



HSCC Thundersports: Technical Regulations for Historic Sports 2000

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.

- 5.1.1** Competitors must always make prior application to the Historic Sports 2000 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 Sports 2000 class has been conceived to provide affordable historic sports prototype 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 series..

- 5.2 GENERAL DESCRIPTION:** The Historic Sports 2000 class within the HSCC Thundersports series is for open two seater sports racing car fitted with a standard Ford NE series 2 litre SOHC engine with 2 venturi carburettor, of a type built and raced before 31st December 1990. They should be compliant with the requirements of FIA Appendix K Categories S2/2 or S2/3 for Period I and Period J cars respectively, although FIA papers are not currently mandated.

Cars must be in the specification for such cars in their original year of manufacture. No updating beyond such specification or other modification is permitted except that cars may be updated or modified to accord with the latest specification that was attained by identical models provided that was before 31/12/90. Cars may also use parts that were available, or are equivalent to those that were available and conformed to Sports 2000 regulations up to 31/12/90. The onus of proof shall be with the competitor/entrant. The HSCC will implement an approved Vehicle Identification Form for Historic Sports 2000 cars.

If there are sufficient entrants and at the series organiser's discretion, there may be separate classes for categories S2/2 and S2/3 and if deemed appropriate a further age related split within S2/3. Should that occur, to remain eligible for the relevant class the car must not have any modifications or updates beyond latest specification that was attained by identical models during the period defined by the class. Cars with modifications beyond those allowed will be classified in the class relevant to the specification presented rather than that of the original build date of the car.

All cars, prior to being accepted for competition, must comply with these regulations and the provisions of the regulations. Anything outside this must be approved by the Eligibility Scrutineer.

Excluded from these restrictions are: -

- a) The addition of extra safety or protection features, which do not improve the performance of the car (E.g. front end foot protection structures or stone/gravel guards to protect the engine drive belts), and which do not breach other specific regulations herein.
- b) The addition of electronic analogue instruments, rev limiters and lap timers.

5.3 SAFETY REQUIREMENTS:

The following Articles of Motorsport UK Section K Safety Criteria Regulations will apply:- K1 to K1.5.2, K1.6.2, K1.6.4, K1.6.5, K 1.6.6, K1.7, K1.8, K2.1, K2.1.4, K2.1.6 TO K2.1.10, K2.3, K3, K3.1, K3.1.2(a) or K3.1.3, K3.1.6 to K3.5, K5.1, K5.2, K6, K8.1, K8.3, K8.5, K9.1 to K9.3, K10.1 TO K10.4, K11.1 to K11.3, K13, K14.1 to K14.3.

Fire extinguisher equipment may be located in the passenger space.

Whilst Motorsport UK regulation provide some latitude with regard to compliance with FIA safety regulations competitors should be aware that the series has rounds outside the U.K. and for these events all vehicle and driver safety equipment must be fully compliant with the relevant current FIA regulations.

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 Any chassis manufactured before 31.12.90, and of a type raced in contemporary Sports 2000 will be eligible. A list of eligible cars is available on request.

5.5.2 There are no restrictions on the type of construction but no stressed part in the longitudinal section of the chassis structure between the steering wheel and the seat back may exceed in height 30cm (11.8in) above its lowest point. 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.

5.6 BODYWORK:

5.6.1 The body must provide a cockpit for two seats and cover all mechanical components including wheels and suspension members except for the exhaust pipe, induction system and camshaft cover which may protrude through the engine cover. 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. Composite materials incorporating carbon and/or Kevlar reinforcement is prohibited unless it can be proven to have been used on the model concerned in period. Maximum height with driver aboard, excluding safety roll-over bar, must not exceed at any time 90cm (35.4in) measured from the ground.

5.6.2 Between the front and rear axle lines the body must:

(a) Maintain over a minimum of 70% of the length of the wheelbase and over a depth of 20cm (7.9in) a minimum body width exceeding the greatest overall width across the tyres less 15cm (5.9in).

(b) Exceed in height the top of the tyres over a width of 50cm (19.7in) excepting only cockpit and engine openings. There must be no gap between the main body and the mudguards which must comply with Vehicle Regulations.

5.6.3 The body above chassis level in the region of the cockpit must not be reinforced in any way which would complicate or hinder the rescue of the driver.

5.6.4 The cockpit opening seen in plan view must be symmetrical about the longitudinal axis of the cars and must be large enough for a horizontal rectangle of 80cm (31.5in) by 40cm (15.75in) to be passed through with its minor axis aligned with the vehicles longitudinal axis.

5.6.5 Space for two seats must be provided each of at least 40cm (15.75in) width and be positioned symmetrically about the vehicles longitudinal axis. There must be at least 25cm (9.9in) wide foot space for both driver and passenger measured at the pedals. The passenger space must provide as much seat space, elbow room, foot and leg room in terms of length width and height as that of the driver.

5.6.6 Aerofoils and/or spoilers which are capable of adjustment are only permitted if they are mounted horizontally at the end of the front of the vehicle and vertically +20° at the rear. There must be no gap between these surfaces, or any other aerofoil, and the main bodywork.

5.6.7 Within the total plan form of the vehicle the lower surface (surface licked by the airstream) must not exceed 2.54cm/1 in deviation from the HORIZONTAL in any LONGITUDINAL section through that surface. No AERODYNAMIC device (e.g. 'Skirts' body sides etc.) may extend below this lower surface anywhere on the vehicle to the rear or the front wheels.

In addition: Situated between the front and rear axle centre lines (within 2.54cm/1 in of vertical deviation) there must be a uniform, rigid, flat, impervious rectangular surface. The area of this surface must extend to the full width of the body; it must be of minimum width 142.24cm/56in over a length of 91.44cm/36in (i.e. there must be a rectangular solid surface of at least 142.24cm/56in measured across the vehicle by at least 91.44cm/36in measured along the longitudinal axis of the vehicle). It is the intent of this to nullify/ minimise the use of 'Ground Effects' to achieve downforce on vehicles.

(Note: this is not to be interpreted as requiring a floor pan beneath the engine, transaxle, transmission in front engined vehicles.)

5.6.8 Doors and transparent windscreens are optional.

5.7 ENGINE:

5.7.1 PERMITTED MODIFICATIONS

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

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.

Cylinder head face may be skimmed.

The only permitted camshafts are the standard Ford production camshafts for 2000SOHC NE engines, part number 1584660, the FF2000 camshaft kit, as supplied by Universal Racing Services (URS), or the SC2000 or SRCC2000K camshaft kit from Kent Cams Ltd. These camshafts have been measured and recorded to ensure conformity with the standard Ford profiles, the camshaft and rockers must remain entirely unmodified, none of the above camshafts may be reground, reprofiled or modified in any way.

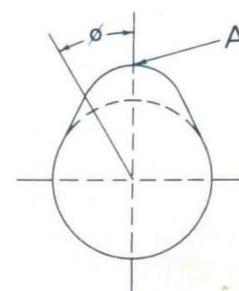
The key/keyway in the camshaft pulley may be offset. Vernier adjustment of cam timing is permitted.

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.

Maximum valve lift against cam angle with zero tappet clearance:

All angles measured from point A. Lift measured in mm.

Angle	Inlet		Exhaust	
	Opening	Closing	Opening	Closing
0	10.442	10.442	10.442	10.442
5	10.36	10.36	10.36	10.36
10	10.11	10.11	10.11	10.11
15	9.69	9.69	9.69	9.69
20	9.11	9.11	9.11	9.11
25	8.37	8.37	8.37	8.37
30	7.45	7.45	7.45	7.45
35	6.38	6.38	6.38	6.38
40	5.17	5.17	5.17	5.17
45	3.86	3.86	3.86	3.86
50	2.58	2.59	2.58	2.59
55	1.47	1.50	1.47	1.50
60	0.81	0.86	0.81	0.86



65	0.56	0.65	0.56	0.65
70	0.43	0.54	0.43	0.54
75	0.33	0.46	0.33	0.46
80	0.19	0.37	0.19	0.37
85	0.08	0.26	0.08	0.26
90	0.01	0.20	0.01	0.20

Valves and rockers must remain dimensionally identical to the standard Ford items, no reprofiling or polishing is permitted.

The original 45deg. Valve seat angle must be retained.

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

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

Maximum valve stem diameter 8.4mm

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

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. In addition the outside diameter of the small end forging may be machined around to the shank blends 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. Alternate connecting rod and big end bolt assembly part no. M6200C200 are permitted. ARP big end bolts part no. 151-6001 are permitted.

CRANKSHAFT

A standard crankshaft must be used. Spot machining to achieve balance is permitted. Tuffriding Parkerising, shot-peening, shot blasting and polishing are permitted. Crankshaft minimum weight 12.7kg. 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. The clutch must be a standard Ford road car unit or aftermarket replacement of identical diameter and type, uprated clamp load is permitted, the driven plate must retain a sprung hub design and be of an organic friction material. Sintered and cerametallic friction materials are forbidden. Flywheel bolts are free and locating dowels are permitted. It is permitted to secure the starter ring to the flywheel, the 110 tooth ring gear from the Ford X-flow may be used. 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:

Only modifications or additions specifically covered by these regulations are permitted. All engine components not covered by these regulations must remain completely standard and unmodified.

5.7.3 OIL/COOLING SYSTEM:

A liquid cooling system is mandatory but radiator and water pump are free provided that the water pump stays in the standard Ford position and be belt driven from the engine crankshaft. Electric Water pumps are not permitted.

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. Localised machining of the cylinder block is permitted to allow fitting of the oil pump. Oil coolers are unrestricted.

5.7.4 INDUCTION SYSTEM:

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. Only the standard inlet manifold may be used 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.

5.7.5 EXHAUSTS:

The Exhaust system and manifold design are unrestricted, but must comply with MSA regulations J5.16.1 to J5.16.6. Exotic materials including titanium and Inconel are prohibited.

5.7.6 FUEL PUMPS:

The standard mechanical fuel pump for the engine must be retained and all fuel to the carburettor must be supplied by this pump. Fuel hoses and pipes are free. Fuel cooling radiators are permitted, within safety regulations, but must be mounted within the main chassis frame.

5.7.7 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 and reinforcements 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 Sports 2000 race prior to 31/12/90. All parts must be of steel or ferrous material, with the exception of springs, hubs, hub adaptors, hub carriers, bearings and bushes, spring caps, abutment nuts, anti-roll bar links, shock absorber caps and nuts. Titanium is prohibited. Remote reservoir and/or light alloy dampers are prohibited.

5.8.2 No modification permitted without consultation and ratification by the Eligibility Scrutineer. 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 nonferrous dampers with a ferrous material is prohibited.

5.9 TRANSMISSION:

5.9.1 Gearbox and final drive must be of the type originally fitted to the car.

5.9.2 The gearbox must have an H pattern shift, 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, electronically controlled and locked differentials are prohibited. Non-ferrous differential components are prohibited.

5.10 ELECTRICAL:

5.10.1 A rear fog light shall be fitted as Motorsport UK Regulations Section (K5.1)

5.10.2 An operable electric self starter is mandatory.

5.10.3 Two stop lights and two tail lights each of at least 15 watts rating, or an E approved LED alternative, must be operable.

5.10.3 Batteries must be of a type which does not leak acid if inverted. Batteries must be of a lead acid type, lithium batteries are prohibited. Auxiliary batteries may be used for starting before a race and in the pits providing approved couplings are used.

5.10.4 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. Light alloy brake calipers are prohibited. Discs must be of a ferrous material. Brake pad friction material is free.

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

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

Dry Rear 8.2 /22.0 X 13 Spec no. 8815
Wet Rear 180/565 E13 Spec no. 13594M

The use of un-cut wets is prohibited.

YOKOHAMA

Dry Front: 160/520R13 Code N 2669
Wet Front: 160/520R13 Code N 2701

Dry Rear 200/50VR13 Code N 1803 (Slick)
Wet Rear 200/50VR13 Code N 2045 (Wet)

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

5.14 WEIGHTS:

The minimum weight must be the weight of the car at which it crosses the finishing line , or at any time during the competition. 506kg Minimum.

5.15 FUEL SYSTEM:

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 for FIA events bag tanks are lited for 5 years from the date of manufacture. Metal tank(s) may be used providing they are covered externally with a fireproof protective coating and are mounted within the main chassis structure. There must be a liquid tight and fireproof bulkhead separating the fuel tank(s) from the cockpit.

5.15.2 Fuel Capacity, 32lt maximum unless FT3 Spec. A larger capacity fuel cell can be fitted if it complies with FIA FT3 Spec., 64lt maximum. It is not permitted to install both metal and an FT3 fuel container.

5.15.3 Fuel must be in accordance with Motorsport UK regulations Section B Nomenclature & Definitions Pump Fuel parts (a) or (b).

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.

5.17 NUMBERS AND SERIES DECALS:

Competition numbers and backgrounds shall be displayed in accordance with the requirements of the Series Organisers and MSA regulations. The numbers and backgrounds shall be of regulation size (see MSA Blue Book J.4.1).

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 Sports 2000 for any further action. Historic Sports 2000 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.