1/24th Scale Auto Regulations as used in the Nordic Championships 2020

Basics for the races

The championships are organized in the second half of January in Sweden 2019, Finland 2020, Denmark 2021 and Norway 2022. The first loop had the same sequence starting in 2015.

The race director is running the event. To aid the race director on rule interpretations a race jury is elected at the race meeting. The race jury consists of one representative from each nation and the race director.

Unsportsmanlike conduct breaching the spirit of the rule set, the sport and competition is penalized by the race direction on its discretion by warnings, lap deductions or disqualifications.

The races are run on an 8 lane track of a minimum length of 40 meters providing 12,5 Volts loaded.

The endurance race is a single body event, while the sprint race is open to a list of Scaleauto bodies.

As liveries are free and may be presented at the venue, photos will be taken at start and published on the web along with results. By entering the events an entrant accepts that the organizer publishes results and photographs on the championships official website and in social media.

The most number of laps made over the duration of a race decides who wins the championship. This is decided by the lap counter.

Technical inspection will be open for 60 minutes and it is possible to have the car checked in parts during this time, however it is the test at the time it is left for parc fermé which is decisive.

Event organizers provide all actual scrutineering tools for the event at the start of official practice. These tools must include a scale measuring to at least 1/10th of a gram, specific calipers or gauges for measurement of the front and rear spur and specific calipers or gauges to measure the minimum front wheel diameter and width. Specific gauges to measure ride height before, during and after the race is also be provided at this time. These tools will be the only ones used by the scrutineer(s) during the event.

The procedure for handout of tires and motors shall be announced in the invitation at least 90 days prior to the event.

During lane changes, which are 2 minutes, no work on the cars is allowed - work on the car may only be done under green light. Lane changes are administered by the race direction.

Cars being serviced or repaired must be replaced on the track in the service zone marked out by race direction.

If the ground clearance, car widths or car weight is found to be in breach of the rules during the race, it must be rectified under green light. Inspections are made on the fly during the race. A car found too low, too wide or to light has to be repaired immediately and before making any race laps. A penalty of 5 laps for each and every infraction is given.

Parts falling off the car during racing must be replaced under green light (see rule 1.1.6 (f) for exceptions). Rear wings must be re-mounted properly in the event of mounts breaking or wings falling off. Cars have to be taken off the track to be repaired within 3 laps after they have been found faulty. If not done within the three laps a penalty of 2 laps will be given for each lap made past 3 laps.

The word "Track" can be used to call for power off by active drivers and turn marshals in the following situations: a/ the car becomes a rider, b/ a car under the bridge, c/ a car falling off in the straight in front of the drivers, d/ a car positioned in the in-fields. Additional zones may be decided by the race direction. Illegal track calls by drivers are penalized by a 2 lap deduction for each infraction.

Sprint race

The Nordic Open Sprint Championship is run as a sprint race with lap time qualification over 1 minute and finals over 40 minutes (8x5 minutes). The race is open to all entrants.

Entry fee is 10 Euro exclusive costs for handout parts (motor and tires). For those taking part in the endurance race the handout motors used are to be used in the endurance race and covered by that entry fee. A motor may be changed once if found faulty at a cost of 5 Euro.

The sprint race run with both practice and race on the Friday at the race weekend.

The practice is ticketed in 4 minute stints as 4 minute drive followed by 4 minutes marshalling. A new stint may not be booked on the board before marshalling duty is fulfilled.

Sprint race schedule (40 entries):

10.00 – 15.40	Ticketed practice
15.00 – 16.00	Technical inspection
16.00 – 16.10	Race meeting and election of race jury
16.10 – 17.30	Qualifying lap time 1 minute
17.30 – 21.00	Race 8x5 minutes / 1 minute lane change (5 groups)

Endurance race

The Nordic Endurance Championship event is run as an endurance race over 6 hours (8x45 minutes). Denmark, Finland, Norway and Sweden are represented by two teams each. It is at the discretion of each nation to select their teams. All teams must be presented and fees paid by January 10 in the year of the event.

A team consists of 3 or 4 members. Each member in a team of 3 must drive a minimum of 110 minutes and in a team of 4 a minimum of 85 minutes. A team stint schedule shall be presented to the race direction before start. The schedule will be announced at the race direction during the race. Changes to the schedule are accepted. A team that do not observe the minimum driving times will be disqualified.

The starting fee per team is 250 Euro including 3 pairs of handout wheels trued and branded, 1 handout motor per driver in the team. A three person team is allowed a fourth motor on racing day. Included in the fee is also breakfast, lunch and dinner on the racing day.

Practice is run as a lane per team in pre-defined stints.

Each team has to provide a turn marshal at all times in the race and in practice. A missed marshalling duty leads to a deduction of 10 laps in the race for each infraction.

Endurance race schedule (8 teams)

Friday

21.30-22.30	Practice as 1 round of 8x6 minutes

Saturday

07.30	Venue open
08.00-10.00	Practice as 1 round of 8x12 minutes
10.15-10.45	Technical inspection
11.00	Race meeting, election of race jury and lane draw
11.30	Lunch
12.15	Start
19.30	Price ceremony and race dinner

Technical rules

1.1.0. GENERAL DESCRIPTION

(a) The only car permitted to enter the endurance race is Scaleauto Dodge SRT Viper and in the sprint race also Scaleauto Porsche 991 GT3 RSR, Porsche 997 GT3, BMW Z4 GT3, Mercedes SLS AMG and Audi R8 LMS are accepted.

(b) It is the responsibility of the racer to ensure that the purchased Scale Auto cars are accurate, complete and without missing parts. (Including small plastic and photo edged parts.)

(c) An original example of the homologated Scale Auto car as described by Art.1.1.0 (a) will be at Technical Control as reference for the Technical Director and Scrutineers. In the case of all disputes, the judgement of the Technical Director (or race jury) will be final and binding.

(d) All of the chassis and body parts that come with the Scale Auto car as described in Art. 1.1.0. (a) must be used. See Rules-Pictures for additional clarification.

If a part is shown in these pictures it must be on the car according to the manufacturer's intended mounting and location. The only exceptions are as follows: Art. 1.1.3. (b).

1.1.1. MODIFICATIONS

(a) It is not permitted to modify the RTR car or white kit in any way other than those parts of free make as described by Art. 1.1.1 (b)

(b) Parts of free make are restricted to: (i) nuts, bolts, spacers and washers, (ii) the guide and guide nut, (iii) braid, braid clips & lead wires, (iv) axles, (v) axle bearings, (vi) ballast lead weights, (vii) 3-dimensional wheel inserts, (viii) M50 spur gear, (ix) M50 pinion gear.
The different sized body suspension supports SC8126a-e are considered spacers.

(c) Scale Auto tuning parts including the carbon spring plates and rear suspension etc. are NOT permitted.

(d) Scale Auto supplies different height axle holders to allow for different riding heights, thus SC-8147a-d are all legal. It is allowed to use spacing material under the axle holders as to provide correct riding height. The adjustable rear axle holder from Scale Auto with part no SC-8121 is allowed. The carbon H-plates SC-8157C and SC-8158C are both accepted, so are the SC-8153C and SC- 8154C carbon front axle carrier.

1.1.2. WEIGHT, DIMENSIONS & GROUND CLEARANCE

(a) The minimum weight for a complete Scale Auto car is 190.0 g at any technical inspection during an event.

(b) The minimum weight for the body with the body mounts and fixing screws attached is 55.0 g at technical inspection.
(c) The ground clearance will be measured with the guide out of play so that all four wheels sit flat on the tech block.
(d) The ground clearance under at the start of a race is minimum 1.2 mm.
(e) The ground clearance during or at the end of a race is never less than 0.8 mm.
(f) The ground clearance of the body at technical inspection and start of the race is 2,0 mm.
(g) The ground clearance of the body during the race is never less than 1,6 mm.
(h) Additional weighting of the body can only be applied to the vertical surfaces of the plastic reinforcing strips within the boundaries as shown in the picture below.

(i) The distance from the top of the H plate to the bottom of the chassis plate may never be more than 4.0 mm.
(j) Additional weighting of the chassis may only be on top of the chassis, NOT visible when viewed from below.
(k) The measure on the body width at the widest point (in front of the rear wheel arc) is maximum 88 mm mounted on the car.

1.1.3. CHASSIS

Only the SC-8003 GT3 chassis is permitted.
(a) The chassis must be assembled with screws and/or nuts and bolts using the original mounting holes.
(b) The chassis must be assembled in the exact manner and orientation of the production RTR car.
(c) The chassis' metal plate may be lightly sanded to remove burrs and sharp edges. Further it is allowed to remove burrs and sharp edges on the axle holders and on the carbon parts by light sanding.
(d) The original mounting holes can be re-countersunk to properly seat the screws flash to the bottom of the plate.
(e) The original MSC/Scale Auto logo on the bottom face of the main chassis plate must remain visible to the Technical Control.

(f) The original chassis plates, parts and metal body holders cannot be repainted or refinished in any way.
(g) The length of the guide blade cannot exceed 27,0 mm and this guide blade is the only part of the chassis that may enter the track's slot.
(h) No part of the chassis may be visible when viewing the car from above. See 1.1.6 e/ for clarification on tinted windows.
(i) Any form of magnets, except for those in the motor, are not permitted.

1.1.4. MOTOR, GEAR AND PINION

(a) The handout motor used is a NSR King Evo 25000 rpm (NSR part no. 3026)

(b) Soldering may only be used to attach the lead wires to the motor terminals.
(c) Motor coolers or heat dissipating products of any kind are not permitted.
(d) Only M50 pitch pinion and M50 spur gears are permitted.
(e) The gear ratio is fixed at 12:44.

1.1.5. AXLES, BEARINGS & WHEELS

(a) Only solid steel 3 mm diameter axles, front and rear, are permitted. No independent front axle configurations of any kind are permitted.
(b) Ball bearings for 3 mm axles are permitted.
(c) Front wheels must be either the standard hard rubber wheels with rims as supplied with the RTR cars or have a minimum diameter of 25.5 mm when using the RTR Scale Auto racing wheels. The Scale Auto parts SC-2715P or SC-2709P may be used to achieve the 25.5 mm minimum diameter.

(d) Each front wheel must make a minimum of 7.5 mm contact with the tech block with the guide out of play. Front tires may be hardened and polished.
(e) Rear wheels are RTR Scale Auto SC-2421P ProComp 3 wheels with 27,5 mm OD, 13.0 mm wide. Only the Scale Auto wheels are allowed and may not be substituted with other brands. At events handout wheels and tires are supplied, the handout wheels and tire diameters may not be changed and must be used as supplied.

(f) Rear tires may not under any circumstances be treated with any kind of tire dressing, or compound or traction product.
(g) Removing dirt, dust and loose rubber particles from the tires may only be performed with a tape roll or Shellite provided by the Race Direction.
(h) All four wheels must be fitted with three-dimensional wheel inserts (with or without brake discs and calipers) correct to the car. (No photo edged or vinyl cut reproductions are allowed.)
(i) The wheels including inserts may not protrude outside of the body when viewed from above.
(j) No car can have a front spur greater than 80 mm or rear spur greater than 83 mm, measured at the widest point of the front and rear axles. (This includes any protruding wheel inserts that may be fitted).

1.1.6. BODY & INTERIOR

(a) All bodies and interiors must be painted. (Interiors with at least three different colors and bodies with at least a coat of clear paint covering the complete outside of the body shell).
(b) Fantasy liveries in the spirit of 1:1 motor sport are permitted.
(c) Three number shields (water slide or self-sticking) typical of 1:1 motor sport are required.
(d) Only the stock rear wing uprights may be replaced or reinforced with rubber parts of equal or like shape.
(e) All the cars are permitted to use the full Scale Auto Lexan window and interior kits. The roll cage from the original hard plastic interior must be refitted to the lexan interior. The interior must be full size and completely cover the view from above through the car windows. Tinted windows shall be regarded as clear and see through.
(f) Mirrors, wipers, light lenses, towing hooks, exhaust end pipes, the small aerodynamic winglets in the front are very fragile. Cars will be allowed to continue the race without them when it is obvious that they have broken off during racing and after technical inspection.
(g) No modifications of the body are permitted other than those described by Art. 1.1.6 (a-e)

1.1.7. ADDITIONAL NOTES & CLARIFICATION TO RACERS.

Please read on the website (nm.embrey.se) for updates and rule interpretations. These will be introduced in the rulebook for the year after.

This rule set is compiled by Lars Harrysson (nm@embrey.se) and Rolf Andersen in 2014. Latest revision is done by Lars Harrysson, Claus Henriksen, Kimmo Rautamaa and Rolf Andersen in September 2019.