



# HISTORIC SPORTS CAR CLUB

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## HSCC Historic Formula Ford 2000 Championship Regulations 2020

### Eligible Cars:

The HSCC Historic Formula Ford 2000 Championship is open to genuine Formula Ford 2000 racing cars originally built and raced between 1/1/75 and 31/12/81. There is also an invitation classes open to Air Cooled Formula Super Vee cars built prior to 1/1/78 All cars must have current FIA or HSCC Vehicle Identification Forms.

### Class Structure for HSCC Historic Formula Ford 2000 Championship:

- Class A: Formula Ford 2000 cars built between 1/1/79 and 31/12/81 but excluding the Van Diemen RF81 and RF82 and the Reynard 82SF.
- Class B: Formula Ford 2000 cars built before 1/1/79, but excluding Reynard and Delta cars built in this period, which are eligible for Class A.
- Class C: Invitation class for Air Cooled Formula Super Vee cars built before 1/1/1978. Class C cars are not eligible for championship points.
- Class D: Invitation class for single seater racing cars which are, at the absolute discretion of the Championship Committee, considered to be compatible in performance, appearance and presentation with the Formula Ford 2000 cars around which the championship is primarily based. Class D cars are not eligible for championship points.

## 1. SPORTING REGULATIONS - GENERAL

### 1.1 Title and Jurisdiction:

The HSCC Historic Formula Ford 2000 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 [Motorsport UK] (incorporating the provisions of the International Sporting Code of the FIA) and these Series Regulations.

Motorsport UK Championship Permit No. **CH2020/R081** Race Status: **Interclub**

Motorsport UK Championship Grade: **D**

### 1.2 Officials:

- 1.2.1 Co-ordinator: Mr. A. Dee-Crowne, HSCC, Silverstone Circuit, Silverstone, Nr Towcester, Northants, NN12 8TN Tel; 01327 858400
- 1.2.2 Eligibility Scrutineer: Matthew Lambkin-Smith
- 1.2.3 Series Stewards: John Davison, Kevin Kivlochan, Mark Richardson  
All c/o HSCC Silverstone Circuit, Silverstone, Nr. Towcester, Northamptonshire, NN12 8TN

### 1.3 Competitor Eligibility:

- 1.3.1 Entrants must:
  - (a) be fully paid-up valid membership card-holding members of the HSCC and
  - (b) in possession of a valid 2020 Motorsport UK Entrant's Licence.
- 1.3.2 Drivers and Entrant/Drivers must:
  - (a) be fully paid-up valid membership card-holding members of the HSCC and,
  - (b) be registered for the Championship and
  - (c) be in possession of a valid 2020 Motorsport UK Competition (Racing) Interclub status Licence as a *minimum*. N.B. A National status Licence may be required subject to Q 9.1.1.
  - (d) 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 the HSCC Vehicle Identity Form (VIF) must be presented for checking at all rounds when signing-on.

**PUBLISHED REGULATIONS**

#### 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 **£180** to be paid direct to the HSCC and includes membership of the HSCC.
- 1.4.3 Registrations will be accepted from 1st January 2020.
- 1.4.4 Registration numbers will be the permanent Competition numbers for the Championship.

#### 1.5 Championship Events:

The Championship will be contested over 7 race meetings, if there are two races at a race meeting both will count for championship points.

Date	Circuit	Status	Org. Club
April 4 <sup>th</sup> – 5 <sup>th</sup>	Snetterton	Interclub	HSCC
April 25 <sup>th</sup> – 26 <sup>th</sup>	Brands Hatch	Interclub	HSCC
June 6 <sup>th</sup> – 7 <sup>th</sup>	Donington Park	Interclub	HSCC
July 11 <sup>th</sup> – 12 <sup>th</sup>	Brands Hatch	Interclub	HSCC
August 22 <sup>nd</sup> – 23 <sup>rd</sup>	Anglesey	Interclub	BRSCC
September 19 <sup>th</sup> – 20 <sup>th</sup>	Cadwell Park	Interclub	HSCC
October 17 <sup>th</sup> – 18 <sup>th</sup>	Silverstone	Interclub	HSCC

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

Position	10 or more in class	less than 10 in class
1 <sup>st</sup>	25	15
2 <sup>nd</sup>	20	12
3 <sup>rd</sup>	16	10
4 <sup>th</sup>	14	9
5 <sup>th</sup>	13	8
6 <sup>th</sup>	12	7
7 <sup>th</sup>	11	6
8 <sup>th</sup>	10	5
9 <sup>th</sup>	9	4
10 <sup>th</sup>	8	3
11 <sup>th</sup>	7	
12 <sup>th</sup>	6	
13 <sup>th</sup>	5	
14 <sup>th</sup>	4	
15 <sup>th</sup>	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.

Invitation Class points will be awarded, to **Class C and D** competitors 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 <sup>st</sup>	15	10	5
2 <sup>nd</sup>	12	8	3
3 <sup>rd</sup>	10	6	
4 <sup>th</sup>	9	4	
5 <sup>th</sup>	8	3	
6 <sup>th</sup>	7		
7 <sup>th</sup>	6		
8 <sup>th</sup>	5		
9 <sup>th</sup>	4		
10 <sup>th</sup>	3		

- 1.6.2 The totals from all qualifying races less two 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 Motorsport UK 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, second and third overall and to first, second and 3<sup>rd</sup> in class subject to three, five and 6+ starters in each class. The overall winner's trophy also counts as a class award for these purposes. In addition, the Formula Ford 2000 Association will provide awards for 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> overall where fifteen or more cars start the race.
- 1.7.3 Championship: Championship winner, 2<sup>nd</sup> overall - 6<sup>th</sup> overall will receive a trophy and each 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> 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 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 (MOTORSPORT UK Regulations Q4.5).

2.3.3 Where possible, drivers will be released in on to the circuit in current championship position. Drivers not in the championship table will be released in race number order after those in the table. At the start of the season the Championship positions from the end of the previous season will be used.

#### **2.4 Races:**

Should any race be disrupted the Clerk of the Course shall not be obliged to resume or rerun the race Q 5.4. (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 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 pit lane and may start the race after the last car has passed the startline or pit lane 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 MOTORSPORT UK 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.

2.5.6 Should circumstances at the event change such as, but not restricted to, Track Conditions or weather, the Clerk of the Course may change Standing Starts to Rolling Starts. When this decision is made all affected competitors will be notified at the earliest opportunity along with being advised of the number of Pace laps.

#### **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 & Pit Lane Safety:**

2.7.1 **Pits & Paddock:** Competitors must ensure that the MOTORSPORT UK, 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 Refueling: May only be carried out in accordance with the MOTORSPORT UK 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 pit lane.

#### **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. (MOTORSPORT UK 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 being excluded from the result as per Motorsport UK Q12.2.1

2.11 **Qualification Races:** If any event is oversubscribed the Organising Club may at its 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 Motorsport UK 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 the Clerk of the Course and / or Stewards in the event of an incident during the event. See current Motorsport UK Yearbook section J5.21.

### 2.13.1 **Data Logging**

The use of data loggers that record Data for post-race analysis is accepted. The use of linked data performance loggers that supply real time information in cockpit is not permitted

2.14 **Multiple Races:** If there are two races at a race meeting for all classes then starting grid positions for the second race shall be determined by the finishing positions of the first race.

## 3. **SPECIFIC CHAMPIONSHIP REGULATIONS**

NIL

## 4. **SPECIFIC CHAMPIONSHIP PENALTIES:**

In accordance with Section C of the current Motorsport UK Yearbook.

### 4.1 **Infringements of Technical Regulations:**

4.1.1 Arising from post practice Scrutineering or Judicial Action: Minimum penalty: The provisions of Motorsport UK regulations C3.3.

4.1.2 Arising from post race Scrutineering or judicial action: Minimum penalty: The provisions of Motorsport UK 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 Motorsport UK 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 Motorsport UK Regulation C2.3 (Judicial)

4.3 Any competitor who is penalised under the Motorsport UK 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.

4.4 Any Competitor who is penalised under the Championship Sporting Regulations at any stage of a Championship event and receives an allocation of penalty points on their race licence in accordance with Motorsport UK Regulations, will receive a Championship points deduction equal to the number of penalty points which were allocated. Should the same competitor receive penalty points at another round of the Championship then the number of Championship points deducted will be double the number of penalty points applied. If penalty points are applied at a third round, then the Championship points deducted will be triple this number, and quadrupled at the fourth occurrence of such a penalty etc. This may result in a driver receiving a negative score.

## 5. **TECHNICAL REGULATIONS**

### 5.1 **INTRODUCTION:**

The following Technical Regulations are set out in accordance with the Motorsport UK 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 section J** of the current Motorsport UK Yearbook. N.B. Specific regulations for Formula Ford 2000 cars and Air-Cooled Formula Super Vee cars are headed FF2000 and FSV respectively. If no such heading is present, the regulation covers ALL competing cars.

5.1.1 Competitors must always make prior application to the FF2000 Registrar 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 at the discretion of the Registrar.

**5.1.2** The HSCC Historic FF2000 Championship has been conceived to provide affordable historic single seater racing which is both competitive and enjoyable for all participants. The "Spirit of the Regulations" must be respected at all times. Any competitor considered by the Series Organisers or Eligibility Scrutineer to be in breach of this Spirit is liable to exclusion from the Championship.

**5.2 GENERAL DESCRIPTION:**

The Historic Formula Ford 2000 races are for competitors participating in Formula Ford 2000 Single Seat Racing Cars built prior to 31/12/81 (excluding the Van Diemen RF81 and Reynard 82 series cars), and the onus is on the entrant/competitor to establish this. There is also an invitation class for Formula Super Vee cars with air-cooled engines built prior to 31/12/77. All cars, prior to being accepted and registered by the Association, 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 Motorsport UK Section K Safety Criteria Regulations will apply:-

**K1; K2.1.4 Six Point; K3; Section K; K3.1.1. & K3.1.2(a); K4; K5; K6-13; K14.**

**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 (J5).

**5.5 CHASSIS:**

**5.5.1 FF2000:** Any chassis manufactured before 31.12.81, and of a type raced in contemporary FF2000 will be eligible. In addition, Formula Ford 1600 cars, modified to FF2000 regulations will also be accepted, providing that an equivalent car ran in period. (i.e, a Royale RP24 may be modified and raced to RP25 specification). The exception to these rules is the Van Diemen RF81 series, in both FF2000 and FF1600 forms, which are specifically excluded, as are the Reynard 81FF and 82SF. A list of eligible cars is available on request.

**5.5.2 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 closer than 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 pickup 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.

**5.5.3 FSV:** Any chassis manufactured before 31/12/77 and of a type raced in Formula Super Vee.

**5.6 BODYWORK:**

**5.6.1 1. General**

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

**2. Exterior**

Wings must be of a proven period design and construction and must respect period dimensions for the chassis type in question. All other bodywork dimensions are as follows (to be read in conjunction with drawing number Q19.17 in the Motorsport UK Competitors and Officials Yearbook):-

- (A) 100cm on cars built before 31/12/77, otherwise 80cm
- (B) 100cm
- (C) 90cm. Cars built before 31/12/78 using the original bodywork shape are permitted to run period "Periscope" airboxes which may exceed this height.
- (D) 30-60cm
- (E) Front wheel rim height
- (F) 92cm
- (G) 5cm
- (H) 185
- (I) 95cm
- (J) 95cm
- (K) 135cm
- (L) 45cm
- (M) 30cm
- (N) 60cm
- (O) see 5.12.1
- (R) N/A
- (S) 100cm on cars built before 31/12/77, otherwise 80cm

Enclosure of the sides and underside of the engine is prohibited.

## 5.6.2 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.

## 5.6.3 Modifications Prohibited

No modifications are permitted without the specific approval of the Eligibility Scrutineer.

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

## 5.7 ENGINE:

### 5.7.1 PERMITTED MODIFICATIONS

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.

### 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, or back to the oil tank. Cylinder blocks may be machined to achieve deck height. The deck height, measured from the centreline of the crankshaft to the top face of the block, must be 206.8mm +0mm -3.25mm

### 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, part number 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. Tuffriding or Parkerising is permitted.

As an alternative to the Ford camshaft specified above, the FF2000 camshaft kit, as supplied by Universal Racing Services (URS), or the SC2000 camshaft kit from Kent Cams Ltd. May be used. These camshafts have been measured and recorded to ensure conformity with the standard Ford profiles. None of the above camshafts may be reground, reprofiled or modified in any way.

The key/keyway in the camshaft pulley may be offset. Vernier adjustment of cam timing is permitted. 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 and rockers must remain dimensionally identical to the standard Ford items, 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.

Broken camshaft carriers may be repaired by means of machining the broken carrier(s) flat, and replacing with a ferrous block, screwed into, or welded to the head casting. The block may then be line bored to accept the camshaft.

### **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 surfaces, 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, or AP Racing models CP5351-1 or CP5351-2. Sintered clutches are forbidden. 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.

## **5.7.2 PROHIBITED MODIFICATIONS**

FSV: The engine must be of a cubic capacity no greater than 1600cc and consist of standard VW parts, and only components from engines of VW types 1 to 4 (excluding type 4 2000cc) are permitted.

Compression ratio is unrestricted, and the cylinder heads may be machined by removal of metal. Piston rings, camshaft, cam followers, pushrods and rocker box covers are unrestricted. Roller camshafts and cam followers are prohibited. Two double choke, or four single choke carburettors of maximum 40mm at the throttle butterfly/slide are permitted. The make of carburettor is free.



Fuel injection is prohibited. Valve springs and valve caps are unrestricted in respect of design or number. The maximum permitted valve diameters are Inlet 41mm, Exhaust 34mm. The clutch unit must originate from VW types 1 to 4, although the method of operation, types of linings and springs are unrestricted. The flywheel may be lightened, and extra location dowels may be added. Cooling fans from VW types 1 2 3 and 4 only are permitted. Fans, fan housings and cooling ducts may be modified or removed. If a fan is used, it must be driven directly by the engine.

#### 5.7.4 OIL/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.

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 with the exception of an external drain from the head to the sump. Standard friction surfaces must remain unchanged. Dry sump is permitted, oil coolers are free

#### 5.7.5 INDUCTION SYSTEMS

**Carburettor Type:** Weber 32/36 DGV & DGAV. Number on engine 1 Number of Main Venturi 2.

Maximum diameter of carburettor outlet to inlet manifold 32.0/36.0mm. Maximum diameter 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-surge pipes, 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.

#### 5.7.6 EXHAUSTS

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

#### 5.7.7 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.

#### 5.7.8 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.

#### 5.8 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 Ford 2000 race prior to 31/12/81, or Formula Super Vee race, prior to 31/12/78.

**FF2000:** All parts must be of steel or ferrous material, with the exception of 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.

**FSV:** The front suspension, although unrestricted, must include VW Type 3 stub axles (uprights) and wheel hubs. The rear suspension, although unrestricted, must include VW axle shafts and universal (CV) joints.

5.8.2 No modification permitted without consultation and ratification by the 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. Dampers must be steel-bodied. Sheathing of non-ferrous dampers with a ferrous material is prohibited.

5.8.3 Minimum wheelbase: 2000mm  
Minimum track: 1200mm

## **5.9 TRANSMISSION:**

- 5.9.1 Gearbox and final drive must be of the type originally fitted to the car.
- 5.9.2 FSV: The VW gearcase in its original orientation must be used. It is forbidden to turn the gearcase through 180° axially.
- 5.9.3 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 slip and locked differentials are prohibited. Non-ferrous differential components are prohibited.

## **5.10 ELECTRICS:**

- 5.10.1 A rear fog light shall be fitted as Motorsport UK Regulations Section (K5.)
- 5.10.2 Batteries must be of a type which does not leak acid if inverted. The location is free.  
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.), (Motorsport UK Technical Regulations).

## **5.11 BRAKES:**

- 5.11.1 The braking system must be as that originally fitted to the car.  
FSV: VW Type 3 front brake calipers and discs must be used. VW rear brake caliper and disc (or drum) from VW Type 3 or VW Porsche 914/4 (rear) must be used
- 5.11.2 No modifications are permitted without the specific approval of the Eligibility Scrutineer.  
FF2000: Light alloy brake calipers prohibited, otherwise free.

## **5.12 WHEELS/STEERING:**

- 5.12.1 Rear wheel steering prohibited, otherwise free. Material is free providing it is metal.  
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. 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.
- 5.12.3 Rim dimensions:  
Front 13" dia x 6" wide maximum: Rear 13" dia x 8" wide maximum.

## **5.13 TYRES:**

- 5.13.1 Only tyres as specified in 5.13.2 are permitted.
- 5.13.2 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  
AVON  
Dry Rear 8.2 /22.0 X 13 Spec no. 8815  
Wet Rear 180/565 E13 Spec no. 13594M
- 5.13.3 The use of tyre heating/heat retention devices, tyre treatments and compounds is prohibited.
- 5.13.4 A maximum of twelve slicks per car per season ONLY are 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 beyond the allowance of twelve, it must be with the express permission of the Eligibility Scrutineer, who will first inspect the tyre to be changed.

5.13.5 Deleted

## **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 FF2000: The weight of the car shall not be less than 440kg
- 5.14.3 FSV: The weight of the car shall not be less than 400kg

## **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 lified 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 Motorsport UK regulations Section B Nomenclature & Definitions Pump Fuel parts  
(a) or (b),

5.15.4 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 Motorsport UK **Regulation J5.17**, and are also subject to individual circuit requirements if specified in Supplementary Regulations.

5.16.1 On FF2000 engines a mandatory silencer, Ford part no: 9095317 must be fitted and must comply with Motorsport UK Regulation J5.17.

**5.17 NUMBERS AND SERIES DECALS:**

As per Motorsport UK Yearbook. Individual sponsors decals are limited to two per vehicle, each with a maximum size of 12" by 4". All competing cars must display at least two HSCC badges, one on each side of the car and one Historic FF2000 Association badge, together with series or race sponsor stickers as required.

**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.

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 of the Historic FF2000 Association for any further action.

Historic FF2000 is, as its name implies, a category for historic cars, being raced in a specification very close to that in which they originally competed. The organisers therefore reserve the right to disallow any developments they feel not to be in keeping with the spirit of the formula regulations, or any actions by competitors which would result in an unacceptable increase in costs for the category.

**6. APPENDICES**

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

**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.

Chairman: Alan Morgan

Eligibility Registrar Alan Morgan

Drivers Representative TBA