

# 2010 MOTORSPORT IRELAND FIAT UNO CHAMPIONSHIP

## TECHNICAL REGULATIONS

### 15. INTRODUCTION.

This is a class for standard production saloons based on the FIAT UNO. All cars must use only standard production components except where permitted in these regulations. In these regulations the word 'standard' is deemed to be as originally produced or supplied by FIAT, the definition is further extended to include replacement or pattern parts produced by other than FIAT for aftermarket sales provided that:

**15.1.** The part is a straight replacement for the original part, requiring no modification to fit.

**15.2.** All dimensions of the part and the materials used in its construction are the same as the original part.

**15.3.** The entrant is able to demonstrate that points 15.1. and 15.2. have been observed, if requested by the Eligibility Scrutineer. (By making reference to the aftermarket manufacturers catalogue, for example).

**15.4.** The MI Year Book and Spec. Sheet take precedence over the Workshop Manual.

**15.5.** If there are any doubts over your car's legality, please contact the Eligibility Scrutineer for written clarification or permission.

### 16. ELIGIBLE CARS.

Any 3 or 5 door Uno Mk I or II.

### 17. BODYSHELL.

Must be standard steel shell with all doors and hatch back operating. Structural additions for safety and reliability purposes are permitted provided they do not alter the outside appearance of the car. Head lamps may be replaced by blanking to original shape. Bucket seat must be used to MI Spec. Front bumper must be as standard with no cooling slots cut in it. Headlight covers must be uncut.

### 18. WEIGHT.

The minimum weight in full race trim inclusive of driver and racewear is 787kg. To achieve minimum weight some or all of the following items can be removed; side and rear windows and regulators and be replaced by Macrolon etc, carpets, head cloths, all sound proofing and seats, rear wash and wiper assembly. Dash must remain in place but revcounter and gauges may be added. If door panels are removed, they must be replaced by a sheet of aluminium no less than 1mm in thickness. Doors must retain internal opening mechanism. Full roll cage and door bars may be uprated.

### 19. AERODYNAMICS.

All standard aerodynamic devices such as rear spoiler must remain in original location where fitted by the manufacturer and must not be added to or altered. Front wiper arm and blade must be retained in original position and operational.

### 20. SUSPENSION.

Replacement struts must have same external mounting points as standard units. Group N shock absorbers are permitted. Spring platforms may be fixed or adjustable. Springs are free. Ride heights as per Specification Sheet.

Camber - Front 1o pos to 1.5o neg. Max.

Rear 1o pos to 1.5o neg. Max.

Track - Front 1350mm max.

Rear 1320mm max.

Wheel Base 236.2 Max.

**20.1.** All mounting points must be standard to achieve front camber, one hole in shock may be enlarged. No anti roll bars allowed on suspension.

**20.2.** It is permitted to stiffen the 'U' shaped beam which connects the left and right rear suspension arms. No other modifications to the rear axle are allowed.

#### 20.3. Mounting points for Suspensions.

Top Suspension Mount may be replaced by uniball arrangement, provided it is in original position.

**20.4.** Wishbone and Rear beam rubber mounts may be replaced with Teflon bushes. These are the only modifications permitted to above parts.

**20.5.** The front beam may be re-enforced and strengthened.

### 21. STEERING.

Steering assembly must be as originally fitted to the vehicle. Steering wheel can be changed. Min. turns on wheel 3.8 from lock to lock.

### 22. BRAKES.

Brake lines and friction materials only can be uprated. Standard discs can only be used, unmodified. Friction area can not be increased.

Compensator valve on rear brakes must remain under car

### 23. WHEELS & TYRES.

#### 23.1. Wheels.

**Any 13'5 J alloy or steel provided it has the same off-set as FIAT original and within the max, track allowed.**

#### 23.2. Tyres.

**Toyo TR 350 or 330 165.65 X 13 (dry tyres to be scrubbed 3mil)**

**23.2.1.** Tyres may be checked prior to or in the assembly area and non-conformity with regulations could result in exclusion if not replaced before racing, priority being given to safety.

## 24. ENGINE - GENERAL.

**24.1.** Engines permitted 128A1, 1381, 138B11. Strictly no interchanging between similar types.

**24.2.** Modifications of any kind are strictly prohibited except if contained in these regulations.

**24.3.** Re-conditioning is permitted but must be within the constraints of the FIAT workshop manual of the engine. The MI Spec. Sheet and MI Yearbook taking precedence over workshop manual.

**24.4.** Sump may be baffled. Oil cooler is allowed. No bodywork modifications are authorised except for fixing holes for the actual mounting of an oil cooler.

## 25. CYLINDER BLOCK.

**25.1.** It is permitted to bore cylinder block to max 87.00mm. Maximum c.c. of any block is 1320 c.c. The only way allowed to alter volume of piston in cylinder is by machining square across top of piston. No fettling of piston pockets allowed.

**25.2.** Maximum bore size (A) is 87.00mm.

**25.3.** Machining of piston crown (B) must be square (90) with cylinder bore.

**25.4.** Minimum weight for rod & piston assembly is 1.2 kgs.

## 26. CYLINDER HEAD.

**26.1.** The cylinder head ports must be as manufactured. Strictly no grinding or polishing is allowed. This prohibits the use of wire brushes or other abrasive tools.

**26.2.** The valve guides must be as manufactured, no modification of any kind is permitted. Minimum length: 46.5mm.

### 26.3. Valve Inserts.

It is permitted to re-condition the valve inserts as laid down in the Fiat Workshop Manual provided the re-conditioning ensures a valve seat width of not less than 1.5mm with valve inserts has a maximum width of 30mm at it's narrowest point, for inlet. A valve seat width of not less than 1.5mm with a valve insert maximum width of 26.5mm at it's narrowest point is required for exhaust.

Maximum overall diameter inlet valve seats: 35mm.

Maximum overall diameter exhaust valve seats 30mm.

**26.4. Valves.** Only standard valves, valve springs and assembly permitted. Washers spacers must be of standard specification. No additional spacers, springs or washers may be added. Valve spring retaining position must be as standard.

Washer spec under valve springs:

Large washer thickness - see Specification Sheet

Small washer thickness - see Specification Sheet

Top retaining washer thickness - see Specification Sheet.

Refacing valve seats on cylinder head.

NOTE -The valve seats are refaced on the cylinder head every time the valves or valve guides are refaced or replaced.

## 27. CAMSHAFT.

Camshaft must be a standard 3P, 128 Ritmo 65 or Uno 1300. Coupe camshaft is not permitted.

**27.1.** Cam wheel may be of a Vernier Pulley design, but must be non variable when in motion. Retaining dowels, holes on camshaft and cam wheel must be to standard specification.

## 28. MANIFOLDS.

Inlet only FIAT standard cast manifolds.

Inlet manifold carb. flange end 34mm.

Engine flange end 29mm.

Exhaust manifolds pipe end 34mm.

Engine flange end 28mm.

Exhaust pipe is free but must exit rear of driver either side or rear of car.

**28.1.** The heating system to the inlet manifold may be blocked off at the cylinder head and the external feed may also be blocked off and disconnected.

**28.2.** Exhaust manifold may be insulated with wrapping.

**28.3.** Exhaust pipe is free but must exit rear of driver's seat, either side or rear of the car. It must run with at least one silencer conforming to Appendix 2 Article 9.

## 29. CRANKSHAFT/CONROD ASSEMBLY.

Only standard components permitted. It is permitted to balance the crankshaft assembly in accordance with the FIAT workshop manual but within the limits and tolerance of the MI specification sheet.

## 30. CLUTCH.

A standard clutch assembly must be used, either a FIAT original or equivalent provided they comply with MI specification sheets. It is permitted, however, to uprate clutch disc only.

## 31. PISTONS.

Standard original FIAT part pistons or equivalent may be used provided they comply with the MI specification sheets. Contour or shape of piston may not be enhanced in any way. Maximum allowable compression ratio 9.4:1 also see cylinder block.

**31.1.** Piston rings must be similar in design, shape and specification to standard Fiat unit.

Total seal compression rings are not permitted.

## 2. CARBURETTORS.

**32.1.** Type allowed Weber 34 DMTR with primary venturi 22mm secondary venturi 24mm.

**32.2.** No machining or drilling allowed. All removable jets may be changed. Choke mechanism may be removed or rendered inoperative.

**32.3.** The fuel pump may be electric or standard type.

**32.4.** A K & N/Piper type filter may be used or standard Fiat air box system with complete operating air filter. Alternative air box systems will not be permitted.

## 33. IGNITION.

Standard FIAT system with points or standard UNO Electronic can only be used. No DIGIPLEX or MICROPLEX systems.

## 34. GEARBOX.

Must be standard 4 or 5 speed gearbox unit from any Fiat Uno model, provided that the gear ratios and final drive comply with 34.1. and 34.2. below.

### 34.1. Crown Wheel.

It is permissible to use any Fiat Uno crownwheel and pinion, provided that it is listed in the Fiat Uno workshop manuals.

### 34.2. Gear Ratios.

The following are the only gear ratios eligible to be fitted to any Fiat Uno gearbox:

1st Gear 3.909:1

2nd Gear 2.056:1 or 2.055:1

3rd Gear 1.342:1 or 1.344:1

4th Gear 0.964:1 or 0.978:1

5th Gear (where fitted) 0.778:1, 0.780:1.

0.831:1 or 0.836:1

Reverse: any Fiat Uno reverse gear and shaft is permitted.

Note: it is permitted to modify gearbox casing to facilitate the fitting of larger reverse gear spindle shaft.

### 34.3. Differential.

A limited slip differential of any form is NOT permitted.

### 34.4. Gear Change Mechanism.

It is permitted to up-rate the reliability of the gearchange mechanism by replacing the standard ball & nylon socket joints with up to three rose-joints.

## 35. SAFETY.( see Appendix 2)

**35.1.** A MI approved full safety harness.

**35.2.** A fire extinguisher system to MI regulations, plumbed in.

**35.3.** A master cut out switch operable from outside and inside of car which will isolate the battery and kill the engine.

**35.4.** A full roll cage of an approved type and intrusion bar on each side may be uprated. Strut braces are allowed.

**35.5.** A laminated windscreen *is mandatory*.

**35.6.** Steering locks must be removed or rendered inoperative.

**35.7.** A bucket seat is compulsory.

**35.8.** Protective clothing and helmet as per current MI regulations.

**35.9.** Battery must remain in original position.

**35.10.** Rear lights, stop lights and (21 watt) rain lights (fog) must remain functioning.

## 36. THERMOSTAT.

The thermostat housing on the cooling system may be removed and replaced with a direct feed alternative in the original position. The lower position on the radiator may be connected directly to the water pump.

## 37. BONNET SCOOPS.

The placing of a scoop as defined in a drawing from the Technical **Advisory Group** is permissible. The maximum size of the hole allowed in the bonnet is 30cm width by 16cm depth with 5cm tolerance. The scoop must not be modified. The maximum width of intake is 125mm by 30mm (with 5mm tolerance).

## 38. MI ELIGIBILITY SCRUTINEER APPOINTED.

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