



# ***4x4 OFF ROAD REGULATIONS & GUIDELINES***

Issue #4.0 – November 2022



VERSION HISTORY

Version	Date	Description
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2.0	January 2021	Change of address
3.0	March 2021	Alterations - Items 10.2-b, 8.1-g and 10.3
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3.2	September 2021	Inclusion of Harness 7.4
3.3	January 2022	Alteration to helmet requirements 10.2
4.0	November 2022	7.2 b, c – Radiators 7.2 d – Windscreens 10.2.1 – 4x4 Speed fire suits



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## 1. Overview

NORA Motorsport is a trading name of NORA 92 Limited. For the purposes of this document any reference to NORA can refer to NORA Motorsport or NORA 92 Limited.

No discrimination is intended where references are made to specific gender within NORA's Code of Practice and Regulations

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The NORA Code of Practice together with these regulations, the Event Regulations, and any Final Instructions shall apply to all 4x4 Cross Country events held under a permit issued by NORA 92 Limited.

## 2. Events

### 2.1 Conditions for 4x4 Cross Country Events

- a. The organiser must be affiliated to NORA
- b. A Road Traffic Act (RTA) exemption permit must be applied for and in place for the whole event.
- c. The course must be laid out or approved by a qualified NORA Clerk of the Course

### 2.2 Practice Events and Test Days

- a. An RTA exemption permit must be applied for and in place for the whole event.
- b. Courses must be laid out with the level of participant in mind.

### 2.3 Training Days

- a. All trainers must be licenced through NORA
- b. No more than 15 participants may be in attendance for each trainer.

### 2.4 Speed Events

- a. Events whereby the predominant means of defining a winner is by that of a timed lap or multiple number of laps, number of laps completed in a set time or a timed or series of timed A to B, point to point sections.
- b. Events where vehicles will exceed 15 miles per hour at any point whilst on the site.
- c. Multiple vehicle starts will be permitted under agreement in advance.

### 2.5 Non-Speed Events

- a. Events whereby the prominent means of defining a winner is by means of a point scoring system covering a series of challenges or sections.
- b. Time may be used as a means to differentiate between competitors tied from the points scoring system.
- c. Vehicles must not be racing, head to head, at all times during the event.
- d. Events where vehicles will not exceed 15 mph whilst on site.

## 3. Eligibility

- a. For all NORA competitions the competitor must hold a current NORA licence.
- b. Practice licences are available for non competition events.
- c. A one event competition licence will be available and can be completed on the day of the event.
- d. A one event competition licence grants the same benefits of an annual licence for the duration of the event only with regards to Rules and Regulations.
- e. A one event licence does not include Personal Accident cover.
- f. All new applications for an annual licence must be accompanied by a passport style photograph, Photographs may be sent electronically.



## 4. Licence Requirements

The following annual licences are required for taking part in 4x4 Cross Country events.

Licence Type	Minimum Licence Requirement	Minimum age (at 1 <sup>st</sup> Jan)
Speed Event Driver	National Basic – 4x4 Speed	16 Years
Speed Event Co-Driver	National Basic – 4x4 Non Speed	15 Years
4400 Class Driver	National Basic – Ultra 4 Unlimited	18 Years
4400 Class Co Driver	National Basic – Ultra 4 Unlimited	16 years
Non Timed Event Driver	National Basic – 4x4 Non Speed	16 Years
Non Timed Event Co-Driver	National Basic – 4x4 Non Speed	15 Years
Junior Event Driver	National Basic – 4x4 Non Speed	8 Years

Holders of an Ultra 4 Unlimited licence may compete in all 4x4 Cross Country events. Holders of 4x4 Speed events may compete in 4400 class events once they meet the minimum age requirement.

National basic licences can be upgraded to a National Advanced which includes Personal Accident cover or an International which also includes repatriation cover across Europe.

For the following events it is a requirement for the driver to be the holder of a valid RTA licence for the appropriate vehicle.

- Competitive Safaris, Team Recovery, Point to Point, Challenge events and all events crossing a public highway
- For Trials, Winch Challenge, Gymkhanas, Treasure Hunts and Orienteering events, if the driver does not hold a current RTA licence then they must be accompanied by a co-driver that does hold a current RTA licence.
- For Tyro and Junior trials the vehicle must be driven by a person holding a current RTA licence when moving between sections.

## 5. Officials Licences

Senior 4x4 officials are required to hold a NORA licence of the appropriate grade for the performance of their duties.

### 5.1 Licences Officials

The following officials will require to be licenced by NORA.

Official	Licence Term	Training Method
Clerk of the Course	3 Years	Seminar
Chief Technical Officer	3 Years	Seminar
Engine Measurer	3 Years	Seminar / Qualified Mechanic
Electronic Timekeeper		Assessment

Licences will only be issued to persons having attended a training session organised by NORA or who are approved by the NORA representative for the discipline in question.

#### 5.1.1 Electronic timekeeper

licences are only required where timing is conducted to an accuracy of less than one second. Assessment may be carried out by the following:

- For timing less than one minute but no less than 1 second – Clerk of the Course
- For timing to an accuracy of great then 1 second – NORA Chief Timekeeper.



## 5.2 Unlicensed Officials

The following officials do not require a licence from NORA and come under the authority of the Clerk of the Course.

Official	Training Method
Event Secretary	May receive training from NORA 92 or the Clerk of the Course
Incident Officer	This may be the Clerk of the Course or a person appointed by the Clerk of the Course
Technical Official	Will receive training from the Chief Technical Officer
Chief Marshal	Will be appointed and briefed by the Clerk of the Course
Marshal	Will be appointed and briefed by the Clerk of the Course or the Chief Marshal
Recovery Marshal	Appointed, briefed and under the control of the Clerk of the Course
Judges	Assigned and briefed by the Clerk of the Course or a deputy.
Child Protection Officer	A person appointed to manage child safeguarding issues

### 5.2.1 Marshal

- a. The minimum age for a 4x4 marshal is 14 years.
- b. Marshals under the age of 16 MUST be accompanied by a marshal over the age of 18 years.
- c. All marshals under the age of 18 must be signed on by a person with parental responsibility.
- d. Marshals must be provided with high visibility or defining clothing

### 5.2.2 Recovery Marshal

- a. The minimum age for a live recovery marshal is 18 years.
- b. Course marshals under the age of 18 must not get actively involved in a live recovery but may be used to signal oncoming drivers.
- c. Recovery teams will be sited under the direction of the Clerk of the Course.
- d. Event regulations should state the type of (if any) recovery available.
- e. The Clerk of the Course should inspect the equipment and safety of any recovery vehicles prior to the event.

### 5.2.3 Judges

- a. May be appointed to notify the Clerk of the Course of any course infringements by a competitor, due to the potentially confrontational nature of the task it is recommended that any judge be at least 18 years of age.
- b. Judges may be appointed for the following infringements:
  - i. Touching of course markers.
  - ii. Deviation from the marked course.
  - iii. Stopping forward motion (if applicable).
  - iv. Staying seated as per event regulations (if applicable)
  - v. Rule infringements such as undone harnesses, window nets etc



## 6. Use of Bridleways and Restricted Byways

- a. The Organisers of any Cross Country event (competitive or recreational) crossing or using a Footpath, Bridleway or Restricted Byway, whether competitively or not, must appoint a person to verify the status of any track or path along the route, ensure compliance with Section 33 of The Road Traffic Act 1988 and:
  - i. Obtain permission from the Landowner and any occupiers and authorisation from the Highway Authority in accordance with Section 33 of The Road Traffic Act 1988 (unless the route is already a way of higher status). Any conditions laid down must be adhered to.
  - ii. Notification to the local Police (clarifying the nature of the event) is recommended.
  - iii. Notify the National Parks (if appropriate)
  - iv. Notification to the Parish Council is recommended.
- b. All locations must be adequately marshalled by Officials who are well briefed and properly identified.
- c. One Official must be appointed for each section to ensure that the event does not unduly inconvenience other users, eg horse-riders, walkers, cyclists etc.
- d. The Official must have a good working knowledge of the Rights of Way affecting the Competition.
- e. Alternative routes for other users of the Rights of Way must be signposted. Warning Notices as appropriate and the Safety Signs should also be on display in all areas.
- f. Instructions to Competitors in event regulations or final instructions for events affecting Footpaths or Bridleways should include the following warning:
  - i. This event is routed along and/or across Rights of Way. Competitors must exercise caution and reduce their speed accordingly near other users. Be especially careful near horses. Slow down, stop and switch off your engine if necessary

## 7. General Vehicle Specifications

For all 4x4 events the vehicles must comply with the following minimum standards, further technical regulations may be imposed in the event regulations. For older vehicle that may not fully comply with the regulations then these may be used following an assessment carried out by the Clerk of the Course and Chief Technical officer and duly documented.

### 7.1 Chassis

The vehicle must have a minimum wheelbase of 1270mm

### 7.2 Body

The body construction of any vehicle must comply with the following;

- a. Be fitted with bodywork including a driver (and passenger) compartment isolated from the engine, fluid filled batteries, gearbox, hydraulic reservoirs (with the exception of fire extinguishers) pressurised above atmospheric pressure, pneumatic reservoirs and accumulators, transmission shafts, chains, belts and gears, brakes, road wheels, suspension components including their operating linkages and attachments, petrol/fuel tanks, oil tanks, water header tanks, catch tanks and fuel system components such as to prevent there being a hazard.
- b. Any front mounted radiator must be isolated from the driver/passenger compartment.
- c. Rear mounted radiators must be fitted with a protective mesh screen, allowing airflow, that is fitted to protect the radiator core from flying debris that may enter through the cockpit.
- d. Unless mounted with a rear engine, vehicles must have a bonnet or metal casing of solid flame-retardant material covering or surrounding the engine, which is secured by fasteners of adequate strength and with a positive locking action. Hinged bonnets must be fitted with a Fixed strut or strap the holds the covering in an open position. All moving parts of the engine must be covered.
- e. Windscreens must be erected unless the event takes place wholly on private property or the Event Regulations state otherwise. Windscreens must be of laminated glass or plastic of a minimum thickness of 4mm. Plastic side screens, where fitted, should also have a minimum thickness of 4mm unless fitted otherwise by the original vehicle manufacturer.
- f. If a screen isn't used all vehicles must have a mesh cover with holes no larger than 50mm x 50mm or competitors must wear visors or goggles of a non-splinterable material.
- g. Have a complete floor of adequate strength rigidly supported within the driver/passenger compartment.
- h. Be constructed in such a way as there is a clear extraction route for the occupants from either side.
- i. All access doors must be securely fastened whilst the vehicle is in motion throughout an event.





### 7.3 Seats

- a. Vehicles must be equipped with two fixed seats for the Driver and Passenger, unless the vehicle is manufactured as a single seat vehicle.
- b. The rearmost part of these seats must not be behind the rear wheel axis.
- c. In the case of non production cars, the rearmost part of any additional seat must not be more than 38cm behind the rear wheel axis.
- d. It should not take an occupant more than 5 seconds to be released from the seat. Further it should not take an occupant more than 10 seconds to evacuate the vehicle. All times are nominal.

### 7.4 Harness

For events where vehicle speeds are expected to be higher than 15 mph, vehicles must be fitted with a minimum four-point seat harness to all seats.

- a. All restraint systems must be mounted to structural members able to withstand the load the restraint system will place on them in a crash, without tearing or failing.
- b. The harness must be fastened in the lap with two straps coming from either side of the base of the seat and two across the shoulders.
- c. Harnesses should be worn by occupants, tightened suitably, anytime that the vehicle is in motion.

For all other events a minimum three point inertia seat belt must be worn at all times.

### 7.5 Suspension

- a. Vehicles must be fitted with sprung suspension between wheels and chassis, unless originally manufactured otherwise.
- b. Where the top mounting of the shock absorber, whether or not it is fitted with a coil spring, is mounted directly to a main member of the roll-cage, a brace must be fitted between the mounting point and the chassis or those members of the vehicle frame acting as the chassis.
- c. It is prohibited to mount the shock absorber by drilling and/or welding a stud or bolt directly to the roll cage.
- d. All mountings must be made with reinforcements in material at least the same thickness as the roll cage wall

### 7.6 Wheels

- a. Have not less than four road wheels and tyres (excluding the spare). Vehicles may not have more than four wheels and tyres (excluding spares).
- b. Not be fitted with any wheel spacer exceeding 2.5cm in thickness or of less than hub diameter. Multiple or Laminated Spacers and extended studs are prohibited.
- c. Vehicles may not be fitted with duplicated driving wheels unless Permitted by the Event Regulations. The Event Regulations may permit the use of TUV Approved hub adapters/wheel spacers up to a maximum of 30mm in depth.
- d. Vehicles are advised to carry a securely fastened spare wheel and tyre capable of replacing any one of the wheels in use on the vehicle, unless stated otherwise in the event regulations.

### 7.7 Tyres

- a. Tyres must be compatible with the wheels and be acceptable to the Organiser, unless a particular type and size of tyre is specified in the event regulations.
- b. All tyres must have at least the minimum legal RTA tread depth on all tyres.
- c. The use of tyre chains or studs is prohibited.

### 7.8 Transmission

- a. Vehicles must be equipped with an operable reverse gear and a non-torque biasing differential in full and free operation between the driving wheels, unless:
  - i. A differential was not fitted by the manufacturer.
  - ii. The event regulations specify otherwise.
- b. Vehicles may use all wheel drive (unless the Event Regulations specify otherwise) and may have traction afforded by wheels, track, marine propellers or any combination of these.



### 7.9 Fuel Systems

- a. Vehicles must have any fuel lines passing through the competitor compartment protected and if not metallic must be internally or externally metal braided.
- b. They may only be joined by screwed sealing joints or vehicle manufacturers approved joint.
- c. If fitted with fuel fillers in a closed boot, or under closure, have collector/spill trays incorporated to drain outside the vehicle.

### 7.10 Battery System

- a. If located in the Driver/Passenger compartment, where a competitor is present, the battery must be situated behind or below the base of the Driver's or Passenger/Co-Driver's seat.
- b. Any batteries in driver/passenger compartment must be enclosed in a securely located leak-proof container.
- c. Have batteries duly protected to exclude leakage of acid and to protect terminals from short circuiting and producing sparks.
- d. Have the battery earth lead, if not readily distinguishable, identified by a yellow marking.
- e. If non lead acid batteries are used as the main vehicle battery, they battery pack(s) must carry the appropriate "EC" and markings.
- f. All vehicles must be fitted with a battery isolator switch, accessible by the driver and from the outside, with location marking which must simultaneously stop the engine. Where a vehicle is fitted with multiple electric circuits there must be an isolator switch for each system.
- g. Electric winches must have circuit breakers that isolate the winch from all other electrical systems and must be clearly identified and operable from inside and outside of the vehicle.

### 7.11 Exhausts

- a. Vehicles must have the exhaust system isolated from the driver/passenger compartment (e.g. beneath the floor or secured in casings of solid material).
- b. Vehicles must have no part of the exhaust system protruding more than 15cm from the rear of the bodywork.
- c. All competing vehicles are subject to mandatory silencing, unless a specific waiver for that Class, or Formula is granted. Where specified as mandatory, a silencer must be used, irrespective of the exhaust sound generated without it.
- d. Temporary Silencers, by-pass pipes or the inclusion of temporary parts to achieve silencing requirements are prohibited. Officials may refuse to carry out Sound Checks on vehicles utilising temporary parts in exhaust systems. Organisers are empowered to disqualify in such situations.



## 7.12 Sound Testing

- a. Measurements will be made at 0.5m from the end of the exhaust pipe with the microphone at an angle of 45° with the exhaust outlet and at a height of 0.5 to 1.0m above the ground.
- b. Where more than one exhaust outlet is present, the test will be repeated for each exhaust and the highest reading will be used. In circumstances where the exhaust outlet is not immediately accessible, the test may be conducted at 2.0m from the centre line of the vehicle at 90° to the centre line of the vehicle, with the microphone 1.2m above the ground.
- c. Measurements should be made outdoors with no large reflecting objects (e.g. walls etc.) within 3.0m (in the 0.5m test) or within 10.0m (in the 2.0m test).
- d. Background sound levels should be at least 10dB(A) below the measured level.
- e. Where possible measurements should be taken as close as possible to the vehicle, at the defined distances, to avoid background noise.
- f. The 2.0m test can be made from either side of the car. The highest reading registered being the one needing to comply with the maximum noise requirements.
- g. Sound testing should be carried out BEFORE taking part in any competition.
- h. The time and location of sound testing should be advised to competitors prior to the event.
- i. It is stressed that all participants in motor sport, competitors, officials, marshals, etc., should be aware of, and protect themselves from, noise.

Appropriate Levels

Discipline	dBA at 0.5m	dBA at 2.0m
Trials & events using public highways	100	88
All other 4x4	108	96

## 8. Vehicle Safety

### 8.1 General Points

- a. Vehicles must be of sound construction and mechanical condition and be well maintained.
- b. Have positive fastenings for all doors and all hinged or detachable parts of the bodywork.
- c. Have no temporary parts incorporated in their construction.
- d. All vehicles in all competitions must carry within their vehicle a self-contained spill kit capable of effectively absorbing minor spillages of up to 1.25 litres of all vehicle fluids – oils, fuels, coolants, battery acid.
- e. If a windscreen is fitted it must be of either laminated glass or plastic of a minimum thickness of 4mm.
- f. If a plastic windscreen is perforated for viewing purposes with holes larger than 50mm x 50mm it is strongly advised that goggles or visors are worn.
- g. For all speed events side windows must be fitted with window nets so that a competitors arm cannot move beyond the confines of the vehicle.
  - i. The open areas of the side of a vehicle must be covered by a door or net, the net must not be fitted to the loop or framework by means of drilling or welding.
  - ii. Nets must be fitted to the inside of the vehicle to prevent snagging.
  - iii. It is advised that nets are fitted in the open area above doors and side frames.
  - iv. Nets must be fitted to allow easy access and egress from the vehicle.
- h. Two rearward facing red warning lights of a minimum of 21 watts, with surface area minimum 20cm<sup>2</sup>, maximum 40cm<sup>2</sup>, or of 21 watts with a surface area minimum of 50cm<sup>2</sup> and with lens and reflector to EU Standards, must be located as high as possible and be clearly visible from the rear. An alternative light unit of equal or enhanced constant luminosity or LED lights that comply with relevant EU Regulations may be used. The warning light must be switched on when visibility conditions are reduced, or as detailed within championship and/or event regulations, or when so instructed by the Clerk of the Course.
- i. A passenger grab rail/handle or strap must be fitted in front of the passenger and must be constructed and installed so as not to compromise the safety of the crew.
- j. All vehicles must carry a basic waterproof first aid kit including eye wash.
- k. All vehicles must carry a current and fully charged fire extinguisher.



## 9. Rollage Safety

The following are various specifications and configurations that can be used in manufacturing, preparing and installing Roll-Over Protection Systems (ROPS)

### 9.1 Roll-Over Protection System

#### 9.1.1 Definitions

- a. **Safety Cage:** A structural framework designed to prevent serious bodyshell deformation in the case of a collision or a car turning over.
- b. **Rollbar:** Structural frame or hoop and mounting points.
- c. **Rollcage:** Structural framework made up of a main rollbar and a front rollbar (or two lateral rollbars), their connecting members, one diagonal member, backstays and mounting points.
- d. **Main Rollbar:** Structure consisting of a near-vertical frame or hoop located across the vehicle just behind the front seats.
- e. **Front Rollbar:** Similar to main rollbar but its shape follows the windscreen pillars and top screen edge.
- f. **Lateral Rollbar:** Structure consisting of a near-vertical frame or hoop located along the right or left hand side of the vehicle. The rear legs of a lateral rollbar must be just behind the front seats. The front leg must be against the screen pillar and dashboard such that it does not unduly impede entry or exit of driver or co-driver.
- g. **Longitudinal Member:** Longitudinal tube which is not a part of the main, front or lateral rollbar, for example, a backstay.
- h. **Diagonal Member:** Transverse tube between a top corner of the main rollbar or upper end of a backstay and a lower mounting point on the opposite side of the rollbar or backstay.
- i. **Framework Reinforcement:** Reinforcing member fixed to the rollcage to improve its structural efficiency.
- j. **Reinforcement Plate:** Metal plate fixed to the bodyshell or chassis structure under a rollbar mounting foot to spread load into the structure.
- k. **Mounting Foot.** Plate welded to a rollbar tube to permit its bolting or welding to the bodyshell or chassis structure, usually onto a reinforcement plate.
- l. **Removable Members:** Structural members of a safety cage which are able to be removed.
- m. **Harness Bar:** A transverse tubular member attached across either the main hoop or backstays to accept harness mountings.

#### 9.1.2 Specification

- a. **Main, Front and Lateral Rollbars:** These frames or hoops must be made in one piece without joints. Their construction must be smooth and even, without ripples or cracks. The vertical part of the main rollbar must be as straight as possible and as close as possible to the interior contour of the bodyshell. The front leg of the front rollbar or a lateral rollbar must be straight, or if it is not possible, must follow the windscreen pillars and have only one bend unless a windscreen pillar reinforcement is fitted. The mounting foot must not be rearward of the foremost point of the rollbar. Where the main rollbar forms the rear legs of a lateral rollbar, the connection to the lateral rollbar must be at roof level. To achieve an efficient mounting to the bodyshell, the original interior trim may be modified around the safety cage and its mountings by cutting it away or by distortion. However, this modification does not permit the removal of the complete parts of upholstery or trim. Where necessary, the fusebox may be relocated to enable a rollcage to be fitted.
- b. **Mounting of ROPS to the Bodyshell:** Minimum mountings are:
  - i. 1 for each leg of the main or lateral rollbar.
  - ii. 1 for each leg of the front rollbar.
  - iii. 1 for each backstay.

Each leg of a main, lateral or front rollbar must be attached, via a mounting foot, by at least three bolts, minimum M8 ISO grade 8.8 and utilising a steel reinforcement plate of a material of at least the same thickness as the wall of the tube to which it is being welded (minimum 3mm) and of at least 120cm<sup>2</sup> area which is welded to the bodyshell. The mounting foot or leg may alternatively be welded directly to the bodyshell/reinforcement plate.

- c. **Backstays:** These are compulsory and must be attached near the roofline and near the top outer bends of the main rollbar on both sides of the car. They must make an angle of at least 30° with the vertical, must run rearwards and be straight and as close as possible to the interior side panels



of the bodyshell. Forward facing stays are permitted if an angle of 30° cannot be achieved with Backstays, providing they do not unduly impede Driver and Co-Driver access to the vehicle. Their mountings must be reinforced by plates. Each backstay should be secured by bolts having a cumulative section area at least two thirds of that recommended for each rollbar leg mounting, and with identical reinforcement plates of a least 60cm<sup>2</sup> area. A single bolt in double shear is permitted, providing it is of adequate section and strength and provided that a bush is welded into the backstay. The mounting foot or backstay may alternatively be welded directly to the bodyshell/reinforcement plate.

- d. **Diagonal Members:** At least one diagonal member must be fitted. They must be straight. The combination of several diagonal members is permitted. Where two diagonals in the form of a cross are used, at least one of the diagonals must be a single piece tube. The attachment points of the diagonal members must be so located that they cannot cause injuries. They may be made removable but must be in place during events. The lower end of the diagonal must join the main rollbar or back-stay not further than 100mm from the mounting foot. The upper end must join the main rollbar not further than 100mm from the junction of the backstay joint, or the backstay not more than 100mm from its junction with the main rollbar. A diagonal member fixed to the bodyshell must have reinforcement plates.
- e. **Optional Reinforcement of ROPS:** Reinforcements must be either welded in position or installed by means of demountable joints. Reinforcement tubes must not be attached to the bodyshell.
- f. **Protective Padding:** Where the driver's or co-driver's bodies or crash helmets could come into contact with the ROPS, non-flammable padding should be provided for protection.
- g. **Removable Members:** Should removable members be used in the construction of a ROPS, the screws and bolts must be of adequate diameter and of ISO Standard 8.8 or better. Demountable joints must not be used as part of a main, front or lateral rollbar because they act as hinges in the principal structure and allow deformation. Their use is solely for attaching members to the rollbars and for attaching a lateral rollbar to a main rollbar. In this last case, hinged joints must not be used.
- h. **Harness Bars:** Minimum dimensions 38mm x 2.5mm or 40mm x 2.0mm. Cold Drawn Seamless Carbon Steel with minimum tensile strength of 350N/mm<sup>2</sup>. Harness straps may be attached by looping around the tube or by threaded fixings using inserts as drawing No. 44 welded into the tubes(s).

## 9.2 Material Requirements

### 9.2.1 Tube requirements

- a. **Minimum Material:** Cold Drawn Seamless Unalloyed Carbon Steel, containing a maximum of 0.3% of carbon. Note: For an unalloyed carbon steel the maximum content of additives is 1.7% for manganese and 0.6% for other elements.
- b. **Minimum Yield Strength :** 350 N/mm<sup>2</sup>
- c. **Minimum Dimensions (∅ in mm):**
  - a. Mandatory tubular members
    - i. 45 x 2.5 (1.75" x 0.095") or 50 x 2.0 (2.0" x 0.083").
    - ii. 38 x 2.5 (1.5" x 0.095") or 40 x 2.0 (1.6" x 0.083"). (For roll cages/bars approved prior to 1.1.95).
  - b. Optional tubular members
    - i. 38 x 2.5 (1.5" x 0.095") or 40 x 2.0 (1.6" x 0.083").
- d. The tubing must be bent by a cold working process and the centreline bend radius must be at least three times the tube diameter. If the tubing is ovalised during bending, the ratio of minor to major diameter must be 0.9 or greater.

## 9.3 Competitive Safari and Point to Point

There are three classifications of vehicle design which, whilst requiring the same principles of roll-cage design, may employ different mounting methods.

### 9.3.1 Monocoque Vehicles

These are of unitary construction employing an integral chassis structure.

- a. They must fit longitudinal door bars.
- b. A centre roof bar must be installed either diagonally or, evenly spaced in line with the exterior longitudinal bars. If more than one centre bar is fitted, the bars must be evenly spaced. Double crossed roof bars, to the minimum specification for optional members, are strongly recommended.



- c. It is recommended that a horizontal bar be incorporated in the front hoop, located approximately in line with the base of the windscreen, which may be bolted or welded to the front hoop members.

### 9.3.2 Vehicles with chassis

These employ a separate chassis structure from the body or superstructure.

- a. They must mount their roll-cage directly to the chassis.
- b. Exceptionally where the body contains a superstructure of internal steel pressings including the floor and the roll-cage it is permitted to install the roll-cage as with a monocoque vehicle.
- c. Where it is necessary to weld additional chassis outriggers on which to mount the roll-cage, these must be of at least 75x50mm box section steel, and not less than 3mm thick.
- d. Alternatively, the main hoop may be constructed allowing mounting to the main chassis rails, or where a beam is welded across the chassis rails.
- e. Where the roll-cage passes through the superstructure's floor panels, two alternative methods may be employed:
  - a. Either oversize holes allowing uninterrupted passage of the tubes to the chassis placed so as to allow for the movement of the superstructure where this is rubber mounted to the chassis, or
  - b. spreader plates may be used to sandwich the floor where the cage structure is continued through the floor pan to the chassis.
- f. The backstays in short wheelbase vehicles may have to be mounted aft of the rear suspension mountings to the chassis
- g. The backstays where mounted directly to the chassis must be angled to the main roll hoop. Existing vehicles configured with the backstays mounted in line with the main chassis members as are permitted.
- h. The longitudinal bars connecting the front to rear roll bars should be straight, or where a manufacturer's truck cab or hard top is fitted the bars may follow the contours of the roof.
- i. The front hoop may be mounted directly to a fabricated chassis extension.
- j. External front hoops must be fitted with a horizontal bar, approximately in line with the base of the windscreen, of the same material and dimensions as specified for the main members of the ROPS, and which may be bolted or welded to the front hoop. Recommended for vehicles with an internal front hoop where installation is practical.
- k. Must be fitted with sill bars of the same material and specification as the main ROPS or primary chassis members, or box section steel, being a minimum of 40mm x 40mm x 3mm or 50mm x 25mm x 3mm. These may be welded or bolted to the main longitudinal chassis members.

### 9.3.3 Spaceframe vehicles:

These are constructed entirely from a framework including an integral roll-cage made of tubes and/or box sections. For Safari Plus and all Hill Rallies, those elements comprising the primary chassis components must be of at least the same material and dimensions as the primary ROPS members, or equivalent box section steel.

- a. All these vehicles must have rollcages incorporated into the frame of the vehicle.
- b. The roll-cage must be welded and integral to the design.
- c. It is recommended that a horizontal bar be incorporated in the front hoop, located approximately in line with the base of the windscreen, being of the same material and dimensions as the main ROPS members and which may be bolted or welded to the front hoop members. For Safari Plus and all Hill Rallies this horizontal bar is mandatory.
- d. A sill bar or single longitudinal door bar of the same material and dimensions must be fitted.

## 9.4 Brakes

- a. The vehicle must be fitted with brakes that are operative and capable of stopping and holding the vehicle as required
- b. A functioning independent parking brake system must be fitted which is capable of holding the vehicle on a 45° longitudinal gradient.



## 10.Safety

### 10.1 Medical Services

At all events, including official practice, qualified first aid personnel should be in attendance with full first aid equipment. Organisers must ensure sufficient medical services for the type of event remain in place until the event has completely finished.

#### 10.1.1 Speed Events

An IHCD Emergency Technician (EMT), First Response Emergency Care person (FREC), level 3 or above, the Voluntary Aid Society (VAS) equivalent or person qualified to Fpos1 must be in attendance during official practice and racing.

The minimum medical requirement is always to have a person qualified to one of the above to be available. Should these persons be required to give continuous support and treatment to an injured party the event must stop until such time that the qualified person is available again or can be replaced.

#### 10.1.2 Non-Speed Events

It is highly recommended that each event have in attendance a person qualified to a minimum of First Aid at Work level (3 day) and have available a suitably stocked first aid kit appropriate for the type of injury that may be sustained. More information about first-aiders can be found from the following URL link:

- <http://www.hse.gov.uk/firstaid/first-aider.htm>

UK Life Medics are NORA's preferred provider, to find out about training courses visit <https://www.uklifemedics.com/> or contact [aimie@uklifemedics.com](mailto:aimie@uklifemedics.com)





## 10.2 Clothing

- a. All Competitors in speed events must wear approved Crash Helmets (see code of practice) clothing which covers the arms, legs and torso up to the neck, and unless a windscreen is fitted it is highly recommended that goggles or visors are worn to protect the eyes.
- b. All competitors in speed events must wear a form of neck support or restraint, a foam donut is the minimum requirement.
- c. Competitors in non speed, competitive events must wear approved Crash Helmets (see code of practice).
- d. Competitors in non speed event, non competition events are recommended to, and may be required to, wear crash helmets as specified in the event regulations.
- e. The wearing of flame resistant clothing and gloves is strongly recommended for all events.

### 10.2.1 Fire Suits

For 4x4 Speed Events, all competitors must wear a one-piece fire retardant suit conforming to SFI 3.2/5, 10 second rating and TTP (thermal protective performance) value of 19. Where graphics are introduced to the suit, then SFI 3.4/5 is the minimum standard.

SFI 3.2/1 is acceptable if worn in conjunction with SFI 3.3 specification underwear covering both the legs and arms, reaching to the ankles and wrists.

#### Recommendations

It is recommended that fire suits are made from Aramid materials for longevity. Flame retardant treated cotton suits are acceptable but will degrade with washing and soaking, it is expected that cotton suits are suitable for 30 – 45 washes and should then be changed.

When washing suits, it is recommended that:

1. Garments are always washed following the instructions on the label
2. Garments are always washed separately to avoid contaminants.
3. Garments are washed inside out whenever possible.
4. Garments are not washed on the hottest setting,
5. Use non bleach based liquid detergents, avoiding the use of starch and fabric softeners.
6. Garments are removed from the machine as soon as the cycle is complete to avoid leaving in soak.

Other points to consider:

1. Grease, fuel, oils, fluids, and their fumes can soak into fabric creating a conduit for fire, support the flames and lead to a combustible situation.
2. The suits quilting is used to create air pockets. Tight suits are counter productive.
3. Wearing fire-resistant underwear adds to the TPP.
4. Patches should have a fire-retardant backing and be attached using an aramid thread to the outer layer of the suit.
5. Embroidery should be created with an aramid thread and should only be attached to the outer layer of the suit.

The current FIA equivalent specification is FIA 8856-2000 / FIA 8856-2018

## 10.3 Refuelling – Speed Events

For speed events, refuelling must not take place within the pit area during racing hours. Racing hours are defined as 1 hour prior to the start and 1 hour following the close of a race.

- a. An area must be set aside and demarked as the live fuelling area for race times
- b. The fuelling area must be defined on site and set at a point so as to limit the spread of any fire to nearby infrastructure or vehicles.
- c. The only persons allowed in the refuelling area will be competitors and designated pit crew.
- d. All persons involved in the live race refuelling must be wearing an overall and balaclava stamped to EN11612, EN1149-5 (ASTMF1959) as a minimum.
- e. There must be an allowance for a spacing of 5m between refuelling vehicles and no more than 4 vehicles may be permitted to refuel at any time.





#### **10.4 Fire Extinguishers**

- a. Each organiser should provide fire extinguishant of a minimum one 6kg dry powder and one 6L foam, suitable for extinguishing vehicle fires.
- b. All officials should be made aware of the position of fire extinguishers.

#### **10.5 Spill Kits**

- a. Organisers must provide at least one spill kit.
- b. This spill kit can be carried by a Recovery Marshal.
- c. Where trial sections are closely grouped, one spill kit located at a clearly visible central point is permitted.
- d. For all Hill Rallies, Competitive Safaris, Point to Point, Challenge Events and Orienteering a medium spill kit must be located at the start of the course, each Special Stage or section



## 11. Discipline Regulations (non- timed events)

### 11.1 Cross Country Trials

The use of the public highway should be avoided but if used must be stated in the event regulations. If the public highway is used, all vehicles must comply with the Road Traffic Act and drivers licenced accordingly. The event regulations may allow the vehicle crew to be varied during the event and may specify the minimum tyre pressure permitted for the Competition.

- a. Only one Passenger aged 16 or over may be carried on a vehicle during Observed Sections. The event regulations may reduce this minimum age to 12, providing the vehicle is fitted with seat belts and either a manufacturer's hard top, a truck cab, or a rollbar.
- b. The Start and Finish of observed sections must be marked by signs and the Starts should be reasonably flat and wide so that all Competitors can at least enter the section.
- c. The Passenger must remain properly seated alongside the Driver throughout all Observed Sections. 'Bouncing' will be Permitted only within the confines of the seating compartment, and then only so long as no portion of either the Driver's or Passenger's body is placed outside the sides of the vehicle or behind the seat they are occupying
- d. The layout of sections should take account of the location of possible failure points and safe exit routes
- e. Course markers should not be placed against trees. The use of trees or natural hazards as course boundaries should be avoided.
- f. If possible, alternative routes should be planned in case of changes of weather condition.
- g. It is recommended that sections be laid out using a minimum of 10 pairs of markers of a minimum height of 1m, and with colour coding to clearly identify each side of the route.
- h. Metal rod markers should not be used.
- i. Markers should be placed to avoid the likelihood of Competitors putting all wheels out between markers, or where they are likely to be moved by bushes or branches.
- j. A minor proportion of the sections can be timed, but any time penalties must be related using a published formula to calculate points lost on a section. Timed sections must be a maximum of 200m long, and the maximum time allowed for the section shall be stated Approaches to and exits from sections must not present any unreasonable hazard or difficulty.
- k. There should be enough Marshals at each observed section to ensure safety procedures are followed, and adequate Judges in attendance.
- l. Organisers may at any convenient time after the start of a Competition require any Competitor to increase or decrease their minimum permitted tyre pressure by a maximum of 5lbs/sq.in. This decision must be advised to Competitors in writing and enough time allowed for them to comply.

#### 11.1.1 Numbers

Numbers will be allotted by ballot. Numbered Results Cards will be issued at the Start and must be presented by the crew to Officials.

- a. Competition numbers must be displayed on both sides of all competing vehicles unless exempted in the event regulations.
- b. Competitors will start in numerical order, and the Organisers shall determine the order of running at each observed section.
- c. Competition Numbers or Number Cards must be removed at the Finish or if a Competitor retires.

#### 11.1.2 Sections and Route

The onus of following the correct route rests with the Competitor. Any signs displayed, other than in an Observed Section, are designed to assist Competitors and have no mandatory authority. Competitors will drive from section to section with as little delay as possible.

- a. Competitors arriving at an Observed Section more than 20 minutes after the preceding Competitor may be refused permission to attempt that section.
- b. Competitors should attempt to negotiate Observed Sections without stopping. Organisers may allow certain vehicles, by virtue of their size, to take a specified number of changes of direction on any section. The permission to change direction and the eligibility of vehicles to do so must be specified in the event regulations or final instructions
- c. Failure of a vehicle to maintain unassisted forward motion in the direction of the course will be regarded as failure to comply with the requirements to proceed non-stop, unless the Judges are satisfied that a permitted change of direction is intended, or the organisers have ruled that more than one attempt may be made.



- d. The point of failure will be at a vertical line from the centre of the hub of the forward most front wheel.
- e. The beginning of an Observed Section will be marked by signs and its boundaries by markers or natural obstacles. Natural obstacles must not be used as penalty markers.
- f. Before attempting an Observed Section, a vehicle must be brought to rest with a leading wheel hub centre vertically over the Start line, as indicated by Officials. The Driver must not proceed until instructed to do so.
- g. If an Observed Section is divided into Sub-Sections, signs must indicate the beginning and end of each Sub-Section.
- h. A vehicle will be considered to have entered an Observed Section or Sub-Section when the leading wheel hub centre has passed the marker(s) indicating the beginning of the section.
- i. A vehicle will be considered to have left an Observed Section or Sub-Section when the leading wheel hub centre is past the marker(s) indicating the end of the section.
- j. Failure in a any Sub-Section will constitute failure in the entire section.
- k. The Start line will indicate the greatest penalty and the Finish line the zero penalty. The event regulations will specify the methods of scoring and application of penalties.
- l. A Competitor will be deemed to have failed to negotiate an Observed Section non-stop if:
  - i. Any part of the vehicle touches a penalty marker
  - ii. All wheels cross the boundary of the course as defined by the Clerk of the Course.
  - iii. The point of failure will be deemed to be that at which the first penalty marker is touched, or the point at which the course boundary is first crossed by all wheels of the competing vehicle.
  - iv. Should this point of failure coincide with the division between two Sub- Sections, the marks lost will be those on the Sub-Section recording the greater penalty.
- m. Performances on an Observed Section may be ignored at the Organisers' discretion, even though there have been successful attempts to negotiate the section. If this discretion is exercised, no performance on the section in question must be considered when compiling the results.
- n. No unauthorised assistance is allowed, vehicles must complete the course under their own power.
- o. At the Organisers' discretion, a minority of the Observed Sections may be timed, if provided for in the event regulations. The following conditions will apply:
  - i. Only those sections which the Organisers anticipate will be completed without penalty by most Competitors may be timed.
  - ii. Any such timed section must be less than 200m long.
  - iii. No Sub-Sections can be used.
  - iv. The maximum time allowed for each timed section must be stated in the Official Instructions prior to the commencement of the test.
  - v. The maximum time allowed for each timed section must not require any Competitor to exceed 15mph or 30 seconds per 200m.

**11.1.3 Results**

Competitors will start with zero marks. To be classified as a finisher, a Competitor must have attempted at least three quarters of the total number of Observed Sections and arrive at the Finish within 20 minutes of the preceding vehicle.

- a. The Competitor incurring the lowest marks will be the winner, and so on.
- b. Ties will be resolved at the Organisers' discretion, unless the event regulations state otherwise.
- c. Each Competitor will be provided with a Results Card which must be produced on demand for Officials to mark at each section, unless the event regulations specify an alternative method.
- d. Penalty marks will be incurred as follows, unless the Marks Lost indicated below are modified by the event regulations:

Penalty	Marks Lost
Each minute late reporting at the Start or a re-Start	5
Failure in an Observed Section	12
Where numbered sub section gates are employed the penalty will correspond to the number of sections completed prior to failure	
Not attempting or being ready to attempt an Observed Section or Sub-Sections when instructed to do so	12*
Not complying with a reasonable instruction by an Official for which a penalty is not otherwise stipulated, and provided warning of penalty is given	12*
Driver and/or Passenger not correctly seated	12
Running with tyre pressures lower than that required by event regulations	50

\* Plus the lowest penalty scored by a competitor attempting the section correctly

- e. Any additional penalties incurred on a timed section must be calculated by reference to the following formulae, unless the event regulations specify otherwise
  - a. For negotiating the section non-stop, the following formula is used:

(Time taken in seconds x 100) – 100 = time allowed penalties

Calculated Time	Points	Calculated Time	Points
Within Time	0	50.1 – 58.3	7
0.0 - 8.3	1	58.4 – 66.6	8
8.4 – 16.6	2	66.7 – 75.0	9
16.7 – 25.0	3	75.1 – 83.3	10
25.1 – 33.2	4	83.4 – 91.6	11
33.3 – 41.6	5	91.7 and above	12
41.7 – 50.0	6		

**11.1.4 Junior Trials**

All Junior trials drivers must compete under the supervision of an official of the event.

- a. Special consideration must be given to the terrain chosen, particularly regarding side slopes and drops, and water should generally be avoided.
- b. Where present, the maximum depth of any water must be 0.2m.
- c. The maximum Permitted gradients are as follows:

Gradient Type	Novice	Intermediate	Expert
Longitudinal	50%	60%	N/A
Transverse	25%	35%	N/A

- d. Sections for the different Classes may either be set out separately or so that a section increases in severity with separate finishing points for the respective Classes.



### 11.1.5 Tyro Trials

The terrain chosen should ensure that vehicles do not catch any bodywork on approach, ramp breakover, or departure angles, and consideration should be given to the vehicles entered when laying out sections.

- a. The maximum Permitted gradients are as follows:

Gradient Type	Novice	Intermediate	Expert
Longitudinal	50%	60%	N/A
Transverse	25%	35%	N/A

- b. The depth of any water must be 0.3m maximum.
- c. Vehicles must be capable of traversing sections without contacting any trees, bushes or other natural features.
- d. No features may be included within sections which are likely to cause damage to the underside of competing vehicles.
- e. More than one Passenger may be carried where the Driver holds a valid full RTA Licence.
- f. All passengers must be properly seated with their seat back in an upright position and the seat adequately fixed.
- g. All occupants must always wear an approved seat belt and all passengers must be seated in forward facing seats. Their seat back must be in an upright position.
- h. The passenger sitting alongside the Driver during sections must be at least 12 years.
- i. Passengers who occupy the rear seats of the vehicle must not be less than 2 years of age, any child under 12 years of age or 135cm in height must be seated using an approved 'child restraint'.

### 11.2 Winch Recovery

The aim of these events is to safely and precisely winch an object between two points via gates and different routes as defined in the written instructions, the Course can be laid out over any type of terrain but must be on private ground in an area prohibited to spectators. It must be taped or roped off to indicate the boundary to Competitors and spectators.

- a. Natural anchorages may be used at the discretion of the Clerk of the Course but must be protected from damage.
- b. All objects to be recovered must have a good quality chain attached, to the satisfaction of the Clerk of the Course. If the object is a vehicle then all glass must be removed where appropriate. The steered wheels may be locked in any position and one or more wheels may be removed.
- c. The Clerk of the Course may stop a team if their mode of recovery is considered likely to be dangerous to officials, competitors, spectators or the natural terrain. Penalty points will be awarded if any gate or previously specified object is touched by either the object or team.
- d. The Organisers will allocate Competition numbers at random and teams will start in numerical order.
- e. Details of the course, the manner of recovery, the maximum time for completion and the method of starting will be specified in the event regulations.
- f. Competitors will be allowed to examine the course prior to the start.
- g. The number of vehicles and members in a team will be stipulated in the event regulations.
- h. No more than three members will be allowed in each team which must nominate a Captain to be responsible for keeping any score-card issued and represent the team to the Clerk of the Course.
- i. At the Start and Finish, all team members must be correctly seated in their vehicle and all equipment must be in or on the vehicle.
- j. Each team will be allowed a minimum of two attempts at the course.
- k. The team completing the course with the least penalties as stated in the event regulations will be the winner.
- l. The Clerk can also award penalties for touching gates.
- m. Once a winch vehicle and anchor vehicle have been manoeuvred into position, they must remain stationary whilst winching.
- n. It is strongly recommended that all members of the team wear protective clothing during winching operations, ie overalls, gloves, eye protectors.
- o. It is strongly recommended that competitors, other than the winch operator, should also wear a crash helmet to NORA specification.
- p. All equipment, including cables, ropes, straps or webbing, shackles, blocks, hooks, ground anchors, winches etc. and vehicles may be requested to be presented for approved by the technical official prior to an event.



### 11.3 Promo Events

Non competitive events designed for owners to experience their vehicles in an off road environment and to introduce them to organised off road events. They must consist primarily of a organised route or routes wholly off of the public highway, they may include non-damaging trials type sections.

- a. The routes and any special sections should be clearly marked and adequately marshalled.
- b. Drivers must hold a valid RTA Licence (not provisional) in respect of their vehicle.
- c. Entries from Drivers who are at least 16 without a full RTA Licence may be accepted provided the passenger holds a valid full RTA Licence and has experience in Cross Country Trials. The vehicle may only be driven between Observed Sections by a crew member who holds a valid full RTA Licence.
- d. More than one Passenger may be carried where the Driver holds a valid full RTA Licence.
- e. All Passengers must be properly seated with the seat back in the upright position and with the seat adequately fixed.
- f. All occupants must always wear an approved seat belt .
- g. The passenger sitting alongside the driver in a trials section must be at least 14 years of age.
- h. Passengers who occupy the rear seats of the vehicle must not be less than 2 years of age, any child under 12 years of age or 135cm in height must be seated using an approved 'child restraint' .
- i. Passengers may not be carried for hire or reward.

### 11.4 Orienteering

Events where competitors are required to navigate certain objectives. Event regulations will specify equipment required for the event.

- a. Competitors will be issued with instructions before their due start time.
- b. There should be no merit attached to being the first to arrive at any point, nor should it be necessary to arrive at any point other than the Finish by a specified time as specified in the event regulations.
- c. If an overall speed limit is set for an event, it must be possible to win without exceeding an average speed of 10mph from Start to Finish. Participants must not be required to travel more than 50 miles, nor to perform any task or solve any problem that is likely to offend anybody not taking part in the event.
- d. When running an Orienteering event at night, careful consideration should be given to restricting auxiliary lights.
- e. The method of scoring must be specified in the event regulations.
- f. Objectives must be attempted without the use of winches or other means of assistance.



## Discipline Regulations (timed events)

### 11.5 Timing Equipment

The following equipment is recommended for the timing of events:

- a. Digital clocks or stop watches to an accuracy of no less than one second.
- b. Recording clocks printing to an accuracy of no less than one second
- c. Light beam actuated automatic systems to no less than 100<sup>th</sup> of a second.
- d. Transponder systems to no less than 100<sup>th</sup> of a second.

### 11.6 Timed Trials

These events are predominantly cross country trials events but each section is undertaken against a maximum permitted time allowance, standard trials regulations apply along with the following.

The instructions must state the maximum time and the target time allowed to complete each section.

- a. The target time must be set at no more than 22mph (10m/s) average.
- b. The maximum length of any Timed Trial section must not exceed 320m.
- c. Each section must be clearly identified and must be a prohibited area for all persons except Officials and those Competitors attempting the section.
- d. Penalties will be in accordance with the following:
  - i. For each second over the Target Time: 1 mark.
  - ii. The event regulations may specify additional penalties based on a specified number of marks per second.
- e. Failure of a vehicle to maintain unassisted forward motion in the direction of the course will not be regarded as failure to comply with the requirements to proceed non-stop.
- f. Further attempts to regain forward motion will be permitted until the maximum time allowed for the section has elapsed.

### 11.7 Team Recovery

The event must be on private ground. The use of the Public Highway, including Rights of Way, is forbidden.

- a. Only vehicles within the same team may be on any observed section at the same time.
- b. At each observed section, official recovery and rescue teams must be on duty in the location specified by the Clerk of the Course.
- c. Each team will nominate a captain, who will be responsible for carrying the official score card for the team and who will produce it on demand to officials.
- d. The onus of following the correct route will rest with the Team Captain.
- e. Teams will start in numerical order, and the Organisers will determine the order of running at each Observed Section. Team Members may start in any order. Team vehicles must not be harnessed together before the start.
- f. No Passengers can be carried in any team vehicle when it leaves the Start. This does not preclude other members of the team from being carried through Observed Sections, provided they are properly seated and are only carried for as far as is necessary, and that the vehicle is stationary when they mount or dismount. Seat belts need not be worn.
- g. Any team vehicle that cannot maintain unassisted forward motion in the direction of the course must be recovered by other members of the team by pushing, towing or winching.
  - i. All equipment to be used by team vehicles as means of self-recovery, including harness ropes and shackles, may be requested to be presented to, and cleared by, the technical officer prior to the Start.
  - ii. This equipment must be carried on team vehicles throughout the Competition.
- h. Before attempting any Observed Section, team vehicles will be brought to rest behind the Start line by Officials and will not proceed until instructed to do so.
- i. A team will be considered to have left an Observed Section when all team vehicles have crossed the finishing line.
- j. Where an attempt involves the failure of all team vehicles to proceed, whether involuntary or otherwise, from the Start line into an Observed Section when instructed to do so will be regarded as a failure in that section.
- k. Any team which fails to complete a section in the stated time will have three minutes added for each vehicle that has not successfully completed the section.



- l. Unless the event regulations state otherwise, a penalty of one minute will be added to the team time for each penalty marker touched.
- m. The event regulations will state the maximum time allowed for each team to complete each Observed Section.
- n. Results will be determined with reference to the time taken, including penalties, for the team to complete each Observed Section.
- o. Further penalties may be applied if the event regulations allow.

## 11.8 Gymkhana

Competitors must complete a series of driving challenges, involving boxes, turns and control lines, against the clock

- a. The vehicle may only be driven between Driving Tests by a crew member who holds a valid full RTA Licence.
- b. A Passenger may be carried to assist by giving directions when the driver holds a valid full RTA Licence.
  - i. The Passenger must always occupy the seat alongside the Driver and wear a properly fastened and approved seat belt during the test.
  - ii. No other Passenger is allowed.
  - iii. If the Driver holds a valid, full RTA Licence, a Passenger, if carried, must be 12 years or over.
- c. Where either crew member is under 16 years of age the vehicle must retain the original hardtop or truck cab and the seat belts.
- d. Classes are free, but the class structure must be stated in the event regulations.

### 11.8.1 Layouts

- a. Cars must not be allowed to travel more than 25m (between manoeuvres) without having to stop astride a penalty line, reverse or drive clear of the line or manoeuvre in a garage or box.
- b. Competitors must either stop astride a penalty line or make a change of direction of at least 90° at not more than 20m before the Finish line.
- c. The route must be made available to all Drivers before any test.
- d. The start and finish of all tests must be in a forward direction.
- e. All tests must be arranged so that the whole of the course is visible to the Driver from the Start Line unless competitors are given the opportunity to walk the course beforehand.
- f. Clarification of where and how a change of direction may be made without incurring a penalty must be available on request to all Competitors before the start of any test.
- g. Spin turns are not permitted.
- h. Practising for tests is not permitted.
- i. Markers should be not less than 1m in height, unless the event regulations or test instructions specify otherwise.
- j. Lines and gates must have a minimum width of 3.5m.
- k. Any 'garage' must have a minimum length of 6m and a minimum width of 3.5m.
- l. When Competitors are required to perform a 180°turn in a box, the size of the box must be 16m by 16m.
- m. Each test should be designed so that a Competitor is not expected to engage reverse gear more than four times (ignoring manoeuvres to correct mistakes).
- n. Each test must be run at least twice.
- o. Each Competitor's worst performance at each test will be discarded in arriving at total penalties for the event.





### 11.8.2 Procedures

- a. Drivers will be considered under Starter's orders when instructed by an Official to proceed to the Start line.
- b. Drivers then failing to proceed may forfeit their run or may be penalised in accordance with the table:

Penalty	MARKS LOST
Each minute late in reporting at the start or a restart	5
Not attempting or being ready to attempt a test when instructed to do so	40
Not performing a test correctly or not completing the test or making a false start	40
Striking any barrier, wall or marker or crossing the boundary of a test (per mistake)	5
Failing to cross or stop at any line or specified position as required in a test (per mistake)	5
Every second (rounded down) taken to complete test	1

- c. A start will only be valid if made under the vehicle's own power.
- d. When a car is required to stop astride a line, the line must be between its front and back axles and all the area of the tyres in contact with the ground must be seen to have crossed the full width of the line. If a car is required to cross a line with all four wheels, all tyre contact area must be seen to be clear of the line.
- e. Timing at completion of a test must be based on the leading wheel (on the same axle) crossing the Finish line.
- f. Penalties will be applied for failure to cross the Finish Line.
- g. In any diagram illustrating a test, the dimensions should be approximate and for guidance only. Indications of the direction of travel of the competing cars when crossing a line, or passing between markers, must be shown unless specified otherwise (ignoring 'shunts' to avoid markers).
- h. A maximum penalty shall be applied if a competitor crosses with both leading wheels a marked test line in the wrong direction, out of the prescribed sequence or too many/few times, otherwise competitors may correct their mistakes by returning to the point where they deviated from the test diagram, unless otherwise stated in the event regulations.
- i. In changes of direction either lock can be used (unless the test diagram specifically states otherwise).
- j. Clerks of the Course wishing to define direction of travel between markers should include any necessary marked line(s).
- k. In the event of a re-run caused by a timing failure, the greater number of penalties incurred in either run will be added to the time taken in assessing the performance on that test.

### 11.8.3 Marking

- a. Judges must be appointed to each test to adjudicate on:
  - i. False starts
  - ii. Crossing/failing to cross marker lines
  - iii. Touching markers and not following correct route.
- b. Competitors will be provided with a score card for the Organisers to record times and penalties at the completion of each test run.
- c. Marks will be lost for time taken (if applicable) and for any infringements of the test instructions, such as striking a marker or crossing a boundary line.

### 11.8.4 Results

- a. To be classified as a finisher, Competitors must complete not less than half of the tests and must hand in their score card to Officials within 15 minutes of all other Competitors completing the final test.
- b. Competitors will start with zero marks.
- c. All Class awards must be calculated on the basis of penalty marks lost, with the Competitor incurring the least penalty points being judged the winner.
- d. In the event of a tie, the Competitor who was first to have the lesser penalty from the start will be adjudged the winner, unless another method of resolving ties is stated in the event regulations.



## 11.9 Comp Safaris

Comp (Competition) Safaris are staged over a set distance covering off road terrain, competitors are given a set time to complete the allotted target distance, the distance may be achieved by completing more than one lap of a course.

- a. All courses must be on private ground and should be laid out at one venue only.
- b. Routes must run over roads, tracks or sections from which all vehicle and animal traffic has been excluded. These need not be marked on definitive maps. The route should be made as safe as possible and unmistakable for Competitors and spectators.
- c. Means of access to the route should be closed by barriers and signs to prevent any noncompeting vehicle gaining access.
- d. Warning notices as should be displayed and areas of particular danger (eg escape routes) should be marked with clear signs.
- e. It should be impossible for anyone on foot to get on to any stage through normal access roads or tracks without:
  - i. Being aware of it.
  - ii. Having been seen by an Official.
  - iii. Having seen a warning or prohibition notice.
  - iv. Having seen a Motorsport is Dangerous sign.
- f. The course should be not less than one mile long, where the terrain makes this impossible at least a quarter mile long. The course can involve trials type sections, the surmounting of natural obstacles or hazards, or points at which the crew may be required to dismount to perform a set task.
- g. Two separate Drivers may be allowed to drive one vehicle under one entry. In such cases their total combined penalties will be added together as if they were one Competitor.
- h. Vehicles may carry one passenger, minimum age 16, in addition to the Driver.
- i. It is recommended that crew are identified by suitable means, eg a rubber stamp or a wrist identity tag, which must be issued at signing-on. This must not be re-usable and must not cause discomfort. For safety reasons it must be worn under clothing and each Competitor must be allowed to choose to which limb the identity mark is applied. Competitors will be required to show the identity marking to Officials in the assembly area prior to the Start line.
- j. Competition numbers must be displayed on both sides of each vehicle, either on the front doors or behind them above the vehicle waistline and parallel to the vehicle sides. Where the event regulations require numbers to be displayed at the front or rear of a vehicle, they must be a minimum 100mm in height. It is the competitors' responsibility to ensure that the identifying number is clearly legible at any control points.
- k. Competitors will be advised of the minimum and maximum time allowed for the course, before the Start, this can only be adjusted for reasons of force majeure and must be communicated to the competitors via a clearly visible sign at the main control point.
- l. Practising will not be allowed over the course, unless the event regulations state otherwise. If Permitted, the event regulations must specify the number of practice runs and the times of any practice periods.
- m. Unless the event regulations specify otherwise penalties will be awarded as follows:
  - i. For each second to complete the course over minimum time allowed: 1 mark per second.
  - ii. For exceeding the maximum time allowed: disqualification.
  - iii. For taking Official recovery: 100 marks.
- n. Competitors must carry an A4-size white board with a red SOS on one side and black OK on the other (letters to be a minimum of 12cm high with a minimum stroke width of 1.5cm), with means to secure them on display for oncoming Competitors.
  - i. In the case of an accident where urgent medical attention is required, the red SOS sign should be displayed as quickly as possible to alert following cars and aid any medical services attempting to assist.
  - ii. Any crew that sees a red SOS sign displayed on a car, or sees a major accident where both crew members are inside the car but not displaying the SOS sign, must immediately and without exception stop to give assistance.
  - iii. All following cars must also stop and the second car arriving at the scene must inform the next radio point. Subsequent cars must leave a clear route for emergency vehicles.



- iv. The Clerk of the Course may award a discretionary time to any Competitor delayed in such circumstances.
  - v. Any crew which can, but fails to comply, with the rule will be reported to the Clerk of the Course who may impose penalties.
  - vi. In the case of an accident where medical intervention is not required, the OK sign must be clearly shown to following vehicles, and to any emergency or recovery services attempting to assist.
  - vii. If the crew leave the vehicle, the OK sign must be left clearly visible to other Competitors.
  - viii. Any crew failing to comply will be subject to a penalty at the Clerk of the Course's discretion.
  - ix. Competitors who misuse the SOS or OK signs will be subject to a penalty at the Clerk of the Course's discretion.
- o. Any crew retiring from an event must report to the Organisers as soon as possible, except in cases of force majeure.

#### **11.9.1 Timing**

- a. The average speed aimed to not exceed 30mph, if the speed is likely to exceed 30mph then additional assessment must be given to safety of spectators, officials and competitors.
- b. Where timing is actuated by a light beam, vehicles must be positioned at the Start with the part which will break the beam 1 to 2 metres behind the beam. When transponders are in use vehicles should be positioned 5 metres behind the pickup loop.
- c. Where an event is timed manually, and the Start Marshal has instructed a Competitor that they are next to start, the starting procedure shall be one of the following:
  - i. The Marshal will give a loud verbal indication of 30 seconds to go, 15 seconds, 10 seconds and 5 seconds, and then count down verbally each second 5-4-3-2-1-GO. Upon the signal GO, a visual starting signal must be given, which will normally be the raising of a flag from the bonnet (not the windscreen). Any other visual signal to be used must be described in the event regulations. False starts will be penalised.
    - Courses and Stages where Competitors are required to start at intervals of less than one minute may dispense with the '30 seconds to go' advance warning.
  - ii. Before the illumination of a green light indicating that a Competitor may start, a red light is illuminated warning that their countdown is imminent. The event regulations must specify the countdown method. Timing will start from the green light, regardless of whether the Competitor starts immediately on its illumination.

#### **11.9.2 Course Organisation**

- a. There must be adequate communication between Start, Finish and intermediate points.
- b. Adequate Marshals must be posted along the course, particularly at any potentially dangerous points, at any observed section and where recovery operations may be required.
- c. Rescue vehicles must be positioned at predetermined locations, to transport any injured crew or officials to the medical or first aid facilities.
- d. Spectators are not permitted to use unauthorised vehicles to navigate the site for viewing purposes.
- e. As far as reasonably practicable the course layout should allow for easy access to all areas for official recovery / emergency vehicles.
- f. A course should be laid out to avoid unnecessary environmental impact.



### 11.9.3 Course Marking

The course should have a clearly marked route so that no navigation is required, the correct route should be indicated to Competitors by arrows and signs, and by physical blockage of all but the correct road.

- a. These indications must, wherever possible, be consistent with the following:
  - i. Arrows kept to a minimum and placed only at junctions.
  - ii. Really acute bends or hazards where a drastic reduction in speed is required should be marked by a Caution Board. Caution Boards, comprising red exclamation Marks on a white background 51cm x 38cm, will be displayed on each side of the stage between 40 to 50 metres before the hazard. At the hazard a pair of diamond shaped orange markers (or crossed arrows) at least 150mm x 150mm will be placed each side of the stage. These will be repeated, in pairs, on each hazard if there is more than one hazard to which the warning refers.
  - iii. All signs should be placed approximately 1.0m – 1.2m from the ground. Wherever possible arrows and signs should be brightly coloured and should be easily visible. To avoid confusion, multiple signs on one post should be avoided.
  - iv. Advance warning signs for junctions should be between 50m and 100m before the junction. Two arrows should be visible on the junction, fixed to form a 'gate' through which the Competitor will pass. Arrows may be angled to show the severity of the junction, indicated by one of four basic positions, either vertical, horizontal, raised or lowered by 45°.
  - v. A vertical arrow should confirm the correct route immediately after a junction.
  - vi. A wrong direction should be indicated by a standard No Entry sign (a red disc with a white bar) and all but the correct road should be visibly blocked by available means
- b. For areas deemed to be of particular difficulty should be marked as following:
  - i. Special warning signs, a minimum of 51cm x 38cm and fixed on a stake, erected in a clearly visible position.
  - ii. The sign must show two exclamation marks, and be preceded at 50m and 100m by similar exclamation marks.
  - iii. The area must be Marshalled throughout the event.
  - iv. Less difficult hazards should be indicated by single exclamation signs 50m and 100m before the hazard.
  - v. Crossed arrows may be used if exclamation signs are not available.
- c. If a section of road is used twice on stages where the route divides, or where two roads merge, the junction itself should be clearly marked by a white board at least 75cm x 60cm, illustrating the nature of the junction.
  - i. Figures on this board should be at least 16cm high.
  - ii. The junction should be preceded by similar signs at 100m and 200m showing Motorway-type count down diagonal bands.
  - iii. Judges should be placed at the split junction to record penalties on Competitors overshooting and reversing back against the route of competitive traffic.
  - iv. Where Competition routes merge on a lapping course, the angle between the two roads (prior to the common route) should be no more than 45° to each other, and on joining should run separately, but in parallel, for at least 100m before merging.
- d. Where the course changes direction repeatedly without any natural features, arrows must have a contrasting colour on the reverse side (preferably matt black or white) with tape staked at reasonable intervals to further define the course.
- e. A Stop Line should be positioned following a flying finish to allow Competitors to decelerate in a controlled manner, especially where they proceed directly into a Service Area. The area between the Flying Finish and the Stop Line should be free from bends, sharp or deceptive corners or hazards such as gates or ditches and must be prohibited to spectators.



#### 11.9.4 Live Recovery

The event regulations will specify whether Live Recovery will be operated by Recovery Vehicles (RVs) at the event. The event regulations will specify the maximum time allowed to Competitors for self recovery, after which they must take Official recovery.

- a. No recovery operations organised by the Competitor in advance may be used.
- b. At events where Live Recovery is operated, the Clerk of the Course must advise Competitors of the procedures at a Drivers Briefing.
- c. The Clerk of the Course must specify whether the RVs will be manned by a third crew member responsible for attaching the tow rope, or whether this will be carried out by the passenger or navigator. In the former case, Competitors must remain in the vehicle and follow the instructions from the RV crew. In the latter case, the passenger or navigator must alight from the stranded vehicle and follow the following procedure:
  - i. They must stand clear and await instruction from the chief RV crew member before attaching the tow rope between the vehicles
  - ii. When properly attached to the towing points, they must stand clear and indicate to the chief RV crew member that Live Recovery may start
  - iii. Once the stranded vehicle has been recovered, and only after the chief RV crew member has indicated that it is safe to do, they can detach the tow rope and stow it safely. They should then inform the chief RV crew that the course or stage can be cleared
  - iv. The Driver of the recovered vehicle must not proceed until the Passenger or Navigator involved is properly seated and belted in. Failure to comply will be penalised by disqualification.
- d. When arriving at a point on the course or stage where a Yellow Flag is being displayed, the Competitor must not pass the Yellow Flag unless instructed to do so by a Marshal and will proceed with caution until clear of the incident, obstruction or stranded vehicle. Failure to comply will be penalised by disqualification.
- e. Time lost whilst Live Recovery of another Competitor is in progress will be regarded as force majeure.
- f. The procedure for a Live Recovery operation must be as follows:
  - i. The RV must report the number of the stranded vehicle by radio and should not commence operations without permission. The second crew member then proceeds on foot to a safe distance ahead of the stranded vehicle and displays a Yellow Flag to warn other Competitors that a Live Recovery is taking place.
  - ii. The RV must always display a flashing amber beacon and flashing hazard lights during Live Recovery.
  - iii. In reaching a stranded vehicle, it must avoid travelling across or along the course, except in positioning itself to approach the recovery from a down-course direction, and place the stranded vehicle between it and approaching Competitors.
  - iv. Course Marshals may assist the RV crew and must ensure all spectators are kept clear.
  - v. Wherever practicable, the stranded Competitor must be pulled through or over any obstruction in the direction of travel along the course.
  - vi. When the RV is in position, the chief crew member should instruct either the Passenger or Navigator of the stranded vehicle (or the third crew member) to attach the tow rope between the vehicles. Once attached, they must stand clear and indicate to the chief crew member that it is safe to commence recovery.
  - vii. On completion of the recovery, the first crew member will indicate to the Passenger or Navigator (or third crew member) that it is safe to detach the tow rope between the vehicles, ensure that the tow rope is properly stowed and then indicate to the chief crew member that it is safe to move the RV clear.
  - viii. Once the chief crew member reports that the RV is clear, the second crew member can allow Competitors to proceed past the recovery location.
  - ix. The RV must carry SOS / OK boards for use during recovery.



### 11.10 Point to Point

The event is designed for competitors to get from a start line to a finish line whilst visiting a set number of points along the route. Events must be on private property at one venue only. They can incorporate open ground, tracks or roads, and can include arduous or demanding areas, water courses and other natural obstacles or hazards. The ground should be an open area and positive steps (including the closure of tracks) should be taken to prevent vehicles meeting at blind points.

- a. The event regulations will specify:
  - i. whether the event will comprise a set number of points to be visited in the shortest time, or a set amount of time during which the maximum number of points are to be visited. In either case all the team must cross a Finish line.
  - ii. whether points should be visited in a set order or at random.
  - iii. If a point comprises a single marker pole with minimum height of 1m, or a gate of poles through which the direction of entry will be marked. Each point visited shall be recorded either by collecting a token or by an Official marking a score card. Tokens and score cards used will be provided by the Organisers.
  - iv. The starting signal to be used.
  - v. The method of timing to be used.
  - vi. The maximum time allowed.
  - vii. The number of vehicles in a team.
- b. Each team must nominate a Captain who will be responsible for carrying the Official score card or tokens for the team and who will produce them to Officials on demand.
- c. In addition to the Driver, vehicles may carry one Passenger or Navigator who must be seated and wearing a safety belt.
- d. Competitors may be required to dismount at each point visited to record their visit and must fasten safety belts prior to the vehicle moving off again.
- e. No recovery assistance outside that given by a team member is allowed.
- f. Practising is not Permitted.
- g. Only vehicles from the same team may be in any point at the same time,
- h. Rescue vehicles must be positioned at predetermined locations to evacuate any injured party.
- i. Adequate Marshals must be positioned at each point to be visited, and at locations overlooking the areas that Competitors will cross.



### 11.11 Winch Challenge Events

The aim of the event is to drive, tow and or winch a vehicle(s) to the various identified points within the competition site, the location of which will be indicated in the event regulations.

- a. Drivers and co-drivers must hold a valid RTA licence appropriate to the vehicle if they are intending to drive at any time during the event, either may drive the vehicle during the event. Navigators, minimum age 16, do not need to hold a valid RTA licence and may not drive during the competition.
- b. Crew members must be accommodated in securely fixed seats and wearing approved seatbelts or harnesses while the vehicle is moving.
- c. There is no compulsion to attempt to reach any point which has been set out.
- d. There is no compulsion to attempt any Special Task. The event regulations will specify any penalties which may be applied during the competition, including a maximum speed limit for competing vehicles.
- e. The winner will be the vehicle or team which has attained the highest points score at the end of the competition.
- f. Winches may be required primarily for the purpose of self-recovery.
  - i. All equipment to be used by team vehicles as means of self-recovery, including ropes, strops and shackles, may be requested to be presented to, and passed by, the technical official prior to the start.
  - ii. The use of winch sails (minimum 1kg dry weight) is compulsory when winching across a section of track that may be used by another vehicle.
  - iii. When using winch cable or rope, suitable gloves should be worn. Rubber and woollen gloves are not suitable.
- g. At each location will be a means to prove that the vehicle has reached the location, this will be identified by a number to verify it is the desired objective and will be attached securely to a fixed point. A score card (or other device attached by the technical officials in a consistent point on all vehicles) must be marked as proof that the location has been visited. The vehicle must negotiate close enough to mark the scorecard without detaching either component.
- h. The event regulations will specify:
  - i. Whether the event is for single vehicles or teams of vehicles.
  - ii. Whether there is a class structure and specify the eligibility requirements for classes.
  - iii. Will specify the start time, finish time and any penalty which will be applied for late finishing.
  - iv. Will specify any start order and the method arrived at for employing it.
  - v. Will specify the values of each point visited or any formula which is used to calculate the value of each point visited.
- i. In addition, there may also be Special Tasks at certain locations which are worth extra points. These may take the form of driving, mental or physical tasks, these may involve the use of the competing vehicle or alternatively a vehicle may be provided for the task. Each task will be overseen by a marshal who will issue instructions and record the score.
  - i. The event regulations will specify the number of Special Tasks available on the day and their maximum scoring potential.
  - ii. Winch sails must NOT be rolled up or permanently attached to the winch line.
  - iii. Special Tasks may be timed to an accuracy of one second.
- j. Where a winch rope may be deployed the area of that section shall be no less than the length of the outstretched winch cable of rope and only competitors attempting the section and the observing official may be present in the Section. Where event regulations require all competitors to use synthetic winch rope the width of this area may be reduced.
  - i. Winch rope must be presented in a serviceable condition.
  - ii. Broken ropes must be spliced or replaced.
  - iii. Damaged hooks must be replaced.