

Crimond Saloonstox Regulations 2020.



When referring to the engine, gearbox, final drive, mechanical or construction Rules & Regulations, the principle will always be: Unless permission is specifically granted to make Modifications (or any variation) nothing may be done to alter or change the Standard Parts in any way.

It is the responsibility of the Driver to prove to the Scrutineer's that the part is legal, by way of written proof of where the part originated. This must be undertaken within 14 days, otherwise the item in question will be deemed illegal, resulting in immediate suspension from racing & Referral for disciplinary action.

Drivers are advised to read the Crimond raceway General rules as well as these Saloonstox rules for all the information required to compete in this formula. Driver safety equipment and procedures are listed there for "ALL" Crimond raceway domestic formulas.

Any changes/updates/clarifications for 2020 are in Red.

After a decision by the drivers at the 2019 AGM, these 2015 rules have been updated and re-introduced. The past two season's rules have been based on the 2017 SSCA National Saloonstox rules and any car built to these rules are still permitted to race at Crimond raceway in 2020. The 2013 SSCA rules which were part of the original 2015 Crimond Saloonstox rules are listed for reference at the end of these Crimond Saloonstox 2020 rules.

- 1) **Car:** Any mass produced saloon, hatchback or estate car can be used that has been in production for 3 years or more. All cars must be rear wheel drive or converted to rear wheel drive.
- 2) **Bodywork** All bodies must retain their original shape when viewed from the side with the exception of bumpers and A+B post which can be replaced with steelwork. The Bonnet, roof and tailgate should be retained with no spoilers or bonnet bulges allowed. All other bodywork, flooring, tunnels and firewalls should be manufactured from sheet steel. No glass or plastic allowed except rear wheel mudguards and Perspex screen. The front firewall should be in its original position and in front of the windscreen aperture. It should extend from the window aperture to the floor. The floor should extend from the firewall to at least 300mm behind the driver. Maximum car width 1800mm.
- 3) **Weight** The minimum race weight taken when the car is leaving the track is 1170Kg not Including the driver.
- 4) **Engines** Only the 2 litre Ford pinto or 2 litre ZETEC engine should be used unless otherwise permitted by the Committee.

Engine location: - The engine must be located in the centerline of the car, (+ or - 25mm).
On any new build car the engine must be located in the standard location: - 2140mm from diff flange to rear of cylinder head. On older existing cars, engine can be no further back than rear of cylinder head in line with most forward point of windscreen aperture.

4a) 2 litre Pinto specification

Pinto engine modifications The Ford 2 litre pinto can have the following modifications however all original manufacturer markings should be retained throughout the engine.

Cylinder head Standard and injection 2 liter heads can be used. Valve seats can be re-cut to 30/45/60 degree angles +_5 degrees. Thin wall valve guides, oversize valve stems and “unleaded” inserts are allowed but must retain original valve position, valve throats must be less than 38.5 mm / 32 mm below the 60 degree valve seat angle. Valve spring seats can be cut or shimmed to give the correct spring height. The head can be skimmed. Valves must be 36 mm inlet and 42mm exhaust, with a single 45 degree back face to a minimum width of 3mm. No competition valves allowed only standard replacement types. Followers must be of ferrous material and of standard slipper type. Camshafts / pulleys and valve springs can be of any type.

Block The block can be overbored up to + 60 thou/ 1.5 mm and be skimmed down to the piston face at TDC. Pistons should be of standard replacement type. Oil pumps and sumps can be modified but no “dry” sumps / crank scraper plates or low profile f2 types allowed. Balancing by spot drilling/grinding only to achieve balance, **not to** lighten.

Flywheel / clutch Must be of standard type and can be lightened by removing the back mass up to the ring gear, no skeleton/spider flywheels.

Carburetor Only the standard weber 32/36 carburetor can be used with 26-27mm venturi. The body +butterfly's + venturi + spindles + spindle screws + associated components of the carburetor must remain as originally manufactured, Jets can be changed or blocked. The float must work as originally designed and control the fuel. Chokes can be modified to open together. The power valve can be removed / blocked. The fuel feed pipe must have a secondary means of fixing to carb incase inlet pipe blows out of Carb, (IE Lock wire or Tie wraps).

Exhaust: - The sierra 2 port manifold should be used. Downpipes can be manufactured from a maximum 50mm id pipe to the collector which should be close to the bell housing. The main exhaust should have a single pipe with maximum ID of 50mm for the majority of its length. Cars should be sufficiently silenced to comply with track noise restrictions.

4B:- The Ford Zetec engine is permitted to be used. The SSCA also allow this engine and their specification is also permitted at Crimond raceway. Any SSCA differences are listed in these rules.

2 litre Crimond raceway Zetec specification

Engine: - Zetec–R engine commonly referred to as the blacktop

Source: - Ford Mondeo 2 litre Engine code: - NGA, NGB, NGC, NGD

Ford Focus 2 litre engine code: - EDDB, EDDC, EDDD, EDDF

Ford Cougar 2 litre Engine code: - EBBC, EBBC, EDDB, EDDB

Engine codes can be found on exhaust side of engine

Standard bore: - 84.80mm X Stroke 88.00mm

No overboring permitted

The cylinder block may NOT be skimmed

The cylinder head CAN skimmed to allow repair after blown gasket etc., but to a minimum thickness of 132.6mm. Piston crowns and valve cutouts must not be altered.
Standard Valve size: - Inlet dia 32mm X 97mm length, Exhaust valve dia 28mm X 96.7 length
No modifying of inlet or exhaust ports permitted, material may not be removed or added
Standard Ford head gasket only permitted, Ford part no: - 0171744/978M6051CF.

The engine + cylinder head + flywheel + clutch + exhaust manifold must remain standard 2.0 litre Zetec parts with the following exceptions:-

Flywheel: - Standard or SSCA supplied flywheel only permitted. Minimum weight (including starter Ring & bolts) = 6.2 kg.

Inlet manifolds: - **No** home- made manifolds permitted. Aftermarket manufactured manifolds are permitted ("IE" SSCA) or an adapter plate can be used to fit Ford Crossflow/CVH type manifold. Adapter plate must be no thicker than 30mm.

Carburetor: Only the Webber 32/36 type carb allowed, Rules as per Pinto engine rules.

Sumps: - Sumps and oil pickups can be modified or replaced but must remain as a wet system.

Exhaust manifold: - Must be the original cast item with part number 968F9430. Downpipe's can be fabricated from maximum 2" ID pipe.

Thermostat housing: - The housing can be replaced with a fabricated steel item

Pulleys and water pump: - These can be modified to ensure correct rotation

Ignition: - System can be any ford mass market ECU ("i.e." fiesta "red packs" and 93bb Mondeo non immobilized ECU'S). Sensors such as temperature and throttle can be replaced with variable resistors to achieve correct timing, (recommend 28 degrees max), but should not be adjustable by the driver on track. Piggyback chips not allowed.

If at any time an ECU is suspected of being out with the above rules, the committee has the right to substitute the suspect ECU with a standard replacement ECU and have the suspect ECU inspected for legality.

The SSCA supplied ECU and wiring loom is also permitted

Camshafts: - Casting rings on the camshaft must be intact. Two close together rings on Exhaust cam and two rings apart on inlet cam. Standard camshaft drive pulleys only permitted and timed as standard. NO re-profiling of Camshafts permitted. Camshafts must be standard Ford production items for the Zetec 2 litre engine. The Engine must have "ONE" Exhaust cam & "ONE" inlet cam fitted in their correct location, NO swapping location of cams.

- 5) **Cooling system** Must be contained under the bonnet and vent below the car or into a catch tank. No electric water pumps allowed.
- 6) **Gearbox and rear axle**
Ratios and type are free but must be from a mass produced road car, van or pick-up. Bell housings are free but must cover the flywheel and not be lightened. Rear differential is free and can be welded, but limited slip differentials are **NOT** allowed.
- 7) **Wheels and tyres** No tyre softener is allowed. All wheels must be steel with a maximum rim width of 6". No wheel spacers allowed.
Tyres must be Yokohama AO-21 185X70X13 diameter. Wheels can have their center strengthened. No dome wheel nuts and wheel nuts must be fully threaded onto the studs.

8) **Brakes** Must be effective on all 4 wheels, discs or drums allowed, no bias brake systems allowed.

9) **Suspension**

Front The car should use the original suspension set up from that vehicle or the sierra MacPherson strut or Cortina wishbone configuration. Tie bars can be manufactured and re-positioned. No rose joints allowed, additional standard dampers are allowed; one adjustable strut or damper (coil over) on the N/S/F only is permitted. Spring rates are free. **Camber is restricted to N/S/F = "15" deg negative maximum, O/S/F = "6" deg negative or positive maximum. Caster is free. Adjustable spring platforms are allowed. Allowance will be made for any race damage induced camber if checked after a race.**

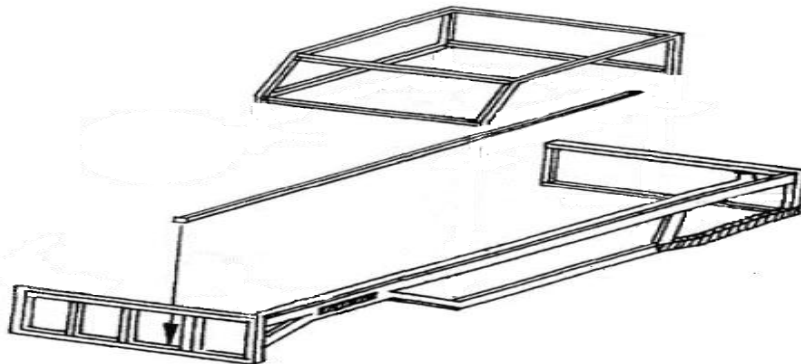
Rear The original suspension set-up for that vehicle should be used or the sierra set-up. The original tie bars and suspension arms should be utilized but can be re-enforced. Any number of **non**-adjustable standard shock absorbers are allowed, adjustable spring platforms are allowed, spring rates are free. **Camber is restricted to N/S/R = 10 deg negative maximum, O/S/R = "0" deg, no positive or negative camber allowed. Allowance will be made for any race damage induced camber if checked after a race.**

Wheelbase The car should retain its original wheel base within +/- 25mm on the inside and up to + 75mm on the outside. The rear wheels should be located in their original position in the wheel arch. Any differences in wheelbase should be achieved at the front of the car. Anti roll bars if fitted must be original to the vehicle and non-adjustable. No 4x4 Anti roll bars permitted.

Ride- height the car should be capable of driving over a 100mm speed bump without ironwork striking it and should not "bottom out" during normal race conditions.

10) **Ironwork**

Main car

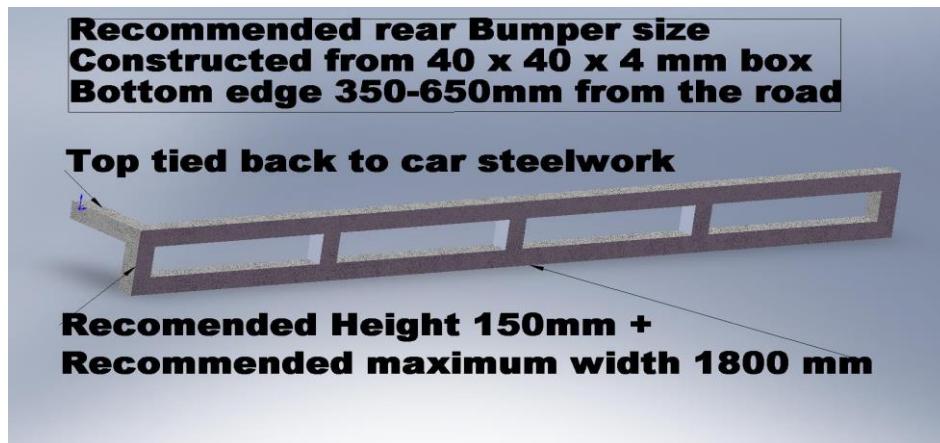


All the main ironwork must be no greater than 70 x 70 hollow section and no less than 40 x 40 x 3mm. At least 4 through bars must run from the bulkhead to the rear of the car in continuous lengths. A Full width roll cage with a minimum of 4 uprights welded to the through bars and extending at least 300mm behind the driver should be installed. The top of the roll cage should have an additional center bar and a 3mm steel plate fully welded above the driver. A minimum of 2 horizontal bars, **(3 on driver's side)** shall be fitted on both sides of the car within the passenger area with a 3mm plate installed on these bars on the driver's

side. This plate should extend from the bulkhead to behind the driver. Additional bars should be added to give sufficient side protection to the driver in the window aperture and driver compartment. 50 x 50mm mesh should cover 1/3 of the screen in front of the driver and be supported by a 25 x 25 x 3 mm bar. To prevent wheel loss the rear wheels can have a heavy weight leaf spring installed at the top of the wheel and held in place with 16mm pins / bolts.

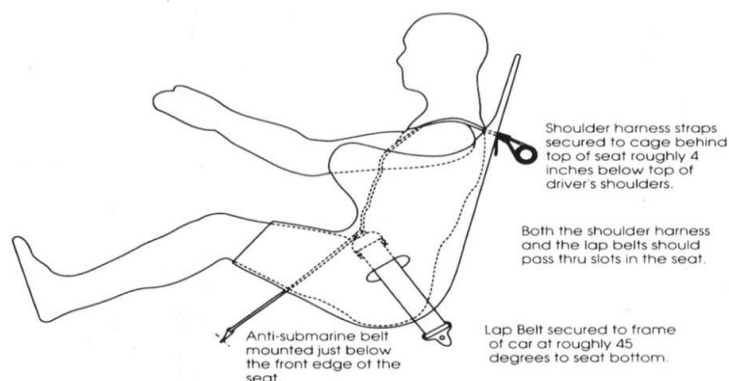
Bumpers All bumpers should be constructed from minimum 40 x 40 x 3mm box or tube and fitted in a vertical position. Bumpering should be no greater than the extreme outside width of the car unless otherwise stated. The front must not exceed the height of the bonnet and drop to less than 450mm from the road. Any extensions for “wall rubbing” must be no greater than 75mm wide and the same height as the existing bumper.

The Bottom of the rear bumper should be 350-650mm from the ground and be constructed from a maximum of two horizontal bars, see sketch for recommended dimensions.



All bars must be smooth and should not be able to tear, catch or puncture other cars during normal racing. A single length of box or tube can be fitted along the length of the car exterior to protect the bodywork, max size 30 x 30 x 3mm.

- 11) **Seats Belts and safety equipment** Personal safety equipment as per general rules. A minimum 5 point belt must be securely installed as per the drawing.



Recommended Seat Belt Installation

In addition seats **MUST** be firmly secured at shoulder height and provide a head restraint either on the seat or padding on the roll-cage. It is recommended a competition type seat is used. Neck braces are strongly recommended. Fire extinguishers should be kept in the

support truck NOT in the car.

12) **Batteries and electrical** All batteries must be securely restrained and have a rot proof covering to prevent acid spill. A cut off switch connected to the main supply should be installed within the rear nearside window aperture and easily identified. The car must have a working starter installed.

13) **Numbers** As per general rules

14) **Fuel systems**



See general rules for fuel specification. A fuel tank with maximum capacity of 2 gallons and a metal screw cap type filler must be fitted rearward of the driver and have a firewall / barrier between it and the driver. The underside of the tank should be open to the track so leaking fuel can escape. Aluminum tanks should have secondary straps securing them to limit the chance of cracking and leakage. All tanks must be suitably placed and protected from impact. A non-spill breather pipe with a one way non-return valve is compulsory. A fuel shut off valve should be within reach of the driver. When fitted electric fuel pumps should be disabled by the master cut off switch and also a switch within reach of the driver. Fuel lines should be metal or metal covered within the proximity of the driver. The fuel tank should be completely covered with the exception of its base.

15) **General rules of racing**

Whilst Saloon Stock Cars are very much a full contact formula; the aim is for drivers to race to win. The following points however will be deemed illegal moves, which will see the offending driver receive disciplinary action.

Cars should not be deliberately spun-out towards the outside of the track.

Attacking a stationary car is **NOT** allowed.

Attacking another car on or in the infield or safe areas.

Attacking another car by driving off from the infield or safe areas.

Deliberate contact on another driver's door area where avoidable action could have been taken.

Cars may be pushed into the safety barriers, but the meeting Steward may punish a driver if they feel excessive force was used to put a car into the safety barrier.

Transponders An Identisports in-car transponder is compulsory in the Saloonstox.

These can be purchased or hired from the track shop. These transponders must be mounted in the car in the passenger compartment on the main interior roll-cage, but must be able to be seen from outside the car.

Raceivers: - A driver Raceiver is compulsory in the Saloonstox in 2020. This will allow the meeting officials to speak to the drivers during a race. Drivers have until July 4th before this is compulsory. Drivers **MUST** have a working raceiver during a race, **NO** Receiver, **No** race!!

2013 SALOON STOCK CAR SPECIFICATIONS.

VIOLATIONS

When referring to the engine, gearbox, differential, mechanical or construction rules and regulations, the principle will always be: **Unless permission is specifically granted to make modifications or any variation, NOTHING MAY BE DONE TO ALTER OR CHANGE IN ANY WAY THE STANDARD PARTS. Unless these rules state you CAN do it, you CANNOT do it.**

All specifications, where applicable, will be taken from the Technical Service Data book for cars, published by Glasses Guide Service Limited. Technical queries can be addressed to, SSCA, c/o ORCi, PO Box 9889, Birmingham B43 6WA and drivers are encouraged to submit queries in writing on any aspect of technical information for which they require clarification. Any written queries will require 21 days in which to receive an answer.

Drivers are reminded that technical checks can be carried out at any time. If parts are suspected of being illegal you must leave them with the promotion. If you refuse, this will automatically deem the parts illegal.

1. CARS & BODIES

- Cars must be built to Ford Sierra running gear specification.
- All bodyshells must be constructed using one from the following (estate versions not permitted): Ford Sierra/Sapphire, Ford Mondeo (Mk1-3, 4dr or 5dr), Vauxhall Vectra (Mk1-3, 4dr or 5dr), or BMW E36/E46 3 series (4dr no compacts).
- **The bodyshell (i.e. roof, pillars, bonnet, boot, doors) to a minimum of 150mm from the bottom of the window apertures or waistline must be original. All bodyshells must keep the original shape when viewed in side elevation. ALL PILLARS MUST REMAIN IN THEIR ORIGINAL POSITION** and must retain the original door mirror locating corner gusset.
- Panelwork must not be tatty, and must be complete with no holes, unless standard to the panel.
- The body shell must be symmetrical on both sides, with the required door/sill/window heights to be achieved on both sides of the car. Sills folded under the car to achieve correct bodyshell heights are not permitted, and therefore the sill must be backed by tube or RHS at its lowest point.
- Race damage repairs and lower panel work may be formed from sheet steel if required. Doors must be welded closed.
- The only holes permitted in bonnets are those to accommodate air filters (these must not be covered in anyway), vents to force feed air are not permitted.
- All cars must be a maximum width of 1777mm (70") at the widest point; with the exception of wheel guards and the front bumper extension - see rule 4.
- The overall length of the race car including bumping must be a minimum of 170" and a maximum of 172".
- The car (excluding driver) will be required AT ANY TIME/RACE READY to record a minimum race weight of 1170 Kg and a maximum weight of 1300kg, with a maximum inside weight of 54.0%

Sierra – Bodyshell measurements

Window aperture must be original at 16¾"

Above this line must be original bodyshell

Mondeo – Bodyshell - Window aperture must be original at 17¾" - Vectra Bodyshell - Window aperture must be original at 17"

Door height from lower window aperture to bottom of sill must be 26" on any bodyshell

2. ENGINES

The only engine permitted is the 2-litre Ford Pinto. It must remain as manufactured by Ford other than where specified.

The "207" block is not permitted. A catch tank must be fitted within the engine compartment capable of catching any oil discharged from the engine. ***ARP replacement con rod bolts are permitted for use.***

Cylinder Block The cylinder block may be surfaced but pistons must not protrude above the block face. Overboring to a maximum of 0.060" is permitted. Grooves cut into the oil way of the journal on the crank are not permitted.

Cylinder Head Surfacing of the cylinder head is permitted. Injection heads are permitted. Seat angles are free on Cylinder head. No fettling is permitted to merge seat angles into porting. Any single valve spring is permitted. Valve spring seats maybe machined and shims may be fitted under springs to provide the correct fitted length of valve spring. Valve guides may be repaired by the use of a thin wall liner only, with valve and guide occupying their original position. All valves must remain the original manufacturer's length. All valves must be standard 2-litre though from any manufacturer produced as a standard replacement part (Karl Schmidt bronze type valves are not permitted). Oversize stems are permitted. Valve seats may be re-cut but the valve and valve seat must retain the original 45° seat (as per manufacturer's specification). Three angle seats are not permitted on the valve. The back of the valve is to remain unworked. Full replacement guides are not permitted. Head Gaskets must be Ford part No. 85 HM 6501 or 92 HM 6501 or any non-competition gasket.

Head Studs May be cut or fitted with washers to prevent bottoming out of studs.

Pistons Pistons must be a standard type though from any manufacturer produced as a standard replacement part and must not be altered in any way. At least one piston must retain its original manufacturers I.D. markings on the piston crown.

Camshaft Camshaft profile is free and an adjustable vernier type timing belt sprocket may be used. Cross drilled cams are not permitted.

Flywheel & Clutch Must be standard 2-litre or 1600cc components but flywheel may be machined to a total minimum weight of 12.31kg including clutch cover, driven plate and all mounting bolts.

Balancing Balancing is permitted by spot machining. Spot machining, means either, by hand grinding, drilling or machining. When balancing pistons or con-rods, at least one of each must retain its original markings, and one of each should remain untouched. Flywheel and clutch may be balanced.

Sump Sumps may be baffled with the pick-up pipe altered to pick up from within the sump. Scraper plates between the sump and the engine are not permitted. The baffle must be contained within the sump.

Oil Pump The oil pump is free.

Manifolds Manifolds must remain unworked other than the water passageway on the Inlet which is permitted to be blanked off. It is permitted to fit a strap to support the inlet manifold and it is permitted to make welding repairs to cracked manifolds but no machining is permitted. The angle of relationship between the carburettor and cylinder head face on the inlet manifold cannot be altered.

Ignition

- A standard Bosch or Motorcraft (injection or carburation) type distributor must be used with either points and condenser or electronic ignition pack. If Lumenition is used the module part No. PMA 50 and sensor FK 221 must be fitted. Motorcraft magnetic ignition must use module No. FK 9 PM A 50. The vacuum advance may be altered or removed and the mechanical advance may be altered.

- To achieve automatic advance in conjunction with the injection distributor, the Vauxhall Astra module, part No, Bosch 1227022008 / or 006 / or 016 may be used.

Carburation, Fuel Pump & Pressure Regulator

- Only the standard Weber 32/36 DGV or DGVA carburettor may be used with a maximum of 26mm and a 27mm sized chokes. No polishing or re-profiling is allowed. No modifications to the carburettors body or original design. The interchanging of the carburettor top from other Weber models is not allowed. All gaskets must remain standard and original. A single original spec insulator block must be fitted between carburettor and inlet manifold, with two gaskets; approximate total thickness = 5mm. Main jets, primary and secondary jets, auxiliary venturi and emulsion tubes may be changed but must face downwards towards the butterflies.

- Accelerator pump jets may be changed but face downwards towards butterflies. Chokes may be modified to open together and replacement spindles may be fitted with standard screws. Cold starting devices may be removed with retaining lugs and subsequent holes blanked off. Air and fuel galleries may not be enlarged or modified, and fuel may enter on either side. Floats may not be modified or weighted, and must control the fuel flow. Needle valves may not be larger than 250, and not enlarged or modified. The power valve must be fitted in the base of the bowl, but may be sealed off, and the diaphragm may be removed. No trumpets are allowed. It is permitted to use a grub screw or similar device to fix the auxiliary venturi to the carburettor body. Top end enrichment devices may be blanked off or modified. A secondary fixing on the fuel inlet feed line is required. The Inlet manifold must be standard & not faced to alter the angle of the manifold to the carburettor. No inlet port matching of the carburettor to the manifold or the manifold to the head. No material may be added or removed from the gas flow area, it must be as standard.

- The power valve must be fitted in the base of the fuel bowl but may be sealed off and the diaphragm may be removed. No induction trumpets are permitted. A grub screw or similar device may be used to fix the auxiliary venturi in the carb body.

- A single electric pump or the standard mechanical pump may be used in conjunction with a pressure regulator.

- Glass bowls are not permitted on the regulator.

- A secondary fixing is mandatory on the inlet pipes & outlet pipes to the carb, regulator and fuel pump to prevent pipes becoming detached under pressure.

3. SUSPENSION

Wheelbase

- The wheelbase must be 2604mm (102.5"). The wheels must occupy their original position within the wheel arch. The inside wheelbase measurement must remain standard with a +/- 25mm tolerance.

- The outside is permitted a lead of 50mm max. Measurements will be taken from the centre of the rear wheel to the front spindle.

- Cars must achieve a minimum ground clearance at all times of 100mm (the exhaust will be excluded from this).

General

- No wheels/tyres are allowed to protrude beyond the outer most edge of the chassis/steelwork (this does not include the 75mm permitted bumper addition or wheel guard).

- Spring rates are free and springs may be shortened to lower the car.

- The use of rose joints or other spherical type bearings are not permitted

- The maximum negative camber permitted on the passenger side front wheel is 15 degrees.

- **ALL SUSPENSION COMPONENTS MUST REMAIN STANDARD WITH THE FOLLOWING EXCEPTIONS:**

▪ Front

- Strut tops must be mounted in as near to original position as possible. A tolerance of 50mm is permitted on the passenger side strut top, forward or back. **You are permitted to move the strut top in towards the engine to achieve negative camber, but to a maximum of "15" degrees on the N/S/F wheel. "6" degrees positive or negative on O/S/F wheel. Strut top measurements maybe checked by taking a measurement from the front face of the pulley on the engine.**
- Only standard Sierra sealed strut units are permitted (no P100 struts permitted). The only alterations are: platform height can be adjustable; spring platform size can be changed; and that the unit can be strengthened. Some downward movement must be retained. The retaining lug on front struts maybe removed. However the strut must be mounted in its original position on the hub carrier, and must not protrude through the mounting point any further than if the retaining lug was used.
- No adjustable shock absorbers or struts are permitted, except one extra shock absorber on the passenger side front. This may be an adjustable platform/damping auxiliary shock absorber, no double adjustment permitted; you may adjust the bump or rebound but not both on one shock absorber. The maximum retail price for a shock absorber is £95+ VAT. Inboard suspension is NOT permitted. The secondary shock absorber mounting points must be rigid and must not pivot.
- Compression struts maybe used, and are free but no rose joints/spherical objects; **however track rod ends maybe used.**
- Track control arms can be strengthened (both sides) and lengthened (passenger side only)
- Driver's side track control arm must be mounted in as near to original position as possible. Both the driver's side and passenger side must be mounted the same height from the ground when the car is level. However, you may locate the mountings closer to the wheel or engine accordingly. You may mount the passenger side arm up to 25mm further forward.
- Steering rack can be lengthened on the passenger side (only) to achieve camber.

Rear

- Rear wishbones maybe mounted without the rear support beam. (Wishbones and rear beam maybe reinforced). Multi hole adjustment IS PERMITTED on rear wishbone mountings, but only to ensure that all pickup points are the same height from the ground on both sides of the car, when the car is level. NO OTHER FORM OF ADJUSTMENT IS PERMITTED ON THE WISHBONE MOUNTING POINTS.
- **The rear wheels are permitted "10" degree negative camber on N/S/R, no positive camber. "0" Degree camber on O/S/R This will be measured using a flat surface across the tyre horizontally.**
- All shock absorbers must be standard sealed unit type, not-adjustable.
- Adjustment on spring platforms is permitted by means of threaded bar, spacers or multi-hole.
- Anti-roll bars are not permitted.
- Sierra 4x4 rear suspension arms can be used.

4. STEELWORK

Chassis

- Must be no larger than 70mm x 70mm RHS. At least 4 through bars of 40mm x 40mm x 3mm minimum must be used in the construction of the car. These must run through the cab area from the bulkhead to the rear in continuous lengths.
- To prevent the loss of wheels, a steel truck spring must cover the rear wheels. Springs must be secured at the front by a minimum 13mm diameter pin and slotted into ironwork at rear or on a 19mm diameter pin locating the rear. The heads of those pins/bolts must be protected. These wheel guards must be in place at all times and must cover the top of the tyre to wheel level. Where possible, these guards should be covered by bodywork.

Bumpers

- Bumpers must be within the 1777mm permitted width of the car. An extension to the front bumper, up to a maximum of 75mm wide is **COMPULSORY** on the nearside – this must be a minimum of 460mm in height and must be mounted as per drawing. This must not be mounted higher than the rest of the bumper. The extension **MUST** be braced/strengthened back to the main bumper as per the drawing (i.e. creating a triangle).
- **All SHS or RHS or equivalent must remain hollow.**
- The front bumper must not exceed the height of the bonnet..
- All bumpers **MUST** have smooth and rounded comers and edges. All bumper faces must be vertical.
- A centre hoop on the front bumper to protect the engine is permitted, and must be no wider than the radiator and its fixing points.
- **REAR** must **NOT** be higher from the ground than 600mm nor lower than 375mm to the centre of the lower bar from any point on the bar. The distance between horizontal rails shown in the rear bumper sketch should be 70mm with the overall depth of bumper being 150mm. The bumper must remain continuous side to side.
- The rear bumper must be constructed from two continuous horizontal bars (with no dog legs) of a minimum 40mmx40mm x3mm RHS (these must be the same thickness steel over the whole width of the bumper) with five vertical uprights as per sketch. The top rail must be connected to the steelwork within the car, by equivalent steel.

Rollcage

▪ Rollcages are mandatory and must consist of a minimum: hoop protecting the A pillar, hoop behind the driver, two outer connecting bars between the two hoops, centre connecting bar, two rearward supports with brace underneath. **THESE ITEMS MUST BE CONSTRUCTED FROM A MINIMUM 40mm x 40mm x 3mm RHS or tube equivalent.**

▪ All other rollcage supports, braces, gussets are free.

▪ The roll cage must be securely welded to the through bars and chassis/floor plates. The rollcage must sit centrally between the extreme outside edges of the car. The cage must be the full width between the front pillars and continue rearward till a minimum of 300mm past the driver's head. A 3mm steel plate must be fitted to cover the driver's side roll cage area and this must be one continuous plate i.e. no holes. ***This must be welded to the roll cage on all four sides including to a support bar joining the front and rear roll cage hoops along the centerline of the car.***

▪ ***It is required to have a minimum of two rearward supports going back from the top of the rollcage hoop down to the chassis – one on each side of the car (see diagram below). You may run the rearward supports in a criss-cross fashion, running diagonally from the top of the rollcage hoop at the driver's side to the chassis on the passenger side and vice-versa. Rearward roll cage supports must also be braced underneath as per the diagram below. The rearward supports must be made of the same specification steel as the rollcage.***

▪ Two horizontal bars of 40mm x 40mm x 3mm minimum, one at knee height, the other at sill level must be fitted to both sides of the car in the door area; a minimum 3mm plate must be welded between those bars on the driver's side to protect the driver if struck in the side by another car. This protection must continue from bulkhead to behind the driver's seat position and be fully welded/braced and padded to avoid injury to the driver.

▪ Where the driver's side doors (front and rear) meet the lower window aperture, this must be backed by RHS or equivalent tube, a minimum of 25mm x 25mm, 3mm thick. This should be supported from either/both the roll cage or top rail. Additionally, if the roll cage is not supporting the B pillar (and is located more towards the rear door) you must fit some protection for the B pillar on the driver's side, (as a minimum) up to shoulder height, by means of a hoop running from the

Rollcage to either the door tops or the top rail. This must also be as a Minimum the same specification steel as above.

▪ ***It is strongly advised to add corner gussets to roll cage joints, and this is Mandatory where no more than 75% of the joint is welded.***

5. ENGINE/DIFF POSITION

The engine must be located centrally along the line of the crankshaft, within the car and in a vertical position. Maximum offset is 25mm. The propshaft should be at 90° to the diff/drive shafts. The diff must also be located centrally in the car, and centrally within the chassis rails, with a tolerance of 25mm.

Original position, for reference a measurement of 83³/₄" minimum will be taken from the diff flange to a line dropped from the rear face of the cylinder head which is standard to all Sierra models. See illustration right.

The diff must also be located centrally in the car, and centrally within the chassis rails, with a tolerance of 25mm. The engine and diff position will be measured from the outside side irons.

6. BRAKES

▪ Brakes must be fitted and effective on all FOUR wheels.

▪ Disc brakes may be fitted to replace drums. No bias brake systems. ABS is Not permitted.

▪ ***Only standard type Sierra discs are permitted – these are solid Mk1 discs Or vented Mk2 discs. (no Cosworth, etc parts permitted). You are not permitted discs which are grooved or drilled.***

▪ ***Braided brake hoses and competition brake pads are permitted.***

▪ ***Master cylinder and brake servo must be from any readily available mass produced road car.***

▪ ***Alternatively, an F2 type tilting master cylinder available from Randall Motorsport maybe used.***

7. GEARBOX

▪ Any standard production gearbox, which is available from a Ford model, may be used provided it fits a standard 2-litre engine without modification. The standard Transit spacer plate is permitted with modification if required to fit the starter/engine mounting brackets.

▪ All gears must be fitted and in working order with ratios to match the casing used.

▪ No straight cut or competition boxes. The propshaft may be modified to accommodate the gearbox used and the gearbox mounting can also be modified.

8. DIFFERENTIAL

▪ Crown Wheel & Pinion sets on all cars must match standard manufacturer's ratios. No competition ratios are permitted.

▪ Differentials may be locked but limited slip not permitted. No Cosworth or 4x4 parts permitted. The only Crown wheel and Pinion sets permitted are those the SSCA have confirmed as a ratio manufactured by Ford as standard Sierra parts, i.e. 3.14, 3.36, 3.38, 3.62, 3.64, 3.77, 3.91, and 3.92. Alternatively, the 7" and 7¹/₂" Granada diff casing is permitted using 3.36, 3.64, 3.91, 4.09, 4.27 diff ratios. Alteration to the diff mounting is permitted. The drive shafts must enter the diff in an original manner and the prop shaft should be at 90° to the diff. The diff must also sit level (front to back).

▪ One long and one short drive shaft as originally fitted must be used; these must be fitted in standard position (short N/S, long O/S) and cannot exceed the original width of the axle.

9. WHEELS

Any 13" steel wheel may be used up to a maximum of 150mm width. To accommodate the 14" Yokohama tyre only standard Ford or Peugeot steel rims are permitted. Centre plates must not be re-drilled but plates cut from the same wheel as those being used may be

fitted over the existing wheels to add strength. A plate may also be welded to the inside of the wheel centre to help prevent loss of wheels. Wheel studs must have sufficient thread to accommodate a full nut. No dome nuts. No wheel spacers permitted. No alloy wheels permitted.

10. TYRES

- ***On SHALE surfaces the only tyre permitted is the Yokohama A Drive 185/65/14 (T rated only) tyre.***
- ***On TARMAc surfaces you may use up to four Yokohama A Drive 185/65/14 (T rated only) tyres or up to four Yokohama A021 tyres or any combination. However the Yokohama A021 will only be allowed to a tread depth of 4mm maximum, in an effort to discourage the use of new tyres. It is hoped to encourage the use of second hand tyres from BrisCA F2s which are widely available.***
- ***Avon tyres and tyre softener are no longer permitted for use.***
- Tyres may be re-grooved but no tyre cut across the tread may be used on shale tracks.

11. SCREENS

- No glass is allowed in the window apertures or screen. Mirrors may be fitted inside the car only.
- A metal upright of min 19mm SHS must be welded or bolted into the windscreen aperture, approximately one third of the way along the driver's side. A sturdy wire mesh panel of max 50x50mm matrix securely fixed to the windscreen aperture and upright covering the driver's side of the screen is compulsory to prevent debris entering the driver's compartment.

12. SEATS

Fibreglass seats and other special competition seats are recommended, and must be securely fitted. The back of the seat must be adequately supported and provide a strong head restraint otherwise this restraint must be an integral part of the rollcage. Driver's seats must occupy their original position.

13. SAFETY EQUIPMENT

- The use of dense foam padding around any protruding objects, which will protect the driver within the cab area, is highly recommended.
- Helmets must be of a minimum standard as directed by British Oval Racing Safety Executive (B.O.R.S.E). These are FIA8860-2004, Snell SA2005, Snell SA2010, SFI Foundation 31.1A, and SFI Foundation 31.2A. The E2205 European standard helmet may be used in Fibreglass, Carbon or Tri-Composite form only i.e. NO POLYCARBONATE helmets are allowed. It is important that the helmet fits the driver correctly. Shatterproof goggles/visors must be worn although tinted visors are not advisable. Your helmet must display the current ORCi sticker.
- Neck braces are recommended.
- Fire retardant gloves are **MANDATORY** and must be marked appropriately. Drivers must wear racing overall type clothing of flame retardant Proban or a high specification material and this must be maintained in a clean and tidy condition in view of the public. N.B. If wet weather clothing is used this must be worn IN ADDITION TO and NOT INSTEAD OF the regulation flame retardant overall type of clothing described above.
- A quick release cloth window net must be fitted to the driver's door window aperture. The netting should have holes not larger than 7.5cm or 3" wide. It should come down level with the steering wheel, and should be flexible and easily removable.
- A 1Kg Dry Powder Gauge Fire Extinguisher is highly recommended and if fitted, this should be in a tube with a spring top and should be within easy reach of the driver. Old type BCF (green) type extinguishers are not allowed. All tow vehicles, must carry a minimum of a 2kg fire extinguisher dry powder or gas, which must be within easy reach of the driver and mechanics at all times, especially when refueling.
- A minimum of 3" (75mm) wide safety belts (1.75" (40mm) sub-strap) are mandatory. This must be a full five point buckle release harness (including NASCAR type) with sub-strap. ***Lap straps and sub-strap must be fitted and bolted to the chassis. Shoulder straps maybe fitted to an extra bar on the roll cage behind the seat, approximately 100mm below shoulder height (this bar is to be made of roll cage specification material), OR TO THE CHASSIS BEHIND THE SEAT BUT NO FURTHER BACK THAN THE FRONT FACE OF THE REAR WHEELS.***
- Shoulder belts with a sternum protection latch are highly recommended. The sub-strap must be used at all times and all belts must connect to the quick release buckle. In the case of NASCAR lever latch buckles it is advisable to fit a secondary means of detent to prevent overall sleeves accidentally unhooking buckles during racing. A small section of Tubegrip elasticated bandage slid over the hooked buckle serves this purpose. Special attention must be paid to the condition of seat belts and fixings once fitted.

14. FUEL

- All cars must use fuel that is freely available from at least 200 roadside service stations in the UK.
- These fuels will conform to either to a British Standard, either BSEN228 (premium unleaded) or BS7800 (super unleaded)
- The only additive permitted is Millers Oils CVL (lead replacement) the approved valve lubricant.
- The maximum treatment rate is 1 bottle (250ml) to 20 litres of fuel.
- Regular fuel testing will be carried out with the test for manganese having an upper limit of 100 mgms/litre (100ppm)

Fuel Testing

- Basing the regulations on a pump fuel (which conforms with a British Standard) will facilitate testing for conformity.
- Random fuel testing will take place at a number of events during the season.
- Samples will be taken directly from the car at the end of a race (i.e., as it leaves the track and before it returns to the pits)
- 3 samples (approx 100ml each) will be taken and stored in tamperproof and glass containers, sealed and the seal numbered. ▪ 1 sample is left with the driver
 - 1 sample is left with the organisers (as a control sample)
 - 1 sample will be sent to Millers Oils for testing.

- Drivers and organisers will sign the fuel testing form which details the seal number.
- Millers Oils will make the results available to the organisers within 2 weeks of receiving the sample.

The testing will confirm that the base fuel complies with one of the British Standard and that the level of manganese introduced by the addition of CVL does not exceed 100ppm.

15. FUEL SYSTEM

- Only tanks with a maximum capacity of 2 gallons are permitted
- This must be positioned, along the centre line of the car (front to back)/in front of or on the rear axle and behind the driver

and on top of the chassis/steelwork (i.e. may not sit lower than any part of the diff).

- All tank filler caps must be metal and screw type fixing. Minimum wall thickness for steel tanks to be 3mm and 4mm if aluminium.
- If the fuel tank is not protected by the rear rollage supports, it **MUST** also have some form of protection to the rear of it, constructed from RHS/Tube and/or steel plate, to prevent damage from a rear impact. The tailgate/boot does not count as sufficient protection.
- All aluminium fuel tanks that are secured using a bracket(s) bolted down to the steel work, **must** also be secured with two 50mm wide metal straps over the tank in the opposite direction to the original fixing i.e. if the original bracket is bolted side to side, the secondary brackets need to go from front to back or vice versa. Must be rubber matting between the base and the floor/steel work.
- Petrol pipes must be of metal, metal covered or **specific rubber braided fuel hose** and have a shut off tap within easy reach of the driver. Reminder that rubber connecting hoses on fuel lines are not permitted
- All tanks must be fitted with a breather system, which prevents spillage if a car is inverted. All petrol pick up pipes must draw through a stand pipe from the top of the fuel tank. A non-return valve is compulsory in the breather pipe.
- All fuel lines must be clipped securely, and routed away from electrics i.e. if a fuel line runs along the inside edge of the chassis rail, you may run the electrics along with outside edge of the rail, as a minimum.
Electronic fuel pumps must be mounted either behind the main firewall or under the bonnet.

16. FLOOR/FIREWALL

- All cab floors must be complete and extend beyond the rear of the driver's seat, at least to the front edge of the rear suspension arms.
- A firewall is compulsory and maybe achieved as follows:
 - Option 1: **Saloon Type BodysHELLs Only**: The cab floor must extend upwards to the foot of the rear screen aperture
 - Option 2: By placing a steel box over the fuel tank. The box must be open to the rear and/or passenger side, and must allow enough room for clear inspection of all pipes and fittings. The floor of the cab must also be extended upwards to the box covering the tank.
 - Option 3: By fixing a fire shield the full width of the car which must deflect rearwards to at least 200mm above the tank.
- Original boot floor may be removed. Fabricated tunnels and front bulkheads must be made from steel and welded to the floor. No holes are permitted for access, **except for a hole in the bulkhead to allow measurement from engine to diff.**
- To protect the driver in the event of a front U/J failure, a hoop of 25mm x 6mm steel must be fitted to surround the prop within 300mm of the front U/J. This hoop is not required if steelwork surrounds the prop in this area.
- Rear wheels must be protected by trailer arches fitted to each side to prevent debris striking driver.

17. BATTERIES & ELECTRICAL

- Batteries must be securely clamped in place and covered with a leak proof material to prevent spillage of acid.
- An electrical cut off switch must be fitted to the Rear N/S corner of the car and be clearly marked On/Off. If the car is fitted with an electric fuel pump, a switch must also be within easy reach of the driver.
- Self-starter motors must be fitted and in working order at all times.
- All electrical wires must be clipped securely, and routed away from fuel lines i.e. if a fuel line runs along the inside edge of the chassis rail, you may run the electrics along with outside edge of the rail, as a minimum.

18. NUMBERING

Your Saloon Stock Car Association registered numbers must be displayed on both sides of the car and also on a roof fin plate. Regulation side numbers must be 450mm high in 75mm strokes. Regulation fin numbers must be 225mm high in 25mm strokes. All numbers must be of professional appearance, painted black on a white background. **The whole of the number must be visible above the roof line.**

19. SIGN WRITING

The drivers name must appear plainly on the car. Only other writing confined to sponsors or mechanics names which must at all times have the approval of the promotion.

20. SILENCERS & EXHAUSTS

The specialized BriSCA F2 silencer available from race suppliers are the only silencers permitted. If the exhaust is routed through the car, this must be boxed in completely (except underneath) throughout the car, to where the floor terminates. All systems must terminate in front of the rear axle. The silencer, must remain unaltered within 25mm either side of the box. **NO COMPETITION STYLE EXHAUSTS ARE PERMITTED.**

A You must use standard 2 litre pinto Sierra down pipes from the manifold, which must continue until at least the single pipe section.

Tail pipes **MUST** point side wards or downwards.

B 50mm flexible joining section if required

C Rear exhaust section fitted with BriSCA silencer

U

The only exhaust down pipes permitted are those as fitted as standard to a 2 litre pinto Sierra. You may use up to a maximum of 50mm inside diameter pipe to connect from the downpipes to the silencer.

Due to the height of engines and positioning of steelwork, you may shorten the down pipes at the manifold end only. Where the twin down pipes gather into one, this must remain standard, i.e. you may only fit your own 50mm internal diameter pipe to the end of the standard SINGLE pipe - you may not use your own 50mm pipe to create your own 2 into 1 section. Furthermore you are not permitted to remove the internal spine from the original two into one section.

To accommodate the new BriSCA F2 type silencer it is permitted to use larger than 50mm inside diameter pipe for the last 150mm **BEFORE** the silencer. This is due to the fact that the new silencer has slightly oversized inlet and outlet pipes.

21. GENERAL RULES OF RACING

- Each driver is only permitted one car per meeting, and each car is only permitted one driver per meeting.
- The grading system will be the same throughout the UK in that there will be no superstars but any driver winning a race must start at the back of their grade for the remainder of the meeting. The onus is on the driver to take up this grid position and two places will be docked by the steward for each position out of place taken at the start.

22. ROOF COLOURS

- When notified of their grading, drivers will paint the roof of their car in their appropriate colour.
- White, yellow, blue or red down to the tops of their doors.

23. TRANSPONDERS (Not **required at Crimond raceway**)

An AMB TranX260 Lap Scoring Transponder is mandatory (available from www.AMB-it.com) and should be working at all times. They **MUST** be fitted 1.8 metres back from the front most position of the car and in the passenger side area **and visible inside the car**. A hole of at least 150mm square (or in diameter) is required in the floor, with the transponder fitted vertically, at floor level. In the event of a dispute with the transponder result, the Steward of the meeting will make the final decision, however, if the driver is found to have fitted the transponder further forward than the required 1.8 metres, then the driver will be excluded from the meeting.