

# IRCCF® S10 PERFORMANCE SCALE CLASS

VEHICLE RULES 2024 V24.0

Effective from Jan 1, 2024 until withdrawal

## 1. Preliminary Provisions

### 1.1. IRCCF®

- 1.1.1. The IRCCF® S10 Performance Scale Class Vehicle Rules are compiled and maintained by the International Radio Controlled Rock Crawler Competitors Federation, hereafter referred to as IRCCF® proudly based on the actual [WRCCA ruleset](#) with possible minor modifications as localisation.
- 1.1.2. The original WRCCA Performance Scale class rules are the intellectual property of [WRCCA](#), IRCCF® has compiled this ruleset with maximum respect for them.
- 1.1.3. Periodic rule changes - in special and justified cases - may be initiated by WRCCA or IRCCF® only.
- 1.1.4. IRCCF® may act at any time during the preparation of the competition events, during the competitions and after the competitions and change anything that IRCCF® believes is against the interest of the sport, including the interpretation of existing rules if it is discovered that a rule can be used or interpreted against the sporting spirit of the competition format.
- 1.1.5. Depending on the character and/or the urgency of the matter, IRCCF® will consider the sporting interest before anybody's financial interest, including the Licensee's interest.

## 2. General Specifications

- 2.1. Vehicles should represent a vehicle that has been modified to become a capable trail rated / competition based rig and is not necessarily street legal.
- 2.2. Body must look like an OEM body panel of a proclaimed vehicle and has to be continuous on all 4 sidelines of the vehicle.
- 2.3. All electrics, motor, transmission, chassis and suspension are to be covered by the body when viewed from above.
- 2.4. All vehicle specification measurements are to be taken in the vehicle's ready to run condition while sitting on a flat surface.
- 2.5. Protruding elements (nuts, bolts, washers, spacers, etc.) shall not be included in the measurements of the vehicle.
- 2.6. It is required to have a minimum of 3 suspension links between skid plate/chassis and the front axle and a minimum of 3 suspension links between skid plate/chassis and the rear axle. These links and the suspension components (For example: Shocks, sway bars, springs and rubber bands) can be the only connection points between chassis and the axles. Chassis mounted servo cars can have an additional drag link between servo horn and knuckle/tie rod.
- 2.7. Vehicles must run a minimum full body from the grille to the B-pillar. Grille area must have a measurable rectangular shape with a minimum height of 0.59"/15mm and a minimum length of 2.36"/60mm. This minimum area can include, or not, the headlights. Headlights are optional as long as the minimum grille area is accomplished. Wheel arches may be trimmed for clearance.
- 2.8. Cab-only configured rear chassis must have frame or bar work, bare chassis and shock hoops is not acceptable. Removal of the roof is allowed so long as roll cage/half interior is fitted.

- 2.9. The body (including tray, cage or any other bar work) must be (3"/76.42mm) longer than the wheelbase, and has to be made of any plastic, metal, carbon fibre or glass fibre materials. No other materials are allowed for the bodywork.
- 2.10. Minimum Body / Cage work height is 4.5"/114mm from A-Pillar to B-Pillar of the cabin.
- 2.11. Minimum body width is 5"/127mm for the full length of the passenger cabin. Passenger cabin is defined as from the furthest forward point of the front windscreen and the furthest rearward point of the rear window.
- 2.12. Sectioning or narrowing of the body is allowed from the A-Pillar forward and the B-Pillar backward but the body must still comply with all other body related rules.
- 2.13. The inner side wall/shoulder of front tires, measured at the axle centre, doesn't need to be covered by bodywork when viewed from above at rest but the body must still comply with all other body related rules.
- 2.14. A front bumper is required. It must be a minimum of 2.75"/70mm wide centred to the front chassis rails and must flow through a continuous line. Chassis mounted bumpers need to project forward at least 0.12"/3mm past the body. Body moulded front bumpers qualify and must not deflect inwards.
- 2.15. Clear bodies, "swiss cheese" bodies are not permitted. Consider realism.
- 2.16. No electrics other than steering servo are permitted to be mounted or fixed to axles or suspension links.

### **3. Tires & Wheels**

- 3.1. With a tire mounted, no exterior component of the wheel, including but not limited to the bead lock ring shall exceed 2.55"/64.77mm. Tires are limited to 4.8"/122mm maximum external diameter and a maximum width of 55mm from sidewall to sidewall. Tire size will be determined by advertised manufacturer specs. Tires without available specs will be measured off the truck as mounted on the wheel laid flat.
- 3.2. Only production tires are allowed that meet all tires and wheels related rules. Narrowing, siping, grooving, shaving and removal of the lugs from any kind of production tires are allowed as long as they meet all tires and wheels related rules. Internal tire modifications like trimming and sanding of tires are permitted. Adding material to a tire is not permitted.
- 3.3. Weighted knuckles/knuckle weights must fit within the bead circumference. Suspended knuckle weights similar in design to "rock magnets" are not permitted.
- 3.4. Carbon fibre wheels/rims must have offset or beadlock rings built into their design, flat face glue on wheels/rims not permitted. The material of these must be plastic or metal. Plastic or metal internal rings are required and tire inserts must not be visible from any angle.
- 3.5. Wheels/rims must be a minimum 0.8"/20mm wide at the outer bead ring surface.

### **4. Drive Train**

- 4.1. Vehicles are limited to front wheel steering only.
- 4.2. Vehicles must be shaft driven only and powered by a single motor. No "Motor On Axle" (MOA) of any kind. Axles must be driven by one transmission or transfer case and a minimum of two drive shafts. No separate throttle control of drive shafts or axles.
- 4.3. Over/under drive gearing is allowed.
- 4.4. No front or rear dig or axle disconnects are allowed.

## 5. Chassis

- 5.1. Chassis rails can be any configuration of C-Channel, tub, tube, rod, moulded plastic, or plate but being one-piece chassis rails is a must.
- 5.2. Chassis must extend covering all axle centrelines. Two piece sectional chassis are permitted, provided they are screwed, bolted or welded/brazed together to form a single chassis rail. Chassis length is to be constructed using a maximum of two pieces, a front section and a rear section, overlapping/joined for the full length of the skid. The front lower links must be at least 90mm in length eye to eye measured in a straight line.
- 5.3. Vehicle wheelbase is to fit the dimensions of the body used. In the instance a tray-back/truggy cage is fitted, the wheelbase will be approximately defined as between double the distance of the front axle to the A-pillar and double the distance of the front axle to the B-pillar.
- 5.4. Battery trays must be mounted to the chassis.
- 5.5. The section of the chassis that counts as the one continuous length must also have the skid plate attached to it directly.

## 6. Glossary of Terms

- 6.1. **Active Suspension:** A suspension that is interlinked (such as the 1:1 Scorpion, excluding the air bags used to raise and lower the vehicle) which by design moves part of the suspension in one direction when moved from another. This does not have any driver input to be legal.
- 6.2. **Body:** Formed as a single piece of seamless rigid material, integrating roof, door (sides), and hood sections.
- 6.3. **Grille:** A grille on a body is located in front of the engine hood/engine cover and is often found between the headlights. It should be in a vertical or semi-vertical position.
- 6.4. **Suspension link, control link or link:** A suspension member that is attached from only two points. One point being the chassis or skid plate of the vehicle and the other point is the axle. The link typically pivots on a rod end at each attachment point.
- 6.5. **Vehicle track width:** Measured from the outermost edge of a tire to the outermost edge of a tire.
- 6.6. **Wheelbase:** Measured from centre of axle nut to centre of axle nut. The vehicle should be set down on a flat surface by the driver. The front wheel on the side that is being checked, must be pointing straight forward. At that time, the driver will then cycle the suspension through its complete extension and compression range while the judge measures the vehicle's maximum wheelbase. At any point the vehicle's wheelbase cannot extend beyond the maximum limit of its class. All the above procedures must be duplicated on the opposite side. Note: All vehicles will be teched in the same ready to run condition, and set up as the vehicle will be run on the course. If the vehicle's wheelbase is affected by radio control it must be cycled or activated during tech inspection.

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