



116 Trophy 2022

Sporting & Technical Regulations

PUBLISHED VERSION - Page 1 of 6 - Issued 28/04/2022

1: SPORTING REGULATIONS - GENERAL

1.1: TITLE & JURISDICTION:

The **116 Trophy** is organised and administered by the 750 Motor Club Ltd in accordance with the General Regulations of Motorsport UK (incorporating the provisions of the International Sporting Code of the FIA) and these Series Regulations.

- MOTORSPORT UK Series Permit No: RS2022/036**
- MOTORSPORT UK Series Grade: N/A.**
- Race Status: Interclub / National.**

1.2: OFFICIALS:

- Co-Ordinator:** G.Groombridge, 750 Motor Club, Castle Donington, Derbyshire, DE74 2RP.
Promoter: Mark Bate, 116 Racing Ltd, 196 Huddersfield Road Stalybridge. SK15 3DL.
Eligibility Scrutineer: B. Blackmore
- Series Stewards:** C. Emmerson T. Gregory I.Sowman
- Technical Advisor:** M. Bate

1.3: COMPETITOR ELIGIBILITY:

- Entrants must:
 - be fully paid up members of the 750 Motor Club and
 - be Registered for the Series and
 - be in possession of a valid MOTORSPORT UK Entrants Licence.
- Drivers and Entrant/Drivers must:
 - Be current Members of the 750 Motor Club and
 - be Registered for the Series and
 - be in possession of valid Competition (Racing) Club Licence, as a minimum
 - Or be in possession of the highest grade of national Race licence or valid FIA International Licence, together with their ASN's written consent ((H)26.2. and FIA ISC Article 2.3.7.b applies)
 - 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.
- All necessary documentation must be presented for checking at all rounds when signing-on.

1.4: REGISTRATION:

- All drivers must register for the series by returning the Registration Form with the Registration Fee to 116 Racing Ltd (Mark Bate) 196 Huddersfield Road Stalybridge. SK15 3DL. Email info@116trophy.com, prior to the Final Closing date for the first round being entered.
- The Registration Fee is £125 per driver payable upon registration.
- Registration numbers will be the permanent Competition number for the Series.

1.5: SERIES ROUNDS:

The **116 Trophy** will be contested over the following rounds:

Date	Circuit	Round/s
10 April	Croft	1
14 May	Oulton Park	1
18/19 June	Pembrey	1
17 July	Silverstone Nat	1
7 August	Donington Park	1
27 August	Brands Hatch (Indy)	1
17 September	Cadwell Park	1
2 October	Snetterton 300	1

1.6: SCORING:

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

1.7: AWARDS:

- All awards are to be provided by the Organising Club unless agreed otherwise.
- Per Round: Trophies to 1st, 2nd and 3rd.
- Series: N/A
- Presentations: Awards will be presented at the end of each event.
- Entertainment Tax Liability: {deleted}
- If Provisional Results or Series Tables are revised after any presentations and these revisions affect the distribution of awards the Competitors concerned must return them to the organisers in good condition within 7 days.

2: SERIES EVENT MEETINGS & RACE PROCEDURES

1. ENTRIES:



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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 (MOTORSPORT UK Regulations Q12.4).
 3. At Double Header Race Meetings the grid for the second race will be set from the second fastest practice times.
- 4. RACES:** Should any race be disrupted the Clerk of the Course shall not be obliged to resume or rerun the race (Q12.15) (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 MOTORSPORT UK Regulation (Q)12.11.2. 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 MOTORSPORT UK, 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 MOTORSPORT UK 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. (MOTORSPORT UK regulation (D)26.3.)
- 10. TIMING MODULES:** The 750 Motor Club utilises AMB / MyLaps 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. The transponder required is either a TRANX 260 or a MyLaps X2 or TR2 model.
- 11. QUALIFICATION RACES:** If any event is oversubscribed the Organising Club may at their discretion run Qualification Races.



12. OPERATION OF SAFETY CAR: The Safety Car will be brought into operation and run in accordance with Section Q, Appendix 2 of the MOTORSPORT UK General Regulations.

13. ONBOARD CAMERAS: All competitors are required to carry **both a front and rear facing** on board, in car camera that records to an SD (or micro-SD) card that must be capable of recording HD footage that can be played back on a standard laptop. Recordings from the cameras may be used where there is an incident which is subsequently brought before the Clerk of the Course for investigation.

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 MOTORSPORT UK regulations and be approved by the Chief Scrutineer in accordance with J.5.21

Front facing cameras must be mounted in a position such that the steering wheel and track in clear view. **Rear facing cameras must show the track in clear view.** **Both units** must always be switched on and be recording when the car is on track during any official free practice, qualification session and race.

The onus is on the competitor to ensure that the camera unit batteries are charged, the cameras switched on to record and manage the storage to ensure enough space is available on which to record during the above-mentioned sessions.

In the event that no recording is available when requested by the Organisers or Clerk of the Course for judicial purposes then the following penalties will be applied by the Clerk of the Course.

- a. First offence – Championship Reprimand
- b. Championship Points Deduction – Equivalent to an 8th place finish.
- c. Disqualification.

3: SPECIFIC SERIES REGULATIONS

1. In the event of any rounds being oversubscribed the Organising Club may, in liaison with the Series Coordinator, 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 series points. At each Round of the series Race 1 grid positions will be determined by each team's fastest lap time in Qualifying.
2. Drivers finishing in the Top 3 at each event will receive a time penalty for the subsequent race in which they participate that year, these will be served at the time of the first mandatory pitstop:
 - 1st place: 30 seconds
 - 2nd place: 20 seconds
 - 3rd place: 10 seconds
3. **Teams may only make one of their two mandatory pitstops under a given safety car period. For the avoidance of doubts making both mandatory pitstops under a single safety car period is prohibited and will result in a 2 lap penalty being applied after the race.**
4. The Series co-ordinator reserves the right to request the fitting of a 750MC owned data logging system to any car prior to competition. Failure to comply will result in disqualification.
5. Drivers may also be requested to take their vehicle (at their own expense) to one of the Series designated rolling roads after competing (including the 750 Motor Club mobile MAHA dyno) where the car will be power tested in order to assess compliance with the relevant class limits.

4: SPECIFIC SERIES PENALTIES:

In accordance with Section C of the current MOTORSPORT UK Yearbook

4.1: INFRINGEMENT OF TECHNICAL REGULATIONS:

1. Arising from post practice Scrutineering or Judicial Action: Minimum Penalty: The provisions of MOTORSPORT UK Regulations: C3.3.
2. Arising from post race Scrutineering or Judicial Action: Minimum Penalty: The provisions of MOTORSPORT UK 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:

1. In the case of a driver being excluded from a race, the Clerk of Course will impose the penalties set out in MOTORSPORT UK Regulation C3.5.1 a & b and may impose the penalty set out in MOTORSPORT UK Regulation C3.5.1 c.
2. In order to maintain standards of conduct, the Series Organisers will monitor all Officials/Observers reports of adverse behaviour at race meetings. If any individual is included on two such reports during one racing season the Series Organisers will request the Clerk of Course at future race meetings to consider specific observation of that driver's conduct.
3. The Clerk of Course may impose a "Stop-Go" or "Drive through" penalty during a race in accordance with MOTORSPORT UK Regulation Q.12.6.



4. Any Competitor who is penalized under the Series Sporting Regulations at any stage of a Series event and receives an allocation of penalty points on their race license in accordance with MOTORSPORT UK Regulations, will receive a grid slot penalty at the next round in which they compete following the allocation of penalty points, equal to the number of penalty points which were allocated. Double headers will be considered as two separate rounds; however if the decision to allocate penalty points is delayed such that further round/s of the Series have taken place since the offence, the grid slot penalty will be implemented at the next round in which they compete after the allocation of the penalty points. The penalty will mean that a Competitor will be moved back grid slot places from their grid position (e.g. if a Competitor with a three grid slot penalty had a qualifying time that was good enough for pole position then the Competitor will start fourth on the grid). If for any reason the imposition of this grid penalty is impractical (such as the competitors qualifying time, starting from the pit lane etc.) or the offence occurs at the final meeting of the season, a time penalty of 5 seconds will be added to the elapsed time of the Competitor.
5. Series Stewards are also empowered to consider any request from the Series co-ordinator to penalize any Competitor for any breach of Series regulations and, after holding a formal hearing if they deem it necessary, to impose a penalty in accordance with MOTORSPORT UK Regulation C.2.1.1 (subject to the rights of appeal provided for in Section C.)
6. One or more of the following may be imposed by the Series Stewards as appropriate;
- Reprimand
 - Fine. This may be also applied in the case of a driver receiving three reprimands from the Series Stewards in one season.
 - Time or Grid Penalties
 - Suspension from all or part of the Series. This may also be applied in the case of a driver receiving two fines from the Series Stewards in one season.

5: TECHNICAL REGULATIONS

5.1: INTRODUCTION:

- a) The following Technical Regulations are set out in accordance with the MOTORSPORT UK specified format and it should be clearly understood that if the following texts do not clearly specify that you can do it, you must work on the principle that you cannot. By registering from the series, you agree to abide to regulations and random checks in paddock by 116 Trophy officials and by scrutineers. The fact that some modifications are mentioned as prohibited does not imply that others are allowed.
- 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 MOTORSPORT UK 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 MOTORSPORT UK 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 116 Trophy is for competitors participating in the BMW E87 5-Door, 5-Speed (1596cc n45 engine.) Only UK & European 2004-2006 domestic market cars in right hand drive are permitted. There are no restrictions on the transport of cars to and from the circuit. Cars will run in one class. Non scoring "Invitational Cars" may be admitted at the discretion of the cup coordinator, The 116 Trophy 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-ordinator 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. Competitors seeking to gain a power advantage can expect to exceed the maximum power allowed for the 116 Trophy Series of **130 bhp** at the flywheel, tested on a Series nominated MAHA Dyno.

The 116 Trophy is not a development formula. **IF ITS NOT IN THESE REGULATIONS IT IS NOT PERMITTED.**

5.3: SAFETY REQUIREMENTS:

Roll cages: Only the 6-point roll cage supplied by 116 Racing LTD is permitted (see Appendix 1.)
Other: 2.1.3. Extinguishers must comply with MOTORSPORT UK regulation K 3.1. Seat belts must be FIA homologated and as per K2.1.2, 2.1.3. or 2.1.4.

5.4: GENERAL TECHNICAL REQUIREMENTS & EXCEPTIONS:

All cars must comply with the requirements of sections J and Q19 of the current MOTORSPORT UK Yearbook. All vehicles must be of sound construction and mechanical condition and be well maintained. Water hoses, oil hoses and their associated clips are free. Fasteners (e.g. nuts, bolts) are free. Rose Joints of any type are prohibited [except where fitted to mandatory items]. The organisers 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 stiffening is permitted except that derived from the fitting of the roll cage. Seam welding is strictly forbidden, Cutting, grinding, drilling, or acid dipping to remove components or material from the chassis is strictly forbidden. It is prohibited to change the standard thickness of the shell, by dipping or sandblasting. Seam sealer may only be removed up to a maximum of 50mm from the periphery of roll cage mounting feet. It is forbidden to remove seam sealer from anywhere else on the interior or exterior of the shell.

Towing eyes must be fitted front & rear and must have a minimum internal diameter of 60mm; (note the tow eye may be of either a suitable rigid or flexible material bolted to the chassis). 1 single hole per tow wire is permitted in the front/rear bumpers. **The plastic "Jack Fixture" (BMW Part No: 31 11 6 761 462) fitted to the front subframe and the 4 x plastic "Lift Supports" fitted to the vehicle sills (BMW Part No: 51 71 7 237 195) may be removed.**



5.6: BODYWORK:

1. Modifications Permitted:

1. General: Mandatory fitment of laminated windscreen. Door windows and rear windscreen must be standard glass. Safety film on the glass is permitted.

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 brackets such as rear seat mountings may be removed, however competitors should bear in mind that if the removal of any material results in weakening the structural integrity of any panel, then the Clerk of the Course (at their own discretion) will be fully authorised to exclude the vehicle from competing.

Spare wheel & associated parts, and all tools must be removed.

Rear plastic battery box can be removed and hole covered by a strong aluminium or carbon fibre panel

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. Glove box lid must be in place, hinges can be removed.

Steering wheel may be changed. Air bags must be disabled if the standard steering wheel is used. Glass sunroofs must be removed or replaced as per MOTORSPORT UK regulation Q13.10.6. It is permitted to remove air-conditioning if fitted, the original heater matrix, mechanism and blower must be retained and in full working order .

An interior (standard or non-standard) rear view mirror must be fitted to the left of the driver.

Rear Doors Can Be Striped of redundant electrics and window lifting parts. The centre console must be retained but the arm rest may be removed.

If the original interior door panels are removed they must be replaced with strong aluminium or composite sheeting - this must be executed to a high standard with no sharp edges and with smooth surface.

3. Exterior: Bonnet, Front Wings, Front Bumper, Rear Bumper, Doors And Tailgates must remain standard.

Only The BMW E87 ES /SE and Sport bodywork is permitted, Msport Bumpers and Side Skirts are prohibited. Door mirrors must be fitted on both sides of the vehicle, only standard OEM mirrors are permitted

The original number of front windscreen wiper arms/blades must remain and be fully functioning, the rear wiper can be removed, all 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. The left-hand lateral underbody shield (BMW Part No: 51757059389) must be retained in order to protect pipework on the underside of the vehicle. The engine undertray and plastic wheel arch liners may be removed.

4. Silhouette: All cars have to retain the original E87 ES/SE or Sport profile. It is permitted to remove the front fog lamps, the front and rear bumpers may not be aesthetically modified in any way, and retain standard in appearance (other than for localized trimming to allow fitment of towing straps). The rear bumper must retain its diffuser insert which must not be modified in anyway.

5. Ground Clearance: It is permitted to alter the ride height. Under no circumstances can any part of the bodywork, or suspended part of the car excluding the exhaust system, be below a horizontal plane passing 65mm above the ground. The car should be in normal racing trim with the driver aboard and steering in straight ahead position. A gauge of 65mm 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. There is no tolerance to this measurement.

2. Modifications Prohibited:

1. General: Other than those panels detailed in 5.6.1.3 the exterior of the car must be standard for the model being raced. All of the bodyshell and any replacement body panels must be of original shape, material and thickness.

2. Interior: A full width dashboard must be used.

3. Exterior: It is not permitted to increase the width of the wheel arch by the addition of material to, or the deformation of, the outside of the wheel arch but the inside lip may be. Bonnet must remain in the normal position and, when closed, must not have any non-standard gaps at any of their edges. Fitment of tape, sealant or addition of any material of any type to close body gaps (e.g. bonnet to wing) is prohibited. It is not permitted to add any non-standard material or structure to the underbody or outer floor plan.

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 is the BMW N45 B16. All internal engine parts must be original or OEM unmodified pattern parts from the N45 B16. (No internal engine components from the N45 B20S engine are permitted)

It is the competitor's responsibility to ensure that no prohibited modifications have been carried out if they are using an engine not assembled by them. Checking of engine parts will be by comparison to spare parts supplied by the manufacturer's official agent or by any other means necessary to ensure compliance.

Drivers may be requested to take their vehicle (at their own expense) to one of the Series designated rolling roads either prior to participation or after competing (including the 750 Motor Club mobile

MAHA dyno) where the car will be power tested in order to assess whether it is compliant. Failure to comply will result in disqualification.

The designated rolling road centres for the Series (including the 750 Motor Club mobile MAHA dyno) will all use MAHA LPS 3000 or FPS 2700 equipment. The maximum permitted power must be within the stated peak flywheel horsepower of 130bhp, Drivers are advised to check the power of their cars prior to using one of the designated MAHA rolling road centres listed in Appendix 2.

1. Modifications Permitted:

No modifications are permitted beyond the repair or adjustment No other modifications are permitted beyond the repair or adjustment processes specifically specified by the manufacturers `workshop manual. Engine and gearbox must remain in its standard location . lowering of engine or moving towards bulkhead is prohibited

Replacement of the Standard Dual Mass Flywheel by the TTV Racing aftermarket flywheel is permitted (see Appendix 1.)

2. Modifications Prohibited:



Any other than those permitted in 5.7.1. It is specifically prohibited to modify the cylinder head in anyway. Skimming the head and reboring the cylinders is prohibited. The engine block bore must measure a maximum of 84mm The OE 72mm crankshaft must be retained 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

3. Location:

Position and mounting method must be standard for the e87 N45 B16 model.

4. Oil/Water cooling:

Water radiators must remain standard, aftermarket electric fans are permitted. The standard water pump and pulley must be used. An aftermarket oil pressure sender and remote cockpit gauge is permitted, the sender must be fitted to the oil filter body housing using the OEM blank provided. It is permitted to remove the standard oil filter housing (BMW part no. 11427530668) and replace with alternative E87 1-Series oil filter housing (BMW part no. 11427508966), in order to fit either:

- a) BMW heat exchanger (for hot climates) part no. 11427508967 and associated pipework.
- or
- b) Aftermarket take off plate 116T001 (available from 116 Racing Ltd for registered drivers) in order to fit aftermarket oil cooler and associated pipework.

No other modifications are permitted to the oil system.

5. Induction Systems:

The complete induction system must remain as standard

No modifications are permitted to the induction system apart from the fitment of a larger diameter BMW throttle body (BMW Part No. 13541439580 or pattern equivalent), and its associated parts. These include Air Boot (BMW Part No 13717555289 or pattern equivalent), Mass Air Flow Meter (BMW Part No 13627533853 or pattern equivalent) and Airbox (BMW Part No 13717543163). All parts must be unmodified and complete, and the standard 116i air probe must be fitted and operational. A foam or paper air filter element must be fitted and complete but the type is free, either aftermarket or BMW Part No 13717532754. The crankcase breather may vent directly to a catch tank and any holes in the air filter housing associated with the breather system may be blanked off.

6. Exhaust systems:

Exhaust systems must exit at the rear of the vehicle. The standard exhaust manifold and system must be replaced with the Klarius system (see Appendix 1) which must remain unmodified. Catalytic converters must be retained, all exhaust gasses must pass through the catalytic converters, emissions testing may be carried out to ensure compliance.

7. Ignition systems:

The only ECU permitted is the 116 Series ECU (see Appendix 1.) No alternative or additional ECU is permitted; spark plugs are free. All original engine sensors must be fitted and operational. The OBD port must remain accessible and fully functional in order to allow diagnostic testing and ECU interrogation.

8. Fuel delivery systems:

It is permitted to replace the fuel lines and filter. Fuel pumps and pressure regulator must be standard and unmodified. Fuel Pressure testing may be carried out at any time to ensure that the fuel rail pressure does not exceed production limits.

5.8: SUSPENSIONS:

1. Permitted modifications:

It is a Mandatory for all cars to run with the Gaz 116 Trophy Suspension Kit including top mounts, which must be unmodified.

Anti-roll bars must be production BMW E87 ES/SE N45 116i 2004-2006 items of the following diameter bars (see Appendix 1):

Front Diameter =26.5mm, Rear Diameter = N/A. - Front anti-roll bar drop links are free.

It is permitted to fit the following E90/92/92 M3 Track Control Arms to allow a wider range of front negative camber adjustment to a maximum of -4 degrees – BMW part nos. 31102283577 (LH) and 31102283578 (RH). These may be BMW OEM or pattern parts but must be unmodified.

Suspension bushes may be replaced with either standard rubber OEM bushes or any aftermarket polyurethane bush. It is prohibited to use solid bushes such as alloy. Rose joints are not permitted other than on top mounts supplied with the suspension kit. Maximum front castor and camber is set using the mandatory adjustable top mounts

It is permitted to add a gusset to the rear toe arms on the rear axle, this gusset must be welded in place and are available for purchase from 40 Forty Racing see Appendix 1 or alternatively manufactured to the exact drawing in Appendix 3 of these regulations.

2. Prohibited modifications:

Modifications to the suspension pick-up points are prohibited; this includes altering (including slotting) the suspension strut mounting points on the chassis and where the suspension attaches to the front and rear subframes.

Rear adjustment of castor and camber can only be set using OEM components. Front camber may not exceed 4.00 degrees Negative.

Front and Rear Strut Braces Are Prohibited

3. Wheelbase:

The wheelbase must be standard for the model being raced; wheels must fit into original wings front and rear without any rolling of the arches, brackets/tabs on the wing for holding the original plastic under arch trims may be folded out of the way or removed. The track may only be changed by using wheels of a maximum offset of ET20, wheel spacers are prohibited.

5.9: TRANSMISSIONS:

1. Permitted modifications:

The only permitted gearbox options are the standard Getrag Type F 5 speed manual as fitted to the BMW E87 N45 116i 2004-2006

Dual Mass flywheels may only be replaced with original or pattern items or converted to the single mass flywheel option as shown in Appendix 1. Clutches may be replaced with aftermarket options but must be single plate only. The original manual gear lever may be replaced with any OEM BMW Part.

The standard E87 116i open diff assembly and casing must be used and unmodified in all respects including the 3.6:1 final drive ratio.

2. Prohibited modifications:

Aftermarket limited slip, locked, locking, torque biasing or spring preloaded differentials or similar are prohibited.



3. Transmissions & Drive ratios:

The use of any aftermarket traction control device is prohibited. Final drive ratio must be 3.6:1 (see 5.9.1)

5.10: ELECTRICS

1. Exterior Lighting:

Must be as per standard fitment and be fully operational.

2. Rear Warning Light:

A rear fog light to MOTORSPORT UK regulation K5.1 must be fitted.

3. Batteries:

Battery is free but may be relocated. 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 on-board battery.

5. No cutting out of excess wiring from the engine loom.

5.11: BRAKES

1. Permitted modifications:

1. All cars must have the standard ABS / DCS system in full working order. Front brake callipers must be standard. Front brake disks Must be standard or standard pattern of a maximum diameter of 284mm.

Rear brake callipers must be standard. Rear brake disks must be standard or standard pattern of a maximum diameter of 280mm.

Brake pads are free. Deformation or removal of back plates is permitted, brake fluid is free. Flexible hoses may be replaced with aftermarket parts. The braking system must remain fully operational in all aspects at all times (excluding the handbrake.)

2. Prohibited modifications:

It is not permitted to use any drilled or grooved discs A hydraulically-operated handbrake is not permitted. Rear brake hydraulic line locks are not permitted.

5.12: WHEELS / STEERING

1. Permitted modifications:

An original, unmodified E87 116i BMW steering rack must be used. The steering lock should be rendered inoperative, unless the vehicle is driven to the circuit on the highway. MOTORSPORT UK regulation Q19.6.

2. Prohibited modifications: No machining or other modification of the road wheels are permitted. Power assistance of the steering may not be disabled, the standard PAS pump and pulley must be used.

3. Construction & Materials: Magnesium wheels are prohibited. The only permitted wheel options are OEM 16" BMW wheels as per 5.12.4 or Revolution CR10 wheels as per 5.12.4 which are available from Demon Tweeks (contact Nick Smith – Tel: 01978 663064 Email: nicks@demon-tweeks.co.uk)

4. Dimensions: 16" x 7"J et20 only.

5. Wheel Spacers: Wheel spacers are prohibited; competitors should ensure that wheel bolts are of sufficient length to adequately secure each wheel. Wheel hubs may be fitted with conversion studs to accept wheel nuts.

5.13: TYRES

1. The only permitted tyres for the competitor is the Nankang NS2-R supplied by Nankang UK (see Appendix 1) in 205/45/16 size. All tyres must be bought from the official 116 Series supplier and have the specific 116 Trophy markings (see Appendix 1.) The original tread pattern must remain visible at all times, and with a minimum tread depth of 1.6mm. No shaving or buffing is allowed. The use of tyre heating/heat retention devices, chemical tyre treatments and compounds is strictly prohibited.

5.14: VEHICLE WEIGHT:

1130 kgs excluding driver

Random checks will be carried out during the season and no car should ever be below this minimum weight.

5.15: FUEL TANK / FUEL

1. Types: Standard 52L tank must be fitted.

2. Locations: Tank must be in standard position.

3. Fuel: Only fuel as defined in Section B Nomenclature & Definitions, Pump Fuel a) section of the MOTORSPORT UK Yearbook for the current year 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 teams which boost the octane rating (RON) in any petrol is prohibited. At the end of practice and the race at least 3 litres of petrol from the tank of the competing car must be available to the scrutineers for analysis.

5.16: SILENCING:

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

5.17: NUMBERS & SERIES 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. Series Sponsor's decals (where applicable) must be affixed in or near the positions mandated by the organisers. 750 Motor Club and Series Sponsor's decals must take preference to any other decals. Drivers may be requested to remove decals that are viewed as conflicting with official Series Sponsors. Failure to comply will render the vehicle and driver ineligible to race.

2. Suppliers: Sponsors and Club decals will be available at the first series race in which the vehicle is entered.

6. APPENDICES:

SEE NEXT PAGE. If it isn't on this list please contact the 116 Racing Ltd to confirm you can fit the part in question.

Appendix 1: Mandatory & Optional Parts

Mandatory Parts	Price	Supplier	Contact
MSA Approved ROPS GRID (Gosling Racing – Independent Design) OR Custom Cages Part (BM1B/22NA)	£TBC	116 Racing	07465 424912
116 Trophy Exhaust System	£395.00	Klarius	07967 645522
116 Trophy Suspension Kit	£525.00	Gaz Shocks	01268 724585
Nankang NS2-R Tyres (set of 4)	£260.00	Nankang UK	0121 5005010
116 Trophy ECU	£195.00	End Tuning	07967 603576
Optional Parts	Price	Supplier	Contact
116 Trophy Primary Silencer Box Delete Pipe	Included with Exhaust	Klarius	07967 645522
116 Trophy Sump Baffle	£22.00	JC Racing	01845 527777
Lightweight Flywheel	£312.00	TTV Racing	01473 730996
Rear Toe Arm Gussets (Pair)	£40	40 Forty Racing	07825 7558443
BMW E90/E92 M3 Track Control Arms	N/A	BMW	N/A
Heat Exchanger (For Hot Climates)	N/A	BMW	N/A
Revolution CR10 Wheels	Quantity Dependant	Demon Tweaks	01978 663064
Race Door Cards (carbon effect) full kit	£170	R.C.D.C	07860 216772
Powerflex Suspension Bushes	25% discount	116 Racing	07465 424912

Appendix 2: Nominated Rolling Roads

Marlin Motor Engineers
(Milton Keynes)
Unit 4-5 Wellington Place
Bletchley

Milton Keynes
Buckinghamshire
MK3 5NA
Tel: 01908 366256

Revivals
(Duxford)
Revivals Garage



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

750 Motor Club (Mobile Dyno)

Donington Park
Castle Donington
Derbyshire
DE74 2RP

TI Motorsport

(Stoke)
TI Motorsport LTD
Tegjwa House
Sutherland Road
ST3 1HZ
Tel: 01782 950315

Alive Tuning

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

Raceworx Performance Centre (Scotland)

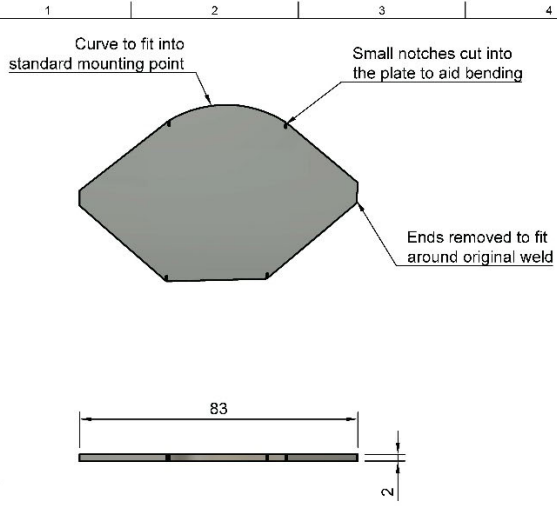
Unit 2
Block 1 Hunting Park,
Livingston
EH54 5QS
Tel: 07483 161958

RE Performance (Swindon)

Scuderia House,
Newcombe Drive,

Swindon
SN2 1EG
Tel: 01793 278069

Appendix 3: Rear Toe Arm Gusset



OVERVIEW

The idea is to manufacture 2 support brackets for the rear subframe. These brackets would support the lower arm mounting point to reduce the risk of bending when riding kerbs. The plates are designed to create little to no extra torsional stiffness in the rear subframe and are purely to aid in the reliability of the vehicle. The plates will be manufactured from 2mm S275 mild steel so that is as close as possible to the original subframe material. Included with the kit will be 2 support brackets ready bent to shape and a fill piece to fill a hole in the original subframe

3D DESIGN



IMAGES

From the images to the left you can see how the items fit into place on the standard subframe. There is scope in the future to further support this mounting point by tying both sides together, although this will then increase torsional rigidity at the same time hence why it was not implemented at present.

Parts List		
Qty	Item	Material
1	Offside Support	S275
1	Nearside Support	S275
1	Fill Piece	S275

	Title	116i Subframe Support	Created by	Tony Russell
	Customer	FORTY40	Document status	Design proposal
			DWG No.	0002
	Rev.	Date of issue	Sheet	
	1	15/01/2022	1 of 1	

Jack fixture
31 11 6 761 462

Support lifting platform
51 71 7 237 195