



## TECHNICAL REGULATION 2021

This technical regulation was prepared by 4x4 Iberian King. This document consists of 21 pages, numbered from 1 to 21 and may not be copied or used, neither totally nor partially without written consent of the 4x4 Iberian King.

## Art.1.- TECHNICAL VERIFICATION

- 1) It is the contestant's responsibility to ensure that their vehicle complies with and / or adheres to all the rules, regulations and technical specifications of this Trophy, at all times.
- 2) The contestant and, failing that, the designated representative for each race will be responsible for providing the Technical Steward with all documentation and records related to compliance with these regulations.
- 3) The technical verifications will be carried out the day before the test.
- 4) The prior technical verifications will mainly deal with the formalities of the vehicle (numbers, advertising, etc.), characteristics of the vehicle (make and model, category, group, cylinder capacity, etc.) through the Verification Sheet or / and the list of registrants , if you are registered in the group and class that corresponds to each vehicle and especially the essential safety elements of both the vehicle and the driver and / or copilot through the documents intended for this purpose (safety structure, fire extinguisher, harness, helmets, suit flame retardant, etc.). This does not imply that obvious technical irregularities that may be found during the verification of the vehicles should be ignored.
- 5) To correct possible anomalies, the contestant will be given the possibility of presenting the vehicle to a new control, up to 60 minutes before the departure of the first participant in the first round or in training, at the discretion of the Sports Stewards. If this possibility is contemplated in the General or Particular Regulations, these will prevail.
- 6) If in the preliminary scrutineering a vehicle does not correspond to the characteristics of the group and / or class in which it has been registered, this vehicle may, at the proposal of the Technical Stewards, be transferred by decision of the Sports Stewards to the group and / or class that corresponds to it.
- 7) The race numbers, and the advertising badges, must be placed on the vehicle BEFORE it accesses the preliminary technical verification.
- 8) The Race Director may authorize, at his sole discretion, the verification of those vehicles whose contestants have justified to the Sports Stewards that their delay was due to force majeure.
- 9) The Technical Directorate of the Trophy reserves the right to limit the number of personnel that is allowed in any area or place where prior technical verifications and final verifications are carried out.
- 10) Any participating vehicle may be required to verify at any time during the meeting.
- 11) No vehicle may be removed from a verification zone without authorization from the Technical Steward.
- 12) Any vehicle withdrawn without the corresponding permit will be disqualified.
- 13) Any vehicle that does not pass the technical checks will not be authorized to start.
- 14) The Technical Steward will report any part or device that he considers does not comply with the regulations and will notify the Stewards and the Clerk of the Course.
- 15) During scrutineering, markers may be used to identify one or more parts of the vehicle. Identification markers shall remain intactos e inalterables durante todo el meeting. Si alguna de las marcas resultase dañada o desapareciese, implicará la descalificación del participante.

16) Once the technical verification has been carried out and satisfactorily passed, the Chief and / or the Technical Delegate will proceed to place the corresponding conformity sticker. The absence or loss of this identification will mean disqualification.

17) During the preliminary technical verifications, clothing and personal safety items may be checked, which must comply with the FIA regulations.

18) All participants must cover a declaration of conformity sheet for clothing and personal safety items. Said sheet must be delivered at the beginning of the season or in the first test in which he participates to the Technical Steward and will be valid for the entire year. The absence or non-completion of this Sheet implies the NO authorization to take part in the Test.

19) A sheet will be sent to all participants, as well as an example of how it should be covered.

20) Everything declared in said sheet will be mandatory for the contestant and the Technical Stewards may check at any time during the meeting that all clothing complies with the FIA regulations Annex "L" Cap. 3. <https://www.fia.com/file/103069/download/12831>

21) The Technical Chief will report any personal protective equipment that does not comply with the standards or is considered unsafe.

22) Any vehicle may be required for a final technical inspection, after the event, at the request of the Sports Stewards.

23) During the final verification, the contestant and one or more mechanics from his team must be present to disassemble the indicated parts. Failure to comply will result in the disqualification of the participant, and may result in suspension.

24) The Technical Stewards, Sports Stewards or the Race Director may require a participating vehicle damaged in an incident during the race, to undergo a post-incident inspection, to check that everything is correct. If the participant refuses to allow the vehicle to be inspected, they may be disqualified.

25) At the end of the test, the vehicles must go to the Parc Fermé until the Official Classification of the Test is published.

26) Any vehicle that is removed from the parc fermé before it is opened will result in its disqualification.

27) Any participant / s who are the object of a claim will not be able to withdraw their vehicle until it is authorized by the Technical Stewards.

28) Any refusal by a contestant to comply with the resolutions of the College of Sports Stewards will be disqualified and a file will be opened which will be transferred to the Appeal and Disciplinary Committee.

## **Art.2.- GENERALITIES**

Any modification is prohibited, unless expressly authorized by these Regulations.

For security reasons, any vehicle can be rejected and, therefore, will not be authorized to take the exit.

Any case not provided for in these Regulations will be resolved by the Sports Stewards, in accordance with the provisions of the CDI.

All vehicles must comply with the 2021 4X4 Iberian King Trophy Technical Regulations.

## 2.1. DEFINITIONS. SUPPORTED VEHICLES.

2.1.1. Group A (Free) .- Rigid all-terrain vehicles with four-wheel drive, homologated or not, that comply with these Technical Regulations.

2.1.2. Group B (Modified) .- All-terrain four-wheel-drive tourism vehicles of origin and commercial sale at dealerships in the European Union; with or without homologation in force.

2.1.3. Group C (Stock, UTV) (UTV).- Vehicles off-road tourism "Side by Side" of traction to the four wheels of origin and of commercial sale in the dealers of the European Union; with or without homologation in force. Without any modification regarding the series vehicle, except those expressly authorized in these Regulations.

## 2.2. FUEL

All vehicles must use a commercial (gas station) fuel.

Specific formulated gasoline is not accepted.

Diesel vehicles are allowed.

## Art.3.- VEHICLE SAFETY EQUIPMENT

All vehicles must conform to the art. 283 of Annex J (Available on the FIA website) in the following elements: <https://www.fia.com/file/77732/download/20710>

- Pipelines and pumps: Art. 283-3
- Braking safety: Art. 283-4
- \* Unless otherwise indicated in the specific preparation of each group.
- Supplementary fixings: Art. 283-5
- Seatbelts: Art. 283-6
- Fire extinguishers - extinguishing systems: Art. 283-7
- Security structure: Art. 283-8
- Backward view: Art. 283-9
- Towing eye: Art. 283-10
- Windshields, windows and openings\* Art. 283-11
- \* Applicable only for Group B and C vehicles (Modified and UTV). The lateral net is mandatory, in any case.
- Windshield security fixings: Art. 283-12
- Cut-off: Art. 283-13
- Security fuel tanks\*: Art. 283-14
- \* Applicable for vehicles of Group A (Free). Group B and C vehicles (Modified and UTV), as an alternative to the security one, may carry the original deposit.
- Fire protection screen: Art. 283-15
- Tails: Art. 283-19
- Seats: Art. 283-20
- Airbag: Art. 283-21

2) All the vehicle, gears, devices, safety equipment and other vehicle components must be in good condition and in working condition at the time of the Technical Inspection. Certain equipment and components must be kept in service throughout the meeting, and if it is damaged during the meeting it must be repaired or replaced and inspected by a Technical Steward before the vehicle can continue to compete..

3) All safety equipment must be approved and current for inspection.

### 3.1. SAFETY STRUCTURE

- 1) All vehicles must be equipped with a safety structure that must comply with Art. 283-8 of Annex J. <https://www.fia.com/file/77732/download/20710>
- 2) Protective coating according to standard FIA 8857-2001 type A is mandatory for all roof tubes, as reflected in drawing 253-68 of Art.283.8.4 of Annex J. <https://www.fia.com/file/100553/download/20710>
- 3) It is the responsibility of each contestant to present a safe vehicle to the prior technical verification.
- 4) The contestant must keep his safety equipment including the integrity of the safety structure in perfect condition.

### 3.2. HELMETS

- 1) Every pilot who registers in these tests, must wear a helmet in accordance with the standards that appear in Technical List No. 25 of Annex J. <https://www.fia.com/file/76192/download/9283>
- 2) Drivers of open-air vehicles must wear full-face helmets, with a chin guard forming an integral part of the helmet structure and in accordance with a standard approved by the FIA.

### 3.3. HEAD RETENTION DEVICE

- 1) Any device attached to the helmet and intended to protect the neck or head of the rider is prohibited, unless the device has been approved by the FIA and is contained in the FIA Technical List No. 36. <https://www.fia.com/file/2835/download/9134>
- 2) When the device used is the HANS, it can only be used with a compatible helmet included in Technical List No. 29. <https://www.fia.com/file/88134/download/9188>
- 3) ~~It is recommended,~~ they should use the helmets with strap anchor assembled by the manufacturer in origin. These helmets are identifiable thanks to a silver FIA label with a hologram that is illustrated in the FIA Technical List No. 29-Figure 1. <https://www.fia.com/file/88134/download/9188>
- 4) ~~It is also recommended,~~ they will have to use approved straps identifiable thanks to a label FIA 8858- 2002 o FIA 8858-2010.

### 3.4. CLOTHING

- 1) All pilots and co-pilots must wear overalls (diver) as well as gloves, approved according to the standard FIA 8856- 2000 u 8856-2018. <https://www.fia.com/file/83855/download/9291>
- 2) Users should ensure that clothing is not too tight, as this would reduce the level of protection.
- 3) Embroideries sewn directly on the jumpsuit should be sewn only on the outermost layer of the garment, in order to improve thermal insulation. The material used for the background (or the support) of the advertising patches, as well as the thread used to fix them on the suit must be flame resistant (see Annex I of the FIA 8856-2000 standard for detailed requirements and other recommendations to users).
- 4) All participants must cover a declaration of conformity sheet for clothing and personal safety elements, which must be delivered signed to the Technical Delegate at technical checks.
  - 4.1) This equipment will be the one that they will use during the entire event or competition (s) in which they participate.

4.2) Said sheet must be delivered at the beginning of the season or in the first test in which he participates to the Technical Steward and will be valid for the entire year. This must be renewed each time any of the aspects contemplated in it is modified.

5) You will be obliged to present an updated copy if it is required by the Technical Delegate, the Technical Stewards or the Sports Stewards at any time during the competition, and which must have been completed prior to the verifications, for its correct verification by the Technical Stewards in the verifications.

6) The Declaration of Conformity Sheet (To be completed on a computer) can be found on the RFEDA website. <https://bit.ly/2OoPNOK>

7) Declaration of Conformity Sheet (Blank Form). <https://bit.ly/2ndYKie>

8) Declaration of Conformity Sheet (Example of how to fill it in). <https://bit.ly/2Vd8aYg>

### 3.5. HARNESS

1) Safety harnesses must meet one of the following standard FIA standards 8853/98 o 8853-2016 8854/98. <https://www.fia.com/file/67493/download/9290>

2) It is not possible to use different models of harnesses from different manufacturers, even if they are valid and approved. Only complete sets can be used.

3) The driver and passenger restraint system must be in good condition, without cuts, frayed layers, chemical stains, or excess dirt and must be in flexible condition (that is, the material must not be rigid) .

4) All driver and passenger restraint systems must show the manufacturer's name, approval and expiration date.

5) No retention system may be used after its expiration date.

6) The manufacturer's standard design may not be modified or altered. This includes welding of couplers or alternative sewing of belts.

7) All restraint systems must be properly mounted in accordance with the manufacturer's instructions and recommendations.

8) In addition to compliance with the manufacturer's instructions, passenger restraint installations must also comply with the following:

8.1) The restraint system must be mounted on the structural elements capable of supporting the load of the restraint system, without breaking or failing.

8.2) The restraint system must be used with an approved seat. The seats should not be modified to create belt slots.

8.3) All straps should be as short as possible to minimize the length of the strap.

8.4) The routing belt must allow the straps to be pulled in a straight line against the anchor point. The mounting brackets should be at an angle that is compatible with the direction of the pull on the belt.

8.5) The straps of the harnesses must not rub against any surface that could cause wear of the harness.

8.6) The mounting of the harnesses must limit the lateral movement of the shoulder straps.

9) Restraint systems must be used properly tightened by all occupants, anytime the vehicle is in motion.

10) Any commissary may and must check that all occupants have their harnesses correctly attached before the vehicle starts driving.

### 3.6. SAFETY NETWORKS

1) Safety nets are mandatory on all vehicles and must cover the entire open area of the cabin on both sides of the vehicle, to the extent that it is impossible for any limb or part of the body of any occupant to protrude from the vehicle anytime.

2) Nets must be installed in such a way that occupants can release the net unaided and exit the vehicle regardless of the vehicle's position.

3) The window nets must comply with the FIA Art. 283-11 of Annex J specifications for all classes. <https://www.fia.com/file/77732/download/20710>

### 3.7. BAQUET

1) All seats must be manufactured by a manufacturer approved for the construction of competition seats.

2) All seats must comply with the standard FIA 8855-1999, FIA 8862-2009 o FIA 8855-2021. <https://www.fia.com/file/96989/download/9318>

3) All seats must be securely mounted to the vehicle frame and mounting must be done in accordance with FIA regulations.

4) Seats must have appropriate grooves to properly accommodate the driver's restraint system.

### 3.8. FIRE EXTINGUISHERS

1) They must comply with Art. 253-7 of Annex J and technical lists No. 16 and No. 52. <https://www.fia.com/file/78442/download/9204> <https://www.fia.com/file/82367/download/12338>

2) Each vehicle must carry two fire extinguishers (one inside and one outside) Type A, B, C, of at least 2 kg.

3) If the extinguisher is inside the vehicle, it must be provided with two quick-opening metal clamps, firmly attached to the floor of the vehicle.

4) Fire extinguishers must be provided with a retention system that prevents it from moving (anti-torpedo system, see photo).

**Anti-torpedo system:**



- 5) All fire extinguishers must be in good condition, with up-to-date checks and fully charged.
- 6) The installation of an approved automatic extinguishing system is recommended..

### **3.9. HORNS**

- 1) All vehicles must have a high frequency horn.
- 2) The horn must be clearly audible at a minimum distance of 50 meters in front of the vehicle.
- 3) Disposable air horns are not allowed.

### **3.10. REFLECTORS**

- 1) All vehicles must have two red reflective tapes 50 mm wide x 200 mm long, or two red reflectors 50 mm in diameter.
- 2) Reflective tape or reflectors must be clearly visible from the rear of the vehicle.

### **3.11. FIRST AID BOX**

- 1) In all vehicles, there must be a first aid kit, which at least contains the basic elements to perform first aid.
- 2) The first aid kit should be easily accessible within the occupant area without having to remove any of the body panels or equipment.
- 3) If any of the occupants have any special medical need, they must notify the Race Director before the start of the race.

### **3.12. VEHICLE SAFETY SUPPLEMENT**

Vehicles may carry, properly secured, the following aid and rescue items:

- Winches: hydraulic, electrical or mechanical, minimum one and maximum two.
- 2 Planks or rescue ladders (maximum length 140cm and maximum width 50cm).
- 2 Slings of 4 Tm maximum, greater than 4 meters and a shorter one for tree.
- 1 deflection pulley.
- 1 Cat.
- 4 Shackles.
- 2 pairs of work gloves.
- 1 Anchor.

- 1 Hammer.
- 1 Winch extension cable or substitute.

#### **Art.4.- NUMBER OF ORDER:**

1) Each participant will designate their own competition number. These numbers may not coincide with those of other participants and the acceptance or denial criteria will be attributed by the order of registration within the Trophy.

2) The respective number for each participant must appear visibly on the front, back and on each of the sides of the vehicle. Any other number likely to create confusion will be prohibited. Participants will be responsible for cleaning the numbers during competitions, so that they are visible at all times.

3) Competition numbers will be placed as follows:

3.1) Two (2) on the sides

3.2) One (1) front and one (1) rear.

3.3) The size of the numbers will be 30x30 cm.

3.4) Competition numbers will have a minimum of 2 numbers.

3.5) The "Arial Bold" font will be used and the reference colors will be, for Group A, a white background and black numbers; for Group B, orange background (RGB: R-255, G-167, B-107) and black numbers and for Group C, blue background (RGB: R-0, G-216, B-255) and black numbers.



#### **Art.4.- GENERAL COMPONENTS OF VEHICLES**

- 1) Vehicle occupants must be able to get in and out without assistance with the vehicle in any position quickly and easily.
- 2) Firewalls or bulkheads must separate the driving compartment from any fuel, engine fluids, and acids.
- 3) There will be two bulkheads, one at the front and the other at the rear, which must be made of metal and are intended to protect the occupants of the vehicle from possible spills of liquids, fluids or acids.
- 4) The front bulkhead will cover from the floor of the cabin, to the windshield and from side to side of the cabin. All those passes that have to be made for the passage of pipes or for the steering column, must be as tight as possible.

5) The rear bulkhead, will go from the floor of the cabin to the roof of the same and from side to side.

5.1) The exception to this rule is cars that have a rear mounted radiator attached to the passenger compartment, which must have a wire mesh panel no larger than 2x2 cm to protect the radiator.

5.1) In addition to this rule, cars that have a radiator mounted at the rear outside of the cabin must have, at most, an intermediate wire mesh panel of no more than 2x2 cm to protect the radiator.

6) Oil coolers, transmission coolers and radiators located at the front of the vehicle must have a cover so that, in the event of a rupture or leak, it prevents liquids from reaching the occupants.

7) All hoses that are passed through the cabin must be shielded and without any type of fitting or connection and in accordance with Art. 253.3.2 of Annex J. <https://www.fia.com/file/77724/download/20694>

8) There may not be any type of pipe or cable, located between the structure and the body of the vehicle.

9) All vehicles with operational doors must have locking mechanisms on the doors. The locking device must be able to be easily operated from the outside.

10) All vehicles must start the meeting with a generator or alternator, fan, water pump (water-cooled vehicles), and an electrical system in perfect working order.

11) The ends of the bumpers must be covered and / or rounded to avoid any sharp edges.

12) NERF bumpers must be designed in a way that minimizes the possibility of two vehicles hitching up and getting stuck.

13) Bumpers must be constructed in a way that prevents the tire from contacting the tire in a frontal or rear impact with another vehicle.

14) It is mandatory to install one interior or two exterior rear-view mirrors on all vehicles.

14.1) The mirrors must have an unobstructed view of the rear and side of the vehicle.

15) All spare parts and extra equipment that go on the vehicle must be well fixed and tied to prevent them from moving during the competition. All spare parts and additional equipment must be positioned in a way that minimizes the risk of injury to vehicle occupants.

16) All parts of the vehicle must remain in the vehicle (accidental damage excluded) throughout the event.

#### 4.1. ENGINE

1) The motor must not leak or spill.

2) The engine will have an oil collection container with a capacity of at least 2 liters.

3) The oil level dipstick must be blocked.

4) The exhaust pipe must have silencer and spark arresters.

5) The exhaust system outlet must extend a minimum of 305 mm beyond the rear of the occupant compartment; be directed to the rear, out of the passenger compartment, the fuel tank and the tires.

6) No participant may replace a complete engine during an event. A complete engine will be considered to have replaced, if the block has been replaced.

#### **4.2. TRANSMISSION**

1) The transmission must be free of leaks.

2) Every vehicle must have a functional reverse gear.

3) The transmission must have an approved dispersion shield, or a sufficiently resistant and approved floor between the occupants and the transmission..

#### **4.3. TRANSFER-CASE**

1) The transfer case must be free of leaks.

2) There will be a fluid collection system from the transfer box, to avoid any fluid from falling to the ground.

3) All vehicles must be capable of transmitting power to all four wheels / tires, and must be equipped with a low operating range. Low range is defined as a gear ratio that is less (numerically greater) than 1:1.

#### **4.4. STEERING**

1) The steering wheel that can be used will be free, both the manufacturer and the design.

2) A rapid decoupling system is authorized.

3) The steering column is free, provided it meets the following conditions:

3.1) It must be collapsible in front of a frontal impact.

3.2) Any steering column adjustment system must be locked, and must be operated only with the use of tools.

3.3) Any steering lock system must be removed.

4) The power steering vent tubes must be attached to a fluid containment system that prevents any fluid from falling onto the ground.

5) All hydraulic steering tubes must be in good working order and free of cracks, defects or leaks.

6) The power steering system must be free from leaks.

#### **4.5. SUSPENSION**

1) The suspension will be free.

2) There must be at least one shock absorber per wheel.

3) Suspension pivot points and connection points must be free of cracks and in good condition.

4) Shock absorbers must be leak-free.

#### **4.6. BRAKES**

1) Brakes must be able to apply adequate force to stop all four tires.

2) Brakes must be in a safe, leak-free operating condition throughout the event. If brake system problems occur during the event, they must be repaired before continuing in the competition.

3) Manual, vacuum actuated and hydraulically assisted brakes are allowed.

4) The brake pedal must act on all the brakes of the vehicle.

5) Transmission and / or pinion-brake systems are allowed, provided they meet all other requirements specified in this document.

6) The hoses and pipes of the brake system must comply with Art. 283 of Annex J. Plastic brake pipes and hoses are not allowed.

### **Art.5.- FUEL**

#### **5.1. FUEL TANK**

1) The fuel tank must be security in all vehicles.

2) Auxiliary fuel tanks can be added. The auxiliary fuel tanks should also be the backup fuel cells.

3) There must be a protection between the fuel tank and the occupants, which prevents the possible spillage of fuel from reaching them.

4) All vehicles must mount FT3-1999, FT3.5-1999 or FT5- 1999 fuel tanks, as indicated in Technical List No. 14 regarding fuel tanks. Available on the FIA website <https://www.fia.com/file/71952/download/9049>

5) Fuel tanks should be mounted so that they are protected against damage from a collision, impact from debris or rocks from under the vehicle, damage due to turning over, or the possibility of damage from chassis bending.

#### **5.2. FUEL: PIPING, FILLING AND VENTILATION**

1) The fuel lines, filling pipes and fuel ventilation ducts must have anti-return valves that prevent the fuel from returning when the vehicle is partially or totally inverted.

2) All fuel pipes must comply with art. 283-3 of Annex J <https://www.fia.com/file/77732/download/20710>

3) Ball valves, or a combination of ball valve and one-way check valve, located on the return supply, and vent line will be permitted.

4) The fuel isolation valves shall be located such that, with the vehicle in any position, they can be closed rapidly to restrict the continuous flow of fuel to the ground in the event of a fuel line failure.

5) The fuel tank must be filled and vented from outside the occupant compartment.

6) The tank must be filled from one of the sides or from the top of the vehicle and with an outlet that prevents fuel spillage on other parts of the vehicle or on the ground.

7) Fuel fill lines and positive locking non-vented fuel fill caps must be located and secured in such a way as to prevent them from being dropped or opened during vehicle movement, rollover or accidental impact. Monza / flip caps are strictly prohibited.

8) All fuel fill lines that are attached to the frame or body panel must be connected to the tank using flexible couplers. All fuel fill lines must be surrounded by a sleeve or splash shield. The protection at the rear or front of the passenger compartment (depending on where the fuel tank is mounted) should direct any fuel spillage to the outside of the vehicle and away from the occupant compartment, engine and exhaust. A fuel fill check valve must be incorporated in all filler ports.

9) Fuel filler caps must have a flexible strap or chain to secure them to the vehicle.

10) The fuel vent line must use one of the following routes:

10.1) The fuel vent line must extend to the highest point of the anti-tip structure closest to the fuel cell, across the width of the vehicle and down to under the belly of the vehicle or 75 mm below the fuel cell, whichever is less.

10.2) The fuel vent line should loop above the fuel tank to a point that is 100mm above the top of the tank. From there it will be wound in a full loop around the outside of the fuel tank near the top of the fuel tank and then brought to a point that is 75mm below the lowest point of the fuel tank.

11) An environmental mat or canvas will be mandatory, covering the entire floor of the box or repair area of the vehicle. That mat or tarp may never be less than twice the size of the vehicle.

12) Fuel storage must be carried out in appropriate containers intended for this purpose.

13) There will be a specific area for filling (Refueling area) where it will be the only place allowed for filling fuel.

14) In the Refueling area it will be forbidden to smoke and use tools that produce sparks or flame.

15) To fill up with fuel, the occupants of the vehicle must be outside the vehicle.

16) In the Refueling area, there will be as many fire extinguishers and fire fighting means as necessary.

17) The Refueling area will be properly marked and controlled by a Commissioner.

## **Art.6.- ELECTRIC SYSTEM**

### **6.1. CUT-OFF**

1) The general cut-off must cut all electrical circuits (battery, alternator or dynamo, lights, horn, ignition, electrical controls, etc.), and must stop the engine.

2) For diesel engines that do not have electronically controlled injectors, the circuit breaker must be connected to a device that cuts off the engine intake.

3) It must be an explosion-proof model and there must be one inside the passenger compartment and within reach of the occupants and another outside the vehicle.

4) Outside, the cut-off actuating system must be located at the bottom of one of the windshield pillars. It must be marked by a red ray in a blue triangle with a white border and a base of at least 12 cm.

## 6.2. SWITCHED ON

1) Every vehicle must have on / off switch. The switch should be labeled “on / off” and should be within easy reach of the driver.

2) All electric fuel pumps with independent switches must be labeled “fuel on / off” and be within driving distance. It is recommended that electric fuel pumps do not turn on and off independently.

## 6.3. BATTERY

1) The battery / s must be gel.

2) Batteries must be securely mounted with metal brackets, clamps, and clips to prevent battery movement.

3) Batteries should not be located in the occupant compartment.

4) There should be a firewall between the battery and the occupants.

5) The positive terminal (+) of the battery must be covered and protected at all times.

## 6.4. LIGHTS

1) The work lights will only be mandatory in those tests in which the race runs between sunset and sunrise.

2) All vehicles must have a minimum of two taillights, two brake lights, and one amber light facing rearward. Standard taillights, if equipped, are allowed as long as they remain on as long as the vehicle's ignition is on.

3) An amber rear light must be installed on all vehicles.

4) Amber light and blue light, if necessary, should illuminate with a brightness that is at least equivalent to a 40-watt 12V lamp, but not brighter than a 55-watt 12V lamp.

5) Amber lens must be deep coated amber, no other color is allowed.

6) The blue lens must be blue with medium coating, no other color is allowed.

7) Amber light and blue light, if required, must be mounted a minimum of 1220mm from the ground and must be clearly visible, unobstructed (i.e. not mounted behind any translucent object), from any position in a imaginary arc from the 5 o'clock position to the 7 o'clock position of the vehicle.

8) The amber light and blue light, if necessary, should be positioned so that they do not impair the vision of another driver approaching from the rear.

9) LED lamps are allowed.

10) All rear-facing lights must be protected against damage that can be caused by a vehicle overturning.

11) All rear-facing lights must be protected from damage that may be caused by overturning.

12) The taillights must be at least 75mm in size and must be mounted in such a way that they are clearly visible from the rear of the vehicle.

13) All rear-facing lamps must be connected to the ignition switch or directly to the main battery power switch, as they remain on every time the vehicle is started.

14) If during a test any of the lights did not work, the contestant would be warned who would have to repair it in the next step by goal, in order to continue the test.

## **6.5. MOTOR DE ARRANQUE**

1) Todos los vehículos deben ser de arranque automático mediante el uso de un arranque eléctrico a bordo.

## **Art.7.- WHEELS AND TIRES**

1) All vehicles must have exactly four driving wheels, each with its corresponding tire.

2) Tire caps are not allowed.

3) All tires from any manufacturer are allowed.

4) The tires will be checked and verified that they are appropriate for the category and that they are in optimal conditions of use.

5) Bolts, screws or anything else added to the tire is not allowed.

6) Grooves, grooves or other modifications that involve removing material from the tire are not allowed.

7) The tire is not allowed to be equipped with a mouse or anti-puncture kit. The use of these products will lead to disqualification.

8) The inside of the tire is not allowed to be filled with anti-puncture "tireballs". The use of these products will lead to disqualification.

## **Art.8.- VEHICLE WEIGHT**

1) There is no minimum or maximum weight.

## **Art.9.- ALLOWED MODIFICATIONS TO ALL VEHICLES IN GROUP A (FREE).**

### **9.1. BODYWORK - CHASSIS**

9.1.1. The side accesses to the passenger compartment may be made with a metal structure and a safety net or mesh, or completely made of a safety net or mesh.

9.1.2. The bumpers can be modified, removed or reinforced. When they house pilots or headlights of any type, said pilots or headlights can be removed.

9.1.3. The tubular structure must be covered, in its upper part, by a steel sheet of at least 1 mm, or aluminum sheet of at least 3 mm. and it will be welded or screwed to the safety arch, covering the entire area above the pilot and copilot.

9.1.4. All vehicles will have a maximum of two seats, the front seats must be arranged side by side with a minimum distance from the outer side of the seat to the longitudinal axis of the vehicle of 45 cm.

9.1.5. The wheel arches and fins can be modified and widened.

9.1.6. The body-chassis reinforcements are free.

9.1.7. The exhaust and / or intake pipe can be modified. The exhaust system must have at least 1 flame-arresting silencer and always keeping the outlet behind the seats.

9.1.8. Lower guards are allowed to protect the underside of the vehicle. They must not protrude from the perimeter of the bodywork.

9.1.9. The battery must be gel (one or more) and it will be firmly fixed to the chassis or body.

## **9.2. WINDSHIELD, WINDOWS AND OPENINGS**

It is forbidden to install a windshield and side windows.

The installation of a lateral net according to Art. 283-11 is mandatory, in any case.

The use of helmets with protective screens or protective glasses will be mandatory.

## **9.3. INSIDE**

It's free.

## **9.4. ENGINE**

9.4.1. The engine may be located at the front or rear of the vehicle.

9.4.2. An effective protective screen must be placed between the engine and the passenger compartment to prevent the projection of flames in the event of a fire.

9.4.3. The starting of the motor must be electrical.

9.4.4. An oil recuperator with a minimum capacity of 3 L. of a translucent plastic or metallic material must be installed. The intake will be from the top and also its vent to the outside.

## **9.5 WATER AND OIL RADIATORS**

They are free in shape, size and situation.

10.5.1. The radiator will not be able to penetrate the passenger compartment. The pipes will not pass through the cabin.

## **9.6 SUSPENSION**

It's free.

## **9.7 TRANSMISSION**

The self-locks or differential locks are free.

## 9.9 BRAKES

Apart from what is specified in Art. 3, the presence of a hydraulic or mechanical handbrake on the vehicle is not mandatory.

## 9.10. STEERING

The steering system and its position are free.

Any system of four steering wheels is allowed.

## 9.11. WHEEL AND TIRE

In this Group a maximum rim size of up to 17 inches is allowed.

The tires can protrude from the bodywork, not being able to exceed 42 inches.

## 9.12. LIGHTS

They are free. The presence of flashing amber, red or blue rear position lights is mandatory.

## Art.10.- ALLOWED MODIFICATIONS TO ALL VEHICLES OF GROUP B (MODIFIED)

The vehicles will be of origin, only the works for their normal maintenance may be carried out, or the replacement of parts damaged by use or accident with others of origin, identical to the damaged part. Only the modifications specified below will be accepted.

### 10.1. BODYWORK - CHASSIS

10.1.1. The original body must be kept. Bumpers, trim strips, trim, etc. can be removed.

10.1.2. The standard chassis must be maintained and it is allowed to reinforce the original basic structure, provided that the ferrous material used is a sheet with a maximum thickness of 2 mm, follows the original shape and is in contact with the chassis.

10.1.3. Lower guards are allowed to protect the underside of the vehicle. They must not protrude from the perimeter of the bodywork.

10.1.4. The battery, one or more, must be made of gel and will be solidly fixed to the chassis or body of the vehicle.

### 10.2. ENGINE

10.2.1. Any motor is allowed.

10.2.2. The thermostat, the electric fan and its start-up sensor are free.

10.2.3. The route of the exhaust pipe can be modified. The place of exit of the exhaust is free, always keeping the exit behind the seats.

10.2.4. An oil recuperator with a minimum capacity of 2 L. of a translucent plastic or metallic material must be installed. The intake will be from the top and also its vent to the outside.

### 10.3 WATER AND OIL RADIATORS

They are free in shape, size and situation.

10.3.1. The radiator will not be able to penetrate the passenger compartment. The pipes will not pass through the cabin.

#### **10.4 STEERING**

10.4.1. It is allowed to reinforce the trapezoids and the original anchors, as well as to vary their position and size.

10.4.2. The springs, leaf springs and torsion bars are free.

10.4.3. The shocks are free as long as they do not exceed 2.5 inches per shock. They must be fixed to the axles of the vehicle, and cannot be fixed to the tie rods or other parts of the damping assembly.

#### **10.5 TRANSMISSION**

10.5.1. The clutch is free

10.5.2. The reduction of the differentials (pinion-crown assembly) is free. The bearings are free.

10.5.3. A self-locking or differential lock is allowed on the front and rear axles.

#### **10.6 BRAKES**

They are free, associated with the axles that are installed in the vehicle, including the handbrake.

The brake pads and fluid are free. The original hoses can be replaced by other aviation type according to Art. 283-3.3.2.

#### **10.7 STEERING**

The steering system will be necessarily mechanical, and cannot be 100% hydraulic, it is allowed to improve it by means of steering shock absorbers.

#### **10.8 WHEEL AND TYRE**

In this Group a maximum rim size of up to 17 inches is allowed.

The tires can protrude from the bodywork, not being able to exceed 37 inches.

#### **10.9. WINDSHIELD, WINDOWS AND OPENINGS**

10.9.1. The windshield may be removed.

10.9.2. If the windshield breaks during the competition and cannot be replaced by another, the defective windshield will be removed, forcing the occupants of the vehicle to use helmets with a protective screen or if the helmet is open, they must wear protective glasses.

10.9.3. Side windows will need to be removed.

10.9.4. The installation of a lateral net in the place of the side windows will be carried out in accordance with Art. 283-11 of Annex J. <https://www.fia.com/file/100553/download/20710>

## 10.10 INSIDE

It's free.

## 10.11 LIGHTS

They are free. The presence of flashing amber, red or blue rear position lights is mandatory.

## Art.11.- ALLOWED MODIFICATIONS TO ALL GROUP C VEHICLES (UTV)

The vehicles will be of origin, only the works for their normal maintenance may be carried out, or the replacement of parts damaged by use or accident with others of origin, identical to the damaged part. Only the modifications specified below will be accepted.

### 11.1. BODYWORK - CHASSIS

11.1.1. The body can be modified. Bumpers, trim strips, trim, etc. can be removed.

11.1.2. The standard chassis can be modified, it is also allowed to reinforce the original basic structure, provided that the ferrous material used is a sheet with a maximum thickness of 2 mm, follows the original shape and is in contact with the chassis.

11.1.3. Lower guards are allowed to protect the underside of the vehicle. They must not protrude from the perimeter of the bodywork.

11.1.4. The battery must be made of gel and it will be solidly fixed to the chassis or body of the vehicle.

### 11.2. ENGINE

11.2.1. The engine and cooling system assembly must be the original one for the vehicle.

11.2.2. The air intake system can be modified.

11.2.3. Forced induction at any point is not allowed, unless factory fitted.

11.2.4. The exhaust manifold must be the original one for the vehicle.

11.2.5. The route of the exhaust pipe can be modified. The place of exit of the escape is free.

11.2.6. An oil recuperator with a minimum capacity of 2 L. of a translucent plastic or metallic material must be installed. The intake will be from the top and also its vent to the outside.

### 11.3. SUSPENSION

11.3.1. It is allowed to reinforce or modify the trapezoids and the original anchors, maintaining their position and size.

11.3.2. The standard suspension system of the vehicle can be modified.

## 11.4 BRAKES

It will be the complete original system of the vehicle, associated with the axles that are installed in the vehicle, including the handbrake, or modified.

The brake pads and fluid are free. The original hoses can be replaced by other aviation type according to Art. 283-3.3.2.

## 11.5 STEERING

11.5.1. **The steering system can be the original stock of the vehicle or modified.**

11.5.2. Any steering column adjustment system must be locked, and must be operated only with the use of tools.

11.5.3. Any steering lock system must be removed.

## 11.6 WHEEL AND TYRE

In this Group a maximum rim size of up to 17 inches is allowed.

The tires can protrude from the bodywork and cannot exceed 35 inches.

## 11.7 WINDSHIELD, WINDOWS AND OPENINGS

11.7.1. **The windshield will be kept, except if the vehicle does not carry it at origin.**

11.7.2. If the windshield breaks during the competition and cannot be replaced by another, the defective windshield will be removed, forcing the occupants of the vehicle to use helmets with a protective screen or if the helmet is open, they must wear protective glasses.

11.7.3. Side windows will need to be removed.

11.7.4. The installation of a lateral net in the place of the side windows will be carried out in accordance with Art. 283-11 of Annex J.

<https://www.fia.com/file/100553/download/20710>

## 11.8 INSIDE

It's free.

## 11.9 LIGHTS

They are free. The presence of flashing amber, red or blue rear position lights is mandatory.

## 11.10 WATER AND OIL RADIATORS

**The standard vehicle will be kept, or modified.**