

# Castrol BMW Race Driver Series

## Open Class Regulations - Effective for 2011 / 2012 Season.

### 1 - GENERAL DESCRIPTION

This class is intended to provide a series for BMW race cars to compete in, as an alternative to the closely controlled technical regulations of the BMW E30 class. This Open group is deliberately intended to include Group A cars, SuperTourers, NZ Touring Cars, as well as other rally and circuit cars. It is also intended to encourage the building of BMW race cars, by providing race meetings in which they can compete.

- 1.1 Entry to the BMW Race Series (BRDS) is by invitation only, at the discretion of the Committee.
- 1.2 All entrants must be current financial members of the BMW Car Club of NZ.
- 1.3 Presentation of cars must be to a high standard and the organizers reserve the right to refuse entry to any car deemed not up to standard. This requirement also applies to vehicle previously accepted for the BRDS, where their condition has deteriorated to the point where it is not up to the standard.
- 1.4 The following regulations provide a basic outline of the technical requirements for cars running in the Open Class. **NB: Drivers planning to purchase or modify a car to race in the BMW Race Driver Series are strongly advised to contact the BMW Race Driver Series Committee for confirmation of the car's eligibility before committing to the modification / purchase via e-mail: [bmwraceseries@hotmail.com](mailto:bmwraceseries@hotmail.com)**

The BRDS Committee and its appointed agents will be judge(s) of fact regarding general vehicle eligibility for the Series and regarding any specific technical details for those cars.

### 2 - SAFETY REQUIREMENTS

All vehicles are required to adhere to all Motorsport New Zealand (MNZ) regulations in relation to Driver and Vehicle Safety – refer to MNZ Manual no. 34, Appendix Two, Schedule A, available in hard copy or on-line: [www.motorsport.org.nz/Regs/manual.htm#Manual34](http://www.motorsport.org.nz/Regs/manual.htm#Manual34). This includes any amendments or subsequent versions issued by MNZ. The required Safety Equipment includes:

- 2.1 An MNZ-approved competition seat designed for use with four-point, five-point or six-point harness; with appropriate mountings; must be fitted according to App Two, Sch A, Section B4.5, diagram 8.
- 2.2 A suitable MNZ-approved harness of either four-point, five-point or six-point mounting as detailed in App Two, Sch A, and Section B 4.2 and Chart A 4.3.1.
- 2.3 An MNZ-approved hand held fire extinguisher is mandatory as per App Two, Sch A, and Section B 4.6 and Chart A 4.6.1. (Minimum capacity = 1.0 litre AFFF foam or 0.9kg BE or ABE powder)
- 2.4 A multi-point roll cage (App Two, Sch A, Section B 4.4) with side intrusion bars is mandatory. Alternative roll cages are acceptable, provided they meet the following criteria:-
  - a) The roll cage design, construction and installation must satisfy all of MNZ regulations.
  - b) Triangulation between the roll cage front legs and front strut towers is permitted.
  - c) Roll cage padding must be fitted as required in section MNZ Manual 34, B4.4 section 7.
- 2.5 Glass headlamps should be covered with protective tape, as per MNZ requirements.
- 2.6 All cars must have a current log book.

### 3 – TECHNICAL / VEHICLE ELIGIBILITY

- 3.1 This class is generally open to **any model BMW car fitted with a BMW engine.**
- 3.2 Left or Right-hand drive vehicles are eligible including cars that have been converted.
- 3.3 **Engines:** Must be a production BMW cylinder block and head casting, all other components are free.

- 3.4 For normally aspirated models, it is permissible to use a BMW engine transplanted from other model BMW, even if it has a larger displacement. However, the same number of cylinders must be retained in respect to the body type. ie. 2002 must be four cylinders, so S14 into 2002 is permissible. E30, including M3 must be four or six cylinder, so M30 into E30 is permissible. Cylinder number is in respect to cars produced by BMW, with a minimum production run of 500 cars.
- 3.5 It is permissible to move the engine within the engine bay. However, it is not permissible to remove, cut or modify the factory firewall/bulkhead in order to move the engine rearwards in the chassis, even for low-volume models covered under section 3.7.
- 3.6 **Forced Induction:**  
Turbo-charged cars will only be accepted at the discretion of the Committee. It is recommended that entrants obtain clearance before building any cars. To be considered, a turbo vehicle must meet all of the following criteria:
- The car model must have been originally available as a turbo-charged version. By definition, "model" means the body type, such as 2002, E21, E34, E92, etc.
  - The engine block must have the same number of cylinders as the original engine, but there is no restriction on capacity.
  - The cylinder head from the original engine must be used. eg E92 must use N54 head.
  - The type and size of turbochargers is open.
  - The number of turbochargers cannot be greater than the original model. ie One turbo can be used on a model that originally had two, but not the other way around.
  - All turbo-charged petrol and diesel powered vehicles must currently run in Group A.
- 3.7 **Low volume** runs by BMW specialist tuners Hartge, Alpina and Schnitzer may be accepted at the discretion of the Committee. This dispensation process also applies to any other BMW models falling outside of the production volume requirements of section 3.4 above. In all cases, a written application must be submitted, with full details of the vehicle specifications. (engine, transmission, differential, chassis, bodywork, brakes, suspension, etc) The car will be considered and either approved in full, approved with required modifications, or rejected outright. However, in all cases these cars **MUST** be BMW-powered - no exceptions will be made for cars that have engines from any other manufacturer.
- 3.8 **Chassis:**Original unit construction bodyshells must be used. No space-framed or semi space-framed cars will be allowed. The original floor-pan between the firewall and rear bulkhead (behind the rear seat) must remain as per the manufacturer's original specifications. Save for the fitment of the roll protection, pedal box or exhaust system, further modifications to the floor-pan can only be made with the written permission of the BRDS Committee.
- 3.9 **Bodywork:**Outer body panels may be replaced with items of a different design or material (including composites) to that used on the original. This includes the addition of front or rear spoilers, wings, splitters, wheel archextensions and/or after-market body kits.
- 3.10 **Drivetrain:**Gearboxes are free in terms of manufacturer, number of gears, ratios or shift mechanism. Differentials are free.
- 3.11 **Suspension:** As long as the original configuration is retained (eg McPherson strut, trailing arm) the suspension is free in terms of design and materials used.
- 3.12 **Brakes:** There is no restriction on type and materials.
- 3.13 **Wheels:**Rim widths can be no more than 10 inches, but there are no other restrictions in terms of wheel diameter, materials or construction type.
- 3.14 **Tyres:** Slicks are permitted, except where restricted by Race Group rules. (see Section 4)
- 3.15 **Weight:**Typically there will be no minimum weight for any cars competing in the Open class, unless:
- this is stipulated as a condition of entry for a vehicle given discretionary entry under section 3.7, or
  - a minimum weight is specified as part of the rules for a Race Group. (see Section 4)
- 3.16 **Fuel:** There are no restrictions on the fuel used, as long as the safety and technical requirements of MNZ and the meeting organisers are met.

## **4 – COMPETITION CATEGORIES**

The open class will now be broken into three different race categories (Groups), all run within the same race, meaning that the grid will be mixed rather than run separately.

Drivers must register for Groups B and C before they race and carry the appropriate signage. (see 5.2d below) Cars / drivers not specifically registered for Group B or C will automatically be included in Group A. There are minimum race weights for each car in Groups B & C, with selected cars weighed after each race or qualifying session. Drivers who do not present their cars when requested for weigh-in will be classified as Group A entrants.

Sections 4.1 and 4.2 (below) detail the specific rules for Groups B and C. Please note: These rules are IN ADDITION to the rest of the Open class rules defined in Sections 1, 2, 3 and 5, to which cars must also comply.

### **4.1 Group B: Over 2000cc**

- a) All cars MUST run on BRDS acceptable treaded DOT-rated tyres, ie. No racing slicks allowed.
- b) Factory built race-cars are NOT eligible, this includes Group A, DTM, SuperTourer, WTCC etc. By factory this refers to cars or kits supplied by BMW Motorsport, or recognized works teams. NZ built cars (including NZ touring cars) are eligible to run within this class.
- c) Cars must run with the following minimum weights, including driver, based on the actual displacement of the engine (as raced) rather than the original capacity of that car/engine:

<b>2001 – 2500 cc</b>	<b>1080 kg</b>
<b>2501 – 2800 cc</b>	<b>1120 kg</b>
<b>2801 – 3000 cc</b>	<b>1180 kg</b>
<b>3001 – 3500 cc</b>	<b>1260 kg</b>
<b>3501 – 4000 cc</b>	<b>1340 kg</b>
<b>Over 4000 cc</b>	<b>1420 kg</b>

<b>Mechanically injected or carburetted cars use these base weights. EFI petrol cars add 20kg and 4-valves per cylinder petrol add another 40kg</b>
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#### Examples:

<b>E30 M3 2.3</b>	1080kg + 40kg (4-valve) + 20kg (EFI) = <b>1140kg</b>
<b>E24 635 CSi</b>	1260kg + 20kg (EFI) = <b>1280kg</b>
<b>E24 M635 CSi</b>	1260kg + 40kg (4-valve) + 20kg (EFI) = <b>1320kg</b>
<b>E28 535i</b>	1260kg + 20kg (EFI) = <b>1280kg</b>
<b>E28 M5</b>	1260kg + 40kg (4-valve) + 20kg (EFI) = <b>1320kg</b>
<b>E34 M5 3.6</b>	1340kg + 40kg (4-valve) + 20kg (EFI) = <b>1400kg</b>
<b>E36 325i</b>	1080kg + 40kg (4-valve) + 20kg (EFI) = <b>1140kg</b>
<b>E36 M3 3.0</b>	1180kg + 40kg (4-valve) + 20kg (EFI) = <b>1240kg</b>
<b>E36 M3 3.2</b>	1260kg + 40kg (4-valve) + 20kg (EFI) = <b>1320kg</b>
<b>E39 M5 V8</b>	1420kg + 40kg (4-valve) + 20kg (EFI) = <b>1480kg</b>
<b>E46 M3 3.2</b>	1260kg + 40kg (4-valve) + 20kg (EFI) = <b>1320kg</b>
<b>E60 M5 V10</b>	1420kg + 40kg (4-valve) + 20kg (EFI) = <b>1480kg</b>
<b>E90 335i</b>	2979cc x 1.7 = 5064cc, so 1420kg + 40kg (4-valve) + 20kg (EFI) = <b>1480kg</b>
<b>E90-93 M3 V8</b>	1340kg + 40kg (4-valve) + 20kg (EFI) = <b>1400kg</b>

### **4.2 Group C: 2000cc and below**

- a) All cars MUST run on BRDS acceptable DOT-rated tyres, ie. No racing slicks allowed.
- b) Factory built race-cars are NOT eligible, this includes Group A, DTM, SuperTourer, WTCC etc. By factory this refers to cars or kits supplied by BMW Motorsport, or recognized works teams. NZ built cars (including NZ touring cars) are eligible to run within this class.

c) Minimum weight including driver will be 1000kg, with the following additions for both petrol & diesel:

<b>EFI</b>	<b>+20kg</b>
<b>4-valves per cylinder</b>	<b>+40 kg</b>

Examples:

<b>2002</b> (all models except turbo)	<b>1000kg</b>
<b>E21/E30/E36</b> (2-valve, EFI)	<b>1020kg</b>
<b>E30/E36/E46/E90</b> (4-valve, EFI)	<b>1060kg</b>

## **5 – SIGNAGE**

5.1 **Series Sponsor Decals**– The following decals will be supplied to registered entrants and must be fitted as supplied to race cars at all BMW Race Driver Series events. (see Appendix 1)

- Castrol BMW Race Series number box – both sides, anywhere on the front door panel.
- Castrol Windscreen Banner –top of front windscreen, using a minimum 100mm of the supplied banner, including the Castrol logos, and up to the full width of the banner. (approx 200mm)
- Castrol Decal (580 x 135mm) – centreline of bonnet, no more than 75 mm from BMW bonnet badge and oriented so that the writing is the correct way up, as viewed from in front of the car.
- Radio Sport Decal (165mm high x 400mm long) – Both sides, upper/rear of front fender, or other location forward of the B-pillar, approved in writing by the Committee. (to allow for a variety of body shapes and individual signage)

5.2 **Other BMW Race Driver Series Signage** – The following signage, to be supplied by the competitor unless stated otherwise, must be fitted to race cars at all BMW Race Driver Series events.

- Race Number (if not already printed onto number box) Both sides, inside number box. Must comply with MNZ requirements in terms of size, colour, font, etc. Minimum of 280mm high, stroke of 50mm, solid black (on the supplied white background), font to be Helvetica, or similar. (see Manual 34, Appendix Two, Schedule A, Section 6.2) For clarification, Helvetica font is shown.
- Driver Name – The driver surname (at least), on both rear side windows, close to lower edge, minimum of 80mm high, 10mm stroke, white or fluoro yellow/green in Helvetica or similar font.
- Screen Numbers – both front and rear screens, passenger side upper corner, minimum of 150mm high, 20mm stroke, white or fluoro yellow/green in Helvetica or similar font.
- Race Group Markings – to assist with identification of the cars for weigh-in and for commentary purposes, each car will carry a single letter to confirm the race group each car is competing in. (see Section 4) The letters will be in black on a fluoro coloured background, applied to each rear side window in such a position that it is distinguishable from the driver name, and to the rear screen directly below the race number and novice stripes, if applicable. (See appendix 1) The letters, to be supplied by the Race Series, will be as follows:



- A** = **Group A**- open cars running on slicks and any vehicles not included in Groups B or C.
  - B** = **Group B**- over 2 litres, running on DOT-rated tyres.
  - C** = **Group C**- 2 litres and under, running on DOT-rated tyres.
- e) Novice Markings – Up to three horizontal stripes on rear screen located directly below rear race number. Minimum dimensions for each stripe are 30mm wide and 250mm long, in white or fluoro yellow/green. Regardless of previous race experience in other classes, drivers who are new to the BMW Race Driver Series must carry three stripes for their first meeting.

One stripe can be removed after each completed race meeting, meaning that their fourth meeting will be the first without any stripes.

- 5.3 **Personal Signage** – The following restrictions apply to any personal signage or sponsorship carried on cars competing in the BMW Race Driver Series.
- a) **Front Screen** – This area is reserved exclusively for the Series sponsor (Castrol) and apart from screen numbers (see 5.2c) no other signage can be carried on the front screen. If the supplied Castrol screen banner is not deep enough, cars are permitted to have an additional screen band fitted, but this must be a plain colour, with no lettering or graphics, and must be fitted below the complete Castrol screen banner.
  - b) **Rear Screen** – Personal advertising may be fitted to the rear screen, as long as it complies with all MNZ regulations for vision and safety and to WOF regulations, if applicable.
  - c) **Number Boxes** – No signage at all shall be fitted to the front doors in the area immediately above or below the official race number box, or within 50mm either side of the box. It is permissible, however to carry personal signage anywhere on the sills, provide it complies with all other regulations regarding signage, including 5.3d.
  - d) **Competitive Signage** – No signage for any brands that compete with any of the series sponsors can be carried on the front section of the car - defined as being all panels “forward of a line through the rear edge of the number boxes on each door”. The Series sponsors currently include: **Castrol and Radio Sport**. Committee decisions on any conflicting advertising are final, as are any decisions to introduce new/additional series sponsors.

## Appendix 1– Vehicle Livery (Refer Section 5)

### 5.1 a) Castrol Race Number Box

To be located anywhere on front door panel.

### 5.1 d) Radio Sport decal

Both sides on upper rear section of front guard or, by written permission, other position to suit shape and graphic layout of vehicle.



### 5.1 b) Castrol windscreen banner

May be deeper than 100mm, but plain colour only

### 5.2 c) Front screen number\*

Passenger side, white or fluoro yellow/green



### 5.1 c) Castrol bonnet decal

Centred, no more than 75mm from bonnet badge



### 5.2 c) Rear screen number\*

Passenger side, white or fluoro yellow/green

### 5.2 e) Novice Stripes\*

Below race number, white or fluoro yellow/green

### 5.2 d) Race Group (See Section 4)

Rear screen, below race number and novice stripes



### 5.2 b) Driver Name\*

Both sides, bottom of rear side window

### 5.2 d) Race Group (See Section 4)

Both sides, anywhere on rear side window



\* = Items to be supplied by Driver/entrant