

2010



MINI STOX SPECIFICATIONS

The formula is based on a 1000cc Mini, as manufactured by British Leyland. **No Cooper or Cooper S Engine/Suspension/Brake parts may be used.**

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.

Cars, Engines and Fuel will be checked on a random basis.

Violations will result in an immediate suspension of all racing facilities and any refusal will also result in an immediate suspension.

All car and engine specifications will be taken from the Technical Service Data book for cars as published by Glass's Guide Service Limited. Technical queries can be addressed to, The Secretary, ORCi Limited, Technical Committee, P.O.Box 9889, Birmingham, B43 6WA.

NB: Drivers are reminded that scrutineer checks can be carried out at any time, and most certainly on all official championships. If parts are suspected of being illegal make sure you leave them with the promotion if you do not agree. If you refuse it will automatically make the parts illegal. **It is the responsibility of the driver to prove to the promotion that the part is legal by the way of written proof of where the part originated. This must be done within seven days, otherwise the part(s) in question will be deemed to be illegal and will result in immediate suspension from racing and referral for disciplinary action.**

1. BODY

Only Mini, Mini Clubman, Riley Elf or Wolsely Hornet Saloons are acceptable providing all run with 850cc/1000cc running gear on the front and rear with a standard wheelbase of 2040mm + or – 25mm. A metal upright min size ¾" square must be welded or bolted into the windscreen aperture, one third of the way along the driver's side. Passenger door may be cut down a max of 3" drivers door 1½". All external lights, fittings and bright metal trim must be removed. The doors may be skinned, along with the rear pockets; the rear parcel shelf may be removed. The doors must be welded shut. A steel boot floor must be in place on all cars. Though not necessarily original, this must tie the vehicle floor pan, rear arches and rear panel together and be welded in position. Further alloy firewalls behind the driver are permitted and drainage holes in the area around the location of the fuel tanks are compulsory. Aerofoils are not permitted. The floor pan must be retained and made good, where the internal iron work is joined to the external iron work the body or floor pan must be made good. Inner wings may be removed.

2. WEIGHT

Warning : Cars can be weighed at any time before, during or after a meeting, without driver. They must always achieve the minimum weight; the adding of fuel or any other liquids is not allowed to achieve this minimum weight, which is 712 kg. Racing weight must be achieved without the use of ballast. All internal ironwork must be of equal proportions on both sides of the car in construction and gauge. The driver's floor pan may be reinforced with steel plate maximum thickness 3mm.

3. ENGINE, GEARBOX & DIFFERENTIAL

The regulations for the 1000cc engine are as follows :

- A nominal bore of 64.59mm plus 1.5mm oversize allowed. A standard stroke of 76.2mm (original cc 998).
- Pistons must be standard 998 replacement type, with all rings in place. No machining of pistons allowed.
- Only standard replacement rings are allowed (No competition or total seal rings allowed).
- The block may be surface ground, but the piston must be level or down the bore.
- The block may be rebored or sleeved back to standard and rebored or line bored.
- No other alteration allowed.
- The head must be standard Mini 1000 casting and may be surface ground to a minimum thickness measured between the top and bottom machined faces of 2,700 thou.
- Valves must be standard or replacement Mini 1000
- Valves of standard length and standard valve head size of 27.89 inlet, and 25.53 exhaust.
- Valve seat angles are free, but there must be no machining or fettling past the valve seat on the valve or the head.
- Standard valve spring top and coilets must be retained.
- Any single valve spring that fits without the need for machining may be used.
- Valve guides may be replaced or reconditioned using thin wall bronze sleeve in existing guide, but must occupy original position.
- The combustion chambers and ports may not be modified in any way and must not have any material added or removed.

- Smoothing, cleaning or fettling any of the flow areas i.e. Carburettor, Adapter/Restrictor Plate or inlet manifold is not allowed.
- Replacement valve inserts may be fitted, but must be level with the bottom of the combustion chamber. Inserts must not be fitted that enlarge the port orifice. Inserts must return to the cylinder head to its original port diameter.
- Only the standard replacement gasket allowed.
- Any camshaft may be used that fits without additional modification to the engine or components.
- Cam followers, push rods and rockers must be standard Mini 998.
- NO VERNIER PULLEYS ALLOWED.
- You may use off-set woodruff keys.
- Standard timing chain and tensioner must be used.
- Only the standard type distributor may be used.
- The advance may be altered and you may lock the base plate.
- No electronic ignition systems are allowed.
- Spark plugs are free.
- You may not lighten, balance or stress relieve the pistons, con rods, crank shaft or flywheel.
- All oil ways and galleries must remain unmodified.
- Oil pickup pipe may be repositioned.
- No oil coolers or remote oil filter allowed.
- Compact oil filters are allowed.
- Only the standard Mini 1000 1½" carburettor, with the single outlet exhaust manifold is allowed, used with the restrictor plate provided by your ORCi Promoter. The plate must be fitted with the ORCi label at the top and fitted to the manifold with the holes provided. The restrictor plate must be fitted between the sandwich plate and the inlet manifold. Once fitted, you may modify the corners to allow throttle linkage clearance. **Drivers are to be reminded that any tampering with the supplied restrictor plate will automatically attract a 12 month ORCi racing ban.** Inlet manifold servo pipes must either be connected to the servo or blanked effectively.
- No modification to the carburettor allowed.
- Jets and needles are free.
- Air cleaners are free.
- No trumpets allowed.
- The radiator must be within the engine compartment and be of the standard type.
- Solid engine mountings allowed, and engine stabilisers may be fitted. A 50mm hole must be machined in the engine end cover in a convenient location for checking the flywheel.
- Gearbox. You may only use the standard 850 or 1000 Mini gearbox all gears must be in place and all gears must be original equipment ratios. Diff ratios are free, however the formula may be restricted to one ratio in the near future. All diffs must be unlocked, no limited slip or power lock types. A remote gear change is not permitted.
- The engine must be fitted with a metal catch tank of 1 litre minimum capacity connected to the engine breather system. This must be fitted under the bonnet,

For the 2010 season, all cars registered or racing with Spedeworth are subject to additional rules regarding gearbox and differential ratios. Please see Item 18 under Quick reference chart for further details.

4. ROLL CAGE

A full roll-cage must be constructed of minimum 38mm (10 gauge) square or round tube. The cage to consist of screen hoop and hoop behind driver with connecting bars in the roof. All four uprights must have a steel plate on the base bolted to the floor no less than 100mm square minimum, one eighth thick. Two chicken bars must be fitted to the roll-cage on the driver's side and one on the passenger side. A 3mm plate must be welded to the outside of the chicken bars inside the car. A horizontal bar must be fitted across the roll cage pillars at shoulder and floor level behind the driver and at scuttle panel and floor level in front. This bar must be a minimum size of 2" x 1" or 1½" x 1½" or tube equivalent. A 3mm thick roof plate must cover half the roll cage area above the driver and be supported on all sides. All roll cages must terminate within the vehicle. **The use of steel mesh is permitted in the front windscreen, but must end ½ way across on the drivers side only.**

5. IRONWORK

Protection bumping and side rails constructed from 50mm x 30mm, 50mm x 25mm or 40mm x 40mm hollow steel rectangular box must be constructed in accordance with illustration, to ensure even contact between cars. The front bumper must consist of two horizontal bars, with a minimum of 4 and a maximum of 5 vertical uprights. The height of the front bumper, measured between the top of the top bar and the bottom of the bottom bar must be a minimum of 9" and a maximum of 14". The curve at front and rear corners of bumpers must not extend more than 150mm from the line of the side iron. Corner gussets up to 150mm triangular of 6mm thick plate may be fitted. Two through irons MUST be fitted underneath the car from front to rear bumpers to hold sub frame in place 50mm x 30mm, 50mm x 25mm or 40mm x 40mm hollow steel box as in other parts of ironwork or metric equivalent may be used. Protective ironwork inside the car, rear of the engine compartment is up to individual and is free (See Regulation 2). Any additional gussets must not exceed 80mm x 80mm. The ironwork may be used as a location for the front and rear

subframe mounting brackets. Sub frames may be strengthened by the use of steel plate or hollow section. Sump guards may be fitted but must be securely welded to the ironwork. **All steel used must be 3mm thick (10 gauge) and must remain hollow i.e. no ballast of any kind is permitted. The car must be symmetrical in construction side to side)**

6. WHEELS & TYRES

Any standard manufacturers steel wheel 10" or 12" up to a maximum of 5" width may be used. Weller wheel etc. may be used with a maximum width of 5", a maximum inset of 3¼" and a maximum offset of 2¾" this measurement is taken from the back of the wheel rim to the back of the wheel stud flange face. Only 10" wheels are allowed on the back. Wheel studs may be modified to suit. Modified (stronger) wheel studs may be used on Weller Wheels, flanges may be modified to accommodate the different stud. Any tyre to a maximum width of 6.2 or 165 may be used. Competition tyres cannot be used. No wheel spacers allowed. No regrooved or Town & Country tyres are allowed. All identification marks must remain on tyres. No tyre flaps allowed. Buffing of tyres is not allowed. Tyre softener is not allowed. The Yokohama AO32R, Yokohama A038R, and Yokohama A048R are not permitted irrespective of suffix. The Avon CR6ZZ and Dunlop Formula R are not permitted.

7. SUSPENSION - FRONT

Suspension components must remain standard. *Suspension cones and ball sockets must be fitted unmodified and should be identical. (Adjustment of ride height may be achieved by adding washers).* You may lengthen the near side track control arms by up to 20mm in length to give negative camber. *The maximum negative camber is 4°.* You may also shorten or lengthen the near side front tie rod. The modified components are not permitted to be adjustable on the vehicle. All suspension parts must be mounted in the original position and must not be attached to any additional ironwork. All cars must have suspension movement up and down. No lowering allowed. Push fit drive shafts may be lengthened upto 25mm to prevent driveshafts popping out on impact, ride height will be measured on the drivers side between the floor and the roof gutter midway along the car; it must not be less than 116.5cm. The steering rack may be lengthened, near-side only up to 20mm, or track rod ends may be changed to accommodate a longer track control arm. The repositioning of the near side front top shock absorber mounting is not allowed. Bump stops must not be removed.

8. SUSPENSION – REAR

The use of negative camber is not permitted on rear suspension. ***The rear suspension must always be set within the manufacturers tolerances of +0.5/-0.5.*** All suspension parts must be mounted in the original position, however sub-frame mounting points may be attached to the ironwork. **(Adjustment of ride height may be achieved by adding washers).**

9. FUEL SYSTEM

A full firewall must be in place between the driver and fuel tank and engine bay, with all holes blanked off. The interior of the car must be completely gutted of all combustible materials, glass and trimmings. Where additional internal panelling is used, these should be detachable to allow full visible access. Only tanks with a maximum capacity of 2 gallons are permitted, these must be fitted inside the boot area where they are separated from the driver and securely mounted. All tank filler caps must be of metal and screw fixing. Petrol pipes must be of metal or metal covered and have a shut off tap within easy reach of the driver. 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. Electric fuel pumps can be used in place of the standard manual pump but they must be situated in the boot behind the fire wall, 4 x 2" holes must be drilled at the lowest point under the fuel tank to allow spilled fuel to drain. The use of in-line fuel pressure regulators is allowed.

10. FUEL

For the full fuel specification please see the separate sheet.

11. BATTERIES & ELECTRICAL

Batteries must be securely clamped in place behind the driver with a leak proof material to prevent spillage of acid. An electrical cut/off switch must be fitted to the R/N/S corner of the car. If a car is fitted with an electrical 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.

12. BRAKES

Brakes must be effective on all four wheels. A handbrake must be fitted, in working order. Two brake lights must be fitted and working to be able to race on non contact tracks. These lights must be disconnected when racing on contact tracks. (See Rule 12 for Brake Light Specifications). Mini 1000 front disc brakes are permitted, you may skim the callipers to allow 10" wheels. The use of standard Mini 1000 spacers drums, on the rear only are allowed, provided they are fitted to both sides. Brake servos may be fitted as standard or remote, but it is not permitted to fit a servo which requires changes to the pedal box etc. No Cooper or Cooper S parts may be used.

13. STOP/BRAKE LIGHTS

As per Rule 12, stop/brake lights must be fitted and working to be able to race on non contact tracks as per the following specification :

Two stop/brake lights must be fitted anywhere within the rear window aperture and a minimum of 30 inches apart facing rearwards. Lamps must be operated by the standard stop light switch as fitted to the particular model of car. No other switches or modifications to switches to be made. Bulbs to be of 21 watt intensity.

- For round type lamps: minimum 3", maximum diameter 4".
- For square type lamps: minimum 3" square, maximum 4" square.

14. TRANSPONDERS

Transponders are mandatory and should be working at all times. They should be fitted 1.8 metres back from the front most position of the car. A hole of at least 6" (150mm) square is required in the floor, with the transponder fitted vertically, just below the hole. 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.

15. SEATS

Fibre glass seats and other special 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 roll cage. Drivers seats may be moved up to 3" from original position towards the middle of the car. A 75mm x 6mm flat plate shaped to the seat at shoulder height and welded to the roll cage must be fitted as support for the seat.

16. NUMBERS

Numbers must be displayed on both side of the car and also on a roof fin plate. Regulation side numbers must be 12" high in 2" strokes. Regulation fin numbers must be 9" high on 1½" strokes. All numbers must be of professional appearance, painted black on a minimum white background of 2".

17. SIGN WRITING

The driver's name must appear plainly on both sides of the car. Only other writing confined to sponsors or mechanics names. Childish drawings are not permitted. The drivers age must be painted on the side of the car above the number.

18. 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. Silver stripes denotes top points scorer. Each promotion's Top Points Scorer must start at the back of the grid. Only the correct roof grade and racing numbers may be painted on the roof. NO SIGNWRITING. Drivers name must be painted on a sun visor bolted or welded to the top of the windscreen aperture.

19. EXHAUSTS

Exhausts systems must use standard bore exhaust pipe max OD of pipe is 1¼" (32mm) to the front of the rear sub frame and standard Mini 1000 silencer(s). The system can terminate anywhere after the front of the rear subframe provided silencers are fitted. Max OD of pipe is 1¼" (32mm). The lagging of exhaust systems is not permitted.

20. DRIVER'S AGE

The minimum age for boys and girls is 11 years old and all drivers will end on their 16th birthday.

However, a driver aged from 11-12 may only race under the watchful eye of their promotion, with restricted bookings, until such time as the driver is confident enough to compete fully.

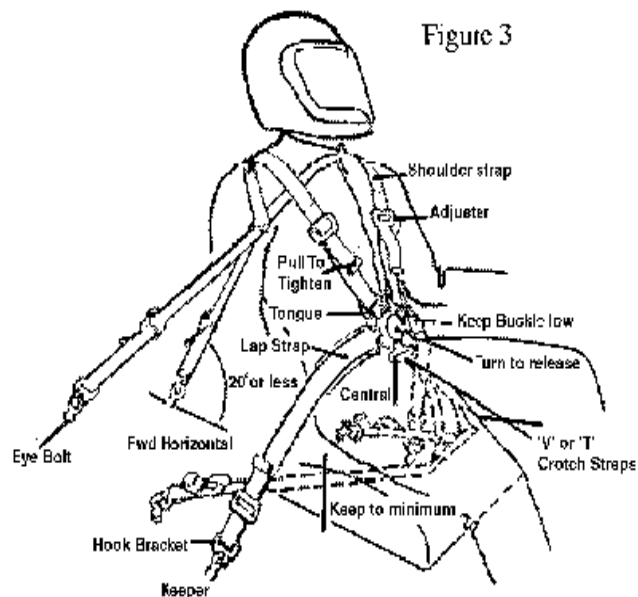
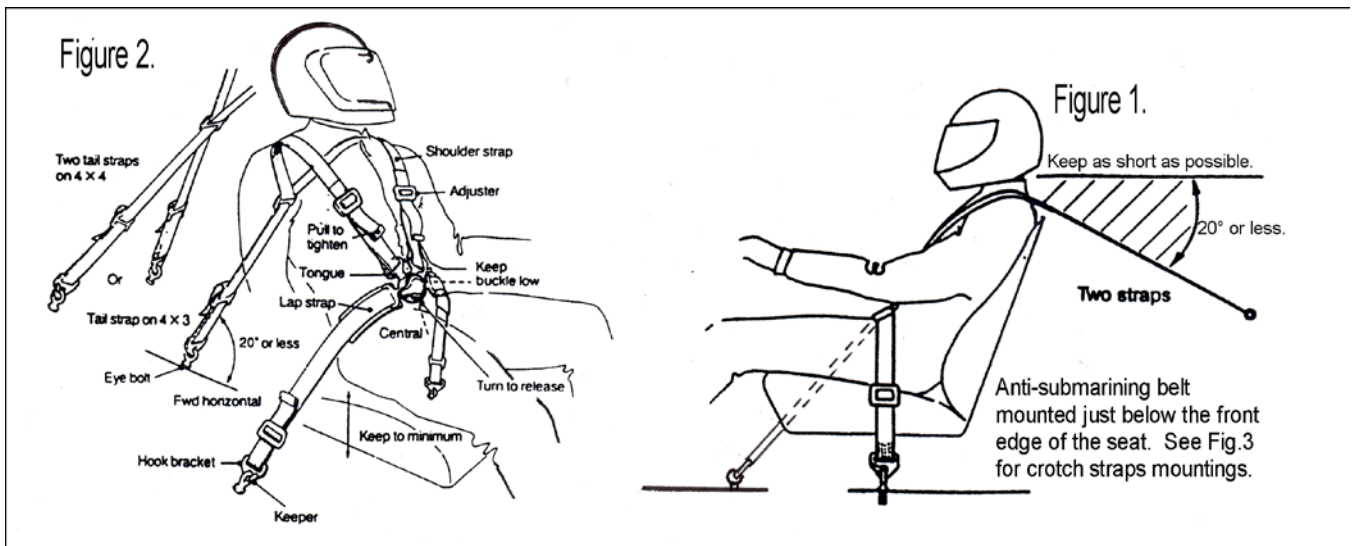
The driver's age must be painted on the passenger side of the car. A copy of the child's birth certificate must accompany their application for a licence.

21. SAFETY EQUIPMENT

- ***Helmets must be of a minimum standard as directed by British Oval Racing Safety Executive (B.O.R.S.E). These are ~~BS6658/85 Type A~~, BS6658 Type A/FR, FIA8860-2004, Snell SA2000, Snell SA2005, SFI Foundation 31.1A, SFI Foundation 31.2A. The E2205 European standard helmet may be used in Fibreglass or Tri-Composite form only. 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 (ORC09) sticker.***
- Neck braces are **MANDATORY**.
- Fireproof balaclavas **MANDATORY** and must be marked appropriately.
- Fire retardant gloves are **MANDATORY** and must be marked appropriately.
- A full five point buckle release harness (including NASCAR type) with sub-strap must be fitted and bolted to the floor and/or the roll cage. 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. An extra bar is to be fitted to roll cage behind drivers seat approx 4" below shoulder height of driver. Your seat belts may be fixed to this bar. The bar is to be of roll cage material specification.

Following recent research made by leading safety harness manufacturers, new information has been made available with regard to the best way to fit your safety harness, which will further ensure your safety. Please study the diagrams below to ensure your safety harness is fitted correctly.



- Drivers must wear bright coloured 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 separate to the movement of the door.
- 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.

22. GENERAL RULES OF RACING

Each driver is only permitted one car per meeting, and each car is only permitted one driver per meeting. **A responsible adult must be present at each race meeting with a Mini Stox driver.**

Non Contact Racing :

Some promotions may run non-contact racing. Check with any away promotion before travelling. New drivers will be deemed to be 'ROOKIE' drivers for their first THREE meetings and must start at the rear of the grid.

Contact Racing :

Drivers may only use enough force to push a car off its line, or spin a car towards the infield. Deliberate or forceful fencing is not allowed. Side swiping is not allowed.

New drivers may paint the boot lid with a black or white cross. This will mean that other drivers may not make contact with them, and that they will not be allowed to make contact with other competitors. The Steward of the Meeting will be empowered to ask a driver to remove the cross once he feels that a reasonable level of confidence has been achieved.

Please note that all of the above rules are subject to change in respect of Health & Safety requirements.

REVISED RULES FOR 2010 IN BOLD/ITALIC PRINT

ITEMS MARKED ~~STRIKETHROUGH~~ ARE NO LONGER ALLOWED

2010 Mini Stox Technical Specifications, Issue 4, Dated 5th January 2010.

QUICK REFERENCE CHART

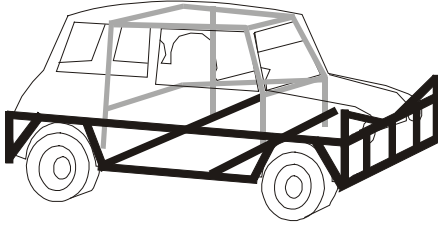
1. Engine Identification. The 99H, ID number is the correct block to use. The modern "A" Plus block is also allowed.
2. The original bore size is 64.59mm. The original stroke size is 76.2mm. The original swept volume is 998cc.
3. Carb: Only the two bolt fixing one and a half inch carb can be used, needle and jets are free, no reprofiling allowed, no quick lift chamfers, no reducers apart from the ORCi restrictor plate correctly fitted.
4. Pistons: Any standard 998cc replacement piston may be used 3 ring or 4 ring types are permitted; pistons must be unmodified with all rings in place.
5. Cylinder Head: All 850 & 998 heads are allowed provided they are unmodified and they use the specified valve size, part numbers permitted are 2a628-2a629-12a1456-cam4810. DO NOT USE, 12g202/206/295 or 12G940 or 12A185 or AFG163.
6. Camshaft: Free providing it fits without requiring any engine modification i.e: machining of the block or head, pistons etc.
7. Crankshaft: Any 998 crank including the "A" Plus are allowed stroke is 76.2mm.
8. Balancing: Only the standard factory balancing is permitted. Scrutineers will have the discretion to pass any suspect item to the ORC Technical Committee for a final decision.
9. Rocker Gear: All factory types will be accepted with A ratio of 1.25 to 1.
10. Oil Pumps: All three types of oil pump drive to suit the cam are permitted.
11. Lock Tabs: Not required.
12. Air Filters: Free, no reducers allowed to be fitted between the carb and air cleaner.
13. Brake servos may be fitted as standard or remote.
14. Tyres and wheels may be non-symmetrical on front, i.e. 10 or 12" on either side. Only 10" wheels may be used on rear.
15. Tyres must not be re-grooved.
16. The standard Mini steering column may be modified or repositioned to suit the driver, quick release steering wheel are permitted.
17. The restrictor plate must be fitted between the sandwich plate and inlet manifold, the plate must not be altered in any way. **Drivers are to be reminded that any tampering with the supplied restrictor plate will automatically attract a 12 month ORCi racing ban.**
18. **For the 2010 season, all cars registered or racing with Spedeworth or INCARACE are subject to additional rules, regarding gearbox and differential ratios as follows :**
 - ◆ **The differential ratio must be 3.44:1.**
 - ◆ **Gearbox type must be A+ 998cc.**
 - ◆ **Identification No DAM5626 (by oil filter).**
 - ◆ **2nd Gear ratio = 21 tooth layshaft and 26th tooth gear.**
 - ◆ **Final drive ration 3.44:1 = 18 tooth pinion and 62 tooth crown wheel.**
 - ◆ **Crankshaft gear = 29 teeth, Idler = 37 teeth and 1st motion gear = 29 teeth.**

N.B As stated above these additional rules also apply to any other registered drivers when racing at any Spedeworth tracks.

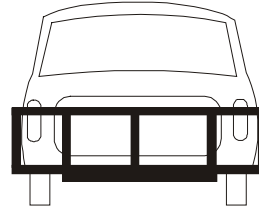
Mini Stox

Details of ironwork shown on this page as solid black lines is mandatory.

SIDE / FRONT

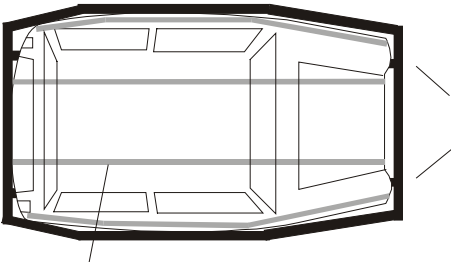


REAR



MAXIMUM OF 5 UPRIGHTS AT FRONT AND 5 UPRIGHTS AT REAR

TOP

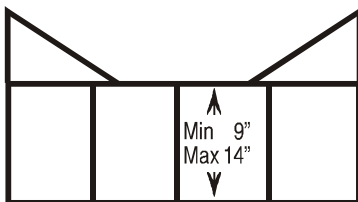


TWO THROUGH IRONS MAY BE FITTED UNDERNEATH CAR.

FRONT & REAR BUMPERS MUST BE FITTED TO SUB-FRAMES. NO EXTRA IRONING PERMITTED, THAN THAT SHOWN IN THESE DIAGRAMS

IRONS PASSING THROUGH TO ROLL CAGE AND FROM ROLL CAGE TO REAR BUMPER. TO COMPLY WITH THE REGULATIONS ON IRONWORK SIZES, THERE MUST BE A GAP BETWEEN THE INTERNAL AND EXTERNAL IRONWORK. IT IS NOT PERMITTED TO SEAM WELD OUTER RAIL AND INNER RAIL OVER THE LENGTH OF THE CAR THOUGH THEY MAY BE JOINED AT INTERVALS IN A LADDER FASHION

ALL IRON WORK MUST BE 2" X 1" OR 1.5" X 1.5" OR 2 X 1.25" BOX IRON - THE ONLY EXCEPTION BEING THE ROLL CAGE. YOU MAY USE NEAREST METRIC EQUIVALENT



FRONT BUMPER

THE FENCE HOOPS AND THEIR SUPPORTING BARS ABOVE THE BUMPER MUST BE HOLLOW BOX OR TUBE, MINIMUM SIZE 25MM X 25MM OR 25MM TUBE

ANY REAR SUPPORTS FOR THE FENCE HOOPS MUST TERMINATE AT THE CENTRE LINE OF THE WHEEL

ATTACHMENTS MAY BE WELDED TO THE SUB-FRAME FROM WHICH TO MOUNT THE BUMPER. YOU MAY WELD DIAGONAL BARS BETWEEN THE SIDE IRONWORK AND THE FRONT BUMPER

ALL CARS MANUFACTURED BEFORE JANUARY 1ST 2000 MUST BE A MAX WIDTH OF 60" AT ITS WIDEST POINT. ALL NEW CARS AFTER THIS DATE MUST BE NO WIDER THAN 58" AT THE WIDEST POINT.