

SCHEDULE E46

NEXEN Tyre E46 Series

TECHNICAL REGULATIONS 2026-2027

PREAMBLE

The NEXEN Tyre E46 Class is for right-hand-drive BMW E46 320i Models, in both 2-door and 4-door body styles (excluding hatchback models) that were produced by BMW for sale to the public, as shown in sales brochures. This can be verified by using the chassis number. Other body styles are not eligible for this Class.

The E46 320i must use the M54B22 Double Overhead Cam 24-valve, six-cylinder, 2.2 litre engine.

The E46 concept is intended to provide close racing between drivers and require a simple technical challenge for preparation and setup. The intention of the Technical Regulations is to create a car that is as safe as possible, fun to drive and yet remain as close to standard as possible.

RECORD OF AMENDMENTS ISSUED TO THIS SCHEDULE

MotorSport New Zealand may amend or clarify these Technical Regulations by issuing Amendments, authorised by the Chief Executive Officer or their representative.

All Amendments issued during the season are recorded in the table below:

Amendment Number	Issue/Effective Date	Regulation Reference	Subject/Notes
T001	06/10/26	6.2.3	Update and clarify the article

1.0 GENERAL PRESCRIPTIONS RELATIVE TO THIS SCHEDULE

- 1.1** This Schedule shall be read in conjunction with the MotorSport NZ safety schedule as detailed in Appendix Two, Schedule A of the current MotorSport Manual.
- 1.2** The authoritative source of these Technical Regulations is available at motorsport.org.nz under the sporting tab.
- 1.3** All text changes from the previous issue of this Schedule are **highlighted** such. Text change for grammatical and/or formatting reasons are not highlighted.
- 1.4** Any modifications or additions to the originally manufactured standard production vehicle, or any parts thereof, that are not specifically permitted by this Schedule or by a subsequent MotorSport New Zealand amendment are prohibited.
- The only work that may be carried out on the vehicle is that necessary for its normal servicing, or for replacement of parts worn through use or accident, solely using parts permitted under this Schedule.
- 1.5** By entering the BMW Race Driver Series (BMW RDS), drivers acknowledge that they have read all of the technical and operational rules and will abide by them in all respects. They should be aware that any breach of these Technical Regulations will render their vehicle ineligible and will result in sanctions against the offending driver that may include time penalties, disqualification, loss of competition points, suspension and/or expulsion from the Series, plus any further penalties deemed appropriate.
- 1.6** The Series Scrutineer reserves the right to make technical checks at any time during the racing season, defined as being from the start of pre-season scrutineering through until the completion of Parc Ferme following the last race meeting of the season. The duration of Parc Ferme may be based on the driver's position in the championship and will be advised during the last race meeting. Scrutineering inspections may be made at race meetings, or away from the track at the discretion of the Series Scrutineer. Any costs associated with any inspections or tests will be borne by the competitor, including any replacement parts, such as gaskets and fluids, as well as the cost of getting the car to any specified place of inspection.
- 1.7** Security seals will be applied to the following components:
- 1.7.1** Diff Head
 - 1.7.2** Gearbox
 - 1.7.3** Engine Head
 - 1.7.4** Inlet Manifold
- 1.7.5** All seals are required to be fitted prior to the start of qualifying at Round 1.
- 1.7.6** Seals will be provided by the BMW RDS at no charge.
- 1.7.7** This class uses security seals. Before any seal is removed, a written application must be made to the Series Scrutineer requesting approval to remove the seal. The Series Scrutineer will always provide a written reply with details of the permission to remove or not. They will also include BMW RDS in their correspondence for information purposes only. Refer to Appendix Two Schedule A Article 3.7 for the definitive rules regarding seals.
- 1.8** Third-party/aftermarket replacement components may be used in place of the BMW OEM part, provided they are materially, physically, and electrically indistinguishable from the original BMW part they replace. The substitute part must match the OEM specification in form, fit, function, and performance characteristics. It is the competitor's responsibility to prove compliance.

2. SAFETY REQUIREMENTS

- 2.1** All vehicles are required to adhere to all current MotorSport New Zealand (MSNZ) regulations in relation to Driver and Vehicle Safety (refer to MotorSport NZ Manual No. 36, Appendix Two, Schedule A) on-line <https://manual.motorsport.org.nz/>. This includes any amendments or subsequent versions issued by MSNZ.
- 2.2** All vehicles must have:
- 2.2.1** A current MotorSport NZ Logbook (both Digital and Physical).

- 2.2.2** A MSNZ approved competition seat designed for use with a five-point or six-point harness with appropriate mountings must be fitted according to Appendix Two, Schedule A, Part One, Article 4.7 of the MSNZ Manual.
- 2.2.3** A suitable MSNZ approved five-point or six-point harness mounted as detailed in Appendix Two, Schedule A, Part One, Article 4.4 of the MSNZ Manual.
- 2.2.4** A MSNZ approved multi-point roll cage compliant with Appendix Two, Schedule A, Part Two, Article 4.6 of the MSNZ Manual with side intrusion bars is mandatory. Cages must be made from MSNZ-Q29 material. For avoidance of doubt, 4130 and T45 material is prohibited.
- 2.2.5** Alternative roll cages are acceptable provided they meet the following criteria:
 - (1) The roll cage design, construction and installation must meet the requirements of MotorSport New Zealand Schedule A.
 - (2) Triangulation between the roll cage front legs and front strut towers is permitted.
 - (3) Safety cage padding must be fitted as required in Appendix Two, Schedule A, Part One, Article 4.6 (6) of the MSNZ Manual.
- 2.2.6** Headlamps (if installed) covered with protective tape and comply with any current MSNZ requirements.
- 2.2.7** Towing eyes fitted in accordance with Appendix Two, Schedule A, Part One, Article 5.15 of the MSNZ Manual.
- 2.2.8** A MSNZ approved handheld fire extinguisher as per Appendix Two, Schedule A, Part One, Article 4.8 of the MSNZ Manual.
- 2.3** Frontal Head Restraints (FHR) are mandatory.
- 2.3.1** A Front Head Restraint (FHR) complying with the requirements of Appendix Two, Schedule A, Part One, Article 4.2 must be used.
- 2.3.2** All occupants must wear an FHR during all practice, qualifying and races that are part of the Series. Failure to do so may result in a penalty or disqualification.

3. CHASSIS & EXTERIOR/BODYWORK

3.1 Required Equipment / Modifications:

3.1.1 The chassis:

- (1) design and material must remain as standard. Lightening or reducing chassis strength is prohibited. Other than the reinforcement of rear sub-frame mounting points plus front and rear shock towers, additional strengthening of the chassis is prohibited (e.g. seam welding).
 - (2) as produced by the manufacturer must be retained in all aspects in respect of material, thickness and contour. For the avoidance of doubt, the chassis is defined here to include the body shell, wings, bonnet, boot-lid, roof, panels, floor and all bumper bars and support devices.
- 3.1.2** The steering system including rack, tie rods, front sway bar, steering arms and column shall remain as standard E46 fitment, with the Power Steering system fully operational.
 - 3.1.3** Towing eyes must be fitted and identified as per Appendix Two, Schedule A, Part One, Article 5.15 of the MSNZ Manual. To avoid damage caused by a solid metal towing eye a soft webbing-type strap must be used on the front of all cars.
 - 3.1.4** The following items must be removed – tow bars, mud flaps.
 - 3.1.5** Front bumpers shall be OEM BMW design (excluding M3) and must be complete with all internal structure as factory. Fitment of replica plastic bumpers is allowed, provided they are a direct copy of an OEM BMW one.

3.2 Modifications permitted, but not mandated:

- 3.2.1** It is permissible to remove the factory applied body sound deadening and under seal.
- 3.2.2** A strut brace between the front strut towers may be fitted, either bolted or welded in place.
- 3.2.3** A strut brace between the rear strut towers may be fitted, either bolted or welded in place.
- 3.2.4** Sunroof mechanisms may be removed entirely and replaced with any material of your choosing so long as it meets MSNZ safety requirements. Alternatively, the complete roof panel may be replaced with another standard steel roof that does not have a sunroof.

- 3.2.5** The OEM Cabin Filter Housing can be replaced with a fiberglass equivalent.
- 3.2.6** Either the steel (31111096431) or alloy (51717028433) subframe reinforcement may be fitted or removed. If fitted, no modifications are permitted. OEM plastic splash guards/undertrays may be fitted or removed. If fitted, no modifications are permitted - including to attachment points.
- 3.2.7** A boot spoiler may be fitted to the rearmost edge of the boot lid. This spoiler must be of the same material and dimensions as BMW part number 51 71 0 018 269. No other style of wing or spoiler is permitted.
- 3.2.8** The bonnet/boot catch mechanism may be replaced with an alternative device provided the bonnet/boot remains adequately secured.
- 3.2.9** The internal door structures may be modified to remove unnecessary weight, but the exterior door panels must remain standard.
- 3.2.10** The side windows may be replaced with an approved polycarbonate type material, such as Lexan. Holes or scoops may be added in the side windows for the sole purpose of ventilation.
- 3.2.11** Front Headlights and driving lights may be removed or lightened, but if removed headlights must be replaced by a good fitting blanking plate. The headlight blanking plate must not form any part of the induction system.
- 3.2.12** Rolling of the inner front and/or rear wheel guards is permitted to provide additional tyre clearance. The outer wheel arch profile and visual appearance must remain unchanged from the standard factory (OEM) specification when viewed externally.
- 3.3 Modifications strictly prohibited:**
 - 3.3.1** All spoilers, dams, splitters, aero foils and diffusers are prohibited, other than the spoiler mentioned in Article 3.2.7
 - 3.3.2** The use of any under-trays, diffusers or any other aerodynamic device fitted to the underside of the vehicle other than those fitted as standard are prohibited but refer to Article 3.2.6
 - 3.3.3** Except as specifically allowed no external body parts may be modified in any way to improve the flow of air around the vehicle or into the engine / engine bay.
 - 3.3.4** Use of window tinting film is not permitted.
 - 3.3.5** Plan view must be as standard with no extensions to wheel arches permitted.
 - 3.3.6** All bumpers must remain in complete original condition. All bumper dampers, bumper mounting brackets, mounting points and trim must be retained as fitted standard by the factory. Tow hook covers may be removed.

4.0 INTERIOR

- 4.1 Required Equipment / Modifications:**
- 4.2 Modifications permitted, but not mandated:**
 - 4.2.1** An aftermarket steering wheel may be fitted but must comply with Appendix Two, Schedule A, Part 1, Article 6 of the MSNZ Manual.
 - 4.2.2** Any interior trim, including dashboard trim, heat shielding and non-structural / unused metal brackets and fittings may be removed, but door locks and catches must remain in place, and operational, for safety reasons. Boot locking mechanism and catches are free.
 - 4.2.3** The dashboard may be modified (but not removed entirely) to allow the fitting of the safety cage and the opening/removable glove box unit may be removed provided the dash remains securely fastened.
 - 4.2.4** Interior door trim panels may be removed. If removed, they must be replaced with an alternative door panel that protects the driver from sharp edges and the intrusion of metal structures in the event of a side impact.
 - 4.2.5** The rear bulkhead may be modified to accommodate the safety cage. Where holes have been cut to fit the safety cage, they shall be no more than twice the diameter of the safety cage member to be fitted.
 - 4.2.6** A footrest may be added next to the clutch pedal.
 - 4.2.7** The three pedal pads may be modified by the addition of a non-skid surface.

- 4.2.8 The heater / demisting unit can be removed provided the vehicle still has an effective method of demisting.
- 4.2.9 If a front passenger seat is installed this must also comply with Appendix Two, Schedule A, Part One, Article 4.7 of the MSNZ Manual.

5.0 ENGINE & RELATED COMPONENTS

5.1 Overview:

- 5.1.1 Only the M54B22, double overhead cam, 24 valve, six-cylinder, 2.2 litre engine is eligible.
- 5.1.2 Except for the allowed modifications shown in these Technical Regulations no modification to the engine or any ancillaries, including the fuel or ignition systems are permitted. For the benefit of doubt, this includes grinding or machining or lightening. The engine must retain the standard specification block, pistons, crankshaft, con-rods, cylinder head, camshafts and valves. Balancing of engines by the removal or addition of material is specifically prohibited.
- 5.1.3 Unless otherwise stated, all parts must be the standard, Original BMW parts.

5.2 Cylinder heads:

- 5.2.1 Only the following cylinder head part number is permitted: 11 12 7514 539
- 5.2.2 The cylinder head may have the head gasket surface only skimmed (minimum cylinder head height 139.70mm), additionally cylinder heads may be cleaned and/or de-coked, but additional porting, and polishing, machining, or any other modifications are prohibited.
- 5.2.3 Valve seat inserts must be positioned as per the manufacturer's original specifications.
- 5.2.4 Valve seat inserts cannot be modified other than the machining of the valve sealing surface.
- 5.2.5 Valves must be original size and design.
- 5.2.6 Only the sealing edge of the valve may be machined as part of the reconditioning process. The profile of the valve, including head and stem, may not be modified in any other way.
- 5.2.7 Camshafts – only the following parts are permitted:
 - (1) Intake Camshaft must be BMW # 11 31 1438 079
 - (2) Exhaust Camshaft must be BMW # 11 31 1435 416

5.3 Lower Engine (Block, Pistons, Conrods, Crankshaft & Sump):

- 5.3.1 Original BMW manufactured M54B22 pistons must be used. Oversized pistons are not permitted.
- 5.3.2 All three piston rings must be fitted per manufacturer's specifications and normal trade practice.
- 5.3.3 Conrods must be Original E46 BMW Parts. Under no circumstances can they be modified to alter their effective length.
- 5.3.4 Non-OEM BMW bearings may be used for the crankshaft. (Big-end & main bearings).
- 5.3.5 The crankshaft may have the bearing surfaces only machined during reconditioning to allow the fitment of oversized big-end and main bearings. However, offset grinding to alter the crank throw is strictly prohibited.
- 5.3.6 The standard sump may have baffles fitted to prevent oil surge. Any additional baffles cannot project above the gasket line between the upper and lower sump sections.
- 5.3.7 No other sump modifications are permitted, and no additional parts can be fitted to provide any form of windage or scraping effect.
- 5.3.8 An oil pump chain tensioner may be fitted to the block.

5.4 Fuel System:

- 5.4.1 Fuel pressure regulator, fuel rail and injectors must be the original part and no modification is permitted, including restricting vacuum supply.
- 5.4.2 The design and location of the fuel tank shall be as per manufacturer's specification.
- 5.4.3 The standard fuel pump must be used but the passenger side pickup can be modified to transfer fuel from the passenger's side across to the driver's side in tank to prevent fuel starvation, or a fuel starvation kit maybe used, however ensuring that 5.4 (d) is complied with. Refer to <https://www.bimmerworld.com/Intake-Fuel/Fuel-Filters/E46-Fuel-Starvation-Kit.html>
- 5.4.4 No swirl tanks or other means of fuel baffling is permitted.

- 5.4.5 Only BP Ultimate 98 fuel is permitted to be used.
- 5.4.6 Fuel must be used as purchased - no fuel additives or blending is permitted.
- 5.4.7 Fuel samples may be taken for compliance purposes at any time during any Series event by the Series Scrutineer.
- 5.5 **Engine Miscellaneous:**
 - 5.5.1 Gaskets are open in terms of supply but must be manufactured to Original BMW specifications. Only one gasket may be used in any location. For the head gasket the following dimensions are supplied for clarification:
 - (1) Cylinder Head Gasket Minimum non-compressed thickness = 0.7mm
 - 5.5.2 Aftermarket Flywheel's are permitted however they must be 240mm in diameter and have a minimum weight of 6.7Kg's.

Note: These weights are inclusive of the three dowels, Ring Gear and Crank Bolts but exclude all other components.
 - 5.5.3 Throttle bodies cannot be modified in any way. For the avoidance of doubt the 320i standard throttle body diameter measured at the butterfly must be 65.0mm. Part Number 1354-7-502-444-05.
 - 5.5.4 The induction system must retain the standard airflow meter and throttle body with the exception of the intake boot which may be replaced with the Turner Motorsport Silicone Intake Boots with the following part numbers: 001687TMS01-01 or 001687TMS01-02. Upstream of the airflow meter is free. No mechanical or electrical forced induction is allowed. For the avoidance of doubt air intake ducting cannot be channelled through any additional holes cut into body work or other components.
 - 5.5.5 The standard exhaust manifold may be replaced with the factory E46 325/328 unit or E36 320 unit, part numbers 11 62 1706 538, 11 62 1706 539, 11 62 1740 731, 11 62 1740 730. They must be fitted in the factory position. No coatings, exhaust wrap or modifications is permitted on or to the exhaust manifold. The remainder of the system is free providing that it shall conform to Schedule A Part One Article 3.8 Vehicle (1) and exits from the rear of the car.
 - 5.5.6 The standard viscous cooling fan may be removed. The addition of a single electric cooling fan is permitted, and the removal of the factory electric air conditioning fan, if fitted, is permitted. The original radiator cowling may be removed but cannot be replaced by a non-standard cowling. Coolant hose material is free and may be modified to accommodate an additional temperature sender unit.
 - 5.5.7 Only Original BMW radiators that were factory-fitted to an eligible E46 model, or a direct OEM equivalent replacement, are permissible. To avoid any uncertainty, the use of full **aluminium radiators is strictly prohibited. The original radiator mounting points must be used.**
 - 5.5.8 The installation of direct OEM replacement expansion/header tanks, including direct aluminium replacements, is allowed. However, these must be positioned identically to the original and utilize the original mounting points.
 - 5.5.9 Only standard, genuine E46 320i BMW Siemens MS43 ECU can be used.
 - 5.5.10 The standard ECU can be remapped, but any aftermarket or Piggyback ECU's are not permitted. The OBD2 port must remain accessible and available for the purpose of reading the ECU's tune or for the installation of a datalogging device mandated by Series. The tune must be able to be read from the OBD2 port.
 - 5.5.11 Rev limits must be a maximum of 7000 rpm.
 - 5.5.12 Engine mounts are free in material, and the fitment of aftermarket mounts is also allowed provided they support the engine in the same position as the original mounts and retain the OEM standard height.
 - 5.5.13 Oil coolers are permitted, in addition an oil catch can may be fitted as per Appendix Two, Schedule A, Article 5.1 (5) **of the MSNZ Manual.**
 - 5.5.14 Any camshaft and crankshaft angle sensors must remain in their standard unmodified location. This means that mounting points cannot be modified or slotted.
 - 5.5.15 The use of applied High Performance or Friction Coatings on any internal engine or gearbox components is prohibited.

- 5.5.16** The Standard Air Flow Meter Part No 13 62 1 432 356 with a diameter of 70.0mm, must be used and unmodified.
- 5.5.17** The Standard 320i DISA valve must be used and unmodified.
- 5.5.18** Underdrive pulleys are permissible on the alternator, power steering pump and water pump.
- 5.5.19** It is permissible to fit an aftermarket thermostat and thermostat housings provided they are installed in the factory location.
- 5.5.20** Aftermarket Power steering reservoir caps may be fitted including the vented ones. If vented, it must be plumbed into a suitable catch can.
- 5.5.21** The only permitted spark plugs are:
 - (1) BOSCH FGR7DQP or
 - (2) NGK BKR6EQUP

6.0 SUSPENSION

6.1 Mandatory Equipment / Control Parts

6.1.1 The only permitted suspension package is as follows:

- (1) Fortune Auto 500 Series Coils Over kit -Part number FA-500-E46 Supplied by: MRP Ltd
Phone: New Zealand 021 2949461 International +64 212949461 Location: Suburb:
Rosedale Postcode: 0632 City: Auckland Email: sales@mrpltd.co.nz

6.1.2 No additional non-kit supplied items shall be fitted.

6.1.3 Dampers may only be serviced/rebuilt to the original damping characteristics using the approved service agent.

6.2 Permitted Equipment / Modifications

6.2.1 Springs are free in terms of rate and brand but must be linear in design and not of a lightweight material such as titanium. However, this is restricted to one active coil per corner (excluding keeper springs), with stacked “active” coil springs not permitted.

6.2.2 Separate spring spacers for ride height adjustment are allowed, however only the adjustable front camber plates as supplied with the suspension package in Article 6.1 above are permitted.

6.2.3 The front strut mount location can be relieved to obtain the maximum allowable camber as prescribed in Article 6.2.11 below.

6.2.4 A spacer with a consistent thickness up to 8mm is allowed to be fitted between the top of the front struts and the strut tower. The spacer must maintain a uniform thickness throughout its entire structure.

6.2.5 Suspension bush material is free, provided they are not made entirely of metal.

6.2.6 All suspension bushes must only use the original unmodified mounting points and brackets, however offsets within bushes are permitted.

6.2.7 Fitment of a retention screw is permitted on front caster arm bushings, where aftermarket bushings are fitted to prevent rotation of the bushing.

6.2.8 Adjustable Rear lower arms are permitted to allow for rear camber adjustment.

6.2.9 Only standard OEM BMW E46 front and rear anti roll bars with a maximum size of 24mm Front and 18mm rear diameter are permitted. Fitment of front bar is compulsory; fitment of rear bar is optional.

6.2.10 Adjustable anti-roll bar linkages can be used in replacement of OEM linkages. Provided that they are only manually adjustable to aid in corner weighting. Spherical bearing / “Rod End” type ends are only permitted for the rear anti-roll bar linkages. They may be of steel and/or aluminium construction.

6.2.11 The maximum allowable negative camber is 4° at the front wheel per side and 3° at the rear wheel per side measured on a designated measuring pad or location with the car in full race trim meeting minimum weight requirements including driver.

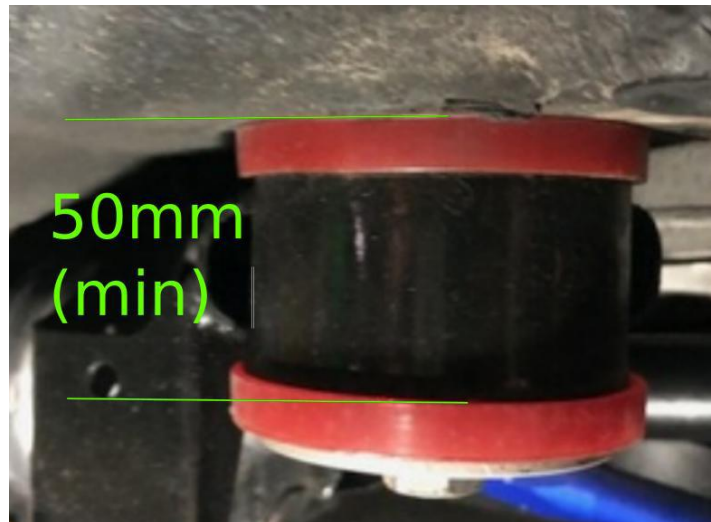
6.2.12 Minimum ride height is 100 mm under the front and rear factory jacking points (excluding jacking pads) with driver installed and vehicle in race trim.

- (1) Ride height measurement shall be taken during or after any qualifying session and immediately after any race.

- (2) All measurements of height shall be made with the vehicle in race trim and with the Driver on board seated in the normal driving position. If a failure occurs, it is permissible to inflate the car's tyres to 25PSI and a re-measurement will be performed. New tyres inflated to 25PSI will only be permitted where a car has suffered a puncture.
- (3) 'Race trim' means the condition the car competes in and includes the driver, all safety items, all vehicle fluids and any ballast necessary to maintain weight compliance.

6.2.13 Subframe Mounting

- (1) The bushing material for mounts between subframe and chassis is not restricted.
- (2) The mounting through the bush must be centrally located. No offsetting is permitted.
- (3) The minimum vertical distance between the chassis and the bottom of the mount cup must not be less than 50mm compressed height.



6.2.14 Subframe Reinforcement

- (1) The front subframe may be reinforced for strength and durability only. Reinforcement must not alter the height, position, or alignment of the subframe relative to the chassis, must not change suspension or steering geometry, and must not serve any additional function.
- (2) Reinforcement plates may be added to the chassis at the rear subframe mounting points. Any additional material added shall be included in the measurement of the minimum vertical distance specified in Article 6.2.13 (3) above.

6.2.15 Replacement of Bush 33326770786 in the rear trailing arm with a Spherical bearing bush is allowed.

- (1) Replacement must not be eccentric in type. It may be narrower to allow for shimming for toe adjustment only. Material is free.
- (2) The following part numbers must remain unchanged:
 - (a) 33326774777 Left Trailing Arm
 - (b) 33326774778 Right Trailing Arm
 - (c) 33303411877 Bracket Left
 - (d) 33303411878 Bracket Right
 - (e) 33326760389 Collar Screw
 - (f) 33326760386 Collar Screw

6.3 Suspension Modifications Prohibited

6.3.1 No changes to suspension pick up points are permitted.

6.3.2 Unless permitted under Article 6.2 above, all suspension components must be of the same design and made of the same material as that on the standard vehicle. Specifically, aluminium components may not be used to replace steel components (or vice versa) and no component may be replaced with a composite material or alloys that include any element of Titanium or Magnesium.

6.3.3 No alterations to suspension geometry are permitted other than that available on the standard car or as part of a permitted modification under Article 6.2 above.

6.3.4 Rod ends or other spherical bearings are not permitted except where permitted under Article 6.2 above.

7. DRIVE-TRAIN

7.1 Clutch

- 7.1.1 Aftermarket clutches are permitted, provided the clutch disc diameter is 240mm. Clutch covers made from materials other than steel are prohibited. Modifying the clutch cover to reduce weight is prohibited.

7.2 Gearbox

- 7.2.1 Only the factory 5 Speed Getrag 220 and ZF gearboxes are permitted.
- 7.2.2 Gear ratios must be as supplied with the gearbox in production form with a 1:1 5th Gear.
- 7.2.3 Aftermarket Short shift gear levers are permitted.
- 7.2.4 Gearbox mounting and location points must be retained and used as intended by the manufacturer.
- 7.2.5 A factory BMW E46 accelerator and brake pedal must be used, however a Mini (R56) clutch pedal may be used in lieu of the BMW pedal.
- 7.2.6 The Giubo must be OEM or a direct OEM rubber style replacement.

7.3 Differential

- 7.3.1 Either a BMW 168 “small” or 188 “medium” differentials can be used, provided the factory E46 differential mounting and location points are preserved and used in accordance with the manufacturer’s original design and intention. Modifications to these points are not permitted unless in accordance with Article 7.3.5 below.
- 7.3.2 The final drive ratio of the differential must be 3.9:1.
- 7.3.3 Limited slip or locking differentials are prohibited. Furthermore, the differential (including all internal components) cannot be modified in any way or have any parts added that might provide any kind of locking or additional frictional action.
- 7.3.4 The differential mount bushes can be replaced. Replacement material is unrestricted. The mounting through the bush must be centrally located. No offsetting is permitted.
- 7.3.5 The differential mounting points on the rear subframe may be reinforced. Reinforcement is permitted for strength and durability only, must not alter the original position of the differential, and must not serve any additional function.

7.4 Drive Shaft & Axles

- 7.4.1 Aftermarket drive shafts are permitted for use provided they are composed of steel. The use of aluminium or carbon fibre drive shafts is expressly prohibited.
- 7.4.2 The drive shaft must be of a two-piece design. Single-piece drive shafts are not allowed.
- 7.4.3 The centre support bearing must remain in the factory position.
- 7.4.4 Axles must be OEM BMW E46 units.

8.0 ELECTRICAL

8.1 Required Equipment / Modifications:

- 8.1.1 The battery can be moved from its factory location. Size and type are free.
- 8.1.2 The battery must be fitted in accordance with Appendix Two, Sch A, Part One, Article 5.5 of the MSNZ manual.
- 8.1.3 The alternator must remain in its standard configuration and be operational at all times while the engine is running.
- 8.1.4 Circuit breakers or battery isolating switches can be fitted so long as they comply with Appendix Two, Sch A, Part One, Article 5.4 (2) of the MSNZ manual.

8.2 Modifications permitted, but not mandated:

- 8.2.1 Electrical controls (e.g. window switches and light switches) may be repositioned as required to accommodate any permitted changes to the interior trim.
- 8.2.2 The fitment of a simple shift light (to an rpm source), auxiliary gauges and video recorders are permitted as long as these do not contravene any MSNZ regulations and are adequately secured.

- 8.2.3** The fitment of “standalone” lap timers, including GPS units is permitted as long as such fitment and use does not contravene any regulations from the meeting organizers or MSNZ. When fitted these must not require any driver input during a race and must connect to the car for power supply only.
- (1) Connecting to the cars wiring loom for the installation of additional sensors or electronics, including data logging or electronic dash displays is permitted.
- 8.2.4** The following items originally fitted as standard, or as optional extras to the vehicle, may be removed along with any associated wiring:
- (1) Cruise control.
- (2) Air conditioning and / or electric fans including heater and demister, however must still comply with 4.2 (h).
- (3) Reverse sensors.
- (4) Air bags including associated ECU, sensors, modules.
- (5) Interior courtesy lamps.
- (6) Boot illumination.
- (7) Glove box illumination.
- (8) Electric window switches and winder mechanisms.
- (9) Electric mirror control switch, providing mirror adjustment is still available.
- (10) Front fog lamps and switchgear.
- (11) In-car entertainment systems, including speakers, amplifiers, aerials and head units.
- 8.3 Modifications strictly prohibited:**
- 8.3.1** No devices may be added or modified to provide any form of aftermarket traction control, launch control or full throttle gearshifts.
- 8.3.2** Electrical switches can only be used to operate the function for which they were originally fitted into the car for, and for no other additional purpose.
- 8.3.3** Aside from any permitted modifications listed in these Technical Regulations, including the rerouting of existing wiring, no other changes may be made to the electrical system.
- 8.3.4** The OEM wiring harness / loom must be retained other than for exceptions in Article 8.2.3 and 8.2.4 above.

9.0 BRAKES

9.1 Required Equipment:

- 9.1.1** The braking system shall be standard Original BMW equipment, including master cylinder, brake booster, metal brake lines, wheel cylinders and brake calipers. All braking system components must comply with Article 9.2 (c).
- 9.1.2** All components of the handbrake system must be fully installed in the original factory position and remain fully functional at all times.

9.2 Modifications permitted:

- 9.2.1** Brake pad and shoe material is free, but dimensions are to remain as per original equipment.
- 9.2.2** Brake discs are free in terms of supply but must be of one-piece steel construction. Slotted and/or drilled rotors are permitted.
- 9.2.3** Standard front discs have a maximum diameter of 286mm and thickness of 22mm. These may be replaced with front discs (and calipers) from E46 325i / 328i models. These discs have a diameter of 300mm and a thickness of 22mm.
- 9.2.4** Rear discs as per standard fitment. With a diameter of 276mm and thickness of 19mm.
- 9.2.5** The flexible rubber portion only of the brake lines may be replaced with a steel braided brake line.
- 9.2.6** To improve front and rear brake cooling the removal of OEM splash guards / backing plates only is allowed. Also allowed for brake cooling is the addition of ducting, but this cannot be designed in any way which would otherwise enhance aerodynamics.
- 9.2.7** The standard ABS system can be disabled or removed entirely. No changes to the ABS units programming is permitted.

9.2.8 An adjustable brake proportioning valve may be fitted to the rear brakes.

9.3 Modifications strictly prohibited.

9.3.1 Aftermarket ABS systems are not permitted.

10.0 RIMS & TYRES

10.1 Rims

10.1.1 The rims must adhere to specific regulations regarding size, weight, and offset.

- (1) Rim diameter must be 17 inches.
- (2) A rim must have a minimum weight of no less than 7.7 kilograms.
- (3) The maximum allowable width for the rim is 8.5 inches.
- (4) The maximum width of a spacer is 25mm and comply with the provisions of Appendix Two, Schedule A, Part One, Article 4.9 (c) of the MSNZ Manual.

10.1.2 Offset limitations are based on rim width and front/rear axle.

- (1) For 17× 8.5 inch rims, the total effective positive offset, inclusive of any spacer, must be no less than ET40 positive offset for rear axle, and no less than ET15 positive offset for front axle.
- (2) For 17× 8 inch rims, the total effective positive offset, inclusive of any spacer, must be no less than ET35 positive offset for rear axle, and no less than ET10 positive offset for front axle.

For instance, a 17× 8.5 inch rim with an offset of ET45 may use up to a maximum 5mm spacer to achieve an effective positive offset of ET40 on the rear, and a 25mm spacer for the front, for an effective positive offset of ET20. (limited by maximum spacer width of 25mm).

10.1.3 No modifications to the external surface of wheel arches are permitted. The tire should not interfere with either the body or chassis when the steering is turned, regardless of static or dynamic suspension load conditions.

10.2 Tyres

10.2.1 The control tyre for the E46 Championship is the Nexen 225/45R17 N'FERA SUR4G.

10.2.2 It is prohibited to alter the tread or tread pattern of the tires. For clarification this includes re-grooving, buffing, skimming, or any other method, including chemical application.

11.0 WEIGHTS

11.1 The minimum weight is 1275kgs in Race trim.

11.2 'Race trim' means the condition the car competes in and includes the driver, all safety items, all vehicle fluids and any ballast necessary to maintain weight compliance;

11.3 All cars must be presented for weighing as part of the Parc Fermé regulations after each qualifying session and each race.

11.3.1 Drivers who do not present their cars for weigh-in may receive point penalties and/or be disqualified from the qualifying session or race.

11.4 As long as no other regulations are breached regarding vehicle modifications it is at the driver's discretion how and where any additional weight is achieved, subject to Appendix Two, Schedule A, Part One, Article 6.1 of the MSNZ Manual.

12. PARC FERMÉ

12.1 All cars automatically enter Parc Fermé conditions following any qualifying or race sessions and must proceed immediately to the designated Parc Fermé area, which is the Series weighbridge (unless otherwise specified). Delayed arrival may be considered an immediate breach of Parc Fermé conditions.

12.2 Only the presence of the driver and one additional team member is permitted alongside their car in the designated Parc Fermé area.

12.3 Tyre pressures and tyre temperatures may be checked while the car is in line, provided there are no delays.

- 12.4** Any other checks or alterations to the car are strictly forbidden under Parc Fermé conditions, unless approval is given by the Series Scrutineer.
- 12.5** No items are to be added to or removed from the vehicle during Parc Fermé.
- 12.6** The continuation of Parc Fermé conditions applies until an official notification from the Series Scrutineer or Clerk of the Course, and the vehicle, driver and additional team member shall leave the Parc Fermé area immediately following this.

13. VEHICLE LIVERY

- 13.1** All decals shall be applied in accordance with the graphic in Appendix One.
- 13.2** The following supplied decals are mandatory and shall be fitted as supplied to all race cars at all Series Rounds.
- 13.2.2** NEXEN Tyre Windscreen Banner Using a minimum 100mm of the banner and up to the full width of the banner.
Note: To provide sun shading, additional material may be added below the windscreen banner, to a maximum total depth of 200mm at any point, including the windscreen banner. This additional material shall be a single solid colour in black or plain colour.
- 13.2.3** NEXEN Tyre decal Applied to both front guards in accordance with Appendix One.
- 13.2.4** NEXEN Tyre / DTM decal Applied to the boot lid, left hand side.
- 13.2.5** Pacific Resort Decal Applied to both front guards in accordance with Appendix One.
- 13.2.6** E46 Decal: to be fitted to both rear side windows, as well as the front and rear windscreens, as illustrated. The BMWRDS Committee may allow variances at their discretion.
- 13.2.7** Novice Sticker: Shall be run in a visible location on the rear of the car. Regardless of previous race experience in other classes, drivers who are new to the NEXEN Tyre E46 Class must carry this sticker for a minimum of three full BMWRDS rounds.
- 13.3** The following decals are to be supplied by the competitor and are mandatory. These must be fitted to all race cars at all Series Rounds.
- 13.3.1** Number Box:
 - (1) Shall be 480mm high, by 440mm wide, and shall include the Series Logo and Competitor's race number (see example below:



- 13.3.2** Race Numbers
 - (1) Shall be on both sides of the vehicle and printed onto or included inside the number box. Minimum of 230mm high, stroke of 38mm, solid black on a white background. Font shall be Helvetica, or similar. Shall be located within 40mm of the front of the door panel, and;
 - (2) Shall be on both front and rear screens, on the upper corner of the passenger side. Minimum of 150mm high, 20mm stroke, in Helvetica or similar font. Numbers should be white. The current championship leader at the start of the round may elect to use fluoro yellow instead for the duration of the round.
- 13.3.3** Driver Name
 - (1) The driver surname at a minimum must be shown 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.

- 13.4** Personal Signage: The following restrictions apply to any personal signage or sponsorship carried on race cars at all Series Rounds.
- 13.4.1** Front Screen: This area is reserved exclusively for the Series sponsor and apart from screen numbers, no other signage can be carried on the front screen.
- 13.4.2** Rear Screen: Personal advertising may be fitted to the rear screen, so long as it complies with Appendix Two, Schedule A, Part One, Article 5.11 (a) of the MSNZ Manual and to Warrant of Fitness regulations (if applicable).
- 13.4.3** Number Boxes: No personal signage is to 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.
- 13.4.4** 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.

Note: The front section of the car is defined as being all panels "forward of a line through the rear edge of the number boxes on each door". The Committees decisions on any conflicting advertising are final, as are any decisions to introduce new/additional Series sponsors.

E46 SERIES SPONSORS DECAL PLACEMENT

