

Section 3 – TECHNICAL REGULATIONS

The responsibility for the eligibility of vehicles in the championship rests with the competitor. In the event of a dispute concerning the compliance of a vehicle with the regulations, the responsibility lies with the competitor to satisfy the organizer with regards to such compliance and not the organizer to prove non-compliance.

3.1 - Introduction

Drivers and cars must conform to the technical regulations throughout all qualifying and race sessions. Drivers and cars found not to be in conformity with technical regulations may be subject to penalties.

3.2 - Eligible Vehicles and Engines

- All cars (chassis') must be series production models imported into Kuwait with the following:
 - Normally aspirated engines with a maximum capacity of 2000cc
 - Forced induction engines with a maximum capacity of 1650cc

Cars must belong to a production series distinguishable by specific nomenclature, the same basic floor pan, external bodywork, and identical engine and transmission from the engine to the wheels (except that both manual and automatic gearboxes may be utilized). Bodywork variations concerning several doors, hatchbacks, or boots are permitted and will be considered to be of the same model range. Both left and right-hand drive vehicles are acceptable.

- Convertible cars equipped with an approved roll cage (Art. 253-8 FIA Appendix J) are accepted with a closed-face helmet.

The engine may be changed; the homologated engine design model cannot be changed. The engine must be from the A2 category (see appendix: Allowed engines).

- o up to 2000cc & supercharged up to 1650cc
- o Diesel up to 2000cc

3.3 - Scrutineering General

3.3.1 – All entered vehicles must be presented for visual examination and weighing in the nominated location at the time stated in the event timetable. Presentation is a statement of conformity.

3.3.2 – Competitors must report for scrutineering with their vehicles clean and complete in all respects. Vehicles that do not meet these criteria will not be accepted for inspection by the technical steward and may be subject to a late scrutineering fee.

3.3.3- Competitors must ensure that their cars comply with the conditions of eligibility and safety throughout practice and the race in accordance with the technical regulations.

3.3.4 - All participants must submit the homologation form for the roll cage to scrutineering, who will keep it throughout the entire event.

3.3.5 - Scrutineers have the right to:

A) Check the eligibility of a car or of a competitor at any time during the event.

b) Require a competitor to supply them with such parts or samples as they may deem necessary.

3.3.6 - No car may take part in the event until it has been passed by scrutineering.

3.3.7 - Helmets and Hans devices meeting requirements will be issued with an identification sticker. Once a car has passed the safety and technical requirements, it will be issued with an identification sticker. These stickers **MUST NOT** be removed or covered. Entrants will not be allowed to exit the pit lane onto the track without displaying these.

3.3.8 – If any vehicle, after being approved by the Scrutineers, is dismantled, modified, or involved in an accident or incident, the car must be re-presented for scrutineering.

3.3.9- All cars must be presented after Qualifying Practice and the Race for Weight and/or fuel checking. Failure to present the car will lead to sanctions from the stewards.

3.4 - Safety Requirements

The following safety requirements are **compulsory** and must be presented at Initial Scrutineering.

3.4.1 - DRIVER

- **Helmet:** Must meet FIA-approved standards for helmets. Drivers of convertible models running without hard top must wear an FIA Homologated full-face helmet.
- **Racing suit:** Must meet FIA-approved standard 8856-2000 for homologated racing suits & boots. FIA Technical list No. 27 (section 1).
- **Undergarments:** Must meet FIA-approved standards 8856-2000. FIA Technical list No. 27 (section 2).
- **Gloves:** Must meet FIA-approved standard 8856-2000. FIA Technical list No. 27 (section 3).
- **Hans Device:** Must meet FIA-approved standard 8858-2002. FIA Technical list No. 29 (Only to be used with Hans compatible seat).

3.4.2 - CAR: Good, clean general condition with no loose bodywork. Compulsory advertising, stickers, and number plates must be present and correctly placed, including the driver's name and blood type.

All competing cars must be professionally turned out.

- **Towing point:** Front and/or rear towing point or hook must be present to assist in the rapid removal of cars from the track in the event of an accident or breakdown.
- **Seat:** Must meet FIA-approved standard 8855-1999. FIA Technical list No. 12

- **Harness:** Must be correctly installed and meet FIA-approved standards 8853/98 and 8854/98. FIA Technical list No. 24
- **Roll cage:** Must meet FIA standards for roll cages. FIA Appendix J Article 253. (Bolt-on or welded FIA Homologated rolls cage can be accepted). If the roll cage does not meet this requirement and the certificate is not produced, then the car will not pass technical control and will be refused entry to the track.
- **Roll cage padding:** Must meet homologated standard 8857-2001 Type A. FIA Technical list No. 23. If the roll cage padding does not meet this requirement, then the car will not pass technical control and will be refused entry to the track.
- **Fire extinguisher:** Must be charged and secured in a place accessible to the driver when strapped in and to any officials. The minimum size is 1kg. If the plumbed system is being used, it must meet FIA standards for plumbed-in fire extinguisher systems. FIA Technical list No. 16
- **No oil leaks are permitted.**
- **No water leaks are permitted.**
- **The battery** must be secured. If it is located within the body compartment, it must also be within a sealed container to prevent the spillage of acid. Dry battery types must be electrically protected.
- **No loose items in the interior are permitted.**

3.5 - Additional Safety Requirements and Seals for Production Class

3.5.1 - OIL CATCH TANK: Catch tanks must be fitted in the engine compartment and must be of 2 liters capacity. The tank must be translucent or have a panel through which the level may be observed. Alternatively, the standard closed breather system must be in operation.

3.5.2 - DRAIN PLUG AND OIL FILTERS: Drain plugs must be wired, and oil filters must be clamped to prevent loosening.

3.5.3 - REAR VIEW MIRRORS: External units must be fitted, one on each side of the car, with a minimum area of 90 cm² per unit. An interior rear-view mirror must be in place.

3.5.4 - CIRCUIT BREAKER: A circuit breaker, capable of being operated from **both inside and outside** the vehicle, must be fitted to one of the main battery cables. **Its position must be clearly marked on the outside by a red spark on a white-edged blue triangle having a base of at least 120mm.**

3.5.5 - ADDITIONAL/ REPLACEMENT FASTENINGS: The bonnet and boot lid may be secured with extra fastening devices. If the bonnet or boot lid is replaced (non-standard), then extra fastening devices **MUST** be used. Any and all original bolts and fasteners may be replaced with upgraded components.

3.5.6 - AIRBAGS: All airbags must be disabled or removed.

3.5.7 - FLUID LINES/ CABLES: Fuel and oil lines, brake pipes, and cables may be protected against damage and internally against fire risk. It is recommended that all flexible pipes be replaced with Aeroquip-type hoses.

3.6 - Weight: Engine Capacity (Normally

Engine capacity	Minimum Weight
1801 to 2000cc	1150kg
1601 to 1800cc	1050kg
1401 to 1600cc	950kg
Engine (Forced Induction)	
Up to 1650cc	1270kg
Peugeot RCZ 1600cc	1270kg

3.6.1 - PERFORMANCE BALLAST

a) Ballast is allocated according to the results from the previous race and is updated per race.

b) For race two, ballast is allocated according to the finishing positions in race one.

c) The weight is allocated as follows o **1st: 48kg**

o **2nd: 36kg**

o **3rd: 24kg**

o **4th: 12kg**

d) The minimum weight will be the minimum weight + ballast amount

e) The full nominated ballast + ballast box must be carried even if the car exceeds the minimum weight.

f) It is the driver's responsibility to ensure that the ballast is securely fitted and that the car meets the minimum weight limit at all times.

The weight must be fitted in the championship-specified FIA-approved ballast box.

3.7 - Bodywork

3.7.1 - Exterior

○ General –

A maximum of 3 holes (maximum diameter of 12.5 mm) are permitted for the team in order to use supplementary measuring devices (radio, temperature, pressure, and similar). Other up to 4 similar holes are allowed for promoter use.

If a device is not used during a competition, the corresponding hole must be sealed off, and the exterior of the bodywork must retain its original appearance.

The only body parts that can be replaced and changed in shape are:

- Front bumper; Shape resembles the original without bolted license plate support(s), must be approved before production; no dive planes allowed.
- The front fender's lower edge behind the wheel may not be higher than the front door's bottom border. The shape must be approved prior to production (no louvers allowed)
- Side sills (these may be added if not present in the production car)
- Rear wheel arch extensions
- Rear door bulge compatible with the rear arch extensions
- Rear bumper; Shape resembles the original must be approved prior to production
- Wheel arch liners

○ Bonnet and boot lids –

- It must be possible to open them without the use of tools.
- The retaining springs (not the hinges) may be removed, but the car must have supports to hold the bonnet and the boot lid in the open position. (Certification)
- Openings in the engine bay bonnet are allowed up to a maximum total surface of 1050cm², including any original opening(s) but must be covered by wire netting with a maximum mesh surface of 500mm²(Certification).
- Trims on the openings can be added to the bonnet if they do not protrude from the outer surface more than 15mm outwards and 50mm inwards (Certification).
Cut-outs in the original production bonnet for the trims are allowed up to a total surface of a maximum of 2350cm², including any original cutouts.
- The production of internal reinforcements may be removed in the opening zone (Certification).

- **Door –**
 - The production door locks, door hinges, anti-intrusion bars, external door handles, and driver-side window lifters stay as original and in operation.
 - The other side window lifters may be removed, but the side windows must be locked in place and secured from all movement.
 - The removal of door soundproofing material and decorative strips is allowed.
 - Original inner trim panels must be replaced and be made from plastics (including composite materials) at least 1mm thick. The panels must totally cover the door, its handles, locks, and window winding mechanisms.
 - Air inlets for driver cooling in the area of the external mirrors are accepted (Certification).
- **Aerodynamic devices –**

Rear wing with wing profile, brackets, and side plates (Certification)
The original car's devices must be removed and must be replaced with one compulsory rear wing made up of the following:

 - One aluminum extruded wing profile (KMT Standard applies following season)
 - Material: aluminum or fiber-reinforced plastic
 - production drawings will be delivered for certification
 - the angle adjustment will use 1 (one) axis of rotation. (For cars certified after 2019)
 - scrutineering jigs will be delivered on request to the manufacturers.

It IS NOT the responsibility of the technical control staff to lift the car onto the scales; it is the responsibility of the TEAM ONLY.

Any damage to the car and its skirts that occur on curbs or upon entering the gravel trap is the driver's responsibility.

3.7.2 – Interior

- **Dashboard Trim:** Trims situated below the dashboard, and which are not parts of it may be removed. It is permitted to remove the part of the center console.
- **Instruments:** Display and indicators can be fixed on the dashboard or to the steering column accordant to the FIA WTCR Technical Passport. The installation shall not interfere with the driver's vision or safety.
- **Switches:**
 - Standard switches may be replaced by other control elements and may be fitted at different locations on the dashboard or on the center console. Any opening resulting from this must be covered.
 - Allowed switchable functionalities affecting engine ECU on the steering wheel or switch panel while the engine is running (allowed positions are on/off): Full Course Yellow, Pit Speed Limiter, Launch Control, GBX neutral, and reverse gear.
 - Allowed switchable functionalities affecting engine ECU on the steering wheel or switch panel while the engine is running (allowed positions are on/off): Full Course Yellow, Pit Speed Limiter, Launch Control, GBX neutral, and reverse gear.

- If switches (e.g., rotary, flip, button) for all other functionalities are placed within the driver's reach.
 - The parameters of the engine ECU functionalities may be changed between certified parameter sets or within allowed software variants only when the engine is not running, and it must be verifiable by checking engine ECU calibration and from logged scrutineering data, that switch actuation for these purposes does not take effect while the engine is running.
- **Pedal Box:**
 - Metallic pedals may replace plastic production parts. New master cylinders and a new arrangement in the engine bay may be used.
 - Commercial catalog pedal box (hanging or floor mounted) and master cylinders in the cockpit: Modifications are authorized, provided they have no other function than to allow the fixing of the master cylinders and/or the pedal box.
 - **Heating and Air condition systems:** the original heating and air condition systems may be removed, and Bulkhead openings must be closed respecting "firewall" conditions. (Certification)
 - **Windscreen:** the demisting windscreen system is mandatory; mass production Ac and heating system may be removed.
 -

3.8 – Engine

- The homologated engine design model cannot be changed.
- Homologated parts and castings for the crankcase, cylinder, cylinder head, and gearbox (bell) housing must be used.
- The original flexible material of the engine, gearbox, and differential housing mountings may be changed, but the number of mountings must remain the same, and the engine, gearbox, and differential must remain in the same relative (front/rear/mid) position relative to the body shell.
- The finish of engine components is free (Superfinishing, DLC, etc.)

3.9 - Turbo Engines

- All engine parts must remain standard – none of the modifications from 3.9.4.1 onwards are allowed.
- Turbo, wastegate, and intake manifold must remain as standard.
- Boost pressure must remain as standard.
- Airbox is free.

3.9.1 – TOP END:

- Bore can be up to 0.5mm diameter oversized.
- The method of valve retention must remain as the homologated model. No pneumatic valve retention devices are allowed unless fitted to the homologated model.
- The sequence in which the cylinders are ignited (i.e., 1-2-4-3) must remain as originally designed on the homologated model. Simultaneous firing of 2 cylinders is also forbidden if not adopted on the homologated engine.
- The cylinder Head must be the original casting but maybe machined or 'ported.'

- The ports may be filled with epoxy products.
- The gasket face may be machined.
- The valve guides may be machined or replaced.
- The compression ratio is free.
- The combustion chamber may be modified.
- Valves, springs, retainers, rockers, followers, and associated parts are free.
- Valve seats can be modified or replaced for repair. The material must remain homologated.
- Valve guides are free.
- Valves must remain in the homologated location and at the same angle as the homologated valves.
- The homologated cylinder head/cam cover may be replaced by a cosmetic replica of higher specific weight material (i.e., replace the magnesium part with aluminum).
- Camshaft and pulleys are free.
- The method of cam drive must remain homologated.

3.9.2 – BOTTOM END:

- Stroke *MUST* remain as original.
- Crankshaft, connecting rods, rod bolts, shell bearings, pistons, piston Rings, and Piston Pins are free.
- The top face of the cylinder may be machined to adjust deck height.
- Baffles may be fitted in the sump to prevent oil surges. The fitting of engine oil surge protection devices (consisting of a reservoir for oil that is charged when the engine oil pressure is high and discharged into the engine's oil system when the engine oil pressure is low) is also permitted. The sump may be increased in size and altered in shape. The sump drain plug must be wire-locked to a fixed point.

3.9.3 – TRANSMISSION:

- The transmission configuration must remain standard for the vehicle, e.g., front engine rear-wheel drive, front engine front-wheel drive, etc., and the engine and transmission must remain in the same position relative to each other as the manufacturer's original specification. Four-wheel drive and conversion of four-wheel drive to two-wheel drive is not permitted.
- Gearbox casing, bell housing, and drive shaft (if applicable) must be from the same manufacturer as the engine.
- In cases where a retrofit engine is fitted, the gearbox must be of the same manufacturer as the engine being raced.
- Gear ratios and final drive ratios are free.
- Sequential transmission and dog boxes (and any variants) are NOT allowed.
- Driveshafts are free.
- Hubs are free.
- Automatic transmission is permitted as long as it is standard production specification.
- Fitting of Limited Slip Differentials is allowed.
- Electronic control – see 3.9.5

3.9.4 – COOLING SYSTEM:

- Water cooling hoses, belts, flow restrictors, thermostats, and radiator caps are free. The standard water radiator may be replaced, but its position must be retained, and no alteration to the standard under bonnet sheet metal is permitted. Additional water radiators may be fitted in non-standard positions, but these may not be external to the bodywork, and all bodywork rules must be respected. The addition of ducting components to improve airflow through the radiator is permitted.
- Heaters and air conditioners may be removed in their entirety.
- Oil coolers may be fitted (for engine oil, gearbox oil, differential oil, or power steering fluid, subject to their installation being of a satisfactory standard. Devices that spray water or any other fluid or gas (as a cooling agent) onto the outer surface of any supplementary cooling device fitted to competing vehicles (including oil radiators, water radiators, and intercoolers) are not permitted.
- Heat shielding of the engine or manifold components is permissible from the engine block to the bulkhead. Shielding may be of manufacturer standard shielding plate or by heat shield wrap.

3.9.5 - OTHER:

- The power steering pump and ancillaries may be removed or changed, but the original mechanical steering mechanisms must be retained.
- Air filters are free of restriction (including position).

3.9.6 – INTAKE/INJECTION:

- Throttle bodies may be changed: i.e., For GT86/BRZ type engines, the number of throttle bodies is free.
 - ii. For all other engine types, only a single throttle body may be used.
- Manifolds are free, provided they fit directly to the original port faces of the cylinder head...
- Fuel injectors are free.
- Fuel pumps and regulators are free of restriction, including filters and fuel lines.
- Velocity Stacks / Air funnels are free.
- Variable intake tract devices cannot be added if they are not present on the homologated vehicle. They may be removed and replaced with fixed intake devices, but if retained, they must remain identical and operate in the same way as the original.
- The airbox is free.

3.9.7 - ELECTRONICS:

- Wiring looms are free.
- Sensor units are free.
- ECU (including ancillaries as ignition drivers/modules) are free (allowing replacement or OEM re-flashing)
- Data-Logging is free.
- Track-to-team telemetry is not allowed (onboard video streaming is allowed)
- Electronic torque biasing systems or electronic differential controls are prohibited.
- Traction control, launch control, and driver aids are allowed.
- Spark Plugs are free.
- Coils and HT leads are free.
- Any type of battery is allowed. Its position in the car is free from restriction, provided that if a wet lead acid type battery is retained and positioned in the driver/ passenger compartment, it is not only secure but must be contained in a sealed compartment. The dry battery must be electrically protected.

- Breakers – see 38.4.
- External lighting systems, including dip or high beam headlights, taillights, stop lights, and turn indicators, must remain functional.

3.9.8 – FUEL TANK:

- The fuel cell(s), the filling, and ventilation systems must be separated from the cockpit by a fireproof and liquid-proof protective device and must comply with FIA App. J, Art. 253. (Certification)
- The total fuel volume in the car is max. 100 liters. (Certification)
- The fuel tank must be contained in a close-fitting flameproof and liquid-proof lower (external) housing that has no other mechanical function, including a crushable structure on all surfaces except the one in contact with the body shell.
- The crushable structure must be a honeycomb sandwich construction based on a fire-resistant core with a minimum crushing strength of 18N/cm². The sandwich construction must include two skins of 1.5 mm thickness having a tensile strength of a minimum 225N/mm² and must have a minimum thickness of 10 mm.
- Located within the safety cage, forward of the center line of the rear wheels, no more than 65cm from the vertical plane through the longitudinal axis of the car.
- Floor pan cut above the original fuel cell compartment exclusive for the installation of the supplementary fuel cell volume in the cockpit is permitted. Structural panels cannot be cut or modified.
- The upper (internal) housing may be of mild steel or aluminum, both 1.5mm minimum nominal thickness bolted or welded to the body shell or be a crushable structure with similar properties as the lower housing.
- An add-on fuel cell (FT3 1999, FT3.5, or FT5) on the top of the main fuel cell and installed in a housing corresponding to this regulation may be used up to the total maximal fuel volume. (Certification)

3.9.9 – EXHAUST SYSTEM:

- Aftermarket manifold systems are permitted. The pipe is free from restriction if it follows a similar route to the standard system and exits at the rear of the car. Single outlets are, however, permitted in place of dual outlets, and vice versa.
- The position of the lambda sensor is free of restriction.
- Catalytic converters may be removed and replaced with suitable exhaust piping. Vehicles must always during an event be silenced to meet a maximum level of **125** DB (A) at $\frac{3}{4}$ maximum RPM, measured at 0,5 meters from the end of the exhaust pipe with the microphone at exhaust outlet level at an angle of 45 degrees. Where more than one exhaust outlet is present, the test will be repeated for both outlets, and a higher reading will be taken.
- The inclusion of temporary parts to achieve requirements is prohibited.

3.10 – Suspension

- Anti-roll bars (stabilizer bar/ Sway bar) and their attachment links are free.
- Strut tower braces are free.
- The material of the suspension mounting bushes is free of restriction, including the use of spherical bearings, provided they are fitted to the suspension components without any additional machining of the suspension components.
- Springs are free of restriction but must be made of steel. Bump rubbers are free of restriction.
- Shock absorbers are free of restriction, including their method of fixing, provided that the attachment points are not changed. The original spring seat may be removed. Coil-over shock absorbers, where not a standard fitment, may be fitted.

- Ride height is free.

3.11 - Braking System

The brakes may be retained or replaced/upgraded subject to the following:

- All calipers (front and rear) are free of restriction, excepting that they may have a maximum of 4 pistons and must be made of a metal alloy (no composite or metal matrix materials are permitted).
- Only one caliper is permitted per wheel.
- Permitted brake piston material is restricted to steel, stainless steel, or aluminum only.
- Brake discs/rotors may be replaced with no size restriction.
- Brake disc/rotors must be of ferrous metallic material (i.e., no carbon, aluminum, ceramic, or other 'exotics')
- Brake discs/rotors may be skimmed.
- Brake discs/rotors may be slotted/cross-drilled or vented.
- Brake bells are free, provided they are made from aluminum or ferrous metal. Attachments are free of restriction.
- No titanium components of any nature are allowed in the braking system.
- Brake pad material is free.
- Protector plates/dust covers may be removed or modified.
- Ducting is permitted to the front brakes to facilitate cooling. Only air may be used as a cooling medium.
- Servo brake assisters and braking force adjusters (pressure limiters) may be disconnected and removed.
- Hand brakes and their systems must be retained.
- A pressure line proportion valve may be fitted to the rear braking system only.
- The standard ABS system may be used, removed, or replaced. Substitute ABS systems may be used.

3.12 - Wheels

- Wheel rims are free of restriction within the following dimensions and must be manufactured from steel or aluminum only.
- The wheel diameter has a maximum of 18".
- Wheel studs may be used in place of bolts.
- Wheel nuts must be open-ended. Wheel spacers are permitted.
- Wheel's minimum weight: 11kg
- Wheel's material: Cast aluminum alloy.
- The upper part of the complete wheel (flange + rim + tire) in a straight-ahead position and above the wheel's center must be vertically covered by the bodywork.
- Pressure control valves on the wheels are forbidden.

3.13 - Tires

- Semi-slick tires only.
- There is no tire usage limit.
- If a control tire is agreed upon, then it will be announced in a supplementary publication at least six weeks before the first racing event of the season.

3.14 - Fuel

- Fuel will be specified in the supplementary publication at least six weeks before the first racing event of the season.

3.15 - Unspecified Modifications

The organizer reserves the right to authorize modifications not specified in these regulations in the interests of promoting close racing and the interests of the series. The driver's representative must be involved in the discussion before to any changes are made unless it is a safety issue.

3.16 - Oil Spillage

Any competitor who puts oil on the track through negligence will be liable for any expenses incurred by the organizer. The organizer may also impose additional penalties.