

1: SPORTING REGULATIONS - GENERAL

1.1: TITLE & JURISDICTION:

The **BMW 330 Challenge** is organised and administered by the 750 Motor Club Ltd in accordance with the General Regulations of the Royal Automobile Club Motor Sports Association (incorporating the provisions of the International Sporting Code of the FIA) and these Championship Regulations.

1. **MSA Championship Permit No: RS2017/016**
2. **MSA Championship Grade: D.**
3. **Race Status: Clubmans / National B.**

1.2: OFFICIALS:

1. **Co-Ordinator:** G.Groombridge, Donington Park, Castle Donington, Derbyshire, DE74 2RP

☎ 01332 814548; ✉ giles@750mc.co.uk.

2. **Eligibility Scrutineer:** B.Blackmore

3. **Series Stewards:**

R.Knight C. Emmerson I.Sowman

1.3: COMPETITOR ELIGIBILITY:

- 1 Entrants must:
 - (a) be fully paid up valid membership card holding members of the 750 Motor Club and
 - (b) be Registered for the Series and
 - (c) be in possession of a valid MSA Entrants Licences.
- 2 Drivers and Entrant/Drivers must:
 - (a) Be current Members of the 750 Motor Club and
 - (b) be Registered for the Series and
 - (c) be in possession of valid Competition (Racing) National B Licence, as a minimum
 - (d) A professional driver, in possession of a valid Licence (featuring an E.U. flag) and medical, issued by the ASN of a member country of the European Union, or comparable country. ((H)26.2.1. applies)
 - (e) If participation in the Series requires absence from education a driver, in full time school education is required to have the approval of their head teacher and a letter stating such approval from their school in order to fulfil registration for the Series. A driver shall not take time out of their education to participate in motor sport without the prior written approval of their education establishment.
3. All necessary documentation must be presented for checking at all rounds when signing-on.

1.4: REGISTRATION:

1. All competitors must register for the Series by returning the Registration Form with the Registration Fee to the Coordinator prior to the Final Closing date for the first round being entered.
2. The registration fee is £85.00.
3. Registration numbers will be the permanent Competition number for the Series.

1.5: SERIES ROUNDS:

The **330 Challenge** will be contested over the following rounds:

Date	Circuit	Round/s
18 March	Donington Park GP	2
23 April	Snetterton 300	2
18 June	Brands Hatch	2
19 August	Silverstone Int	2
10 September	Rockingham ISSL	2
01 October	Donington Park Nat	2

1.6: SCORING:

Being a non-championship series of races, no points are awarded.

1.7: AWARDS:

1. All awards are to be provided by the Organising Club unless agreed otherwise.
2. Per Round: Trophies to 1st, 2nd and 3rd overall.
3. Presentations: Garlands for the overall winners and Trophies are to be provided for presentation at the end of each race.
4. Entertainment Tax Liability. Not applicable.

5. Title to all Trophies: In the event of any Provisional Results being revised after any provisional presentations and such revisions affecting the distribution of any awards the Competitors concerned must return such awards to the 750 Motor Club Competitions Secretary in good condition within 7 days.

2: SERIES EVENT MEETINGS & RACE PROCEDURES

1. ENTRIES:

1. Competitors are responsible for sending in correct and complete entries with the correct entry fee prior to the closing date for entries before each event.
2. Incorrect or incomplete entries (Including Driver to be Nominated Entries) are to be held in abeyance until they are complete and correct and the date of receipt for acceptance of entry purposes shall be the date on which the Meeting Organiser receives the missing or corrected information or fee.
3. Any withdrawal of Entry or Driver/Car changes made after acceptance of any entry must be notified to the Meeting Organisers in writing. D25.1.12. applies.
4. The Entry Fee for each event shall be specified in the SRs and on the entry form.
5. Reserves will be listed in the Final List of Entries published with Final Instructions or in a Bulletin.

2. **BRIEFINGS:** Organisers should notify Competitors of the times and locations for all briefings in the Final Instructions for the meetings. Competitors must attend all briefings.

3. QUALIFICATION PRACTICE:

1. Should any Practice session be disrupted the Clerk of the Course shall not be obliged to resume or re-run the session; the decision of the Clerk of the Course shall be final.
2. Each driver shall complete a minimum of 3 laps in the car to be raced, and in the correct session, in order to qualify (MSA Regulations Q4.5).

4. **RACES:** Should any race be disrupted the Clerk of the Course shall not be obliged to resume or rerun the race ((Q)5.4.) (1.6.4. above applies)

5. STARTS:

1. All cars will be released to form up on the grid prior to the start in formation as specified on the grid sheet.
2. The start will be via Rolling start. The minimum Countdown procedures/audible warnings sequence shall be:-
 - I. 1 minute to start of Green Flag/Pace Lap - Start Engines/Clear Grid.
 - II. 30 Seconds - Visible and audible warning for start of Green Flag/Pace Lap.
 - III. A five second board will be used to indicate that the grid is complete.
 - IV. The red lights will be switched on five seconds after the board is withdrawn.
3. Any car removed from the grid after the 1 minute stage or driven into the pits on the Green Flag lap shall be held in the pitlane and may start the race after the last car has passed the startline or pitlane exit, whichever is the later to take the start from the grid.
4. Any driver unable to start the Green Flag/Pace lap or start are required to indicate their situation as per MSA Regulation (Q)12.13.2. In addition any driver unable to maintain grid positions on the Green Flag Lap, to the extent that ALL other cars are ahead of them, may complete the Green Flag lap but MUST remain at the rear of the last row of the grid but ahead of any cars to be started with a time delay.
5. In the event of any starting lights failure the Starter will revert to use of the National Flag.

6. **SESSION RED FLAG:** Should the need arise to stop any race or practice, RED LIGHTS will be switched on at the Startline and RED FLAGS will be displayed at the Startline and at all Marshals Signalling Points around the Circuit. This is the signal for all drivers to cease circulating at racing speeds, to slow to a safe and reasonable pace and

to return to the pit lane, during practice, and to the starting grid area, during a race, unless otherwise directed by officials. Cars may not enter the Pits unless directed to do so. Work on cars already in the Pits must cease when a race is stopped.

7. PITS, PADDOCK & PITLANE SAFETY:

- 1 Pits & Paddock: Competitors must ensure that the MSA, Circuit Management and Organising Club Safety Regulations are complied with at all times.
2. Pitlane: The outer lane or lanes are to be kept unobstructed to allow safe passage of cars at all times. The onus shall be on all Drivers to take all due care and respect the pit lane speed limits.
3. Refuelling: May only be carried out in accordance with the MSA General Regulations, the Organising Club Regulations, Circuit Management Regulations and the SRs or Final Instructions issued for each Circuit/Meeting.
4. Speed Limit: Pit Lane Speed Limit will be 60 km/h.

8. RACE FINISHES: After taking the Chequered Flag drivers are required to:

- I. progressively and safely slow down
- II. remain behind any competitors ahead of them,
- III. return to the Pit Lane Entrance/Paddock Entrance as instructed,
- IV. comply with any directions given by Marshals or Officials
- V. keep their helmets on and harnesses done up while on the circuit or in the pitlane.

9. RESULTS: All Practice Timesheets, Grids, Race Results are to be deemed Provisional until all vehicles are released by Scrutineers after Post Practice/Race Scrutineering and/or after completion of any Judicial or Technical Procedures. (MSA regulation (D)26.3.)

10. TIMING MODULES: The 750 Motor Club utilises transponder-based timing and competitors must have a compatible transponder fitted and working and advise the race organisers of its number prior to the event. Compatible transponders include the AMB TRANX 260 and MyLaps X2.

11. QUALIFICATION RACES: If any event is oversubscribed the Organising Club may at their discretion run Qualification Races.

12. OPERATION OF SAFETY CAR: As Q4.9.1

13. ONBOARD CAMERAS: All competitors race cars are required to carry an on board in car camera for the primary purpose of safety. Footage from the cameras may be used where there is an incident which is subsequently brought before the Clerk of the Course for investigation, or which is reported to the Series Co-ordinators for investigation. The decision to review any such video footage is at the discretion of the Clerk of the Course, the Stewards of the Meeting or the Series Co-ordinators.

- (i) It is the competitor's sole responsibility to ensure safe installation and effective operation of the camera equipment. At all times cameras must be fitted in accordance with MSA Regulations and be approved by the Chief Scrutineer in accordance with J.5.20.5
- (ii) Cameras must be mounted in a fixed "off-centre" position, and angled in such a way that footage captured will provide a clear view through the front windscreen as well as including the steering wheel.

(iii) In the event that no data is available on request (other than due to a proven defect with the equipment) sanctions may be applied which can include a 5 place grid penalty if footage is not available after practice. In the event of footage not being available after a race sanctions can include time penalties, exclusion from the results and exclusion from the meeting. The burden of proof to establish the cause of any failure will lie with the competitor.

3: SPECIFIC Series REGULATIONS

In the event of any rounds being oversubscribed the Organising Club may, in liaison with the Series Co-ordinator, at their discretion run Qualification races as per 2.11 of these regulations. Alternatively at double header race meetings, should there be sufficient space within the timetable, the Organising Club may divide the grid after qualifying

into 3 separate Groups. The Groups will then form 3 races whereby each competitor participates in two races. All 3 races will be eligible for full championship points.

4: SPECIFIC Series PENALTIES:

In accordance with Section C of the current MSA Yearbook

4.1: INFRINGEMENT OF TECHNICAL REGULATIONS:

1. Arising from post practice Scrutineering or Judicial Action: Minimum Penalty: The provisions of MSA Regulations: C3.3.
2. Arising from post race Scrutineering or Judicial Action: Minimum Penalty: The provisions of MSA Regulations: C3.5.1 (a) and (b). For infringements deemed to be of a more serious nature the Clerk of the Course will invoke the provisions of Regulation C3.5.1 (c).

4.2: ADDITIONAL SPECIFIC Series PENALTIES:

None

5: TECHNICAL REGULATIONS

5.1: INTRODUCTION:

a) The following Technical Regulations are set out in accordance with the MSA specified format and it should be clearly understood that if the following texts do not clearly specify what modifications or upgrades can be made to the car, then you must work on the principle that it will not be permitted. The fact that some modifications are mentioned as prohibited does not imply that others are allowed. If any doubt exists about the legality or acceptability of any modification, then please request clarification from the Series Co-ordinators **prior** to any work being undertaken.

b) STANDARD: The word 'standard' used within these technical regulations as a description of components is to be interpreted as per 'Standard Part' defined in Section B – Nomenclature & definitions in the MSA Blue Book. Checking will be by comparison to spare parts supplied by the manufacturer's official agent or by any other means necessary to ensure compliance.

c) STANDARD PATTERN: The phrase 'standard pattern' used within these technical regulations as a description of components is to be interpreted as per 'Standard Part' defined in Section B – Nomenclature & definitions in the MSA Blue Book. Checking will be by comparison to spare parts supplied by the manufacturer's official agent or by any other means necessary to ensure compliance.

5.2: GENERAL DESCRIPTION:

The BMW 330 Challenge Series is for competitors participating in the BMW E46 Coupe 330ci M54B30 UK & European domestic market cars in either left or right hand drive versions. There are no restrictions on the transport of cars to and from the circuit. Cars will run in one class.

The BMW 330 Challenge Series technical regulations are intended to allow competitors to produce race cars that are safe, affordable and of a near identical level of performance, with the emphasis placed firmly on driver ability. Competitors are therefore asked to keep this in mind when building or modifying race cars and are encouraged to seek guidance from the Series Co-ordinators where appropriate. A modification that gives a performance advantage at a high financial cost will almost certainly be illegal, or possibly outlawed in future regulations. As described above, the ethos of the series does not extend to the building of race engines to the limit of the permitted modifications. Those "permitted modifications", are "permitted", in order to prolong the longevity of the M54 engine, head skimming is allowed in order to make a "warped head", re-usable, "boring the cylinders", is not permitted, block re-facing is not permitted, thus keeping costs low. Competitors seeking to use "permitted modifications", solely to gain a power advantage can expect to exceed the maximum power allowed for the 330 Challenge. Please note that the maximum power figures (as tested on a Series registered MAHA Dyno – see Appendix 1), are subject to review and may be changed in the light of further investigation. Also noteworthy is the fact that the series power limit was measured with an "average", engine, and though a sensible margin for ignition timing and fuelling was factored in, it does not allow for "optimised engines", and no further "modifications", to the engine are permitted.

The 330 Challenge Series is not a development formula.

Examination of vehicles. The Series Co-ordinators (in addition to any other powers they may have under these regulations) reserve the right before or after any race in the championship to designate any one or more of the competing cars for special eligibility scrutineering. Competitors must be prepared, with tools and spare parts as necessary, to enable inspection of components, or to have units sealed at the circuit for later inspection by an Eligibility Scrutineer at the Competitor's expense.

Upon such selection being made the competitor shall immediately place the car under the control of the Series Co-ordinators and be deemed to have permitted all such scrutineering, examination and testing as the organisers may reasonably require. The Series Co-ordinators have the right to:

- a) Examine the car at the circuit for such period as they may reasonably require and take fuel samples.
- b) Retain the car for detailed examination at premises chosen by the Series Co-ordinators. If the Series Co-ordinators elect to retain the car they shall make it available for collection by the competitor at least seven days prior to the qualification session for the next race in the championship unless the car is found to be in breach of these regulations.
- c) Seal the car and any of its components in such a manner as they may choose and require the competitor at their own expense to present the car at any other premises chosen by the organisers for detailed examination within a specified period and / or remove the car by transporter at no expense to the competitor to an appointed location. The competitor will be advised in writing of the time, date and location of the subsequent testing or eligibility examination. The overseen stripping of the engine or any required component will be undertaken by the competitor and / or mechanic / technician nominated by the competitor.
- d) The scrutineer can at their discretion request the removal of any part for their further inspection and testing. If the scrutineer decides to retain any part for further inspection over a race weekend, a fully eligible replacement part will be provided by the scrutineer at the time of removal, allowing the competitor to continue racing.

5.3: SAFETY REQUIREMENTS:

The following Articles of MSA Section K Safety Criteria Regulations will apply:- K drawings 1 – 6 with compulsory 'side-entry' bar on both the driver and passenger side of the car; K5, K6, K8 – K11, K13 – K14. Extinguishers must be plumbed-in and comply with MSA regulation K 3.1.2 a). Seat belts must be FIA homologated and as per K2.1.2, K2.1.3 or K2.1.4

5.4: GENERAL TECHNICAL REQUIREMENTS & EXCEPTIONS:

All cars must comply with the requirements of sections J and Q19 of the current MSA Yearbook. All vehicles must comply with MOT requirements (with the exception of emissions), be of sound construction and mechanical condition and be well maintained. There is no requirement for an MOT Certificate, Road Tax or Insurance. The Series Co-ordinators reserve the right to refuse entry from any car of which the preparation is of a poor standard (including the external appearance) and which is likely to bring the Series into disrepute.

5.5: CHASSIS:

No chassis modification or stiffening is permitted except that derived from the fitting of the roll cage; the cage must be a bolt in multi-point Safety Devices B045 (incl rear strut brace). Extensions into the engine bay are prohibited. Seam-welding or the addition of spot welds to the shell is prohibited. Bolt-on aftermarket front strut top braces are permitted. . All Race Cars must be equipped with two front and two rear towing eyes positioned equally either side of the longitudinal centre line. They must be clearly visible, marked with an arrow and the word "tow" and the wire painted in yellow, red or orange to contrast with the vehicle colour scheme.

The towing eyes must be made of at least 6mm diameter steel wire rope with a 6x19 wire core, each which must have a breaking-strain of at least 2 tons. Each towing eye must allow the passage of a cylinder with a diameter of 60 mm, situated 25mm forward of the adjacent bodywork - 100 mm above and below this hole must retain clearance to enable the recovery crews to attach straps and shackles. The

towing eye must be fixed to a structural part of the chassis with a minimum of M12 fixings, the inner part must be flexible in order for the towing eye to be retracted inside the bodywork profile. A "pull-cord" must be attached to the towing eye to enable the marshals to access the wire loop. The end attached to the chassis may be either 'thimble' or 'open-loop' style. Each complete towing eye must be certified as meeting this load requirement.

Webbing towing eyes are not permitted.

This regulation will be compulsory from January 2017.

5.6: BODYWORK:

1. Modifications Permitted:

1. General: A laminated front windscreen is a mandatory fitment. Driver and passenger side windows must remain as OEM, and in standard material. The addition of colourless safety film to the glass is permitted. The door windows rear side windows and rear windscreen are "may", be replaced with Lexan windows of no less than 4mm.

2. Interior: Driver's seat must be replaced with a competition seat fitted in accordance with K2.2. All passenger seats, floor coverings, roof lining, sound deadening materials, radio/stereo units, speakers and associated wiring may be removed. Redundant interior metal bracketry such as rear seat mountings may be removed. Inner door structure may be trimmed, door bottoms may be trimmed (40mm holes punched), inner rear quarters may be trimmed, b-pillars may be lightened by way of no more than four 40mm holes "punched", in the inner pillars, however competitors should bear in mind that if the removal of any material results in weakening the structural integrity of any panel, then the scrutineer, Championship Co-ordinators, or Clerk of the Course (at their own discretion) will be fully authorised to exclude the vehicle from competing.

It is permitted to remove the rear parcel shelf and associated bracketry.

Spare wheel & associated parts, and all tools must be removed. Additional instruments are permitted, but the original dash binnacle and instrument cluster, must be retained and fitted in their original positions.

The main body of the standard dashboard must be retained and securely fitted in its original position, however localised trimming is permitted to allow roll cage fitment and the addition of aftermarket switchgear or pull cables. The removal of the glovebox, lid and hinges is permitted.

Steering wheel may be changed (compulsory if an air bag is fitted as original equipment). Glass sunroofs must be removed or replaced as per MSA regulation Q19.14.6.

It is permitted to remove air-conditioning, but the original heater matrix, mechanism and blower must be fitted and operational. The removal of dashboard air vents and associated pipework is permitted, however the heating system must be able to demonstrate the ability to blow hot air onto the front windscreen to aid demisting. An interior (standard or non standard) rear view mirror must be fitted to the left of the driver (or right if the car is left hand drive). If original interior door panels are removed they must be replaced with strong sheeting - this must be executed to a high standard with no sharp edges and with smooth surface.

3. Exterior: Door mirrors must be fitted on both sides of the vehicle and may be any production or pattern BMW part; the choice of lens within the mirrors is free. The original number of windscreen wiper arms/blades must remain and be fully functioning. Front windscreen washer systems must be fully operational. All external weather strips/channels must be retained. The standard engine bay cover locking mechanism must be disabled; only bonnet pins may be used to secure the engine bay cover in the closed position. Removal of impact absorbing materials from the internals of the BMW M sport rear bumper is permitted. Under car weather shields, wheel liners or any other OEM fitted under car shielding may be retained or removed. If retained OEM parts in original OEM materials only may be used.

4. Silhouette: : All cars must retain the original E46 BMW M sport silhouette. Cars may be fitted with the Tegiva Front Splitter and Canards (see Appendix 2). It is permitted to remove the front fog lamps to accommodate brake ducting. The only permitted rear boot spoilers are, any Original Equipment BMW 330ci spoiler (including the

“Club Sport” Item, OR the Tegiwa GT Rear Wing (see Appendix 1) The front and rear bumpers may not be aesthetically modified in any other way, and must appear as standard (other than for localised trimming to allow fitment of towing straps). The rear bumper must retain its diffuser insert which must not be modified in anyway. The use of tape to bridge gaps between panels is not permitted unless accepted to be for reasons of safety by the scrutineer.

5. Ground Clearance: It is permitted to adjust the ride height. Under no circumstances must any part of the bodywork, or suspended part of the car excluding the exhaust system, be below a horizontal plane passing 50mm above the ground. The car should be in normal racing trim with the driver aboard and steering in straight ahead position. A gauge of 50mm may be used by Scrutineers before or after races or practice to check the ground clearance; the vehicle may be stationary or moving during any testing and steering must be in a straight ahead position. There is no minus tolerance to this measurement.

2. Modifications Prohibited:

- 1. General:** The exterior of the car must be standard for the model being raced. All of the body shell and any replacement body panels must be of original shape, material and thickness. The reduction in thickness of any part of the car by acid-dipping, blasting or by any other means is prohibited. Exterior trim must be generally standard.
- 2. Interior.** Door trims and panels may be removed but must be replaced by appropriate material as detailed in 5.6.1.2 above. Any other modification in contravention of 5.6.1.2 is also prohibited.
- 3. Exterior:** It is not permitted to increase the width of the wheel arch by the addition of material. It is permitted to roll the inside of the wheel arch. Holes for brake ducting may not be made in the bodywork.
- 4. Silhouette:** Any in contravention of 5.6.1.4.
- 5. Ground Clearance:** Any in contravention of 5.6.1.5.

5.7: ENGINE:

The only permitted engine for use in the 2017 330 Challenge is the BMW E46 330Ci UK & European domestic market engine.

Engine parts must be standard unmodified OEM parts or standard unmodified pattern parts manufactured for the M54 B30 24v UK & European domestic market spec.

The use of parts derived from the ZHP model is prohibited.

Verification of legality of OEM engine parts will be by comparison to standard unmodified OEM parts.

Verification of legality of pattern engine parts will be by comparison to standard unmodified pattern parts.

Verification will be by dimensional, weight and visual comparison.

The cylinder head may be skimmed. Below are the combinations of head height/head gasket height combinations that must be adhered to. No other combinations are permitted.

Cylinder Head Height:

- (A) Cylinder head height larger than: 139.75mm: **.70mm** head gasket.
- (B) Cylinder head height less than: 139.74mm: **1.00mm** head gasket.

Cylinder head absolute minimum height: 139.70mm

permitted on any internal or external metallic components of a 330 Challenge car.

All competitors must have available on race days, at least two bolts/nuts for the rocker cover. Two bolts for the sump. Two bolts for the timing cover and two bottom bell housing bolts. All should be cross-drilled with a hole of minimum 1/16th” diameter to accept scrutineer’s locking wire.

Cars may be required at any point during the season to have their power tested on the organising club’s rolling. The maximum permitted power is 260bhp measured at the flywheel. Vehicles exceeding this figure may be subject to disqualification and/or further technical checks.

1. Modifications Permitted:

Engine cylinders may not be re-bored, they must not have oversize pistons. The replacement of valves, valve guides and valve seats with parts of standard pattern and material is permitted. It is permitted to reclaim the cylinder head by skimming provided the cylinder head height remains within the above specification.

No other modifications are permitted beyond the repair or adjustment processes specifically specified by the manufacturers’ workshop manual. Spot tests will be carried out at events.

2. Modifications Prohibited:

Any other than those permitted in 5.7.1. It is specifically prohibited to modify inlet ports, exhaust ports and combustion chambers in any way, and all must remain as cast. The removal of material as a means of lightening any internal engine part is prohibited. The removal or addition of materials as a means of balancing any internal engine part is prohibited. Camshaft profiles and cam timing must remain as standard BMW E46 330ci M54 factory settings.

3. Location:

Position and mounting method must be standard for the model. Original engine mounts may be replaced by the Vibratechnics mount with the part number BMW362MX. No other aftermarket engine mounts are permitted.

4. Oil/Water cooling:

Water radiators must be BMW OE or pattern parts. OE or aftermarket electric fans are permitted. An oil cooler is permitted but must be of the air/oil type.

5. Induction Systems:

The fitment and positioning of the throttle body and mass air flow sensor must be as OEM.

The air ducting between the throttle body and the mass air flow sensor must remain as OEM.

No other modifications are permitted with the exception of the air filter, air filter box and air ducting which are free.

The crankcase breather may vent directly to a catch tank and the PCV system disabled or removed from the inlet manifold. In the process of disabling or removing the PCV system it is permitted to blank the individual airway in the intake manifold runners applicable to the PCV system

6. Exhaust systems:

Exhaust systems must exit at the rear of the vehicle. All cars must run with a fully operational catalytic converter fitted within the exhaust system; this may be the standard BMW part or any aftermarket version. Emissions testing may be carried out to ensure compliance.

7. Ignition systems:

The ECU choice is “free”. Plug leads and spark plugs are free.

8. Fuel delivery systems:

It is permitted to substitute the fuel lines, pump, filter and regulator, (under no circumstances should any part of the fuel system be inside the drivers compartment including the boot area or spare wheel well). The pressure regulator/filter may be relocated in order to minimise the chance of damage. Alternative fuel pumps may be fitted. A swirl pot may be fitted, but only if it is located in the position of the original charcoal canister (behind the OSR wheel), it must be installed properly and safely and not visible. Fuel Pressure testing may be carried out at any time to ensure that the fuel rail pressure does not exceed the OEM 3.5 bar Including under full power during Dynamometer testing.

5.8: SUSPENSION:

1. Modifications Permitted:

It is a mandatory requirement for all cars to be fitted with the 330 Challenge Control Kit specification Gaz coilover shock absorber kit. Springs are “free”, the recommended springs are provided with the kit. If springs are “varied”, this must be declared to the series organiser and open for inspection at any time.

Anti roll bars must be production BMW E46 330Ci UK & European domestic market cars: 24mm dia Front/18mm Dia Rear.
Rear adjustable camber control arms are permitted. No further adjustment, alteration or machining of parts, or the use of eccentric bushes are permitted on the rear suspension
It is prohibited to alter the front camber by any method other than adjustment afforded by the mandatory 330 Challenge Control Kit.

2. Modifications Prohibited:

Modifications to the suspension pick-up points are prohibited; this includes the 'slotting' or 'shimming' of suspension mounting points.

3. Wheelbase/track:

The wheelbase must remain standard @ (2700mm).

5.9: TRANSMISSIONS:

1. Permitted modifications:

The flywheel and clutch assembly are "free".

A standard 5 (five) speed BMW M54B30 24v UK & European domestic market gearbox must be fitted. The only permitted gear ratios are as follows: 1st: 4.23, 2nd: 2.52, 3rd: 1.66, 4th: 1.22, 5th: 1.00.

Final drive ratio must be 2.93:1.

A 'quickshift' gear lever system is permitted. However the system must replicate the OEM gear linkage system and be contained within the standard centre/gearshift console without modification to the standard centre/gearshift console.

*The differential may be standard or a "Quaife ATB".

5.10: ELECTRICS

Exterior Lighting: Must be as per standard fitment and to EC requirements and be fully operational. Front lights/lamps must be taped to MSA regulations or covered with a transparent protective plastic / vinyl film.

2. Rear Warning Light: Cars must be fitted with a manually switchable rearward facing red warning light which must be fully compliant with the MSA Year Book ruling : Section K 5.1A.

3. Batteries: No restrictions on type or location subject to MSA regulations. A battery and electric starter motor must be fitted and be capable of repetitive starts. No external (slave) batteries may be used.

4. Generators: A fully working standard alternator and standard pulley must be fitted and electrically connected so that the standard battery charging function is providing a charge to the onboard battery.

5.11: BRAKES

1. Brake pads are free. Deformation or removal of back plates is permitted, as is the fitment of alternative brake piping/hosing. Anti-lock braking system may be disabled and removed. Discs may be standard or standard pattern. Front discs must be of a maximum diameter of 325mm . Rear discs must be of a maximum diameter of 320mm. Discs may be cross-drilled and/or grooved. Standard E46 330 ci M54 front and rear brake calipers must be used. The braking system must remain fully operational in all aspects at all times, including the handbrake. Brake biasing valve/system may be replaced with a proprietary pressure-limiting valve, which may be adjustable by the driver but must provide a minimum of 25% of braking effort to either axle as per MSA Regulation Q19.5.

2. Prohibited Modifications: A hydraulically-operated handbrake is not permitted in that it does not comply with MOT requirements. Rear brake hydraulic line lock is not permitted.

5.12: WHEELS / STEERING

1. Permitted Options: Modification of the rack is prohibited. Power assistance may not be disabled.

STEERING LOCK: If fitted with a steering lock, this should be rendered inoperative, unless the vehicle is driven to the circuit on the highway. MSA regulation Q19.6.

2. Prohibited Options: No machining or other modification of the road wheel is permitted.

4. Dimensions: 17" x 8j"

5. Wheel Spacers: Spacers are permitted however a combination of spacer and wheel must achieve ET30 ± 1MM

5.13: TYRES

From the tyres listed in the MSA Year Book, Section L, list 1B, the control tyre size for the 2017 Challenge is 225/45/17 or 235/45/17. 2017 tyres are un-controlled for the Challenge.

The original tread pattern must remain visible at all times, and with a minimum tread depth of 1.6mm. The use of tyre heating / heat retention devices, chemical tyre treatments and compounds is strictly prohibited.

2. Nominated supplier: Any

5.14: VEHICLE WEIGHT:

1. Minimum 1300 kgs including driver post practice or race. Random checks will be carried out during the season and no car/driver combination shall be below this minimum weight. All minimum weights are including driver and race overalls, helmet etc.

5.15: FUEL TANK / FUEL

1. Types: Standard unmodified fuel tank must be fitted.

2. Locations: Tank must remain in standard location.

3. Fuel: Only petrol as defined in Section B Nomenclature & Definitions, Pump Fuel a) section of the MSA Yearbook for the current year and complying with BS4040, BSEN228 or BS7800 may be used; fuel which exceeds the stated RON (max) levels in Appendix 1 of Section B Nomenclature & Definitions is prohibited even if it is sold/promoted as being legal for UK Competition and/or obtainable from 'roadside' pumps. The use of additives by competitors which boost the octane rating (RON) in any petrol is prohibited. At the end of practice and the race at least 5 litres of petrol from the tank of the competing car must be available to the scrutineers for analysis. Compliance with minimum weight for the car will be taken before the petrol is removed.

5.16: SILENCING:

All vehicles must comply with the relevant maximum noise limits set out in MSA Blue Book regulation J. Chart 5.18.

5.17: NUMBERS & CHAMPIONSHIP DECALS

1. **Positions:** The race numbers for each rear side window shall be;
(i) A minimum of 200mm high
(ii) With a stroke width of at least 20mm
(iii) Coloured Day-Glo yellow.

In addition, the windscreen of all cars must display the competition number positioned on the upper area of the passenger's side of the windscreen, as follows;

- (i) The numerals must be at least 150mm high
- (ii) Be in the same colour and font as those displayed on the rear side windows
- (iii) Be placed no closer than 50mm from the lower edge of the windscreen "sun-strip" and 50mm from the side edge of the windscreen.

750 Motor Club decals must be affixed prominently. Championship Sponsor's decals (where applicable) must be affixed in or near the positions detailed on the diagram supplied with those decals. 750 Motor Club and Championship Sponsor's decals must take preference to any other decals. Drivers may be requested to remove decals that are viewed as conflicting with official Championship Sponsors. Failure to comply will render the vehicle and driver ineligible to race.

2. Suppliers: Sponsors and Club decals will be available before the first race in which the vehicle is entered. Competition numbers will be obtained at the competitor's expense.



The BMW 330 Challenge

SPORTING & TECHNICAL REGULATIONS 2017

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Appendix 1 Mandatory/Controlled and Optional parts

Available from GAZ 01268 724585

SKU	330 CONTROL ITEMS	MEMBERS (Ex Vat)	PUBLIC (Ex Vat)	
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GMO434CC	GAZ Shocks (GMO434CC) 330 Spec Monotube Dampers	£1,292.80		CONTROLLED & Mandatory
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Available from Tegiwa

SKU	330 CONTROL ITEMS	MEMBERS (Ex Vat)	PUBLIC (Ex Vat)	
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BO45	Safety Devices BO45 (FIA) 330 Spec Multi-Point Roll Cage	£970.00	£1,090.00	CONTROLLED & Mandatory
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SKU	330 OPTIONAL CONTROL ITEMS	MEMBERS (Ex Vat)	PUBLIC (Ex Vat)	
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VIBRA-330	Vibra-Technics Race Engine Mounts	£179.00	£200.00	OPTIONAL, controlled & Highly recommended
4CLPC	4CLPC 4mm Lexan (3pc) Rear Window Kit & Adhesive	£259.00	£287.99	OPTIONAL
KLAR-330	Klarius 330 Spec Full Race Exhaust System	£375.00	£395.00	OPTIONAL
330-POWER-BK	Powerflex Polyurethane & Aluminium (15pc) Suspension Bush Kit	£348.00	£497.71	OPTIONAL & Highly recommended
TTV-330C	TTVR Lite Race Flywheel & Billet Aluminium Cerametallic Clutch	£599.00	£295.00	OPTIONAL
SPEC-330C	Specialist Components Swtchable ECU Management Kit	£1,250.00	£1,250.00	OPTIONAL
HEL-C-330	Hel Clutch Hose	£14.85	£20.82	OPTIONAL
HEL-B-330	Hel 4 Line Brake kit	£57.55	£66.50	OPTIONAL
TD-17X8-ET30	Team Dynamics Wheels 17 Pro-Race 1.2	£115.00	£115.00	OPTIONAL (MUST BE 17X8 (ET30 +/- 1)
EIBACH-330-CAM	Eibach Camber Arm	£120.00	£120.00	OPTIONAL
YSR-CAMBER-R-E4	YELLOW SPEED REAR CAMBER ARMS	£65.00	£69.57	OPTIONAL
TE-1077002	SUBFRAME REINFORCEMENT KIT	£75.45	£83.83	OPTIONAL & Highly recommended
TE-1050001	TEGIWA SHORT SHIFTER	£142.50	£158.33	OPTIONAL
TE-1099001	TEGIWA FRONT CANARDS	£58.33	£58.33	OPTIONAL
TE-1099002	TEGIWA GT REAR WING	£225.00	£250.00	OPTIONAL
TE-1099003	TEGIWA FRONT SPLITTER (MOUNTS & TEMPLATE)	£75.00	£83.33	OPTIONAL
DEPO-WT	WATER TEMP GUAGE	£38.40	£42.67	OPTIONAL
DEPO-OT	OIL TEMP GUAGE	£38.40	£42.67	OPTIONAL
DEPO-OP	OIL PRESSURE GUAGE	£38.40	£42.67	OPTIONAL
PC680	ODYSSEY PC680 LIGHTWEIGHT RACE BATTERY	£75.56	£83.95	OPTIONAL
PC680-CAGE	ODYSSEY PC680 CAGE	£19.80	£22.00	OPTIONAL
RAE-6PH-BLK	6 POINT HANS FIA RAEMCO HARNESS BLACK	£126.00	£140.00	OPTIONAL
73003-0	6 POINT HANS FIA FORMULA TAKATA HARNESS BLACK	£240.24	£266.93	OPTIONAL
TEG-BM-STUD	WHEEL STUD CONVERSION (4 WHEELS)	£63.75	£70.83	OPTIONAL
TEG-BM-SPAC	WHEEL SPACERS (TO MAKE UP TO MAX 30ET	£63.75	£70.83	OPTIONAL
SOLO-K1	SOLO LAP TIMER	£270.00	£300.00	OPTIONAL
MFM 400 S	SPA 4.0 LITRE STEEL MECHANICAL FIRE SUPPRESSION KIT	£168.08	£186.75	OPTIONAL
120-2000	BONNET AERO CATCHES 120-2000	£36.12	£40.13	OPTIONAL
PFR5-4615G	Adjustable Rear Lower Control Arm Kit	£107.96	£119.95	OPTIONAL
PFR5-4616BLK	Rear Lower Control Arm Inner Bush	£27.86	£30.95	OPTIONAL
PFR5-4617BLK	Rear Upper Arm Inner Bush	£18.86	£20.95	OPTIONAL
PFR5-4618BLK	Rear Lower Arm Outer Bush	£20.66	£22.95	OPTIONAL
PFR5-5630-12BLK	Rear Shock Top Mount Bracket and Bush 12mm	£31.95	£35.50	OPTIONAL

Available from Birds, (deal only by prior arrangement with Drivers representative).

SKU	330 CONTROL ITEMS	MEMBERS (Ex Vat)	PUBLIC (Ex Vat)	
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QDF14N	Quaife QDF14N ATB Limited Slip Differential	TBA	£876.00	Optional & CONTROLLED
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POWERFLEX FULL KIT INCLUDES

PFF5-4602-24BLK	Front Anti Roll Bar Bush 24mm
PFF5-5601GBLK	Front Wishbone Rear Bush, Caster Offset
PFR5-3608BLK	Rear Trailing Arm Bush
PFR5-4610BLK	Rear Subframe Front Bush
PFR5-4611BLK	Rear Subframe Rear Bush
PFR5-4625BLK	Rear Diff Front Bush
PFR5-4626BLK	Rear Diff Rear Bush
PFR5-504-18BLK	Rear Roll Bar Mounting Bush 18mm



Appendix 2: Nominated MAHA Rolling Roads:

EDM

(Bicester)

E.D.Motorsport,
Unit 7 Field Farm Business Centre,
Nr Launton,
Bicester,Oxfordshire,
OX26 5EL
Tel: 01869 278 942

TI Motorsport

(Stoke)

TI Motorsport LTD
Tegiwa House
Sutherland Road
ST3 1HZ
Tel: 01782 950315

Revivals

(Duxford)

Revivals Garage
Lodge Road
Thriplow, Royston
Herts
SG8 7RN
Tel: 01763 208043

Alive Tuning

(Louth)

Unit 1 & 2
Meridien Centre
Belvoir Way
Fairfield Industrial Est.
Louth
Lincolnshire
LN11 0LQ
Tel: 01472 812900

750 Motor Club (Mobile Dyno)

Donington Park
Castle Donington
Derbyshire DE74 2RP