

2019 FIA MOTORSPORT GAMES FORMULA 4 CUP TECHNICAL REGULATIONS

SUMMARY

1.	GENERAL PRINCIPLES.....	2
2.	ELIGIBLE CARS.....	2
3.	ENGINE	3
4.	BODYWORK AND DIMENSIONS.....	3
5.	WEIGHT	3
6.	GEARBOX - TRANSMISSION TO THE WHEELS	4
7.	COCKPIT	4
8.	SAFETY EQUIPMENT AND DRIVER INSTALLATION	4
9.	ON-BOARD TELEVISION CAMERAS	6
10.	TIMING TRANSPONDERS	6

1. GENERAL PRINCIPLES

- 1.1. All cars must comply with these 2019 FIA Motorsport Games Formula 4 Cup Technical Regulations (“Technical Regulations”) in their entirety at all times during the Event.
- 1.2. It is the duty of each competitor to satisfy the Technical Delegate and the Stewards of the Meeting that his car complies with these Technical Regulations in their entirety at all times during the Event.
- 1.3. All cars must be built and operated in accordance with the relevant sections of the KC-MG user manual, the KC-MG spare parts catalogue and the MSG F4 Cup Set-Up Manual.

Once supplied, the components may not be modified in any way whatsoever except where specifically permitted by the Technical Regulations, Technical Bulletins, MSG F4 Cup Set-up Manual, KC-MG spare parts catalogue and KC-MG user manual or with the written permission of the FIA after consultation with the manufacturer.
- 1.4. All measurements must be made while the car is stationary on a flat horizontal surface.
- 1.5. The FIA may issue Technical bulletins that modify and/or supplement the Technical Regulations to apply at the Event. Each such Bulletin has to be countersigned by the Chairman of the Stewards.

2. ELIGIBLE CARS

- 2.1. The only rolling chassis permitted are those manufactured by KC-MG under the specification KC-MG 01 in 2019 FIA Formula 4 Motorsport Games configuration. Once supplied, no parts may be modified in any way whatsoever except where specifically permitted by these Technical Regulations or by a Technical Bulletin as defined in Article 1.5. Any such modifications will only be permitted if they are deemed absolutely necessary after a problem has been clearly identified.
- 2.2. Unless permitted under these Technical Regulations or otherwise specifically authorised no element may be added to nor removed from the car specification in its 2019 FIA Formula 4 Motorsport Games configuration. The original design and construction of the car must be preserved at all times.
- 2.3. The action of adding / applying a surface treatment (i.e. shot peening, anodization, any kind of plasma coating, superfinishing) other than painting or adhesive film to a genuine component is considered as a modification of the component itself.
- 2.4. The complete car is divided into three types of parts. The parts are classified in the relevant spare parts catalogue.

Type 1: These parts must be used exactly as supplied. Repairs may be carried out only by the manufacturer.

Type 2: These parts are Type 1 parts with specific restrictions. Only modifications indicated in the homologation may be carried out. Repairs are allowed only in the range described in the homologation.

Type 3: These parts are unrestricted, provided that they are used as designed by the manufacturer and do not fulfil any additional function.

The adding of colour or thin adhesive film up to a thickness of 0.5 mm is not considered as a modification, provided that the colour or film fulfils only an optical function.

- 2.5. Standard mounting parts, such as screws, nuts, bolts, washers and lock washers, are considered as Type 3 parts unless specifically mentioned in the homologation. They may be replaced with equivalent or superior standard parts.

The thread type, size, length and pitch must remain the same.

The use of locking wire is permitted.

Any type of standard mounting part which has an influence on the car set-up is considered as a Type 1 part unless specifically mentioned in the homologation.

Only Type 3 washers may be removed. Washers may be added only for facilitating and improving mechanical installation. They may influence the set-up of the car only when specifically mentioned in the homologation.

- 2.6. Heat protections, mechanical protections (such as abrasion protection or tape) and protections for driver comfort may be added, provided that their sole function is the protection of the relevant element.

3. ENGINE

- 3.1. The only engines permitted are the Abarth engines as type 414-F4H. Once supplied, the engine and ancillaries supplied with it are considered as Type 1 parts and may not be modified in any way whatsoever except where specifically permitted by a Technical Bulletin as defined in Article 1.8.
- 3.2. Any revision, repair or change to the engine can only be carried out by Autotecnica.
- 3.3. The engine will be delivered with security seals in place and it is the responsibility of each competitor to ensure that these seals remain intact until the engine is returned to Autotecnica.
- 3.4. For safety reasons, at any time, it is not permitted to run the engine without anybody on-board while car's rear wheels are laying on the ground.

4. BODYWORK AND DIMENSIONS

- 4.1. The reference plane is the plane passing through the three contact pads of the scrutineering platform when the car is lying on these three contact pads through the three corresponding holes in its underneath skid block.
- 4.2. The front and central parts of the skid block fitted under the bodywork facing the ground must have at all time a thickness of 5mm +/- 1mm. In order to establish the conformity of the skid block after use, its thickness will only be measured in a single position around the periphery of each of the original skid block scrutineering holes.
- 4.3. The bodywork minimum and maximum heights have to be in accordance to the dimensions described in the MSG F4 Cup Set-Up Manual.
- 4.4. It is permitted to grind marginally Type 2 or Type 3 components to prevent chafing.
- 4.5. The side pod air ducts may be partially covered with adhesive tape on the stone guard or with tape or a flat plate on the forward face of the radiators for the sole purpose of optimising temperature.

5. WEIGHT

- 5.1. The weight of the car with the driver aboard wearing his complete racing apparel will be defined after the weight of all driver's has been checked. However, the minimum weight must be respected at all times during the Event.
- 5.2. Ballast can be used provided it is secured in such a way that tools are required for its removal. It must be possible to fix seals if deemed necessary by the scrutineers.

- 5.3. The adding to the car during the race of any liquid or other material whatsoever or the replacement during the race of any part with another that is materially heavier is forbidden.

6. GEARBOX - TRANSMISSION TO THE WHEELS

- 8.1 Only the gear ratios defined in the MSG F4 Cup Set-Up Manual must be used for the whole Event.
- 8.2 All cars must have a reverse gear operable any time during the Event by the driver when the engine is running.

7. COCKPIT

- 7.1. Permitted changes to the original specification :
- 7.1.5. Pedal position, pedal pads, master cylinder pushrod length and the relative working angles may be changed for driver comfort. The original pedal arms as supplied by the car manufacturer must not be modified.
- 7.1.6. The type and position of the driver's heel or foot rest are free.
- 7.1.7. Equipment for supplying the driver with drinks may be fitted within the cockpit.
- 7.1.8. The position of the rear view mirrors may be changed provided the original parts and fixing points to bodywork are used.

8. SAFETY EQUIPMENT AND DRIVER INSTALLATION

- 8.1. The safety equipment of the car has to be installed following the requirements of the KC-MG user manual without any modifications and must be complying with the relevant FIA Homologation and FIA Standard which is mentioned in the KC-MG user manual, at any time during the Event.
- 8.2. Fire extinguisher:
The driver must be able to trigger the extinguishing system manually when seated normally with his safety belts fastened and the steering wheel in place.
Furthermore, a means of triggering from the outside must be combined with the circuit breaker switch. It must be marked with a letter "E" in red inside a white circle of at least 50mm diameter with a red edge.
Extinguisher nozzles be installed in such a way that they are not directly pointed at the driver's face.
- 8.3. Master switch:
The driver, when seated normally with the safety belts fastened and the steering wheel in place, must be able to cut off the electrical circuits to the ignition, all fuel pumps and the rear light by means of a spark proof circuit breaker switch.
This switch must be located on the dashboard and must be clearly marked by a symbol showing a red spark in a white edged blue triangle.
There must also be two exterior horizontal handles which are capable of being operated from a distance by a hook. These handles must be situated at the base of the main roll over structure on both sides of the car and have the same function as the switch described above.

8.4. Rear view mirrors:

All cars must have two mirrors mounted so that the driver has visibility to the rear and both sides of the car.

The FIA technical delegate must be satisfied by a practical demonstration that the driver, when seated normally, can clearly define following vehicles.

For this purpose, the driver shall be required to identify any letter or number, 150mm high and 100mm wide, placed anywhere on boards behind the car, the positions of which are detailed below:

Height: From 400mm to 1000mm from the ground.

Width: 4000mm either side of the car centre line.

Position: 10m behind the rear wheel centre line.

8.5. Safety Belts:

It is mandatory to wear two shoulder straps, one abdominal strap and two straps between the legs. These straps must be securely fixed to the car and must comply with FIA standard 8853-2016.

The safety belts supplied with the car may be changed for another type.

The safety belt fixing system to the monocoque may not be changed or modified.

8.6. Seat, seat fixing and removal:

In order that an injured driver may be removed from the car in his seat following an accident, all cars must be fitted with a seat complying with the FIA Specification for Extractable Seats in Open Cockpit Cars.

The seat shell positioning system must not be modified.

Any seat made from foam must be covered with a non-flammable and non-combustible material.

Padding and minor modifications of the seat shell are allowed for driver's comfort providing all the functionality of the seat and its safety equipment is preserved.

An extraction test may be requested at any time by the scrutineers. The seat must be removable without the need to cut or remove any of the seat belt.

Once the buckle has been released it must be possible to extract the seat from the car without any further adjustment of the harness. The seat must be moved in a direction following the vertical axis of the car.

8.7. Driver position:

The driver's helmet and steering wheel must be arranged such that they lie below a line drawn between the front fixing axis of the secondary roll structure and a point 75mm vertically below the highest point of the principal roll structure.

In order to ensure that the driver's head is not unduly exposed and for him to maintain good lateral visibility he must, when seated normally and looking straight ahead with his head as far back as possible, have his eye visible when viewed from the side. The centre of gravity of his head must lie below the top of the survival cell at this position. When viewed from the side of the car, the centre of gravity of the driver's head will be deemed to be the intersection of a vertical line passing through the centre of his ear and a horizontal line passing through the centre of his eye.

8.8. Head and neck supports:

No head and neck support worn by the driver may be less than 25mm from any structural part of the car when he is seated in his normal driving position.

8.9. Cockpit padding:

All cars must be equipped with the headrest and the leg padding as supplied by the manufacturer.

The headrest must be located by two horizontal pegs behind the driver's head and two quick release fixings, which are clearly indicated and easily removable without tools, at the front corners. No tape or similar material may be used to cover the forward fixings of the headrest.

Behind the driver's helmet, only for driver comfort, an additional piece of padding no greater than 10mm thick may be attached to this headrest provided it is made from the same material.

On each side of the driver's helmet, only for driver comfort, an additional piece of padding no greater than 20mm thick may be attached to these headrests provided they are made from the same material which incorporates a low friction surface.

- 8.10. The driver, seated normally with his seat belts fastened and with the steering wheel removed must be able to raise both legs together so that his knees are past the plane of the steering wheel in the rearward direction. This action must not be obstructed by any part of the car.
- 8.11. From his normal seating position, with all seat belts fastened and whilst wearing his usual driving equipment the driver must be able to remove the steering wheel and get out of the car within 7 seconds and then replace the steering wheel in a total of 12 seconds. For this test, the position of the steered wheels will be determined by the scrutineers and after the steering wheel has been replaced steering control must be maintained.
- 8.12. Each rear light device with more than one LED not working has to be replaced before the beginning of the following session.

9. ON-BOARD TELEVISION CAMERAS

- 9.1. Each competitor must install and maintain in working order (image, data recording and logging) an incident camera. Details of the system, including installation instructions, will be made available from the FIA.

Nothing may obstruct the camera picture and it is the responsibility of the competitor to ensure the functionality of the camera system at all times.

The required memory card (Micro SD) will be supplied and installed by the FIA. The memory card slot will be sealed by the scrutineers before the start of the qualifying practice sessions and races.

It is the competitor's responsibility to ensure that the seal remains intact and that the card is not removed until the end of the parc fermé of the relevant session.

Competitors may break the seal on the card slot after the end of parc fermé of each session. It is the responsibility of the competitor to ensure that the card and the video data of each session are available at any time during the Event. The cards must be returned to the scrutineers at the end of each Event with the video data of all sessions on them.

Failure to comply with the above requirements will be reported to the stewards.

10. TIMING TRANSPONDERS

- 10.1. All cars must be fitted with a timing transponder supplied by the officially appointed timekeepers. This transponder must be fitted in strict accordance with the instructions of the timekeepers.