

Crimond Saloons Regulations revision 2012.02.



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.

- 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.
If permission is granted for alternative engines the driver would be issued a special license With certain conditions to use the proposed engine.

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 + 90 thou/ 2.25mm 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** 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.

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) 2 litre Zetec specification

Engine: - Zetec–R engine commonly referred to as the blacktop or phase 3 Zetec

Source:- Ford Mondeo 2 litre from 05/1998 to 2002 with cast exhaust manifold, no other Zetec Engine types permitted.

Serial number/code type: - NGB or NGC only

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 132.5mm. 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

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

Inlet manifolds: - **No** home made manifolds permitted. An adapter plate can be used to fit Ford OEM manifolds, i.e. Crossflow/CVH type and it should be no thicker than 30mm.

Carburetor: - 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 Mondeo cast item, downpipe 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.

Camshafts: - Casting rings on the camshaft must be intact and a record held of their codes given to Crimond raceway. NO re-profiling of Camshafts permitted. Camshafts must be standard Ford production items for the Mondeo 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 softener is allowed. All wheels must be steel with a maximum rim width of 6". No wheel spacers allowed. Tyres must be Yokohama A-drive, "T" rated with a maximum width of 185, rim diameter is free. **Drivers who were wrongly sold "H" rated tyres by the Track shop, may continue to use them till they are used up.** Wheels can have their center strengthened. No dome 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 (AVO coil over) **on the N/S only is permitted.** Spring rates are free. Camber is free. Caster is free. Adjustable spring platforms are allowed.

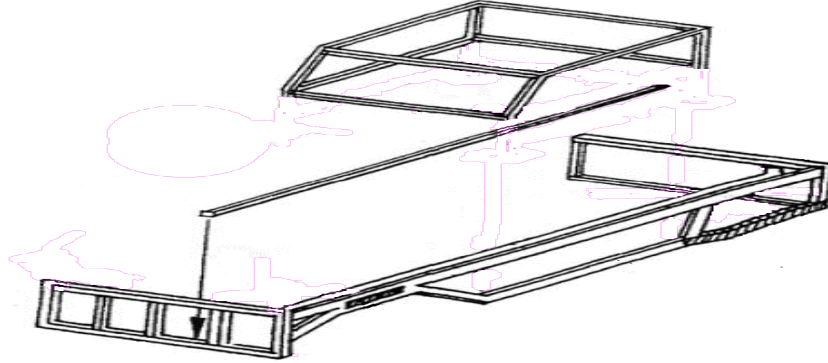
Rear The original suspension set-up for that vehicle should be used or the sierra set-up. The original tie bars and suspension arms should be utilized but can be re-enforced. Any number of **non**-adjustable standard shock absorbers are allowed, adjustable spring platforms are allowed, spring rates are free. Camber is free.

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 50mm speed bump without ironwork striking it and should not "bottom out" during normal race conditions.

10) Ironwork

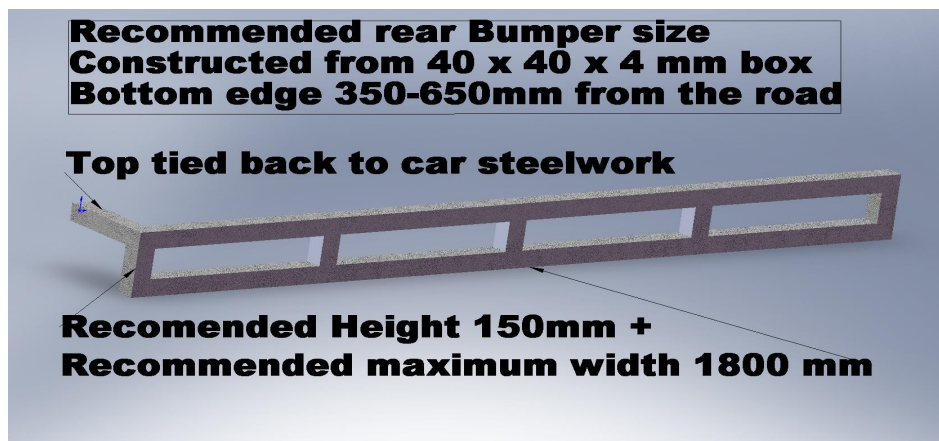
Main car



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. At least 2 horizontal bars should 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.

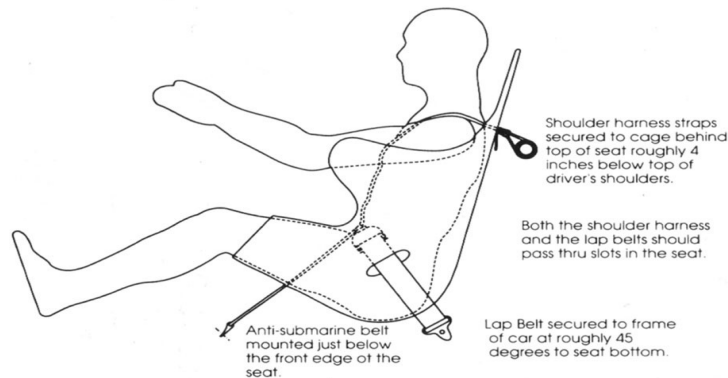
Bumpers All bumpers should be constructed from minimum 40 x 40 x 3mm box or tube and fitted in a vertical position. Bumperring should be no greater than the extreme outside width of the car unless otherwise stated. The front must not exceed the height of the bonnet and drop to less than 450mm from the 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 filler should 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 (recommended one way valve) should be fitted. 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** Cars should not be deliberately fenced or side swipped into the tyres or spun to the outside, follow-ins not permitted, dead or stationary cars should be avoided, cars “hiding” in the safe areas will be excluded if they do not re-join after 2 laps.