

## **YOKOHAMA Irish touring Car Championship 2012**

### **ITCC TECHNICAL REGULATIONS**

#### **Introduction**

**All cars must run on a YOKOHAMA Ireland purchased control tyre and must be purchased from Yokohama Irish dealer Murray Motorsports to be eligible to score points and prizes. All tyres will be branded with a stamp by Murray Motorsports.**

The series will run in accordance with the General Competitions Rules (hereinafter GCR) of Motorsport Ireland and Sporting Code of the FIA, and these rules which will constitute supplementary regulations. The series organisers reserve the right to amend or vary the Technical Regulations at any time before or during the series and further issue additional statements concerning the regulations from time to time subject to MI approval. All statements will be issued as a Bulletin by publishing on the website of MI ([www.motorsportireland.com](http://www.motorsportireland.com)) ([www.itcc.ie](http://www.itcc.ie))

#### **1. GENERAL**

**1.1a** Where these regulations refer to the passenger compartment, or driver compartment, this refers to the whole of the interior of the vehicle – including the rear passenger area.

**1.1b** Competitors must agree to take part in the Official Prize Giving Ceremony.

**1.1c.** The sponsor decals supplied by the ITCC will at all times take precedence with regard to the placement on cars as indicated in the drawing attached, the main sponsor Yokohama tyres will be the only wind screen banner/sponsor allowed, in cases of dispute the Scrutineer's decision concerning the precise location of the Series stickers will be final.

**1.2** It should be understood that if it is not clearly specified that you can carry out modification then you should work on the principle that you cannot.

**1.3** Safety Requirements – See MI Yearbook – Safety requirements conform to Appendix "2" of the Motorsport Ireland Yearbook.

**1.4** A Safety Rollover Cage must be fitted and conforming to MI Appendix 2.16.

**1.5** A Hans Safety System is mandatory for Super Touring drivers for 2012 and recommended for Touring drivers

**1.6** A Master cut out switch operable from outside and inside of the car, which will isolate all electrics and kill the engine must be fitted.

**1.7** Seat Belts complying with MI Appendix 2.7 must be fitted and in good condition.

**1.8** Fire Extinguishers complying with MI Appendix 2.6 (as required must be fitted, filled with permitted extinguishant and carry a current certificate.

**1.9** Competition seat with FIA Approval mounted in accordance with FIA regulations must be fitted

**1.10** Additional fasteners must be fitted on bonnet (not less than two) and tailgate (not less than

two). The original locking mechanisms must be removed

**1.11** Towing eyes must be fitted at front and rear and be clearly visible painted in red or yellow. If a solid item they must not protrude beyond the bodywork of the car. It is recommended that wire or strap type towing eyes are used.

**1.12** The bulkhead between engine and drivers compartment must be sealed against the passage of flame or fluid

**1.13** All cars must have working head lights.

#### **2.0 ELIGIBLE VEHICLES:**

**2.1** Vehicles must be constructed by a major vehicle manufacturer and be currently or previously available as a factory OEM vehicle with factory seating capacity for at least 4 people No tube frame/space frame vehicles or tube frame chassis extensions are permissible. Vehicles must have steel main pillars.

**2.2** 4wd vehicles are not permitted. It is permissible to convert what was originally a manufacturer supplied 4wd car to run in 2wd, where this is done a maximum of two driveshafts to wheels are permitted, whether active or not.

**2.3** It is permitted to fit additional triangulation and bracing of suspension turret/mounting points, as long as the modifications do not alter the appearance of the vehicle.

**2.4** Vehicles must retain their original VIN (chassis number) and original plate, which must be clearly visible and readable. The VIN must be valid for the chassis it is attached to.

**2.5** No convertible vehicles are permitted.

**2.6** Vehicles appearance must remain similar to that of the original vehicle.

**2.7** Engine must be located in front of the driver's feet/pedals

**2.8** The minimum ride height is 50mm, measured from the lowest point on the car to the ground. Cars must be able to pass over a measured item without any part of the car making contact.

**2.9** Original floor and bulkhead must be retained and not modified, it is permissible to remove the spare wheel well and replace with a flat section of steel not less than the original panel thickness. This piece must be no more than 1000mm in any direction and no higher than the surrounding original floor. Strengthening of the suspended parts of the chassis and bodywork through the addition of parts and/or material is allowed under the following conditions: The shape of the reinforcing part/material must follow the surface of the part to be reinforced, having a shape similar to it and the following maximum thickness measured from the surface of the original part

- 4 mm for steel parts

- 12 mm for aluminium alloy parts

For bodywork parts, the reinforcing part/material must be on the area not visible from the outside. Stiffening ribs are allowed but the making of hollow sections is forbidden. The reinforcing part/material must not have any other function than that of reinforcement

**2.10** Touring cars from recognised FIA approved touring car series are permitted provided they are in possession of FIA homologation papers and that the vehicle meets the regulations as

stipulated in these papers. The following ITCC regulations will overrule homologation papers: 2.1, 2.2, 2.5, 2.6, 2.7, 2.8, 3.1, 3.2, 3.3, 5.5, 6.2, 6.1, 6.3

**2.11** All vehicles must be fitted with an ITCC Authorisation badge. These badges are only available from the organisers. The car will not pass scrutiny and be eligible to race without an in date badge.

### **3.0 ENGINE, TRANSMISSION & DRIVETRAIN:**

**3.1** It is permitted to fit an alternative engine to the vehicle provided it complies with Regulations 2.7 and 3.2

**3.1a** All Turbo charged cars must be fitted with a 34mm FIA specification turbo intake restrictor as Appendix "2" Art.28.10

#### **3.2 Engine size**

Super Touring Engines limited to 3600cc, in the case of normally aspirated, forced induction cars are limited to 2300cc. Touring: no more than 2300cc is permitted.

#### **3.3 Location**

The engine must be installed in the original engine compartment and the crankshaft axis must be retained in the original orientation.

**3.4 Transmission** Any car with a non conventional H pattern gearbox gear selector must run with additional 30kgs of weight, this will be imposed over standard min weights as per tyre width.

**3.5** Vehicles must retain an exhaust system, complete with a silencer, which must be capable of passing a static 105db noise test, with the engine running at 2/3rd of the maximum rpm of the engine.

#### **3.6 Air Intake.**

Super Touring: Normally aspirated cars: Intake is free. All turbo cars must be fitted with a restrictor fixed to the compressor housing. All the air necessary for feeding the engine must pass through this restrictor which must respect the following:

The maximum internal diameter of the restrictor for turbo cars is 34mm, maintained for a minimum distance of 3mm measured downstream of a plane perpendicular to the rotational axis situated at a maximum of 50mm upstream of a plane passing through the most upstream extremities of the wheel blades (FIA Appendix J-Art.224 Drawing 254-4). This diameter must be complied with, regardless of the temperature conditions. The external diameter of the restrictor at its narrowest point must be less than 40mm, and must be maintained over a distance of 5mm to each side. The mounting of the restrictor onto the turbocharger/Supercharger must be carried out in such a way that two screws have to be entirely removed from the body of the compressor, or from the restrictor, in order to detach the restrictor from the compressor (It is also possible to use Silicone hose to mount the restrictor to the charger once it complies with FIA Appendix J-Art.224 Drawing 254-4). Attachment by means of a needle screw is not authorised. For the installation of this restrictor, it is permitted to remove material from the compressor housing,

and to add it, for the sole purpose of attaching the restrictor onto the compressor housing. The restrictor must be made from a single material and may be pierced solely for the purpose of mounting and sealing, which must be carried out between the mounting screws, between the restrictor (or the restrictor/compressor housing attachment), the compressor housing (or the housing/flange attachment) and the turbine housing (or the housing/flange attachment) (FIA Appendix J-Art.224 Drawing 254-4) For vehicles with Diesel engines, the restrictor must have a maximum internal diameter of 37mm and an external diameter of 43mm in the conditions set out above (this diameter may be revised at any moment without notice). (NO Black Smoke will be permitted from these cars)

In the case of an engine with two parallel compressors, each compressor must be limited by a restrictor with a maximum internal diameter of 24.0mm and a maximum external diameter of 30mm, in the conditions set out above. FIA Appendix J-Art.224 Drawing 254-4 can be found at the following web address: [http://argent.fia.com/web/fia-public.nsf/D47CB6EAF8D4A88AC12578A7003680E1/\\$FILE/255%2011-12-03.06.2011.pdf](http://argent.fia.com/web/fia-public.nsf/D47CB6EAF8D4A88AC12578A7003680E1/$FILE/255%2011-12-03.06.2011.pdf)

The organisers reserve the right to imply a restrictor to supercharged cars at any point during the season if a car is deemed to have an unfair advantage.

Touring Class: Free

#### **3.7 Oil/Water Cooling**

Free

#### **3.8 Exhaust Systems**

Exhaust manifold are free. A silencer must be fitted and the car must pass a noise test as per section 3.3 of these regulations. Exhausts must exit behind the rear axle

#### **3.9 Ignition Systems**

FREE

#### **3.10 Fuel delivery systems**

FREE

**3.11** Catch tanks for oil and water must be installed and securely fastened with the contents easily visible on inspection.

**3.12** The throttle mechanism must be in good condition and have an effective return spring. It is recommended to fit an additional return spring to the throttle mechanism.

**3.13** It is NOT permitted to convert a front wheel drive car to rear wheel drive, or vice versa

**3.14** Use of power aids such as turbos or superchargers is permitted but no nitrous oxide systems are allowed

**3.15** Motorcycle engines are not permitted.

### **4.0. FUEL & FUEL SYSTEM**

**4.1.** Vehicles must run on diesel or petrol pump fuel as per FIA standards

**4.2.** All fuel lines must be securely fastened at intervals of no more than 100mm throughout its length.

**4.3** The fuel-line can be run through the car, but it

must be a continuous (unbroken) metal pipe or braided hose and must be fitted on the passenger side of the vehicle. All other parts of the fuel system must have a firewall between the driver and equipment. The firewall must be sealed to prevent passage of fluids and fire.

**4.4** All fuel lines and filling devices must be clean and sealed after vehicles are fuelled to ensure no fuel can escape.

**4.5** The original OEM fuel tank is permitted, but it is also permissible to change this to an approved racing fuel tank. Dry break and bobble breathing systems from recognised manufacturers are permitted. If the fuel tank is housed within the driver's compartment it must be protected by a firewall.

**4.6** The fuel tank filler neck should have a spillage collector that drains to the outside of the car.

## **5.0 STEERING, SUSPENSION & BRAKES**

**5.1** All suspension parts and wheel bearings must be in good condition.

**5.2** All steering components are free.

**5.3** Steering wheel must be of continuous construction in either a circle or D shape

**5.4** The vehicle steering lock mechanism must be removed.

**5.5** All brakes components are free with the exception of carbon discs and/or pads which may not be used.

**5.6** The brake systems must be in good serviceable condition and no leaks of any kind are permitted.

**5.7** An effective handbrake must be present, but the operating mechanism is free.

**5.8** It is permissible to move suspension pick up points on the chassis from their original manufactured position, but by no more than 25mm in any direction.

**5.9** It is permissible to change the rear suspension of a vehicle, originally equipped with either a torsion bar or solid rear beam type rear axle to that of an independent rear suspension system.

**5.10** It is permissible to fit brake cooling ducts, these must be mounted within the front bumper of the car and not protrude more than 10mm from the bumper at the location they are mounted

## **6.0 TYRES & WHEELS**

**6.1 A Yokohama branded control tyre must be used in all classes.**

**6.1.1.** Tyre Warmers, space heaters or any similar devices for heating or softening the tyre compound are not permitted at any time. The use of any chemical mixture that is placed in the vicinity of, or applied to the tyre that would restructure the compound of the tyre is also prohibited.

**6.2** The following control tyres must be used for Super Touring: YOKOHAMA ADVAN A005 SLICK. The use of alternative wet tyre brands are permitted for 2012 with a view of using full Yokohama tyres for 2013.

15" wheels: 190/580R15 with a minimum weight of 900kgs

16" wheels: 190/580R16 with minimum weight of 950kgs

17" wheels: 210/610R17 with a minimum weight of 1100kgs

17" wheels: 230/610R17 with a minimum weight of 1200kgs

18" wheels: 230/610F18 with a minimum weight of 1300kgs

The above weights include the driver and equipment at the end of any given race or practice. All cars must report to parc ferme after race or practice.

**6.3** The following control emarked tyres must be used for Touring class YOKOHAMA ADVAN A048 semi-slick.

a) 195 50 R15

b) 215 45 R17

The Touring class minimum weight regardless of tyre width is 1000kg. Forced induction cars must run a min weight of 1050kg regardless of tyre width. Super 1600 or lower N/a cars minimum weight and must run min 850kg and must run a max R15 tyre. The above weights include the driver and equipment at the end of any given race or practice. All cars must report to parc ferme after race or practice.

**6.4** These control tyres may not be cut or altered in any way from that supplied by the manufacturer. No tyre may be buffed, re-trimmed, faced or by any mechanical or hand held device what-so-ever.

**6.5** There will be no tolerance on minimum weights as per GCR. The only weight recognised is that generated by the official scales used by the appointed scrutineer.

**6.6** No aluminium wheel studs are allowed

## **7.0 BODYWORK, WINDOWS & INTERIOR**

**7.1** Pillars must be metal. It is permitted to replace original panels with GRP and/or Carbon Fibre materials, the replacement panels must mirror the originals when viewed from a "side on" perspective. Flaring of arches is permitted.

**7.2** The front windscreen must be laminated glass, with the exception of polycarbonate where it is only permitted once it has been passed by the scrutineer. All other windows may be replaced with lexan materials. Where polycarbonate is used the window must be securely held in place.

**7.3** It is permitted to remove the dashboard and replace it with a bespoke design dash.

**7.4** It is permitted to modify, lighten or exchange the doors for GRP and/or Carbon Fibre units. In such a scenario the roll cage must consist of dual side impact bars.

**7.5** Any additional equipment inside or outside the vehicle including electrical equipment must be securely mounted in place. In car cameras can only be used after permission has been granted by Motorsport Ireland and cameras must be mounted securely. Any such additional equipment must be fitted before scrutineering.

**7.6** All doors, boot lids, bonnets and exterior openings must be serviceable from the outside, door handles and locking systems must be

Cars running:

operational at all times from the exterior of the vehicle.

**7.7** All bodywork must be secure and attached to the vehicle.

**7.8** The driver's side window can be lowered, but by no more than 2", a mandatory window net must be used as per Motorsport Ireland, Appendix 2.24.

## **8.0 ELECTRICAL SYSTEM**

**8.1** At least two brake lights, headlights, front wipers and high intensity rear fog/rain light must be in good working condition. A windscreen demister fan or electrically heated front windscreen must be fitted and in working condition. Headlight glass must be protected against breakage by tape or security film. See 1.13.

**8.2** Vehicles must have battery isolators installed, which must be capable of being activated in the driver's compartment, by the driver when normally seated. In addition, the isolator must be capable of being operated remotely from the front window splash panel. On the passenger side (RHD Car) and clearly marked with an official sticker.

**8.3** Batteries must be securely mounted and all connections must be in a serviceable and clean condition. Positive terminals should be insulated. Negative leads should be braided or have yellow identifying marking. Batteries housed in the drivers compartment must be securely mounted in a sealed and insulated box.

## **9.0 FIREWALLS**

**9.1** There must be a firewall between the engine bay and the passenger compartment capable of preventing the passage of fire or liquid. Larger holes should be covered by metal plates or fibreglass. Smaller holes can be fitted with bolts, rivets or fireproof mastic. If the standard bulkhead has no unfilled holes in it, then it is deemed a satisfactory firewall.

**9.2** If the boot contains any of the fuel system then it must be separated from the passenger compartment with a firewall.

