



Scale Off Road RC Association  
2017 Official Scale Rock Crawling Competition Rule  
(Changes in red)

This rulebook is intended to standardize scale off road RC competitions that are held at various locations throughout the world. The intention is for all clubs/events to use these rules as written; however, they may be modified on a local basis. Any and all changes made to these rules at a SORRCA sanctioned event must be covered in a preliminary drivers meeting and publicly posted before the event. These rules are written to outline the basis for building vehicles and running courses. Anyone attempting to circumvent the spirit of the rules, as determined by the Event Officials, will be subject to rejection from the event.

### General Vehicle Details:

- You are encouraged to go above and beyond to make your truck as scale as possible.
- Vehicles accessories must resemble 1:1. Event Officials have full discretion to determine if a vehicle is accepted and how scale points are scored.
- 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*).
- You must run a rail chassis in Class 1 & Class 2. Class 3 can run a tube chassis but it must follow all C3 chassis specs. (Rail Chassis example: Bruiser/Mountaineer, SCX-10, Reign RC K2-3S, 3L, 4, 5, MFM, Trail, CR-01, UTE, etc...). No TVP (twin vertical plate) chassis' or frame rail extensions on a TVPs. Tub chassis are allowed, but chassis must be covered by the body and follow all other scale rules per class guidelines. An example of a tub chassis vehicle is CC-01, DF01, Twin Hammers, etc.
- Multi axle vehicles allowed in all classes and may use more than one front steering axle (front axles are considered any axles forward of the centerline of the skid), rear steer only allowed in modified class, C3.
- Rear steering(RS) or dig is allowed in modified class only, C3 (you must choose 1 per course).
- No "Motor On Axle" (MOA) of any kind. All motors, transmissions, and other electronics (other than steering servos) must be chassis or frame mounted. Your axles must be driven by one transmission or transfer case and a minimum of two drive shafts (except CC-01, TA-02, etc) No separate throttle control of drive shafts or axles.
- There are no wheel size distinctions. For example, you can run a 1.55, 1.9, 2.0 or 2.2 rim in any class. Wheels larger than 2.2 are not allowed in any class and no short course style wheels with split diameters.
- **Wheels must resemble a 1:1 type wheel. Wheels with exposed foams or front side stand off construction are not legal in any class. Fibre Reinforced Plastic (Ex: Carbon Fiber), translucent and clear materials are not acceptable.**
- **No bolt on or stick on external axle or knuckle weights of any kind.**
- Any functional recovery tools you wish to use during your run, you must carry it on your rig at all times. IE tow strap, pull pal, and sand ladders.
- Winching can only be performed off of natural objects (*i.e. trees, rocks, etc...*), other vehicles, or stakes supplied by the course builder. Winching off of a person such as their shoe or hand is not allowed.
- All vehicles must have the motor, transmission, and electronics covered and hidden when viewed from the top and sides. Batteries must be chassis mounted and should be hidden from view.
- Courses will be tough and made to push the scale vehicle's limits. This is to encourage competitors to improve their rigs from one event to another.
- Winches are **HIGHLY** recommended!!!!!! Expect to use a winch.
- Water proofing is **HIGHLY** recommended!!!!!! Expect your rig to get wet.

## Tires:

Tires should be scale appearing, if it is questionable have it reviewed before the event, or plan to run a different tire. As new competition specific tires are released the ban list may be updated.

## Tire Modification:

- Class-1 Street: No external tire modification is allowed.
- Class-2 Trail: Tire lugs may be removed, siped, grooved and/or trimmed.
- Class-3 Modified: Tire modifications are permitted, as long as the tire is no larger than 5.75" in diameter measured off the vehicle laying on its side, and all tire parts are from a legal scale tire.

## Tire Ban List:

- Losi Claws and bashers (all sizes, and types)
- Hot Bodies Rovers and Sedonas (all sizes)
- HPI Rock Grabbers
- Panther Cougars and Leopards
- Pro-Line Chisels (all sizes)
- RC4WD X-Locks, Crazy Crawlers and Rocklin (all sizes)
- Imex Skulls and Bones

## Class 1 - Description:

- **AKA: Street.** A street legal off-road vehicle that you would drive to work or the trail head and outfit like an expedition vehicle such as the Camel Trophy truck D90 rigs.

## Class 1 - Details:

- **Vehicle must utilize a Chassis Mounted Steering (CMS) setup.**
- Vehicle must have a windshield that fills the entire windshield frame.
- Full width bumpers are required on the front and rear of the vehicle. Bumpers that are molded into the body qualify. A rear bumper is not required on a flatbed, but adding one to the flatbed will gain the additional scale points. (Bumpers are measured from the outsides and must be the width of your windshield).
- Wheels must be aligned within the body wheel wells (center of wheels to center of wheel wells +/- 1/2 inch total combined)
- The vehicles body must be mostly intact. Only mild trimming is allowed, such as **removing:** flairs, **trim, molding** & a hardtop. If the hardtop is removed, a full interior is required (no extreme trimming of bodies allowed \*See below.)
- **Bodies should be mounted in a realistic position in relation to the chassis (like a 1:1 would be).**
- **Any removal of material from behind the front wheel well (except trim/molding) is considered a boat side.**
- Boat sides are not allowed.
- Dovetailing is not allowed.
- Sectioning or narrowing of the body is not allowed.
- Bobbing a truck bed is allowed, but must follow all body specs.
- **Sliders must run parallel to the factory rocker bottom.**
- The tread of the tires cannot extend outside of the wheel wells more then 1/2 of the tread width, flairs can be added to reach min. spec.
- Vehicle must run a full length rail chassis (The rail chassis must be as long as the vehicles wheelbase)(Tamiya CC-01 chassis are allowed).
- **\*For 2018, you will be required to run a metal rail chassis AND parallel skid plate in class 1.**
- Truggies are not allowed, flatbeds with full length rail chassis are allowed. The bed must be as wide as the cab the entire length of the bed. Cab only not allowed.
- Tires can never extend beyond the body's bumpers or the rear of any truck bed. (Any stingers, fairleads, shackles, bolts, etc. are not considered part of a bumper when determining this.)
- 106mm / 4.19" Max tire size including spares.
- Gates will be a minimum of 11" wide (so mind your width).

### **Class 2 - Description:**

- **AKA: Trail.** A stock vehicle that has been modified to become a capable trail rated rig and is not necessarily street legal.

### **Class 2 - Details:**

- Body/cage work must be at least 4.5" tall (including boat sides) and the inside of the front tires cannot extend outside of the width of the cab at the doors.
- A front bumper is required and must be mounted to the vehicle's rail chassis and must be wider than the outside of the chassis rails (chassis cross rails do not count as bumpers).
- You must run a full rail chassis, and the chassis (including bumpers) must be 3" longer than the wheelbase (this includes a chassis with a truggy rear frame).
- Truggies are allowed, but you must replace the ladder frame behind the cab with tube, and the truggy rails must extend past the rear axle pumpkin to be legal. The bed must have a roll bar hoop and integrated shock mounts. It also must be a structural part of the rear of the vehicle. *(If your bed does not meet ALL of the preceding criteria, it does not count as a truggy bed).*
- Flatbeds that run the full length of the rail chassis are allowed. The bed must be as wide as the cab the entire length of the bed.
- 2 of the 3 following modifications are allowed:
- Dovetailing the rear *\*a truggy/tube bed that is narrower than the cab counts as a dovetail\** (1/2 the width of the widest part of the cab).
- Boat sides *(no more than 1.25" measured vertically from the bottom of the skid).*
- Pinching the front (2/3 the width of the widest part of the cab).
- 120mm / 4.75" max tire size with a 2.2 max rim size including spare.
- Gates will be a minimum of 12" wide (so mind your width).

### **Class 3 - Description:**

- **AKA: Modified:** An off-road vehicle that you would build from the ground up and might see in a TTC/KOH type competition.

### **Class 3 - Details:**

- 146mm / 5.75" max tire size with a 2.2 max rim size (including spare).
- A bumper is not required, but to be counted for points it must be mounted to the vehicle's chassis and wider than the chassis rails *(chassis cross rails do not count as bumpers).*
- Gates will be a minimum of 13" wide.
- Class 3 body minimum specs:
- Rock sliders, mirrors, etc. do not count in these measurements:
- The distance between the inside of the tires (of any axle) can be no greater than 1.25" more than the width of the body at the doors.
- *\*Example\* (7" inside-of-tire to inside-of-tire = body must be 5.75" wide)*
- The body must be at least 5" wide from the front to the rear of the doors.
- Tire height can be no more than 0.5" taller than cab height. Height is measured from the bottom of the skid to the top of the bodywork/tube not including a light bar.
- *\*Example\*(5.5" tire = 5" tall from bottom of skid to top of cab/tube work)*
- Body/Chassis must be at least as long as the wheelbase of the vehicle.
- Body modifications including, but not limited to, pinched front, dove-tailing and boat-siding are permitted as long as the final dimensions comply with the minimum size rules.

### **Scale Points:**

Scale points are to be awarded at 50% of a vehicles total value (*rounded down if necessary*) for an average 10 gate course.

Minimum/Maximum values are to be determined by the event organizers or local clubs.

Scale points will be applied to a DNF but not to a DNS.

*\*No items can be counted more than once unless noted otherwise\**

### **Bed: Not available to tubers.**

#### **Tube bed OR flatbed:**

Metal -3, plastic -1

#### **Bed mounted headache rack or roll bar:**

Metal -2, plastic -1

#### **Truggy/back halved truck:**

Metal -4, plastic -2

- Must replace the ladder frame behind the cab with tube, and must extend past the rear axle pumpkin to be legal.
- The bed must have a roll bar hoop and integrated shock mounts. It also must be a structural part of the rear of the vehicle.
- (If your bed does not meet ALL of the preceding criteria, it does not count as a truggy bed).
- Tube bed, roll bar, shock mount points not available in addition to truggy bed points.

### **Tuber:**

Metal -8, plastic -4

- A tuber consists of a complete body structure where the front, cab, and rear sections are comprised entirely of structural tube work.
- Tube bed, roll bar, internal cage, and shock mount points not available in addition to tuber points.

### **Interior cage or exo-cage:**

Metal -3, plastic -1 (Per row of seats or area where seats would be).

- Cage must have down bars and cross bars in front and behind each row.
- **Cage must be a rigid material of at least 1/8" diameter that is permanently brazed, welded, soldered or mechanically fastened together, to create a single unit.**
- **Cage must be affixed to a rigid floor board, fender well, slider, bumper or structural part of the chassis.**
- **A vehicle interior is required to receive cage points.**
- Not available to tubers.

## **Metal Accessories (Sliders, Bumpers, Shock Mounts):**

- Must be made from a rigid material.
- Tube must be 1/8" diameter or more.
- Flat plate may be any thickness with a minimum of 1/2". IE, it can be bent but 2 measured sides added together must equal at least 1/2".
- Smaller materials may be used but will not count towards points.

### **Sliders:**

Metal -3, plastic -1

- Must be on both sides
- Must be within 1/2" of each wheel well, or to the back of the cab on trucks.
- Must be mechanically fastened, welded or brazed to the chassis OR to a Hard Body.

### **Bumpers:**

Metal -3 each, plastic -1 each

- Must be chassis mounted and separate from the body
- Stinger/grill guard: -1

### **Fabricated 3D Shock Mounts:**

-1 (per pair)

- Metal AND brazed or welded to chassis

## **Body:**

### **Hard body:**

Full -12, cab -6

- Hardbodies can be injection molded or hand made from styrene or metal.
- They can also be 3D printed or vacuum formed but must have a finished thickness of .060 with these processes to receive hardbody points.

### **Drop bed :**

-3

- Must be a minimum of 1.25" deep from top of bed sides to top of entire floor. Wheel wells must be realistic size.

### **Custom built hard body:**

Full body -4, Cab -2 (in addition to hard body points)

- MUST meet this criteria: Must have 3-dimensional body panels that cover the chassis (not flat panels that bolt in between visible tube work).
- Must resemble a known 1:1 body.
- Must be hand formed and fabricated from metal or other rigid material.
- Inner fender wells: -1 per pair
- Rigid flat metal/plastic body panels -1

## **Exterior roof rack/light bar:** (may only choose one)

### **Roof rack:**

Metal -2, plastic -1

### **Roof top light bar:**

Metal -1

## **Interior:**

### **Full interior:**

Single seat -3, 2 seat (or bench) -4, 4 seat -5.

- A full interior must include these separate 3D pieces: seat, dash, steering wheel and complete floor. The interior must be deep enough for a scale figure from the knees up.  
\*An SUV cargo area gets an extra -1

### **Full Interior Driver/Passenger** (1 passenger maximum):

Complete Figure -4, Knees Up -3, Torso Up -2, Head with arms -1

- Figures must be human, scale sized adult figures. A complete figure must be a minimum of 5 1/2" tall, and all partial figures shall be of similar scale to a complete figure.
- Any interior that is vacuum formed to include driver figure(s) will receive interior cover points only.

### **Interior cover** (does not meet all the above specs for full interior):

1 seat -1, 2 seats -2, 4 seats -3.

- A driver gets an additional -1. No points for passengers.

## **Suspension, Drivetrain and Steering:**

### **Leaf Springs:**

-3 single axle / -7 both

- Must support vehicles weight, No external shock springs

### **Multiple axles:**

3 driven axles -3, 4 (or more) driven axles -5

### **Chassis mounted steering servo:**

-5 (front) -2 (rear) \*rear= Class 3 only\*

### **Functioning transfer case:**

-4.

### **3D engine:**

-4

- Must be in a reasonable location and appear to be powering the drivetrain of the vehicle

## **Realistic exterior items:** Max -6 pts

-1 Each

- Items that are non-functional but you would see on a trail truck.
- Examples: Fuel cell, exhaust, jerry can, hubs on all wheels, steering stabilizer, disc/drum brakes on all wheels, mirrors(2), wipers(2), antenna, license plate, first aid, extinguisher, trail tools, Hi-lift jack, etc.

**Functional items:** Max -8

-1 Each (\*unless otherwise noted)

- Functional Items found on a trail vehicle

- Tow strap, -D-ring, Pull Pal, sand ladder, hitch, opening doors and hood, spare tire mount, etc.

\*Headlights (2) and taillights (2): -2

\*Winch: -2 front, -2 rear (max -4)

**Full size spare tire:**

-3

- Must remain a functional item (mounted to a rim).

- Must still be within 1/4" width & height of the drive tires