



# ARMED FORCES RACE CHALLENGE 2017

## SPORTING & TECHNICAL REGULATIONS

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### 1: SPORTING REGULATIONS - GENERAL

#### 1.1: TITLE & JURISDICTION:

The **ARMED FORCES RACE 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.

- MSA Championship Permit No: TBC**
- MSA Championship Grade: D.**
- 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](mailto:giles@750mc.co.uk).

**2. Eligibility Scrutineer:** R.Blackmore

**3. Championship Stewards:**

R.Knight                      K. Messer                      I.Sowman

#### 1.3: COMPETITOR ELIGIBILITY:

- Entrants must:
  - be fully paid up valid membership card holding members of the 750 Motor Club and
  - be Registered for the Championship and
  - be in possession of a valid MSA Entrants Licences.
- Drivers and Entrant/Drivers must:
  - Be current Members of the 750 Motor Club and
  - be Registered for the Championship and
  - be in possession of valid Competition (Racing) National B Licence, as a minimum
  - 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)
  - If participation in the Championship 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 Championship. 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 competitors must register for the Championship via the AFRC website prior to the Final Closing date for the first round being entered.
- The Registration Fee for the season is £30 payable upon registration.
- Registration numbers will be the permanent Competition number for the Championship.
- All competitors of AFRC will be a member of one of the following teams:
  - British Army. Current serving members of the British Army.
  - Royal Air Force. Current serving members of the Royal Air Force.
  - Royal Navy / Royal Marines. Current serving members of the Royal Navy or Royal Marines.
  - Veterans / Emergency Services. UK Armed Forces Veterans and UK Emergency Service members (police, ambulance, fire, HM coastguard).
  - Guests. Any competitor who doesn't fit into any of the teams listed at Para a-d above who have been accepted to compete in AFRC by the AFRC manager.

#### 1.5: CHAMPIONSHIP ROUNDS:

The **ARMED FORCES RACE CHALLENGE** will be contested over the following rounds:

Date	Circuit	Round/s
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#### 1.6: SCORING:

**1. 17.** Members of the 'Guest' team will NOT score individual championship points but will be classified in the individual round results and eligible for individual round awards. Individual championship points will be awarded to the top 15 finishers on the PI (Performance Index) table from the Army, RAF, RN/RM and Veterans team competitors as follows:

1<sup>st</sup>-20, 2<sup>nd</sup>-17, 3<sup>rd</sup>-15, 4<sup>th</sup>-13, 5<sup>th</sup>-11, 6<sup>th</sup>-10, 7<sup>th</sup>-9, 8<sup>th</sup>-8, 9<sup>th</sup>-7, 10<sup>th</sup>-6, 11<sup>th</sup>-5, 12<sup>th</sup>-4, 13<sup>th</sup>-3, 14<sup>th</sup>-2, 15<sup>th</sup>-1.

**2.** The totals from all qualifying rounds will determine the final championship points positions.

**3.** Ties for end-of-season award winning places shall be resolved, when more than one competitor have equal totals, by taking into account the highest number of 1<sup>st</sup> places, 2<sup>nd</sup> places etc from the races they are counting as their best total (i.e. their finishing position in dropped rounds do not get taken into account). If that fails to find a winner their highest or subsequent highest dropped scores will be added to their existing total score until a conclusive result is found.

#### 1.7: AWARDS:

- All awards are to be provided by the Organising Club unless agreed otherwise.
- Per Round: Awards of 1<sup>st</sup>, 2<sup>nd</sup> & 3<sup>rd</sup> overall in PI (Performance Index), Highest Placed Novice.
- Championship: Trophies to:
  - 1<sup>st</sup>, overall.
  - Highest Placed Novice
- Bonuses:
  - Per Round: Not applicable.
  - Championship: Not applicable
- Presentations: Garlands and Trophies are to be provided for presentation at the end of each race. Prize money and Bonuses shall be posted to the Entrants within one month of the results being declared final after each season.
- Entertainment Tax Liability: Not applicable.
- Title to all Trophies: In the event of any Provisional Results or Championship Tables 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: CHAMPIONSHIP EVENT MEETINGS & RACE PROCEDURES

#### 1. ENTRIES:

- 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.
- 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.
- 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.
- The Entry Fee for each event shall be specified in the SRs and on the entry form.
- Reserves will be listed in the Final List of Entries published with Final Instructions or in a Bulletin.



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**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 Standing 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 AMB 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 is a TRANX 260 Direct Powered and is available from HS Sports Ltd – 01260 275708.

**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: {deleted}**

### 3. SPECIFIC CHAMPIONSHIP REGULATIONS

**1.** AFRC will be scored by applying the AFRC Performance Index (PI) formula. The PI is calculated as follows:

$$\text{PERFORMANCE INDEX} = \frac{\text{FASTEST LAP TIME (seconds)}}{\text{AVERAGE LAP TIME (seconds)}}$$

A PI score will be awarded for each stint in the race (one before pit stop and one after pit stop). The following laps will not be considered when calculating the PI:

- a. Out lap. This is the lap from the start lights and also the lap that starts from the pit lane after the compulsory pit stop.
- b. In lap. This is the lap that finished in the pit lane for the compulsory pit stop.
- c. Safety Car laps. Laps following the safety car will not be considered towards the PI.

**2.** If a pit stop is made outside the pit window (as detailed in the meeting final instructions) the in and out laps will still be considered towards the PI.

**3.** If a competitor fails to complete a race, a PI will still be awarded for achieving the following:

- a. A minimum PI of 75 will be awarded to all drivers who sign on.
- b. A minimum PI of 80 will be awarded to all drivers who qualify (must complete three laps to qualify)
- c. A minimum PI of 90 will be awarded to all drivers that start a race; however the PI will be reduced by 5 for any competitor that does not complete that race.

**4.** Starting a stint is considered starting a race. For example, if a competitor completes the first stint but retires after the compulsory pit stop they will score full PI for the first stint and PI minus 5 for the second stint.

**5.** The use of racing wet tyres must be notified to the co-ordinator at least 20 minutes before the start of the race. The use of racing wet tyres will attract a reduction of PI by 3.

### 4. SPECIFIC CHAMPIONSHIP PENALTIES:

**In accordance with Section C of the current MSA Yearbook**

#### 4.1: INFRINGEMENT OF TECHNICAL REGULATIONS:



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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 CHAMPIONSHIP PENALTIES:

1. In the case of a driver being excluded from a race, the Clerk of Course will impose the penalties set out in MSA Regulation C3.5.1 a & b and may impose the penalty set out in MSA Regulation C3.5.1 c.
2. In order to maintain standards of conduct, the Championship Organisers will monitor all Officials/Observers reports of adverse behavior at race meetings. If any individual is included on two such reports during one racing season the Championship 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 MSA Regulation Q.12.6.
4. Any Competitor who is penalised under the Championship Sporting Regulations at any stage of a Championship event and receives an allocation of penalty points on their race license in accordance with MSA 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 Championship 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. Championship Stewards are also empowered to consider any request from the Championship co-ordinator to penalise any Competitor for any breach of Championship regulations and, after holding a formal hearing if they deem it necessary, to impose a penalty in accordance with MSA 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 Championship Stewards as appropriate:
  - a) Reprimand
  - b) Fine. This may be also applied in the case of a driver receiving three reprimands from the Championship Stewards in one season.
  - c) Time or Grid Penalties
  - d) Suspension from all or part of the Championship. This may also be applied in the case of a driver receiving two fines from the Championship Stewards in one season.

#### 5: TECHNICAL REGULATIONS

##### 5.1: INTRODUCTION:

The aims of the Armed Force Race Challenge Championship (hereby referred to as the 'AFRC') are as follows:

- a. To promote Motorsports within the Armed Forces community by providing an effective entry level into circuit racing for Armed Forces members (and veterans) that also allows experienced members to continue competing as and when Service commitments allow.
- b. To facilitate the development of novices by providing a simple format where they can practice their race-craft, car

development skills and benefit from the guidance of our more experienced competitors.

- c. To provide a means of awarding individual Service champions, an overall tri-Service champion and an overall teams champion.
- d. By leaving the technical regulations as open as possible and by rewarding pace rather than finishing position, AFRC encourages effective car preparation, design innovation, develop team building, good relations with fellow Armed Forces competitors plus provide development, training and support to improve our members capabilities.

##### 5.2: GENERAL DESCRIPTION:

The **ARMED FORCES RACE CHALLENGE** is for road based sports and saloon cars. Non-road based racing cars are not permitted. For the benefit of doubt, single seaters and cars never produced for the road are not permitted. Low production number / one-off kit cars will be considered on a case-by-case basis.

##### 5.3: SAFETY REQUIREMENTS:

Cars must comply with the relevant sections of MSA Regulations K. Roll cages must be as per MSA blue book section K1.

##### 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 be of sound construction and mechanical condition and be well maintained.

##### 5.5: ACCEPTABLE CARS:

See 5.2.

##### 5.6: BODYWORK:

###### MODIFICATIONS PERMITTED

**General:** The addition of colourless safety film to the glass is permitted.

**Interior:** All standard interior trim, floor coverings and roof linings may be removed. Heating and air-conditioning systems along with their associated wiring and ducting may be removed. The dashboard may be removed. Standard instrumentation may be removed and replaced with non-standard items. The driver's seat must be replaced with appropriate racing seat, the passenger seat may be removed. Side windows need not be operable; they may be removed or replaced with plastic as per MSA regulation J5.20.8. The rear window on closed cars or those with hardtops may be replaced with plastic as per MSA regulation J5.20.8.

A scrutineering card display pocket (supplied with registration pack) must be fitted to the left rear window on Saloon cars.

**Exterior:** The construction and materials of the following bodywork parts is free.

Front Bumper; Front Wings; Bonnet; Doors; Rear Quarter Panels; Engine Bay Cover; Rear Bumper; Boot Lid.

The lips in the inner wheel arches may be ground down and seam welded to allow clearance for wheels. Wheel wells may be reshaped but must not have any material added or removed. Material may be removed from non-structural areas of the chassis (such as the boot floor). Material may be removed from structural areas of the chassis, provided that such modification does not compromise the integrity of the chassis. If material is removed to allow clearance for the engine or gearbox then it is permitted to introduce material to compensate, provided that any strengthening of such areas must be in keeping with the vehicle's original construction. Apertures may only be created in the front and rear cabin bulkheads for the purpose of routing wiring and pipework. All such areas must be correctly sealed and competitors are encouraged to use existing apertures where possible. Aerodynamic aids such as flat underbody, splitters, spoilers, diffusers and canards may be added. Rear wings may be hard mounted to the chassis using any means. 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. A scrutineering display pocket (supplied with registration pack) must be fitted to the left side of the dashboard on open-top & kit cars.



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### Silhouette

**Ground Clearance:** It is permitted to alter the ride height. Under no circumstance can any part of the bodywork, or of the suspended part of the car excluding the exhaust system, be below a horizontal plane passing 50mm above the ground, the car being in normal racing trim with the driver aboard. 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.

### MODIFICATIONS PROHIBITED

**General:** It is not permitted to close panel gaps on an access panel to which access is required (i.e. bonnet, engine bay cover and boot lid) with tape.

**Interior:** Any in contravention of 5.6.1.

**Exterior:** Any in contravention of 5.6.1.

**Silhouette:** Any in contravention of 5.6.1.

**Ground Clearance:** Any in contravention of 5.6.1.

### 5.7 ENGINE

Any production engine produced by any manufacturer may be fitted to the vehicle.

### MODIFICATIONS PERMITTED

Modifications to head and block are free, but must be based on original standard parts. Crankshaft, connecting rods, pistons, valves, camshafts and manifolds are all free. Cylinder capacity may be increased or decreased by modifying cylinder bore and/or piston stroke. Petrol and Diesel engines are permitted. Variable valve systems are permitted.

### MODIFICATIONS PROHIBITED

None

### LOCATION

Engines must retain their original position and orientation within the car.

### OIL/WATER COOLING

Water radiators are free in terms of number, location and capacity. Engine and gearbox oil coolers are permitted and are free. Additional ducting is permitted. Sump type and material is free. Oil control systems (such as an accumulator sump) are also permitted.

### INDUCTION SYSTEMS

Induction systems are free. Forced induction may be added to naturally aspirated engines. The crankcase breather must recirculate or vent directly to a catch tank.

### EXHAUST SYSTEMS

Exhaust systems are free but must comply with MSA regulations J 5.16.1 - 5.16.5.

### IGNITION SYSTEMS

Ignition systems are free. Engine management systems (ECUs) are free, provided that they do not provide any kind of traction control.

### FUEL DELIVERY SYSTEMS

Fuel delivery systems including pumps, injectors, filters and tanks are free subject to meeting MSA safety requirements.

### 5.8 SUSPENSION

Suspension is free, but must use the original pick-up points which may not be modified. Dampers and springs are free. It must not be possible for the driver to make any changes to the suspension settings whilst seated in the cockpit. The wheelbase and track may be modified by using bolt on hub extensions or wheel offsets. Wheels must remain within the bodywork.

### 5.9 TRANSMISSIONS

Gearboxes are free.

### PERMITTED MODIFICATIONS

Differentials are free but may not be electronically controlled.

### PROHIBITED MODIFICATIONS

The use of any aftermarket electronic traction control device is prohibited. Gearbox and final drive ratios are free.

### 5.10 ELECTRICS

#### EXTERIOR LIGHTING

All cars must be fitted with two rear brake lights which must be fully functional at all times, all other exterior lights are optional with the exception of 5.10:2

Forward facing white lights must be fitted.

#### REAR WARNING LIGHT

A rear warning light must be fitted in accordance with K5.1.

#### BATTERIES

There are no restrictions on type or location of batteries, 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

#### GENERATORS

A fully working alternator and 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

#### Permitted Modifications

Brake callipers, disks and pads are free. Deformation or removal of back plates is permitted. Fitting of alternative brake piping/hosing is permitted. Brake bias valves are permitted but must not be operable by the driver whilst seated. ABS where fitted may be disabled or removed. Cars not originally fitted with ABS may be retrofitted with the ABS system from the same model only.

**Prohibited Modifications:** Carbon discs are not permitted.

### 5.12 WHEELS / STEERING

Steering rack is free and may be either powered or manual. If fitted with a steering lock, this should be rendered inoperative, unless the vehicle is driven to the circuit on the highway.

#### PERMITTED OPTIONS

Wheels may be steel or alloy only.

#### PROHIBITED OPTIONS

Magnesium wheels are not permitted

#### CONSTRUCTION & MATERIALS

As above.

#### DIMENSIONS

Wheel Diameter must be no greater than 18." Wheel width must be no greater than 10". Offset is free.

### 5.13 TYRES

Any MSA List 1A, 1B or 1C tyre is permitted. Diameter, width and aspect ratio are free. No alteration to the tyre from the manufacturer's specification is permitted. Re-cutting, re-grooving or in any other way modifying the tread pattern is not permitted. All the manufacturer's data must be clearly visible. Buffing of sidewalls to remove data is prohibited. The use of tyre heating/heat retention devices, tyre treatments and compounds is prohibited.

### 5.14 VEHICLE WEIGHT

There is no minimum vehicle weight

### 5.15 FUEL TANK / FUEL

#### TYPES

Free. A non-return valve must be incorporated in the vent system.

#### LOCATIONS



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If present, the standard fuel tank must be in standard position. The location of aftermarket tanks is free subject to meeting MSA safety criteria. **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 may be used.

### 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:

Championship Sponsor's decals must take preference to any other decals. Failure to comply will render the vehicle and driver ineligible to race.

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