

# ONCHAN RACEWAY

## *Stockcar Racing*

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### 2010 MINISTOX REGULATIONS

#### DRIVERS

Minimum age of 10 years - Maximum age 16 years.

Anyone whose 16<sup>th</sup> birthday falls after the first race meeting of the season will be allowed to continue to race to the end of that season.

#### CARS

British Leyland /Austin Rover derived ---- Mini saloon, clubman, all steel travellers, vans or pick-ups are acceptable; where vans are used the side panels may be cut out as a traveller. Cars and bodies must retain their original appearance. No fibre glass panels allowed.

#### WEIGHT

Each car as presented ready for racing (less driver) must not weigh less than 650 kg. This weight must be achieved without the use of ballast. It is the driver/teams responsibility to arrange for the car to be weighed (in a ready to race condition) prior to the start of the season and witnessed by the promotion.

Random weight checks may take place during the season.

#### INTERIOR

The interior of the car must be gutted of all original combustible material, glass and trim, except the drivers seat and compulsory padding.

#### FLOOR

The car will have a full metal floor fitted from the rear of the front sub frame to the front of the rear sub frame and be full width of the car. This floor is to be securely bolted or welded in place and be at least equivalent to an original mini floor.

Any other part of the floor may be removed if required.

#### ROLL CAGE

A full roll-cage must be constructed, it will consist of a screen hoop and a hoop to the rear of the drivers head. There will be connecting bars in the roof and sides. Two bars are to be fitted to both sides of the roll-cage, one at knee height and one at floor level. There must also be two bars or 3mm steel plate fitted above the drivers head. Bars to be a minimum of 230 mm and a maximum of 350 mm apart. Plate to be a minimum of 300 mm wide by the full length of the roll-cage. The roll-cage must be an all steel construction and be made from the following materials :-

- 35 mm round tube x 4.5 mm wall thickness, or
- 38 mm round tube x 3.5 mm wall thickness, or
- 38 mm square section x 3.2 mm wall thickness.

All sizes above these dimensions are permitted providing the 3.2 mm minimum wall thickness is maintained. The upright posts of the whole roll-cage must be either bolted or welded to either a sound floor or the front to

rear under floor bars. Extra braces and connecting bars between the roll-cage and side bars to be fitted at the constructors discretion. Front cross members between side bars and roll-cage must be fitted either flush or in front of the roll-cage uprights.

Care must be taken to position the bars in such a way that they do not make contact with the drivers legs / body when strapped in.

### **HEAD REST**

A full head rest must be securely fitted within 25 mm of the rear of the drivers helmet when strapped in, and suitably padded.

### **SEAT**

The drivers seat may remain but a better seat giving improved side support is recommended. If a reclining seat is used, the back rest must be securely fixed. All seats must be securely bolted or welded to either the floor or roll-cage.

A bar 25 mm square section must be fitted directly behind the seat from one side of the car to the other. Race type seats incorporating a head rest may be used.

The drivers seat must be moved and refitted in a central position. With a steel plate minimum thickness 3mm fitted underneath to protect the whole seat area.

### **HARNESS**

A full lap and shoulder harness must be fitted. The seat belts should be a minimum four point centre buckling type including a crutch strap. 75 mm belts are recommended. A minimum of 3 anchorage points should be provided inside the roll-cage through eyelets or bolts with a 10 mm minimum size. Belts must not be anchored to tin plate.

### **BATTERY**

The battery must be either enclosed in a box or covered with rubber (so as to prevent acid leakage) and be securely fastened down.

### **ELECTRICAL**

The main electrical lead must be run separately to the fuel line. A battery isolator switch must be fitted within easy reach of the driver when strapped in, which isolates the earth side of the circuit.

### **ELECTRONIC IGNITION**

Basic electronic ignition systems (lumination type etc) are permitted but no electronic management systems are allowed.

### **SPORTS COILS**

Heavy duty /sports coils are permitted.

### **PETROL TANK**

The original petrol tank must be removed and replaced with a metal tank having a maximum capacity of 10 litres with a metal top which is securely fastened. This tank is to be securely fitted in a position where it will not get damaged. All tanks must be fitted with a breather system which prevents spillage if the car is inverted.

The fuel outlet and breather must come out of the top of the tank.

Fuel lines must be of metal type although a maximum of 6 rubber or plastic joints of 150mm maximum length are allowed. Fuel lines must be securely fixed down and routed away from all electrical cables.

A fuel shut off tap must be fitted (and in working order) in the line and within easy reach of the driver when strapped in.

Only 4 star or unleaded petrol is allowed and no additives of any kind may be used.

It is strongly recommended that a fire wall isolating the battery and petrol tank from the driver is fitted.

## **FIRE EXTINGUISHERS**

All cars must carry a dry powder or CO2 fire extinguisher ( minimum size 1 kg and be of dial type ) which should be mounted (not taped) within easy reach of the driver when strapped in. A 75 mm diameter hole must be cut in the bonnet above the carburettor in case of a fire in the engine compartment.

## **BULK HEAD**

The speedo hole and any other holes in the bulkhead must be filled so as to complete a firewall between the engine compartment and the driver.

The steering column, brackets and all cross members close to the driver shall have all sharp edges removed and be effectively padded to avoid injury.

## **EXTERIOR**

All lights, fittings and bright metal etc. must be removed. Only superstar lights may remain. No aerofoils or wings are allowed.

Protective armouring as detailed in appendix 1 must be fitted in the correct position to ensure even contact between cars.

A 3mm steel plate will be fitted to both sides of the car and run from the side rail height bar to the top of the ankle height bar with a minimum size of 600mm x 330mm.

No strengthening bars shall be fitted externally on the centre part of the sides below the side rails. Sides must be completely flat. Any part of the boot lid and doors that remain must be welded or bolted shut. The body section below the side rails may be removed or modified to assist with the fixing of the additional steel plating.

## **FRONT BUMPER**

The front bumper must run parallel to the width of the bonnet. The ends of the bumper where it joins the side rails should be angled backwards at approx. 30 to 45 degrees, to create a stronger corner and lessen contact damage between cars.

Depth of front bumper should be 300mm minimum. A fence protecting post must be fitted on both sides and be a minimum of 100mm above the top rail of the bumper.

## **REAR BUMPER**

A twin rail of similar construction to the front bumper should be fitted downwards from the rear side rails with a minimum depth of 100mm.

## **EXTERIOR BAR WORK**

Bumpers and side rails to be constructed of 40mm x 40mm rhs, or 50 mm x 25 mm rhs ,or 50 mm x 50 mm rhs with minimum wall thickness of 3.2 mm.

Two bars of a minimum of either 40 mm x 40 mm rhs or 50 mm x 25 mm rhs with 3.2 mm wall thickness must be fitted underneath the car connecting the front bumper to the rear bumper.

A 3 mm steel plate must be fitted to the area beneath the drivers seat and can be fixed to one or both of the under floor bars.

All sharp edges must be removed from the bumpers and side rails.

## **WINDSCREEN**

A metal upright of 25 mm diameter or square section must be welded or bolted in the centre of the windscreen aperture, alternatively this bar and an additional one can be off-set leaving an opening of less than 600 mm in front of the driver.

In both cases steel mesh of 50 mm x50 mm maximum size must be fitted in front of the driver.

## **WHEELS**

10 inch or 12 inch diameter wheels may be used, but overall width must not exceed 6 inch.

## **TYRES**

No racing or competition tyres are allowed. Yokohama A008 and 032 are permitted.  
With a maximum profile of 165 permitted.  
Tyre softener cannot be used.

## **BRAKES**

Brakes must be fitted and work effectively.

## **SUBFRAMES**

Front and rear subframes must remain original type.

Front subframe must be fixed in the original mountings on the bulkhead cross-member.

Tie bar eyes must remain in the original position. If the subframe is welded to the front to rear under floor bars, you may remove the rear fins and replace the front cross-member with a similar bar between the front to rear under floor bars.

Rear subframe must be securely fitted to the rear of the car.

No other modifications to subframes other than stiffening or strengthening are allowed.

## **SUSPENSION**

Ride height can be altered by use of adjustable struts (front and rear) which replace the standard alloy struts, or alternatively the standard alloy struts may be shortened.

The top and bottom track control arms may be either shortened or lengthened. Shock absorbers must remain as standard items or equivalent replacement units manufactured specifically for minis; all must be non-adjustable.

## **ENGINES**

All engine blocks must be 998cc with original bore and stroke being :-  
998cc BORE 2.543 ins (64.59mm) STROKE 3.000 ins (76.20mm)

An overbore tolerance of 40 thou is allowed.

Crankshaft must remain original with no balancing or lightening. Billet steel crankshafts are not allowed.

Standard flat top or dished type pistons only are allowed. There will be no raised portion on any piston and no machining into the piston crown. No "Cooper" type pistons are allowed. Skirts may be cut. Flywheel and back plate must remain standard cast type and neither may be lightened. Likewise conrods must remain standard and may not be lightened or balanced.

Simplex, duplex, belt drive and adjustable timing gears may be used. Camshaft type is free.

## **CYLINDER HEAD**

Any 850cc or 998cc head may be used with a maximum valve size of:-

INLET 1.093 to 1.098 ins (27.76 to 27.89mm )

EXHAUST 1.000 to 1.005 ins (25.40 to 25.53mm )

No 1100cc or 1300cc heads or oversize valves are permitted. Heads may be skimmed, cleaned and ported. Any single valve spring is permitted.

## **MANIFOLDS**

Inlet and exhaust manifolds must be cast type No 12G787 and must not be drilled or cut and must not be rewelded. No three branch manifolds are allowed.

## **CARBURETTOR**

Any standard SU carb may be used in conjunction with a restrictor plate which will be supplied and remains property of Onchan Raceway, and returned to Onchan Raceway at the end of each season. Only the restrictor plate and the manufacturers gaskets/insulator block are permitted between the carburettor, manifold and cylinder head.

One carburettor mounting stud needs to be drilled so that the carburettor and restrictor plate can be sealed.

Restrictor plates will be checked randomly throughout the season.

No forced induction is allowed.

## **AIRFILTERS**

Can be removed or replaced.

## **GEARBOX/DIFFERENTIAL**

No limited slip diffs, worm drive, locked or welded diffs allowed.

Final drive ratios may be changed but must remain standard production items .No straight cut gears allowed.

## **RADIATOR**

Any radiator may be used but must remain within the engine compartment. Electric cooling fans may be used.

## **OIL COOLER**

An oil cooler can be fitted but must remain within the engine compartment.

## **ENGINE MOUNTINGS**

May be solid and engine stabilisers may be fitted.

## **EXHAUSTS**

A standard mini 1000 two box system must be fitted and effective. The system must be totally standard and unmodified - baffles must remain.

The following is a list of manufacturers and their part numbers:-

TIMAX -AN374J

BOSEL -294-461

UNIPART -GEX 154

WALKER -68-01940

QP EXHAUST SYSTEMS -S 3843

There will be others available but it is up to the driver/team to prove that their system is equivalent by providing a cross reference.

For reference purposes TIMAX systems have a bore size of 29mm with a front box 280mm long and a back box 355mm long.

If the system is damaged during racing the Clerk of the Course and scrutineers will determine if the car can continue in the meeting. In which case the fault must be rectified before attending the next meeting.

If any car creates excessive noise it will not be allowed to race until the fault is rectified.

## **PRE-SEASON SCRUTINEERING**

Pre-season scrutineering will be required before mini stox are allowed to race which will consist of general scrutineering of car construction, safety standards and engine check and sealing.

Two 1/8 inch holes minimum 8 inches apart must be drilled in the bell housing flange. Also two cylinder head studs and one carburettor mounting stud require to be drilled with 1/8 inch holes for sealing purposes.

## **ROUTINE SCRUTINEERING**

No car may go onto the circuit to race or practice until it has been scrutineered.

It is the drivers responsibility to ensure that their car is scrutineered. Engine seals will be checked. Any car with an engine not sealed will not be allowed to race until the engine has been checked and sealed. There will be no temporary sealing. If during a meeting, engine damage occurs which necessitates the removal of seals, the driver/team have no option but to retire from the remainder of that meeting. The only exception to this would be if a head gasket required changing, then an official from Onchan Raceway would be present to witness :-

1. The breaking of the engine seal
2. Removal of the cylinder head
3. Gasket replacement
4. Refitting of the removed cylinder head
5. Cylinder head tightening
6. Resealing

This work is to be done in the MAIN MINISTOX PIT AREA, in view of other teams and not outside on the grassed area.

### **CRASH HELMETS**

Helmets must be fitted with a suitable visor or goggles. Helmets must be worn at all times during practice or racing.

Helmets must conform to either :- Snell SA-2005; SFI Foundation 31.1A; SFI Foundation 32.2A; E22 05 or ECE-R22.05 Fibreglass or tri composite form only.

### **OVERALLS**

Drivers are required to wear suitable overalls during practice or racing – minimum standard for all drivers is flame retardant Proban protected to BS 6249.

### **NECK COLLARS**

Must be worn at all times during practice or racing.

### **GLOVES**

Flame retardant Proban gloves must be worn at all times during practice or racing.

### **NUMBERS**

Must be painted on both sides of the car, and also on both sides of a roof mounted fin. Minimum size of numbers being 230mm high with 25mm brush strokes with numbers BLACK on a WHITE background. The drivers name should be able to be seen by the commentator and spectators. **There will be no obscenities as stockcar racing is a family sport.**

### **CONDUCT**

Drivers are required to wear clean fire retardant overalls and attend the meetings with themselves and their car looking as presentable as possible.

Remember, apart from driving for your enjoyment, you are entertaining the public and it is with their support that we all continue to race.

A driver is expected to comply with all requests of the stadium staff when at a meeting. Mechanics are the responsibility of the driver, irresponsible conduct by a driver or mechanic could lead to the driver being suspended.

The Clerk of the Course/Onchan Raceway may at anytime discipline a driver or their representatives for unsporting actions or conduct either on or off the track.

A driver making a “ jump” start may cause the whole grid to be reformed, and will be warned of their actions. If the same driver is judged to have jumped the start for a second time within the next three races, that driver will be docked two places from the race result.

Any driver who drives recklessly or too aggressively will be warned of their actions. If their driving does not improve they will receive a 3 race ban.

If a major incident occurs on or off the track involving deliberate fencing, sideswiping or ramming another drivers car or other serious misconduct the driver / team will be disqualified from the remainder of the meeting.

The Clerk of the Course, relevant marshals and Onchan Raceway will discuss the matter at the end of the meeting and inform the relevant drivers / teams of their decision / penalty.

**The decision of the Clerk of the Course or Onchan Raceway will be final.**

### **ENGINE DISPUTES**

Any mini stox driver or their representative may put in a written complaint about the legality of any engine and this must be accompanied by the relevant complaint fee as detailed below :-

Complaints requiring the removal of the cylinder head       £ 40

Complaints requiring the removal of the flywheel           £ 40

Complaints requiring an engine strip to inspect crank, conrods, pistons , gear box or diff   £170

The engine concerned will be checked with Onchan Raceway staff in attendance and if it is found to be illegal the complainant will be refunded and the offender and car will be banned from racing for a maximum of 60 days.

If the suspected engine is legal, the complainant forfeits the complaint fee to the suspected driver.

### **NOVICE DRIVERS**

All drivers must start their racing career as a novice.

A novice driver may paint the rear boot lid of their car with black and white vertical stripes.

Experienced drivers must not treat aggressively novice drivers displaying stripes and likewise a novice driver must not treat aggressively any other driver.

Novices displaying black and white stripes must start each race behind the red / superstar grade drivers, enabling them to gain confidence.

Whilst displaying stripes any points scored will count towards individual meeting trophy awards, but not, the season long points championship. When a driver is confident the stripes can be removed, they will start each race from the white grade position and begin to score championship points.

### **GENERAL**

Each driver is only permitted one car per meeting per formula.

Likewise each car is only allowed one driver per meeting per formula.

### **GRADING**

Grading will take place after every fifth meeting. The entire roof of the car up to and including the gutter must be painted either white, yellow, blue, red or silver depending on points scored. Drivers having the wrong coloured roof will have to start each race behind the red / superstar grade drivers until the fault is rectified. Normal championship starting grid positions will be in graded order and reverse point scoring order. Ie Lowest points scorer before the start of the meeting in each grade starts all the races at that particular meeting from inside front row etc.

During the rolling lap, a distance of 7 car lengths must be maintained between grades (14 car lengths if an entire grade is missing).

The previous seasons points champion will be designated superstar for the whole of the following season and start each race 7 car lengths behind the red-top graded drivers. (Silver roof with roof mounted amber flashing lights in working order).

The points champion from the previous season has the option of racing under No.1 indicating that achievement.

### **ANNUAL TROPHIES**

Best turned out car – judged at each meeting by commentary box officials, with the trophy going to the driver gaining most awards throughout the season.

New comer of the Year – awarded to the highest point scoring driver in the grading list, open to drivers in their first season of racing.

Sword of State Trophy – awarded to the highest points scoring driver, over 3 meetings held during the season. The drivers name and racing number will be engraved on the trophy which they keep for one year. The trophy remains property of Onchan Raceway.

Points Champion (Ministox) – awarded to the winner of the season long points championship. Drivers name and number will be engraved on the trophy which they will keep for one year. It is then presented to the following seasons points champion.

### **THE RULES**

When referring to these rules and regulations the principle will always be :-

If you want to alter, modify or vary anything and these rules do not actually state that it can be done –

DO NOT DO IT – ask Onchan Raceway for written permission.

If you have any doubts about the interpretation of these rules and regulations you should seek confirmation from Onchan Raceway.

Modifications or interpretations will be considered by Onchan Raceway and if it is thought the sport of mini stox would benefit by a rule change, modification or interpretation this will be conveyed to all registered drivers who will be notified of the change and time of implementation.

REMEMBER – UNLESS THESE RULES STATE YOU CAN DO IT - DON'T

**OBJECT** Ministox was and still is intended to be a fun sport for 10 to 16 year olds.

Lets keep it that way --- enjoy your racing and go for it !

**THESE RULES SUPERSEDE ALL OTHERS PREVIOUSLY ISSUED**

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