

TECHNICAL REGULATIONS SSV 2024

Baja Morocco by Carta Rallye



This regulation is written in terms of authorisations.
Therefore, any modification is prohibited if it is not authorised by these regulations.
Furthermore, any authorised modification cannot justify an unauthorised modification.

PREAMBLE

ARTICLE 1. ELIGIBLE VEHICLES

ARTICLE 2. GROUPS AND CLASSES

ARTICLE 3. AUTHORISED MODIFICATIONS Series Category

ARTICLE 4. AUTHORISED MODIFICATIONS Open Category

ARTICLE 5. GENERAL PRESCRIPTION

PREAMBLE

These regulations apply to all vehicles in the Baja Morocco by Carta Rallye.
To avoid any misinterpretation, unless explicitly authorised or made mandatory by these regulations, any modification is prohibited.

ARTICLE 1. ELIGIBLE VEHICLES

Eligible vehicles are of the SSV type with 2 or 4-wheel drive. Vehicles with naturally aspirated or turbocharged engines with a displacement less than or equal to 2050 cm³, a width less than or equal to 205 cm, and a length less than or equal to 350 cm.

Whether the vehicle is a production vehicle or a prototype.

The vehicle must still be identified and administratively compliant (serial number, registration, etc.). It is the responsibility of the competitor to present all necessary documents for the vehicle inspection. Vehicles in the SSV SERIES and OPEN categories must comply with the general prescriptions and safety equipment defined in these regulations.

ARTICLE 2. CATEGORIES AND CLASSES

Series Category

In general, a vehicle in the Series category will be a vehicle with an original chassis, engine, and drivetrain with minimal preparation required for safety. Only safety elements should be mounted or adapted. An FIA T4 or SSV passport does not guarantee participation in the Series group if the level of preparation exceeds these regulations.

SSV vehicles are series vehicles whose base model has been regularly produced and marketed in at least 500 units over 12 consecutive months, having undergone no other modifications than those listed in the technical regulations for this category or those necessary for the installation of certain safety elements.

Series group vehicles are defined as follows:

SSV vehicles with 2 or 4-wheel drive identical to the homologation. Naturally aspirated or

turbocharged engine. Displacement from 0 to 2050 cm³.

SSV vehicles with the preparation limit defined in the Series regulations.

Any option/variant/kit not available in the manufacturer's commercial catalog and/or modifying the engine type, intake, or fueling of the original vehicle is only accepted in the OPEN group. The organizer reserves the right to accept or reject any option/variant/kit in the Series group.

Replacement of parts: In case of part replacement during the event, any mechanical part of a vehicle in the Series category can only be replaced by a part identical to that of the base vehicle used.

If impossible, the competitor will automatically be reclassified to the OPEN category.

Open Category

In general, the Open category can accommodate any type of SSV, including prototypes or vehicles with a chassis specific to automotive racing. Thus, this group can accommodate T3/Challenger-type vehicles as well as T4/SSV-type vehicles whose preparation exceeds the specifications of the Series class or has a chassis not using the original manufacturer base. Additionally, any type of SSV without an FIA passport but meeting these regulations in terms of safety and preparation can also be accepted.

SSV vehicles in the OPEN category are prototypes built individually, possibly derived from a series model. SSV vehicles not admitted in the Series category or not having a homologation sheet will be admitted in the OPEN category subject to eligibility.

Open vehicles are defined as follows:

SSV prototypes with 2 or 4-wheel drive. Naturally aspirated or turbocharged engine. Displacement from 0 to 2050 cm³.

Series-derived SSV vehicles with 2 or 4-wheel drive. Naturally aspirated or turbocharged engine. Displacement from 0 to 2050 cm³.

Prototype or "CHALLENGER / SSV FIA" vehicles with 2 or 4-wheel drive. Naturally aspirated or turbocharged engine. Displacement from 0 to 1050 cm³.

Vehicles in the SSV SERIES and OPEN groups must comply with the general prescriptions and safety equipment defined in these regulations.

Series Category

ARTICLE 3. AUTHORISED MODIFICATIONS

3.1 Series

3.1.1 SSV VEHICLE FROM THE SERIES

3.1.1.a) Engine

The engine must be the original or identical to the original engine of the SSV vehicle as defined by the manufacturer's homologation sheet.

Block and cylinder head must be original; their preparation is prohibited. Mechanical parts complementing the engine block and cylinder head, as well as servitudes, must be identical to the manufacturer's homologation, except for the CDI box, manifolds and hoses, and the exhaust line.

The displacement cannot be modified.

Pulleys and belts for servitude drives are free.

The internal components of the CDI box can be modified but not the connectors, inputs (sensors, actuators, etc.), and outputs; the system must be fully interchangeable with the original box (i.e., the vehicle must start when replacing the box with the series box). Additional boxes and any modification of the harness are strictly prohibited.

The fuel pressure must remain that of the original vehicle.

The injection rail is free, but the injectors must remain standard. The turbo must be identical to the manufacturer's homologation.

No modification of the supercharging system is allowed.

The air filter and its location are free. Air intake lines are free up to the throttle body.

The exhaust silencer can be of a free model.

3.1.1.b) Lubrication

Radiator, oil-water exchanger, thermostat, oil sump, strainers as defined by the manufacturer's homologation sheet.

3.1.1.c) Water radiator and/or intercooler

The water radiator and/or intercooler must be as defined by the manufacturer's homologation sheet. The original water radiator and its fan(s) must be retained. The water radiator and/or intercooler must be located either:

at its original location, if applicable,

relocated within the vehicle as long as it is within the overall limits of the vehicle, only if this installation is justified by the mandatory safety elements. In any case, additional radiators and/or intercoolers cannot be added.

3.1.1.d) Suspension and anti-roll bar

The type of springs is free, provided the number of original springs is retained.

Shock absorbers can be modified, provided the original travel is retained. The number of shock absorbers and their mounting points must remain identical to the original.

The use of active suspension is allowed if homologated by the manufacturer (system allowing control of flexibility, damping, height, and/or attitude of the suspension when the vehicle is moving).

Any connection between shock absorbers is prohibited; the only authorised connections are the mounting points of the shock absorber passing through the chassis without any other function.

Only one anti-roll bar is allowed per axle.

3.1.1.e) Transmission

At least one forward gear and one mechanical reverse gear are mandatory.

CVT gearbox (variator): The variator and the entire system that composes it (weights and belt included) must remain strictly standard.

The belt itself must remain of the type and dimensions identical to those of the manufacturer, but the brand, model, and material are free.

Variator lines are free, but no fan can be added inside.

Mechanical gearbox: This must be listed on the homologation sheet of the concerned SSV vehicle.

The diameters of the drive shafts and axles must be those of the original vehicle. Drive shafts and axles must be made of steel.

An active differential mechanism is allowed only if listed on the homologation sheet of the concerned vehicle.

3.1.1.f) Chassis

Derived from SSV production, no modification or transformation is allowed, except exclusively for the implementation of safety elements. The original vehicle's wheelbase must be respected with a tolerance of +/- 1%.

Arms and trailing arms can be reinforced, but the general structure and shape must remain identical to the original.

The original wheels can be changed. However, the vehicle's overall width must remain identical to the

original.

The original vehicle track listed on the homologation sheet cannot be modified. The measurement will be taken under the conditions defined on the homologation sheet. The vehicle's maximum overall width is limited to 2050 mm, excluding mirrors.

Adding a flat bottom or protective shield for mechanical parts is allowed.

Two towing rings (one at the front, the other at the rear) must be fixed to the chassis, strong enough to allow the vehicle to be towed at any time during the race or vehicle recovery.

3.1.1.g) Braking system

Brake pads, discs, and calipers are free, but the braking surface must be identical to the original. The use of aviation-type hoses is allowed. An additional handbrake can be added, but its locking must be exclusively done with metallic parts.

Fuel tank and lines

For vehicles with a homologation sheet, the original tank and its lines can be retained, provided the original position and fixings are respected.

However, the installation of an FIA-approved tank is allowed, following the rules below.

In the case of using FT3, FT3.5, FT5 tanks, only FIA-type lines and fittings will be accepted.

In the cockpit area defined between the tubes of the main roll cage and half lateral/forward or lateral roll cage, to prevent any fuel projection in case of an element rupture, all lines and components of the fuel system must be covered by non-flammable casing(s) in addition to the fuel tank casing. Inspection hatches can be arranged to access these elements.

If FT3, FT3.5, FT5 tank(s) is/are used, the original tank must be removed or rendered inoperative. Only

for installing FIA screw connections, it is allowed to modify the original immersed fuel pump or replace it with an immersed or non-immersed fuel pump with the same characteristics as the original (flow and pressure).

The number of FT3, FT3.5, or FT5 tanks is limited to 2. When the original fuel tank is retained and located under the seats, if its original lower protection is plastic, it is recommended to replace it with a steel plate at least 3 mm thick or 5 mm thick aluminum plate fixed under the chassis to protect it from stone projections or impacts.

All oil tanks and fuel tanks must be located within the vehicle's main structure.

3.1.1.i) Mudflaps

Mudflaps are optional.

Seats

Bucket seats are mandatory for all vehicles. Seats with expired FIA dates are accepted if the structure is not deteriorated.

Seat supports must be rigidly and securely fixed to the chassis by welding or bolts with a minimum diameter of 8 mm.

Harnesses

Mandatory for all groups and all classes

Harnesses conforming to FIA standards, minimum 4 POINTS, 6 POINTS RECOMMENDED (expiration date tolerated if harness in good condition).

No retractable harnesses will be accepted.

It is forbidden to fix the seat belts to the seats or their supports. Anchor points will be installed on the

body or chassis, one for each strap.

For this, a plate/bracket with a minimum thickness of 3 mm in steel and a minimum length of 40 mm will be added by welding or screwing with bolts of at least 8 mm on the chassis. Each anchor point must withstand a load of 1470 daN or 720 daN for crotch straps. If the support fixation is made by bolts, the supports must be reinforced with 3 mm thick counterplates.

Avoid the straps from being worn by rubbing against sharp edges. Shoulder straps can also be fixed to the safety cage or a strut bar with a loop or rest or be fixed on a transversal reinforcement welded to the safety cage (main hoop preferably). If a screwing fixation is used for shoulder straps, an insert must be welded for each anchor point.

3.1.1.l) Nets

Nets are mandatory and must cover the entire length of the so-called "driver and passenger window" area located between the front roll cage and the main roll cage and extend in height from the bottom of the door or door cross to the top of the safety cage. The net must be fixed on the opening frame, with the top permanently attached and the bottom easily detachable from the inside and outside.

For this purpose, it is forbidden to drill the safety cage tubes or weld supports on them.

3.1.1.m) OPTIONAL WINDSHIELD

A laminated glass or 5 mm thick transparent polycarbonate windshield can be added. In both cases, an efficient windshield wiper and a washer system must be installed.

A wind deflector can also be added. This does not require the addition of a wiper.

3.1.1.n) MAIN SWITCH

The main switch is mandatory and must cut all electrical circuits (battery, alternator or dynamo, lights, horns, ignition, electrical servitudes, etc.) except the fog light and must also stop the engine. This switch must be an explosion-proof model and must be operable from inside and outside the vehicle.

3.1.1.o) SAFETY CAGE

A safety cage must be present on the vehicle, covering at least the entire habitable surface of the vehicle, including the passengers.

The recommendations of Article 283.8 of the FFSA regulations concerning safety cages are recommended.

However, any safety cage homologated by FFSA, FIA, or any ASN will be allowed, provided it has no structural deterioration that could cause a weakness in its resistance. This last point is valid throughout the race and especially in case of an accident. The race director or any member of the organization retains the right to refuse a start (at any time) if they believe passenger safety may be affected.

The minimum configuration if a safety cage is not homologated by an ASN must include:

A safety cage covering at least the entire habitable surface of the vehicle, including the passengers, and at least one windshield reinforcement of the "flying V" type (see image) securely fixed at 3 minimum support points and a support leg taken between the chassis and the highest point of the "modulauto" type hoop. These reinforcements can be bolted, welded, or fixed with clamps and will complement the original cage.

Door crosses and structural reinforcements are recommended. This minimum configuration can be authorised provided it has no structural deterioration that could cause a weakness in its resistance. This last point is valid throughout the race and especially in case of an accident. The race director and all members of the organization retain the right to refuse a start (at any time) if they believe passenger safety may be affected.

LIGHTING EQUIPMENT

It must fully comply with the international road traffic convention. Each vehicle must be equipped with at least:

2 headlights (low beam/high beam)

2 front position lights

2 rear position lights

2 stop lights

2 front and rear direction indicators

Hazard lights.

Two red LED-type "stop" lights (height or diameter minimum 50 mm / 36 diodes minimum) symmetrically placed relative to the vehicle's axis.

They must be located at least 1200 mm from the ground and / or +/- 100 mm from the highest point of the vehicle, vertically directed towards the rear and fixed externally. The quality of these lights' installation must ensure resistance adapted to race conditions.

Two red LED-type "fog" lights (height or diameter minimum 50 mm / 36 diodes minimum) paired or juxtaposed with the two additional "stop" lights. These lights, directly connected to the main switch, will operate continuously once the vehicle's contact is activated.

Additional headlights, including corresponding relays, are allowed.

SOUND WARNING DEVICE

Each vehicle must be equipped with a powerful working sound warning device throughout the event.

FIRE EXTINGUISHERS

Each vehicle must be equipped with at least one 2 kg manual fire extinguisher. These must be accessible to the driver and co-driver without needing to leave the vehicle. However, the extinguisher must be securely fixed to avoid any projection in case of impact.

WHEELS

The maximum diameter of complete wheels must correspond to the size homologated by the manufacturer.

The maximum width of complete wheels must correspond to the size homologated by the manufacturer.

The choice of tire type is free.

STEERING

The rack and pinion and steering rods are free.

BODYWORK

The bodywork must comply with the original, with aesthetic modifications tolerated if they come from a commercial kit. However, the general silhouette of the car must be immediately recognizable as part of the Series group.

Exterior: The vehicle must be equipped with a hard material bodywork. This must cover all mechanical elements vertically, except for shock absorbers, radiators, fans, and spare wheels, including anchor and fixing points.

All bodywork elements must be carefully and completely finished without provisional or makeshift parts and no sharp edges. All parts affecting aerodynamics and all bodywork parts must be rigidly fixed to the entirely suspended part of the vehicle (chassis/body assembly) with no degree of freedom, securely fastened, and immobile relative to this part when the vehicle moves.

Interior: The bodywork must be designed to provide comfort and safety to the driver and any co-drivers. No bodywork element can present sharp or pointed parts. No mechanical part should protrude inside the cabin.

All equipment that can pose a risk must be protected or isolated and not located in the cabin. Any element over 1 kg must be secured inside the cabin.

The cabin can be separated from the mechanical part.

Vehicles must have side openings allowing the driver and any co-drivers to exit. Their dimensions must allow an emergency exit of the crew in any car position (e.g., after a rollover).

The cabin must be designed so that an occupant can leave from their normal position in the car in 7 seconds through the door on their side and in 9 seconds through the door on the other side.

The original bodywork can be modified if the homologated safety cage interferes with it. These modifications must be strictly limited to the cage installation.

3.1.1.v) Battery

Its location is free. If installed in the cabin: The battery must be located under or behind the driver or co-driver seat. The battery must be "dry," "gel," or "sealed" type.

Battery fixing

Each battery must be securely fixed, and the positive terminal must be protected.

MANDATORY FOR ALL SSV VEHICLES

5.1 Door and roof

If the door crosses' installation leads to the removal of doors or in their absence, a panel of hard and opaque material fixed on the door crosses is mandatory. A roof can be present. If it is not fitted on the original vehicle, a panel of free hard material (fiber, aluminum, or steel) must cover the upper frame formed by the safety cage. Drilling the safety cage tubes for fixing this panel or welding mounting brackets on them is prohibited. The panel fixing can only be done with clamps.

5.2 Spare wheel

An identical spare wheel to those mounted on the vehicle is mandatory in the rally. At least one wheel must be present on the vehicle, securely and firmly fixed, as well as the minimum equipment for changing the wheel.

Driver/co-driver safety equipment

Wearing a helmet and "Hans system" as well as a pair of gloves and FIA fireproof suit is mandatory in timed sectors. No tolerance will be allowed. The race director reserves the right to exclude any competitor who does not comply with this rule.

Safety equipment

All mandatory safety equipment (first aid kit, water, strap, etc.) see "mandatory safety equipment list" in the general regulations must be permanently on board the vehicle. The

crew may be refused to start until they replenish their on-board set.

Transporting fuel cans by the crew is strictly prohibited.

Vehicle and crew identification

The identification of SSV vehicles will be done by affixing four numbers, one at the front of the vehicle, one at the rear, and the other two on each side of the vehicle. The identification number will be

the one assigned by the organizer as the race number. Drilling the front roll cage or welding the number support on it is prohibited. The recommended fixing is done with clamps. The crew's name must also be on the bodywork. It is the competitors' responsibility to affix the names on it.