22.0 X 13 Spec no. 8831

FAST

Wet Rear 8.5 /22.0 X 13 Spec no. 1093 GT3

#### 5.13.5 FSV

AVON

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

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 8.2 /22.0 X 13 Spec no. 8831

5.13.6 One set of new slicks per car per meeting ONLY is permitted. Eligibility Scrutineers reserve the right to mark tyres should they so wish. Competitors are reminded that should they wish to fit additional new tyres it must be with the express permission of the Eligibility Scrutineer, who will first inspect the tyre to be changed.

### 5.14 WEIGHTS:

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 440kg

2000cc: The weight of the car must not be less than 440 kg, with the exception of cars built and raced between 1.1.80 and 31.12.80, the weight of which must not be less than 455kg.

FF2000: The weight of the car shall not be less than 440kg

FSV: The weight of the car shall not be less than 440kg

### 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 Only "pump fuel", as defined in MSA Technical Regulations - See Section B Nomenclature & Definitions

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 Blue Book 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

### **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 four 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 comply with either the letter or the spirit of the formula will be reported to the Clerk of the Course by the eligibility scrutineer/registrars or the Classic F3 Association 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/MSC

### **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](mailto:office@hsc.org.uk)

website: [www.hsc.org.uk](http://www.hsc.org.uk)

**CHAMPIONSHIP COMMITTEE** – **Please direct all communication through the HSCC office.**

Reg James - Chairman & Eligibility Registrar

Paul Smith – Drivers Representative

Paul Wyeth – International Drivers Representative

Colin Painter - CF3 Association Secretary