

Crimond Hot Saloon Rules – 2018

This formula is NON CONTACT with cars prepared to a professional racing appearance; this standard is required to be kept throughout the racing season.

Any 2018 changes/clarifications are shown in Red.

1. **ELIGIBLE CARS:** Any front engined, front or rear wheel drive, four or five seat car with an all steel production shell and of a model introduced for sale in the UK six (6) years prior to the current race year, i.e. for 2015 season cars prior to January 2009 are permitted. Right- hand drive cars may be converted to left- hand drive. Front wheel drive body shells **may** be converted to rear wheel drive but rear wheel drive body shells **cannot** be converted to front wheel drive. Cars with four wheel drive or fitted with limited slip differential are **NOT PERMITTED.**
2. **BODYWORK:** Doors, wings, bonnet, boot lid/hatch back door and all main structures must be in place and in a **PRESENTABLE CONDITION** at the start of each meeting. Cars with tatty, dented and badly battered panels will not be passed by scrutineering.
Doors, boot lid/hatch back may have inner structural stiffeners removed but all doors **must** be welded or bolted shut. The bonnet may have inner structural stiffeners removed and front shortened by 100mm (4”) with the cut off section welded in place. No other alterations to bonnet permitted. Bonnet, boot lid or hatch back must be in place during a race. They may be retained with 20mm (3/4”) maximum dia. pins but length must not extend more than 20mm (3/4”).

Steel Bumpers (front & rear) **must** be removed. Original Plastic bumpers only may be used. The **Only** steel permitted is the original steel reinforcement supports/cross bar behind bumper originally fitted to that vehicle. Any mounting brackets for bumpers and or Steel supports may be replaced and re-manufactured to original design and size only from 3mm maximum flat bar or angle. Four (4) extra 10mm (3/8”) max bolts with 50mm (2”) o/d repair washers may be used anywhere on the bumper to fix it to the car.

Where only steel bumpers were fitted originally these must be replaced with Plastic Bumpers (from another vehicle) of a similar size as original steel bumpers fitted. (If in doubt if changing from a steel bumper to plastic, contact a committee member for clarification.)

Headlamp and grille apertures may be filled in with 1.2mm max steel/aluminium sheet but grille must include a minimum of 4 holes 50mm (2”) diameter.

Wheel arches to a maximum of 50mm (2.0”) protrusion beyond widest part of original wings may be fitted. A fabricated sheet metal skirt, 1.2mm thick max, between front and rear arch is permitted but must be no wider than arch extensions.

A strut brace, strut to strut and/or struts to bulkhead are permitted. A 40mm (1.5”) max angle brace between chassis legs, which can be formed into a U

shape for radiator mounting, is permitted but must be no closer than 150mm (6") to front of car.

- 3. ENGINES & TRANSMISSIONS:** Unless stated otherwise both engine & gearbox must remain standard to the original specification for the particular combination used. **NO modification of any sort permitted** NO mixing of pistons/rods/cranks/cylinder heads/valves from various models.

For 2015 onwards drivers have two engine choice options, 3A or 3B. Option 3B will be run for a minimum of Three (3) years and will be reviewed after this time. At the 2018 AGM these engine rule's was reviewed by the H/S drivers in attendance and voted by a majority to be continued as is.

3A:- ENGINE - Option One: Cubic Capacity is free and both carburettor and fuel injection type engines are allowed **but** both must run with carburettors only, no fuel injection systems allowed. Engines that were originally fitted with, either one single or one twin choke down draft carburettor, or one or two single side draft carburettors or the Mazda rotary engine fitted with four barrel down draft carburettor are permitted. Engines with variable valve timing are permitted. Control of the VVT **Must** be hard wired into the car's ignition switch and **NOT the engine ECU**. The VVT control solenoid must be wired to the main ignition switch so when ignition is switched on to start the engine, the VVT solenoid is also switched on and the VVT is activated and can only be de-activated when the ignition is switched off.

NO EXTRA ECU control boxes or control switch's allowed. Drivers **Cannot manually** switch or adjust control of valve timing during a race. The engine must be controlled by matching throttle pedal assembly to the ECU used, "IE" if engine used has an ECU and a drive by wire throttle pedal, this must be used. If the engine has an ECU and a mechanical control, (Throttle cable or linkage), this must be used, **NO** mixing or swapping around of control method.

Re-grinding of crank and re-boring of block to manufacturers limits allowed.
A maximum of 0.5mm (20 thou) may be skimmed from cylinder head.

3A:- CYLINDER HEAD & INLET MANIFOLD: A fuel injection cylinder head may only be used if inlet manifold from standard manufacturers same type engine fits to cylinder head **without** modification, e.g. no drilling of new stud holes, welding up of existing stud holes, closing or opening of inlet or water transfer ports in either manifold or head. Standard inlet manifold gaskets **must** be used; no custom cut or home- made gaskets permitted.

3A:- CARBURETTOR & AIR FILTER: Any standard carburettor is permitted but must fit to standard inlet manifold used **without** modification, e.g. no re-drilling of holes or adaptor plates, and must have originally been fitted to manufacturers engine used, e.g. Ford carb on ford engine or Volkswagen carb on Volkswagen engine. Carb jets may be changed. Air filters can be removed and/or replaced with sports type filter, i.e. K&N or Pipercross. Fuel pumps may be replaced with electric type.

3A:- IGNITION SYSTEM: Electronic ignition and or an ECU is permitted **only** if fitted as standard to particular engine used. **NO** modifying of timing and ignition pick up points permitted, Crankshaft and or flywheel pick up points must also be standard and **NOT** modified.

3B:- ENGINE - Option Two: Drivers are permitted to Purchase an aftermarket or to manufacture an inlet manifold, but can only use the Webber 32/36 carb. If choosing this option the engine will be up to and including a maximum of 2000cc, 4 CYL, SOHC or DOHC, VVT, 8 or 16 valve with an original factory power output of no more than 160 HP when original OEM Fuel injection was fitted.

Re-grinding of crank and re-boring of block to manufacturers limits allowed.
A maximum of 0.5mm (20 thou) may be skimmed from cylinder head.

3B:- CYLINDER HEAD & INLET MANIFOLD: Cylinder head must remain as standard, no polishing/machining of inlet/exhaust ports. No fitting of larger inlet/exhaust valves. Maximum of 0.5mm (20Thou) may be skimmed from head. If an aftermarket inlet manifold is available which allows the fitting of a Webber 32/36 Carb, this is allowed or a driver can manufacture a manifold but must only use the Webber 32/36 Carb. Gaskets to mount the Manifold to the engine may be home- made or original but Carb to manifold gaskets must be as listed below.

3B:- CARBURETTOR & AIR FILTER:

Only a standard Weber 32/36 DGV or DGVA carburettor may be used with option Two.

A maximum of 26mm and a 27mm sized chokes only permitted. 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 carb 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 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. Air filters are free.

3B:- IGNITION SYSTEM: Only the Electronic/ ECU system supplied by the OEM of engine used can be used, “IE” (Ford engine- Ford ECU). This **MUST NOT** be tampered with in any way apart from the removal of any extra wiring not required in a Hot Saloon installation. No modifying of engine timing pick up points is permitted. Control of VVT on engines with VVT **Must** be hard wired into the car’s ignition switch and **NOT the engine ECU**. The VVT control solenoid must be wired to the main ignition switch so when ignition is switched on to start the engine, the VVT solenoid is also switched on and the VVT is activated and can only be de-activated when the ignition is switched off.

NO EXTRA ECU control boxes or control switch’s allowed. Drivers **Cannot manually** switch or adjust control of valve timing during a race. The engine must be controlled by matching throttle pedal assembly to the ECU used, “IE” if engine used has an ECU and a drive by wire throttle pedal, this must be used. If the engine has an ECU and a mechanical control, (Throttle cable or linkage), this must be used, **NO** mixing or swapping around of control method.

References: - OEM – Original Engine Manufacturer
 VVT – Variable Valve Timing
 SOHC – Single Over- head Camshaft
 DOHC – Double Over- head Camshaft
 ECU – Electronic Control Unit

4:- ENGINE POSITION: On RWD cars the engine (and gearbox) may be moved back. All cars must have a firewall/bulkhead separating driver from engine/gearbox.

5:- EXHAUST: Exhaust manifold is free and may be standard fitment or a tubular type. OEM or after- market type is permitted.

A Minimum of one exhaust silencer must be fitted. Exhaust system may pass through interior of car but **must** be covered. If exhaust exits at rear of car it must be below bumper level.

6:- GEARBOX: Any standard production gearbox permitted but must be from same manufacturer as engine, e.g. Ford engine = Ford gearbox, Fiat engine = Fiat gearbox.

7:- REAR AXLE: May be replaced with stronger one of same design only, live axle may **not** be replaced with axle of independent configurations and vice versa. When car has been converted from FWD to RWD, any standard live or independent production axle configuration may be used. If live axle fitted, coil or leaf springs may be used, maximum of four links only permitted.

8:- DIFFERENTIAL: Ratios are free but must be from manufacturers range and may be welded or free. Limited slip differentials are **not** permitted.

9:- SUSPENSION: To remain as original concept apart from permitted negative camber, positive camber is permitted on N/S front wheel only. Suspension arms and links may be manufactured and made adjustable, but **NO rose joints permitted.** Coil or leaf spring rates are free. Cars can be lowered by adjusting torsion bars, cutting coil springs, fitting lowering blocks or using threaded adjusters. Spring platforms and shock absorber mounting points can be made adjustable. A total of only two extra non-adjustable shock absorbers may be fitted. Standard coil over units e.g. BMW – Triumph may be used on the rear only.

10:- BRAKES: Brakes must operate efficiently on all four wheels, drums may be replaced with discs and a servo may be fitted.

11:- WHEELS & TYRES: Widening of wheels is **not** permitted, but wheels from any other standard car may be fitted provided they fit without modification to wheel or hub. After market wheels, e.g. Weller, and alloy wheels are permitted but no racing, rally or circuit types allowed. Maximum wheel width 150mm (6"). The only tyre permitted is the Yokohama AO21R 185/70 X 13 on all four wheels in dry or wet track conditions.

12:- ROLL CAGE: A full steel four post, minimum; roll cage must be fitted, minimum size, 33 x 3 mm tube or 40 x 2.5 mm box section. Where the roll cage contacts the floor/sill area, a 100mm square plate must be welded and or bolted to the floor/sill area. When bolted, there must be a minimum of 4x10mm bolts with suitably large washer plates underneath the vehicle. A 6mm inspection hole must be drilled at base of upright to allow thickness check. A minimum of two (2) drivers' door protection bars must be fitted between roll cage uprights, a minimum of two (2) passenger door protection bars must also be fitted between roll cage uprights. A horizontal cross brace must be fitted mid-way between floor and shoulder height, minimum size 30mmx3 round, or 40x40x2.5 box. The brace should be fitted to the main cage uprights, or if this is not possible, the door bars. The main roll cage must be within passenger compartment. Horizontal extensions, maximum size 25mm (1") box or tube; from front uprights to top of suspension struts are allowed. A rear extension frame from roll cage into boot area is permitted, maximum size 25mm (1") box or tube; to a minimum of 150 mm (6") of all panel surfaces and must be welded or bolted to floor. Horizontal cross braces are permitted. Extra bars may be added to main roll cage at the driver's discretion.

13:- FUEL TANK: Maximum capacity 2 gallons with metal screw type cap drawing fuel from top and fitted with leak proof vent system to prevent fuel escape during full or partial inversion of the car, one-way valve

recommended. The tank must be boxed in if fitted inside the passenger compartment or behind a firewall if positioned in the safe area behind the driver. A fuel valve / tap must be fitted in main fuel line between fuel tank and engine and within easy reach of driver when driver is strapped into car.

14:- RADIATORS: All radiators or cooling containers must be located within the engine compartment forward of the front bulkhead/firewall. Radiators are free but must have an overflow pipe terminating no more than 450mm (18”) from ground.

15:- BATTERY: Can be located in passenger compartment but must be fixed securely and covered to prevent leakage. Fitting of master switch on R.N.S. of car compulsory. If electric fuel pump fitted a control switch within reach of the driver when strapped in must be fitted.

16:- BRAKE LIGHTS: A minimum of two working brake lights must be fitted inside rear window aperture.

17:- WEIGHT LIMITS: Cars must weigh at any time (in full race condition) between **720kg minimum and 850kgs maximum.**

18:- DRIVERS: Once out of white grade, drivers cannot drop below Yellow in second and subsequent seasons.

19:- GENERAL: Components which can be altered or re-positioned are: power units, rear axle, wheels, fuel tank, radiator, seat and any other component which requires moving to facilitate engine/gearbox transplants. The Steering column can be altered, fabricated or modified when converting car to left –hand drive, The use of rose joints is permitted on steering column modifications only.

Cars that are / have been racing in any other class at Crimond are not eligible. There must be a minimum of **Two** rear view mirrors fitted to the race car, one **Must** be fitted to N/S door & other can be inside rear view mirror or O/S door mirror. Mirrors may be of any type, from other car or after-market type.

20:- Transponder A Identisports in-car transponder is compulsory in the Hot Saloons. These can be purchased from the track shop. These transponders must be mounted in the car in the passenger compartment above the top height of the doors “Not forward of the windscreen aperture and preferably not further back than the main loop of the roll-cage. The red led light on the transponder must point towards the control box when the car is competing on track and must be able to be seen from outside the car”.

21. Driver Grading/Roof colour & Numbers: Drivers will be re-graded every two race meetings. Drivers can only change grade if they have raced that grading period. Driver grades will be displayed by number roof fin colours instead of roof colour; drivers may paint their roof any colour and may paint their race number on the roof to assist lap scoring. The following roof fin colours will be adopted from 2014.

White grade driver: - White background with Black numbers

Yellow grade driver: - Yellow background with Black numbers

Blue grade drivers: - Dark Blue background with White numbers

Red Grade drivers: - Red background with White numbers

Any driver not displaying their correct grade on number fins will have to start from the rear of the grid on first time offence; driver will not be permitted to race if second offence until correct grade is shown.

All roof fin numbers must be a minimum of 6" X 1" (150mm X 25mm)

When lining up on track at start of a race, White & yellow grade drivers can start in any position in their grade. Blue & Red grade drivers will be placed on the grid according to their track championship point's total. Any grade driver who wins a race must start at the rear of their grade for the remainder of the race meeting.

Any driver winning 2 races at a race meeting will be automatically upgraded for the next race. If a driver wins the first two races of a meeting, they do not have to have roof fin changed that day but must start at the front of new grade for third race of meeting.