

GRUPPO 2 WORLD CHAMPIONSHIP

30/11
01/12
2019




SLOT CARS ARENA
Italy - Badia Polesine (Rovigo)



Type of **RACE**

GRUPPO 2 **WORLD CHAMPIONSHIP**

Endurance Slot Cars Championship with teams of 3 drivers. 4 races of 2 hours each.

A score will be awarded at each race. The team with most points at the end of the 4 races wins the title.

The race area will consist in four 6-lanes tracks: 2 wooden tracks **BRM** and 2 plastic **PRO-TRACK Scaleauto**.

The championship will take place in 2 days: 2 races on Saturday, one on wooden track and one on plastic track, and 2 races on Sunday on the remaining tracks.

In each race a different **BRM** model must be used to choose from:

NSU TT



RENAULT R8 GORDINI



ABARTH 1000TCR



SIMCA 1000 (BRM)



Mini Cooper



Opel Kadett GTE



A maximum of 28 teams will be admitted to the Championship.

If the minimum number of 20 teams is not reached, 3 tracks will be used, 2 wooden and 1 plastic, with only 3 BRM models.

1. Race direction – Judges – Technical Commission

- 1.1 Race direction: responsible for everything.
- 1.2 Race judges: the only ones who could take the cars.
- 1.3 Technical commissioners: insiders for technical inspections.

2. Behavior

- 2.1 All competitors are invited for maximum sportiness for the entire duration of the event, even outside the venue where the race takes place.
- 2.2 Smoking is forbidden inside the Arena.
- 2.3 Unsportsmanlike conduct will be sanctioned.

3. Type and duration of the races.

- 3.1 28 teams maximum will be admitted..
- 3.2 During the weekend it will take place a real Group 2 Championship with 4 races, 2 Saturday and 2 Sunday.
- 3.3 Each race will last 2 hours.

- 3.4 Each team must have a different car at the start of each race (ex. "Team XXX" race 1 with Mini Cooper, race 2 with Abarth 1000 TCR, race 3 with NSU TT e race 4 with Renault R8 Gordini).
- 3.5 The ranking of each race will be based on the sum of the laps completed in the heats. In case of equal number of laps, the first one will complete the last whole lap.
- 3.6 The score of each race will be assigned in the following way:
1° 100; 2° 95; 3° 90; 4° 85; 5° 81; 6° 77; 7° 73; 8° 69; 9° 66;
10° 63; 11° 60; 12° 57; 13° 55; 14° 53; 15° 51; 16° 49; 17° 48; 18° 47; 9° 46; 20° 45; ecc to always scale by one point.
- 3.7 The final classification will be drawn up by adding together the points obtained in each race.
(ex. Race 1 pt 100 + Race 2 pt 85 + Race 3 pt 55 = Total points 240).
The same score will be classified in advance (best result -> maximum total laps -> maximum lap 1 track -> best fastest lap).

SPORTS

Rules

4. Teams – Driving shifts – Change Drivers

- 4.1 The teams must have 3 drivers.
- 4.2 Each driver has to race for each race a number of heats between 2 and 3.
- 4.3 Each race will consist in 12 manches of 10 minutes + 2 min. lane changing (double turn same track).
- 4.4 On the driving platforms must stand only one driver for each team and nobody else could go there for any reason.
- 4.5 The driver changing must be done at the end of the manche during the lane changing. The driver who finish his shift comes down from the driving station and only when it's free the driver who start the following shift can go there.
- 4.6 Infringements during the lane changing will be penalized with 10 laps.
- 4.7 The controller could be leaved plugged.
- 4.8 The numbers of shifts of each driver will be checked by cameras.

5. Marshall

- 5.1 The Marshall must be part of the team.
- 5.2 During the free practice, at the driving station must be only one driver per team with his marshall on the same track and same position of the number of lane of the driver. Both of them must have their identification badge with race number. During the free practice each team will take care of moving the cars during the lane changing.

- 5.3 During the free practice the Marshall must be at the assigned station; there will not be any type of advise.
- 5.4 The Marshall must be at his station 1 minute before the starting of the heat.
- 5.5 The absence of the Marshall will be penalized by Race Direction with 10 laps.
- 5.6 The Marshall can't do any type of work on the cars. Except for the braids fixing to explicit request by the driver in case the car will not run.

6. Maintenance and repair

- 6.1 For maintenance and/or repairing operations the mechanic of the team will make a first request to a race judge and then it will bring back the car on track on the pit-lane.
- 6.2 If the car will stop on the track, the marshalls will give to the box-table and after the repair the car will go back on track on the pit-lane.
- 6.3 In the box area it will be allowed only one mechanic to work on the car. It could be a member of another team.
- 6.4 Avio, lubricants and rags will be supplied by organisers.
- 6.5 Any necessary spare parts during the race must be checked before being assembled except from the motor and tires that will supplied by the race commissioner.
- 6.6 Gli interventi sulla vettura vengono effettuati solo a gara effettivamente in corso, con corrente in pista (NO durante i cambi corsia o durante eventuali pause nel corso di una manche).

7. Technical inspections

- 7.1 Cars must be presented to Closed Park with the verification cards (one per model). They must have the body separated from the chassis with rubber covers and screws assembled. The body must have the identification stickers and forms with race number supplied by the organization (a number for each side and a sticker for the windscreen with Team name).
The chassis must be without the motor.
The rear wheels must be without the tires.
- 7.2 The technical inspections will take place simultaneously by all the teams on prepared tables. Each team will verify another team. The pairing of the technical inspections will be drawn.
- 7.3 The points to be verify will be specified on the technical form supplied by the organization (one per model).
- 7.4 Three supervisors choosen by race direction will be the Technical Commission; they facilitate the verification procedures. In case of doubt on the regularity of a car it's mandatory to consult them. In case of dispute only the supervisors could decide the regularity or not of the car.
- 7.5 The team must show on the technical form of each model the number of track choosen for them. (track 1 - 2 - 3 - 4).
- 7.6 The verified and ready models will be taken by the race commissioners with all the technical forms. At that time i twill be not allowed

anymore to touch the car or change the track choosen for each car.

- 7.7 The models, even if they have already passed the technical inspections , at any time they could be verified by one race commissioner (car on race or on park closed).
- 7.8 From the beginning of the race and until 15 minutes after the end, the Technical Commission could verify a car after written request by a team (complaint). The verification will take place during the lane changing and not during the race time.
In the event the car that have been verified will result regular the complaining team will be penalized by 10 laps and his car will be verified.

8. Penalties

- 8.1 The penalties, decided by the Race Direction, will be proportionate to the gravity of the infringemnets of the rules.
- 8.2 Failure with the guide table, using magnets, using prohibited liquids and products, repair done outside the "box table" will be penalized with the DISQUALIFICATION of the team.
- 8.3 Smoking inside the Arena will be penalised with 5 laps.
- 8.4 Infringements during the lane changing or during Marshall shift will be penalized with 10 laps.

SPORTS

Rules

9. Free Practice

- 9.1 The free practice will be one shift on each 24 lanes.
- 9.2 There will be heats of 6 minutes including lane changing where each time must occupy only one lane.
- 9.3 After the lane changing the team will go to the following lane.

10. Communications

- 10.1 The Race direction communications will be made known by microphone.
- 10.2 The captain of the teams will be responsible for the communication.

11. Qualifying

- 11.1 The starting grid will be set up by qualifying.
- 11.2 There will be involved 3 drivers for each team and 3 cars. The 3 drivers will drive the qualifying laps simultaneously on the same track in lane 1 -3 - 5, each driver with a different car.

Example:

- A driver on lane 1 with the Mini Cooper
- A driver in lane 3 with the Abarth 1000.
- A driver in lane 5 with the NSU TT.

- 11.3 The qualifying time is 1 minute. The sum of the laps + sectors will determine the starting grid.
- 11.4 The sequence of qualifying will be based on the race number starting from the highest one.
- 11.5 Between each shift of qualifying there will be 60 seconds. After this time the direction will give the start to the next qualifying; if the driver is not a station the team will get the a number of laps as the worst team.
- 11.6 The team who will get the best result will choose the starting track and lane. Il Team che avrà ottenuto il miglior risultato avrà diritto di scelta pista e corsia di partenzaThe others will be consecutively on the same track.
- 11.7 To the teams qualified on the next positions will be assigned the lanes the next track starting from lane 1.
- 11.8 For the following races the starting grid will be the same of the first race.
- 11.9 In case not all the lanes will be raced (ex. 5 of 6) the free lane could be cleaned by the team with the last time on the track (5th time on each track). The driver who clean the lane could not be the same who will race on that lane. In the last heat he will clean the lane who will go on the following track.

Introduction

This regulation specifies in detail the features and components that the cars must respect.

Changes not specified in the rules are prohibited.

On some models we clarify the allowed changes.

During the technical inspections and the races, the only allowed lubricants will be supplied by the organization.

Even if there will be supplied some soldering/welders the organization will not be responsible for their malfunction.

Each team should have his own during verification and race.

Supply of motors and tires

The organization will drawn an original motor **BRM-blue** 19.000rpm - **BRM s-417** with assembled a Nylon Pinion 12T **BRM s-420** diameter 6,8mm for each model.

4 pairs of rear tires: **BRM s-404** (NSU TT - Renault R8 Gordini - Simca 1000 - Mini Cooper), **BRM s-404fl** (Abarth 1000 TCR), **BRM s-404k** (Opel Kadett GTE).

The tires and motor assembling will be in "Park closed".

The motors will be selected by the organization checking rpm and energy to be most equal as possible.



TECHNICAL

Rules

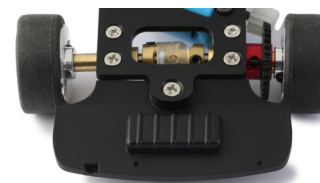
1. Maximum track

- 1.1 The rims can't be out from the wheel arches (view from the top).



2. Chassis

- 2.1 Each model must have his own specific chassis (internal/external) .
- 2.2 The 2 chassis must be fixed using the brass BRM nuts original **s-415** (h 1.5 mm) or **s-415a** (1.0 mm no movement), **s-415b** (h 2.0 mm), **s-415c** (h 2.5 mm) o **s-415d** (h 3.0 mm).
- 2.3 The rear plastic part of the chassis must be assembled (except Mini Cooper).



3. Motor holder

- 3.1 The only allowed motor holder is the original **BRM s-413** + photoetch.

s-413



4. Brass joint – Axle holders

- 4.1 Brass joint original **BRM s-414** (excluding **Opel Kadett GTE**).

s-414



- 4.2 Rear brass axle holders **BRM s-412** (large), **s-412f** (narrow) or new aluminum axle holder double bearings **s-412s**.

Rear axle holders original aluminum **Opel Kadett GTE** (no camber) **s-412k**.



s-412f



s-412s



s-412k

- 4.3 Original front aluminum holders **BRM s-411** or **s-411m** (**Mini Cooper** - independent wheels).

Opel Kadett GTE original front axle holders **BRM s-411k** (camber).



s-411



s-411m



s-411k

- 4.4 It's allowed to use the front independent axle holders **s-411m** on all the models (excluding **Opel Kadett GTE**).

5. Axles – Bearings - Spacers

- 5.1 Front original axle **BRM** 56mm on all the models except:
Mini Cooper: semi-axle **BRM s-416m**.
Opel Kadett GTE: semi-axle **BRM s-416k**.
- 5.2 Rear axles 2 x 23mm **BRM s-416** (it includes the front 56mm) on all the models except:
Opel Kadett GTE: axle 58mm **BRM s-416kr**.
- 5.3 To use the front independent axle holders **BRM s-411m**, use semi-axles **BRM s-416m**.
- 5.4 Brass original bearings **BRM s-409**
- 5.5 Ball bearings allowed on all the holders **BRM s-410**
- 5.6 Free spacers for 3mm axle.



6. Spur gear

6.1 Original spur gear 33T **BRM s-419** or new Ergal **BRM s-419a**.



7. Pick-up

7.1 Pick-up original **BRM s-026ss**.



7.2 Allowed Pick-up REVOSLOT rs210 - rs210w.



7.3 It's allowed remove the spring and reduce the height of the blade.



TECHNICAL

Rules

MODEL	FRONT WHEELS	REAR WHEELS	Ø
Mini Cooper	s-402m	s-402m	16,8 mm
Simca 1000	s-402	s-402	17,0 mm
NSU TT	s-402	s-402	17,0 mm
Abarth 1000 TCR	s-402f	s-402fr	15,5 mm
Renault Gordini r8	s-402	s-402	17,0 mm
Opel Kadett GTE	s-402kf	s-402kr	16,7 ant. - 17,3 post.

8. Wheels - Inserts

- 8.1 It's allowed to use only specific BRM wheels for each model:
 NSU TT / Renault Gordini r8 / Simca 1000: **BRM s-402** (front/rear)
 Mini Cooper: **BRM s-402m** (front/rear)
 Abarth 1000 TCR: **BRM s-402f** (front) - **BRM s-402fr** (rear)
 Opel Kadett GTE: **BRM s-402kf** (front) - **BRM s-402kr** (rear)



- 8.2 The wheel inserts are mandatory. It's possible interchange them between the models NSU TT / Renault Gordini r8 / Simca 1000, but they must be the same type on the 4 wheels.



9. Ruote - Gomme anteriori

- 9.1 Front tires **BRM s-403** (original on wheel \varnothing 17mm),
Front tires **BRM s-403s** (lowered on wheel \varnothing 16,8 / 17mm),
Front tires **BRM s-403f** (original on wheel \varnothing 15,5mm),
Front tires **BRM s-403fl** (lowered on wheel \varnothing 15,5mm),
Front tires **BRM s-403k** (original on wheel \varnothing 16,7mm Opel Kadett GTE).

- 9.2 It's allowed reduce the diameter of the front tires.

- 9.3 When the model is ready during the verification the front rims must touch the track.

10. Braids – Motor wires

- 10.1 Free braids and motor wires.
- 10.2 To fix the wires to the guide it's allowed to use grub screws or cable eyelets.



s-403

s-403s



s-403f

s-403fl

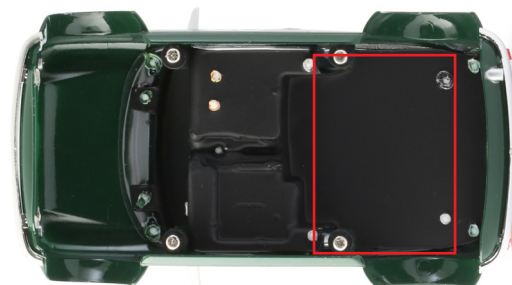
TECHNICAL

Rules

MODEL	PESO (incl. Screws)
Mini Cooper	35g
Simca 1000	47g
NSU TT	44g
Abarth 1000 TCR	36g
Renault Gordini r8	42g
Opel Kadett GTE	46g

11. Body

- 11.1 At the start the model must have all his parts except for wipers, hooks and mirrors).
- 11.2 It's not allowed to not use the rubber covers for the body posts **BRM s-013r**.
- 11.3 It's allowed to change the height of the body adding spacers inside the rubber covers using brass spacers of 0.5mm **BRM s-011c** or 1.0mm **BRM s-011d**.
- 11.4 The body screws must be original **BRM s-421b**.
- 11.5 Weight bodies, see the list on the right.
- 11.6 If it's necessary add weight to reach the minimum weight, it must be located on the red area under the cockpit.. (see photo)
- 11.7 To facilitate the assembling of the cockpit it's possible cut the legs of the driver from the knee.



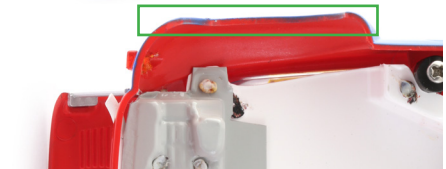
12. Body exceptions

Abarth 1000 TCR

- 12.1 It's allowed to use both types of rear bonnets and to not use the original side mounts to keep the rear bonnet semi-closed.

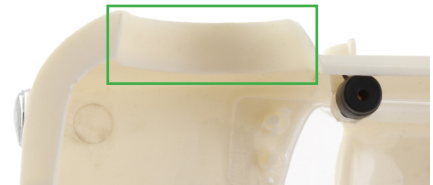


- 12.2 It's allowed to scratch material inside the rear wheel arch to get a better rolling of the rear tyre.



Simca 1000

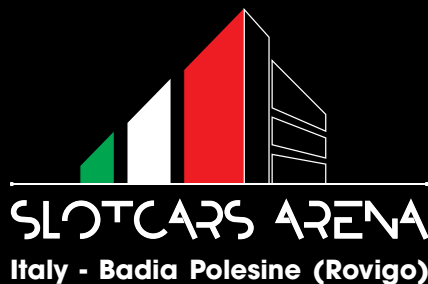
- 12.3 It's allowed to scratch on the front wheel arch to get a better rolling of the front tires.





GRUPPO 2

WORLD CHAMPIONSHIP



SLOT CAR ARENA - VIA BOVAZECCHINO N 385 - BADIA POLESINE - 45021 ROVIGO - ITALY