



# General Tender for Circuit Series Automotive Sports

# Northern European Cup Formula Renault 2.0

DMSB approval number: 509/11

Renault Deutschland AG is tendering the following racing series for 2011:

# Northern European Cup Formula Renault 2.0

(hereinafter referred to as NEC)

# FOREWORD

The Northern European Cup Formula Renault 2.0 (NEC) will be hosted according to globally uniform technical rules and the given sporting conditions of the respective country and its motor sport authorities.

RENAULT brand cups have been successful for over 30 years thanks to our many years of experience, our strict application of the rules and their supplements, and cooperation and continual involvement with well-known partners and sponsors. The worldwide exchange of information among the countries active in Renault sports activities will ensure the continued success of our series.

While operating vehicles of equal quality, talented young drivers learn to make their mark in terms of sportsmanship and driving skills, giving consideration to weaker drivers and measuring their own sports skills against stronger competitors. Strict compliance with sporting and technical rules ensures fair conditions for all participants.

At the end of the year, a champion in the Northern European Cup Formula Renault 2.0 will be selected according to the official point tally.





Organisation:

Renault Deutschland AG Motor Sports Division Renault Nissan Strasse 6-10 50321 Brühl, Germany

and

MdH Consultants AG Baarerstrasse 75 6300 Zug, Switzerland

Contacts: Ralph Weishaupt +49 (0) 2232 73- 9221 +49 (0) 160 740 27 58 ralph.weishaupt@renault.de

> Mick de Haas +31 35 5480 555 +31 655 737 000 mick@mdh.nl

Fax:+49 (0)2232 73-9574 (Renault Deutschland)<br/>+31 35 5480 550 (MdH Netherlands)Internet:www.renault-sport.de<br/>www.necup.com



# Table of contents:

# 1. General

- 1.1 Organisation
- 1.2 Legal foundations of the series
- 1.3 Status of the events

# 2. Series Calendar

# 3. Sporting Rules (Execution Rules)

- 3.1 Participants
- 3.2 Entrants
- 3.3 Guest drivers
- 3.5 Registrations
- 3.6 Participation obligation
- 3.8 Permitted vehicles
- 3.9 Repairs, seals and identification of vehicle parts
- 3.10 Document acceptance
- 3.11 Technical acceptance/technical checks
- 3.12 Driver equipments (see technical rules, Section 4.4)
- 3.13 Advertising on driver equipment
- 3.14 Advertising and start numbers on vehicle (see technical rules Section 4.10)
- 3.15 Execution of the competitions
- 3.16 Training
- 3.17 Qualification
- 3.18 Start types
- 3.19 Races
- 3.20 Points/point allocation
- 3.21 Prize money
- 3.22 Title
- 3.23 Special conditions
- 3.24 Protests and appeals
- 3.25 Barring of legal proceedings and limitation of liability
- 3.26 Liability disclaimer
- 3.27 Indemnity against liability vis-à-vis the vehicle owner
- 3.28 Responsibility, changes to the tender, cancellation of the event
- 3.29 Decisive rules text
- 3.30 Recognition of the rules
- 3.31 Legal venue
- 3.32 TV rights/advertising and broadcasting rights



- 4. Technical Rules and Requirements
- 4.1 Overview of the tendered groups/classes
- 4.2 Basis for technical rules and requirements
- 4.3 General/preamble
- 4.4 Driver equipment
- 4.5 General rules, permitted modifications and installations
- 4.6 Vehicle minimum weights and ballast
- 4.7 Engine size factor for charged engines
- 4.8 Emissions stipulations
- 4.9 Noise stipulations
- 4.10 Advertising regulations and start numbers on the vehicle
- 4.11 Safety equipment
- 4.12 Fuel and uniform fuel
- 4.13 Definitions

Appendices:

- Nomenclature
- Repair manual
- Technical modifications (bulletins consecutively numbered)

# 5. Special Technical Stipulations

- 5.1 General
- 5.2 Engine
- 5.3 Power transmission
- 5.4 Brakes
- 5.5 Steering
- 5.6 Wheel suspension
- 5.7 Wheels (hub + rim) and tyres
- 5.8 Bodywork and dimensions
- a) External bodywork (incl. windows)
- b) Cockpit
- c) Additional equipment
- 5.9 Aerodynamic aids
- 5.10 Electrical equipment
- 5.11 Fuel circuit
- 5.12 Lubrication system
- 5.13 Data transmission/telemetric equipment
- 5.14 Other

# 6. Appendices/Figures





# 1. General

# 1.1 Organisation

Renault Deutschland AG (hereinafter referred to as RD) and MdH Consultants AG (hereinafter referred to as MdH) tender the following series for 2011:

# Northern European Cup Formula Renault 2.0

(hereinafter referred to as NEC)

The competitions are open to all participants who have an international licence, regardless of nationality.

This cup offers interested participants the opportunity to compete in motor sports for a reasonable price and with the best competitive materials.

The deciding factor will be driving skills rather than financial strength.

The companies operating this cup want, in particular, to bring in young talent and to encourage their participation in motor sports.

Experience has shown that this type of cup is feasible only through strict execution and compliance with technical rules.

For this reason, it is extremely important that all participants comply with the sporting and technical rules.

Any change to the rules will be published on the following sites: <u>www.renault-sport.de/fahrerlager/2011/FormelRenault/Reglement</u> and <u>www.necup.com</u>

Copies of this document, including excerpts, may only be made with written approval from Renault Deutschland AG, 50321 BRÜHL, Germany.

# 1.1 Legal foundations of the series

This series is subject to the following regulations:

- FIA International Sporting Code (ISC) and appendices
- DMSB event rules
- DMSB race track rules
- DMSB legal and procedural guidelines (RuVO)
- DMSB resolutions and regulations
- DMSB environmental guidelines
- Anti-doping policies from the National Anti-Doping Agency (NADA code)
- Sporting and technical rules for this series with the changes and supplements (bulletins) approved by DMSB
- Event tenders with possible changes and supplements (according to DMSB approval)

#### 1.3 Status of the events

The status of the event is specified in the respective event tender.

# 2. Series Calendar

RD reserves the right, if necessary, to cancel events or individual races without replacement, to replace them or to add additional events.

The official calendar is located at www.renault-sport.de and www.neccup.com.

# 3. Sporting Rules (Execution Rules)



#### 3.1 **Participants**

Eligible participants are:

Drivers who have a valid international driving licence for 2011, regardless of nationality, and who have registered with RD. This registration must be confirmed by RD in writing.

The participant is assigned a permanent start number for the entire season.

RD must have a photocopy of the driving licence.

Note: Renault Deutschland AG reserves the right to reject registrations.

One double start in the same event is permitted, whereby NEC always takes priority.

#### 3.2 Entrants

Companies, teams or clubs with an entrant licence can register as entrants with a maximum of four starting places per event.

Each entrant can register only one driver per event for each issued starting place, which is valid for the entire season.

As a prerequisite, the respective driver must submit to RD a completed registration form on time, along with the signed liability disclaimer and entry fees.

The entrant must submit the names of registered drivers to the RD Motor Sports Division no later than 14 days prior to the respective event (see also Section 3.6).

RD reserves the right to refuse drivers/entrants.

#### 3.3 **Guest drivers**

RD is entitled to authorise quest drivers to participate in the individual events.

#### 3.5 Registrations

The registration forms must be requested from RD. These forms (one per participant) must be filled out using a computer or typewriter, or in hand-written block letters, and dated and personally signed (by participants and/or entrants).

The original registration must be sent to the address below:

# **RENAULT DEUTSCHLAND AG**

**Motor Sports Division** Renault Nissan Strasse 6 - 10 50321 Brühl, Germany

Each participant must transfer an entry fee of €15,500.00 plus taxes (to participate in all events) to the following account:

MdH Consultants AG Bank: **UBS AG** Baarerstrasse 14 a 6300 Zug Switzerland IBAN: CH74 00273273 2772 7175W **USBWCHZH80A** BIC:

Use "NEC 2011" as the reference.

For the first 12 participants, the registration fee is €9,500.00 + VAT; for the 13th and subsequent participants, the registration fee is €15,500.00 + VAT. The 13th and subsequent participants who register before 1 March, 2011, and who have paid the registration fee in full, will receive a credit note of €1,000.00.



Entry fees will not be reimbursed, regardless of the circumstances.

Registrations will not be processed until entry fees have been received.

# 3.6 Participation obligation

a) Entry for the individual races is submitted to the respective organiser by RD using the entry form (block entry). All participants registered before the deadline are entered in the respective event (one driver per vehicle).

Entry by the entrant or driver directly with the organiser is not possible.

The original entry form must be fully completed, signed and submitted to the RD Motor Sports Division no later than 14 days prior to the first event.

- b) Registration/entry form for events: If unable to participate in an event, the driver/entrant must deregister by submitting a written notice to the RD Motor Sports Division at least 14 days prior to the event.
- c) The entry fee for a single event is €2,500.00 + VAT and must be submitted along with the registration.
- d) The tender for each event can be found on the Internet at: <u>www.renault-sport.de/fahrerlager</u>
- e) Each participant can enter only one vehicle per event.

<u>Only one vehicle</u> per event can be submitted by the driver for technical approval and used for the event. An event consists of the following stages: test and tune runs, qualifying and races. The exception here is damage to the monocoque during the test and tune runs for the event. The technical commissioner makes the decision.

f) Any change relating to the entry form and driver information must be submitted immediately to RD in writing.

#### 3.8 **Permitted vehicles**

a) Formula Renault 2.0, 2009 model

The competition vehicles, Formula Renault 2.0 vehicles built after 2007, must comply with all aspects of the 2009 technical rules, the 2009 nomenclature and the relevant technical bulletins. These bulletins are numbered consecutively and are accessible on the Internet at: <a href="http://www.renault-sport.de/fahrerlager/2009/Formel/Reglement">www.renault-sport.de/fahrerlager/2009/Formel/Reglement</a>

# b) Formula Renault 2.0, 2010 model

Formula Renault 2.0 competition vehicles built after 2010 must comply with all aspects of the current technical rules, the current nomenclature and the relevant technical bulletins. These bulletins are numbered consecutively and are accessible on the Internet at: <u>www.renault-sport.de/fahrerlager/2011/Formel/Reglement</u>

# 3.9 Repairs, seals and identification of vehicle parts

See technical rules

#### 3.10 Document acceptance

The following documents must be submitted by the driver/entrant:

- Driving licence
- Entrant/sponsor licence
- A.S.N. confirmation, if applicable
- Foreign starting permission, if applicable





# 3.11 Technical acceptance/technical checks

For technical acceptance, the drivers or persons appointed by them must appear with the competition vehicle and the prescribed driver safety equipment. The vehicle must be presented in the condition it will be in for the competition and must meet the applicable technical rules.

A vehicle pass issued by A.S.N. must be shown to the technical commissioner prior to using the vehicle.

This vehicle pass remains with the entrant/driver and must be presented at each technical acceptance.

The rules of the International Sporting Code and of the DMSB apply.

Participants' vehicles can be subject to technical inspections performed by the technical commissioner and employees of ORECA (F-Magny-Cours) at any time during an event that is part of the NEC.

Each driver or entrant expressly agrees that these inspections can be performed at a location determined by RD. Transportation costs will not be reimbursed.

Vehicles are selected by the sports commissioners at the proposal of the responsible technical commissioner or RD representative.

The results of a thorough parts inspection performed by the technical commissioners is given to the sports commissioners.

The entrant or a representative of the entrant is entitled to label the removed parts. Rejected parts should be clearly labelled so as to avoid confusion and may be retained by RD. Parts that comply with the rules are returned to the owner as quickly as possible.

There can be no objection to the place of origin of removed parts.

The drivers or their representatives have the right to be present when their parts are being checked.

**Reassembly is the responsibility of the participant.** There is no compensation for checking the engine on the power testing station.

For the sake of fairness, Renault Deutschland AG Motor Sports Division employees are not to perform any work on the participant's vehicle, with the exception of taking measurements for the purpose of verifying that the vehicle conforms to the rules.

# 3.12 **Driver equipment**

See technical rules, Section 4.4

# 3.13 Advertising on driver equipment

- 1. General advertising regulations of DMSB (see DMSB manual, blue section) and the International Sporting Code apply.
- 2. Mandatory advertising on competing vehicles is defined in detail in the RENAULT adhesion instructions and must be followed at all times during the event.
- 3. Mandatory advertising on drivers' overalls is defined in detail in the RENAULT patch instructions and must be followed at all times during the event.
- 4. On the rear of the team truck, the team must attach two flag poles extending four metres above the roof of the truck, flying at least one RENAULT flag (provided by RD) during the entire duration of the event. The second flag pole can be used for team advertising.
- 5. Advertising on the vehicles is allowed under the condition that the advertisements are not for products which are from competitors of the official sponsors of the series. The official sponsors of the NEC are:



- Renault, automobile
- Elf, petrol + lubricant
- Michelin, tyres
- Racecom, radio
  Oreca
- . Racewerk
- . .....

Adhesion instructions and attachment stipulations are part of these rules. Infringement can result in the participant being excluded from the event.

All surfaces that – according to the adhesion instructions – are not covered by the companies mentioned above or used for attaching the start numbers are free for other use.

The distance between the start numbers and the mandatory advertising must be at least 10 cm.

Advertising on the vehicle or drivers' clothing for competing brands or products of the mentioned companies is not permitted.

RD has the right at all times to reject inappropriate advertising on vehicles, on driver clothing and in the driver's area assigned by Renault without providing a reason.

It is important to RD that the vehicles do not damage the image of automotive sports, and RD reserves the right to deny technical acceptance of vehicles that do not comply.

By submitting the registration, the entrants and participants acknowledge that both RD and the series sponsors reserve all rights to commercial exploitation of any sporting achievements, both in writing and in images, without having to pay additional fees.

# 3.14 Advertising and start numbers on the vehicle

See Section 4.10

# 3.15 Execution of the competitions

The competitions will be conducted in accordance with DMSB event rules and race track rules, unless otherwise stipulated in the following or in the tender of the respective organiser.

# 3.15.1 Test ban

NEC teams and drivers are obligated to <u>refrain</u> from testing on NEC tracks from **01.04.11** until after the last race.

Testing on NEC tracks is permitted only after the final scheduled race.

Each team must submit with their registration the test track they will be using during the season. Switching test tracks during the season is not permitted. If, for whatever reason, a team or driver fails to submit a test track, the test ban applies to all championship tracks. The test track stated on the registration is binding for the driver and team. The team may test with unregistered drivers on all tracks, with the exception of 14 days prior the event on each track.

Drivers who switch teams during the season forfeit their test track without replacement. The sports commissioners will move drivers who are in violation of these rules back five places in the starting positions at the respective event(s).

Registered drivers are not permitted to test on any tracks for 14 days prior to an NEC event (even if the track is registered as a test track).

# 3.16/17 Training/qualification

Official testing days

The NEC FR 2.0 organisation will announce the official testing days. The following rules apply on these testing days. Persons who fail to comply with these rules may be excluded from participating in the testing days.



Qualifying should last 2 x 15 minutes with a break of 5 minutes. There should be at least three hours between training and the race. There should be at least three hours between the races. The official results from the first qualifying determine the starting position for the first race,

based on the fastest lap time. The official results from the second qualifying determine the starting position for the second race, based on the fastest lap time.

The starting position for the third race is determined by the official results from the first race. The first six participants to complete the first race are placed in reverse order in the starting position for the third race.

All participants must qualify in training in accordance with the stipulations in the tender.

The number of vehicles permitted to race is determined by the race track's acceptance protocol. The race organisers always have the decision on the final starting positions.

All events which are raced in connection with the Formula Renault 2.0 Eurocup are executed in accordance with the rules of the Formula Renault 2.0 Eurocup. The marking of tyres is excluded.

# 3.18 Start types

The races will be started as follows:

- Standing start with staggered starting position (GP start)

# 3.19 Races

The NEC consists of several races that are listed in the event calendar.

#### As a rule, each race should last a minimum of 25 minutes.

The finish line applies both on the track and in the pit lane.

### 3.20 Points/point allocation

The winner of a race is the participant who crosses the finish line first.

All vehicles are ranked according to the number of laps that have been completed. Those who have completed the same number of laps are ranked in the order in which they last crossed the finish line. For the FR 2.0 and the FR 2000, separate results for men and women are possible.

Points are allocated as follows:

1. place:	30 points	11. place:	10 points
2. place:	24 points	12. place:	9 points
<ol><li>place:</li></ol>	20 points	13. place:	8 points
4. place:	17 points	14. place:	7 points
5. place:	16 points	15. place:	6 points
6. place:	15 points	16. place:	5 points
7. place:	14 points	17. place:	4 points
8. place:	13 points	18. place:	3 points
9. place:	12 points	19. place:	2 points
10. place:	11 points	20. place:	1 point





# 3.22 Title

The NEC champion is the participant with the highest score in his/her class following all completed races. The races include:

1 tbc

- 2 tbc
- 3 tbc
- 4 tbc
- 5 tbc 6 tbc
- 6 tbc 7 tbc
- 7 toc 8 tbc

The winner will receive the:

# NORTHERN EUROPEAN CUP

In the event of a tie (ex aequo), the participant with the greater number of first, then second and, if necessary, additional placements in all completed competitions will be the champion.

# 3.23 Special conditions

# a) Role of RD and the National Sporting Authorities (A.S.N.)

The technical guidelines relating to NEC vehicles are published in agreement with the A.S.N.

# b) Publication dates for changes

All changes to these rules are announced by RD, with approval from the responsible A.S.N., and will be posted at the next event and on the Internet (<u>www.renault-sport.de</u>).

# 3.24 **Protests and appeals**

In the event of protests and appeals, the FIA International Sporting Code applies, and for noninternational series, the DMSB rights and procedural guidelines.

# 3.25 Barring of legal proceedings and limitation of liability

- (1) Legal proceedings are barred for all decisions relating to the FIA, DMSB, their jurisdiction, the sports commissioners, the series' tendering party or the organiser as the adjudicator according to § 661 of the German Civil Code [Bürgerliches Gesetzbuch "BGB"].
- (2) No claims for damages of any kind are permitted that result from measures or decisions made by the DMSB and/or its sports jurisdiction as well as officers of the DMSB and the series tendering party, with the exception of damages arising from intentional or negligent breach of duty.

# 3.26 Liability disclaimer

By submitting their registration, entrants and drivers declare that they waive all rights and claims for damages of any kind associated with the event, specifically involving:

- FIA, DMSB, member organisations of the DMSB, Deutsche Motor Sport Wirtschaftsdienst GmbH, its presidents, bodies, CEOs, general secretaries,
- ADAC chapters, promoters/series organisers,
- organisers, stewards, and track owners,



- authorities, racing services and all other persons associated with the organisation of the event,
- road builders, insofar as damage is caused by the roads and accessories to be used for the event, and
- agents or representatives of above-mentioned persons and bodies,

with the exception of damages resulting from death; from personal injury or to health that are caused by intentional or negligent breach of duty – also in the case of a legal representative or an agent of the liability-disclaimed circle of people – and with the exception of other damage that is caused by intentional or negligent breach of duty – also in the case of a legal representative or representative or an agent of the liability-disclaimed circle of people;

#### vis-à-vis:

- other participants (entrants, drivers, co-drivers) their assistants, the owners and holders of other vehicles,
- particular entrants, particular drivers, co-drivers (contrary special agreements between entrant, driver, co-driver take precedence) and particular assistants waive all rights and claims of any kind associated with the races (untimed training, timed training, warm-up, race) arising from the slalom in conjunction with training and events/races,

with the exception of damages resulting from death, from personal injury or to health that are caused by intentional or negligent breach of duty – also in the case of a legal representative or an agent of the liability-disclaimed circle of people – and with the exception of other damage that is caused by intentional or negligent breach of duty – also in the case of a legal representative or representative or an agent of the liability-disclaimed circle of people.

The liability disclaimer becomes effective vis-à-vis all parties involved upon submission of the registration.

The liability disclaimer applies to claims for any legal reason, in particular both for damages claims resulting from contractual and non-contractual liability and for claims resulting from non-permitted actions. Silent liability disclaimers remain unaffected by the preceding liability disclaimer clause.

# 3.27 Indemnity against liability vis-à-vis the vehicle owner

- (1) Insofar as entrants or drivers are not themselves the owners of the vehicles being used, they must ensure that the vehicle owner signs the liability disclaimer printed on the registration form.
- (2) In the event that the declaration is contrary to this obligation not signed by the vehicle owner, the entrants and drivers will release all persons and bodies listed in Section 32 from all claims vis-à-vis the vehicle owner, with the exception of damages resulting from death, from personal injury or to health that are caused by intentional or negligent breach of duty also in the case of a legal representative or an agent of the liability-disclaimed circle of people and apart from other damage that is caused by intentional or negligent breach of duty also in the case of a legal representative or an agent of the liability-disclaimed circle of duty also in the case of a legal representative or an agent of the liability-disclaimed circle of people.
- (3) This indemnity declaration relates to claims against the other participants (entrants, drivers, co-drivers), their assistants, the owners, holders of the other vehicles, the particular entrants, the particular drivers, co-drivers (contrary special agreements between entrants, drivers, co-drivers take precedence) and particular assistants for all rights and claims associated with the races (untimed training, timed training, warm-up, race) and for claims



against other persons and bodies for damages associated with the event as a whole. Silent liability disclaimers remain unaffected.

# 3.28 Responsibility, changes to the tender, cancellation of the event

- (1) The participants (entrants, drivers, co-drivers, vehicle owners and holders) take part in the event at their own risk. They assume sole civil and criminal responsibility for all damage caused by them or the vehicle they use, insofar as there is no indemnity against liability in accordance with this tender.
- (2) The series' tendering party reserves the right to make changes to the tender as deemed necessary as a result of force majeure or for safety reasons or if instigated by the authorities, or to cancel the event or individual races without replacement if extraordinary circumstances prescribe this without assuming damage obligations, exempting intention and gross negligence. Furthermore, the organiser is only liable insofar as no indemnity against liability is agreed by the tender and registration.

### 3.29 Decisive rules text

The rules have been translated into English; however, only the German text approved by DMSB is binding.

### 3.30 Recognition of the rules

By submitting a registration, all entrants and participants in the NEC confirm their acceptance of these rules, the supplements/changes, the tender of the respective organiser, the rules of the International Sporting Code and DMSB regulations.

### 3.31 Legal venue

In the event that one of the participants – despite the general liability disclaimer agreed upon in the rules – intends to sue for damages, the exclusive legal venue, insofar as this is legally permissible and the claimant believes that RD should be involved in this lawsuit, is Brühl.

# 3.32 TV rights/advertising and broadcasting rights

All copyright and image rights remain with RD and MdH, including those taken from television broadcasts.

All broadcasting rights, both for terrestrial transmission and cable and satellite transmission, all video rights and usufructuary rights using all electronic media, including the internet, remain with RD and MdH.

All forms of recording, airing, repetition and reproduction for commercial purposes are prohibited without the written approval of RD and MdH.



# 4. Technical Rules and Requirements

### 4.1 Overview of the tendered groups/classes

Not applicable.

# 4.2 Basis for technical rules and requirements

Principally, the stipulations of the International Sporting Code and the technical regulations of the DMSB apply.

All changes to the existing rules must be in writing.

Vehicles are subject to technical inspections at any time during an event that forms part of the NEC (see also Section 3.11).

### 4.3 General/preamble

# Everything not expressly permitted by

- these technical rules and requirements,
- the 2009 nomenclature (FR 2000) and the current nomenclature (FR 2.0),
- the 2009 and 2011 repair manuals and
- the 2009 and 2011 technical bulletins

# IS PROHIBITED.

### 4.4 Driver equipment

The following driver equipment is required:

- 1. Overalls, undergarments (with long sleeves and legs), socks, shoes and balaclava hoods all in accordance with FIA Standard 8856-2000.
- 2. Gloves in accordance with FIA Standard 8856-2000.
- 3. HANS-compatible helmet in accordance with current FIA standards.
- 4. FIA homologated head restraint system (such as HANS).

#### 4.5 General rules

#### Permitted modifications and installations

The technical rules and requirements for all parts that make up Formula RENAULT are summarised in the nomenclature. The vehicle parts are grouped into the following three categories according to the degree of permissible modification:

- <u>Category A</u>: No modifications are permitted to these original parts. The parts must remain in their original position and function as originally intended.
- <u>Category B:</u> Only the modifications permitted in the nomenclature or the technical rules (including bulletins) are allowed to these parts.
- <u>Category C</u>: These parts are approved under the express condition that the original function is not circumvented, no function is added and that the part is installed in the same position as the original part.

Any modification to the original parts is prohibited if not expressly permitted in the nomenclature.

All dimensions of new parts must be checked before installation.



Work may be performed that is part of the vehicle's normal maintenance or the replacement of parts damaged by wear or accidents.

Parts damaged by wear or accidents may be replaced only with identical original parts.

# Screws

With the exception of screws for the engine, axle, suspension and steering, all other screws are exempt on the condition that the function (additional functions prohibited), original diameter and the original thread pitch are retained.

# 4.6 Vehicle minimum weights and ballast

#### 4.6.1 Minimum weight

The minimum weight of a **Formula Renault 2.0, 2010 model** must be no less than **517 kg**. The minimum weight of a **Formula Renault 2.0, 2009 model** must be no less than **490 kg**. RD reserves the right to adjust the required weight by making a bulletin announcement, even during the season.

### 4.6.2 Racing weight

The minimum racing weight of a **Formula Renault 2.0, 2010 model** must be no less than **590** kg, including the driver and his/her equipment (according to Section 4.4).

This weight refers to the condition of the vehicle during test and tune runs, qualifying and races. This includes residual fuel. Any modification to the vehicle, including the addition of material, is prohibited.

The minimum racing weight of a **Formula Renault 2.0, 2009 model** must be no less than **565 kg**, including the driver and his/her equipment (according to Section 4.4).

This weight refers to the condition of the vehicle during test and tune runs, qualifying and races. This includes residual fuel. Any modification to the vehicle, including the addition of material, is prohibited.

#### 4.6.3 Ballast

Vehicle ballast is permitted, on the condition that it is attached in the position intended for this purpose and that it can be removed only by using tools. It must be possible to apply seals to it. If the vehicle is equipped with ballast to meet the stipulated weight, this must be reported to the technical commissioners responsible for the NEC and sealed by them.

Ballast that is not sealed properly is against the rules and will be deemed non-existent. Maintenance of the intact seals is the responsibility of the driver.

#### 4.6.4 Adding weight during an event

Adding liquids, materials or replacing parts with others made from heavier material is prohibited during the event (according to the definition in Section 4.13.2).

#### 4.6.5 Checking the minimum racing weight

The minimum racing weight must be adhered to at all times during the event. The official scale is the scale used by the NEC organisation: (Captels VPN MVN/797). Any changes will be announced in a bulletin.

# 4.7 Engine size factor for charged engines

Not applicable.

# 4.8 Emissions stipulations

The catalytic converter in accordance with DMSB homologation no. ROSI 50181/METALCAT must be used. The catalytic converter must always be functional. No protest against the conversion rate is allowed.



# 4.9 Noise stipulations

Only the original exhaust system may be used. In accordance with the DMSB pass-by method (see DMSB manual, blue section), the threshold values of 132 dB(A), according to the LwA principle and 100 dB(A) according to the LP principle, must be adhered to. The silencer from RENAULT England must be used for events in Zandvoort.

# 4.10 Advertising regulations and start numbers on the vehicle

DMSB regulations apply for start numbers and the DMSB manual (blue section) applies for advertising. Regulations for advertising on driver equipment according to Section 3.13 must be complied with.

# 4.11 Safety equipment

The vehicles must comply with Section 277 in Appendix J of the ISC.

# 4.11.1 Roll bar height

The rear roll bar must be high enough to ensure a visual line to the front bar that is 5 cm above the driver's helmet when the driver is strapped into the vehicle and wearing the helmet.

# 4.11.2 Fire extinguisher system

The original fire extinguisher system from RENAULT must be used.

# 4.11.2.1 Test plate

The following data must be clearly visible on the fire extinguisher test plate:

- Capacity
- Product
- Weight or volume of the product

• Test date for the fire extinguisher. This date must not be more than two years since filling or since the last test.

# 4.11.2.2 Housing attachment

The fire extinguisher container must be adequately protected. The container must be located at the place designated by the manufacturer.

In all cases, extinguisher mounts must be able to withstand a force of 25 g from all sides.

# 4.11.2.3 Operation

The driver must be able to manually discharge the extinguisher while strapped into the normal position in the vehicle with the steering wheel installed. There must also be an external release device next to or integrated into the circuit breaker. This must be marked by a red "E" in a white circle with a red border of 10 cm  $\emptyset$ .

#### 4.11.2.4 System layout (ISC, Appendix J, Section 253, 7.2.5)

The outlets must be positioned so that the extinguishing agent does not discharge directly onto the driver.

# 4.11.2.5 Special note

The fire extinguisher system must function in all vehicle positions, even when the vehicle is overturned.

#### 4.11.3 Circuit breaker

Only the original circuit breaker may be used.

While strapped in and sitting in the normal position with steering wheel installed, the driver must be able to break all circuits for the ignition, fuel pumps and taillight by means of a spark-proof circuit breaker.

The switch must be positioned on the dashboard and marked with a red light in a blue triangle with a white border of at least 10 cm.

There must also be an external circuit breaker with a horizontal handle that can be activated from a distance using a hook. This circuit breaker must be positioned at the base of the main roll bar fixture on the right side.



#### **RENAULT SPORT** 4.11.4 Rear-view mirrors

Only the original rear-view mirrors may be used.

All vehicles must be equipped with two rear-view mirrors to ensure drivers can see what is behind them on both sides of the vehicle.

# 4.11.5 Safety harness (ISC, Appendix J, Section 253, 6.1)

The original safety harnesses (FIA homologated) must be used. The safety harnesses must be replaced following an accident.

# 4.11.6 Taillight

The original taillight must be used.

# 4.12 Uniform fuel

The fuel tank of each vehicle must be emptied prior to the start of each event.

When the fuel pump in the tank is used to empty the fuel tank, residual fuel remains in the tank. The tank must be completely emptied to ensure the result of a fuel test is not falsified.

Ensure maximum safety when emptying the tank using the external fuel pump.

The participant may use only unleaded fuel from a supplier appointed by the NEC.

A different supplier can be appointed for each race (filling station, filling truck, or similar). Normally the supplier is the filling station in the driver's area at the specific event. Any changes will be announced in a bulletin. Fuel samples are taken from the respective supplier prior to the start of the event.

RD is entitled to take fuel samples from participating vehicles at any time during the event.

The participant must ensure that, at all times during the event until the end of the protest period, at least one litre of fuel can be taken from the tank.

Filling and emptying the fuel tank during qualifying and racing is prohibited (Section 5.11.3.1). Refuelling the competition vehicles between the starting position and the departure from the vehicle storage area (parc fermé) is prohibited during qualifying and racing.

The fuel is tested using a conformity test with fuel from a specific filling station for the event announced in the bulletin.

# 4.12.1 Combustion additives

The only permissible combustion additive is air.

# 4.13 Definitions

The definitions of the "General Requirements, Definitions and Clarifications of Technical Rules" in the DMSB manual (blue section) and the definitions according to Section 251 of Appendix J (ISC) apply. The following definitions also apply:

#### 4.13.1 Formula RENAULT

Automobile manufactured for speed races on circular tracks or closed circuits.

#### 4.13.2 Event

An event consists of all event sections specified in the schedule (e.g. open training, test and tune runs, qualifying, races, etc.).

#### 4.13.3 Bodywork

See Section 251, Appendix J, ISC (International Sporting Code)

4.13.4 Wheel Wheel:

Hub and rim



Complete wheel: Hub, rim and tyre Vertical wheel axis: The vertical

The vertical axis of the wheel is the line which is perpendicular to the vehicle base on each side of adjacent levels in the middle of the tyre's rolling surface.

# 4.13.5 Cockpit

Space where the driver sits.

# 4.13.6 Survival cell

Continuous structure that houses all fuel tanks and the cockpit.

### 4.13.7 Telemetry

Any type of wireless transfer of real-time technical data between the vehicle and someone in contact with the vehicle (in the pits).

# 5. Special Technical Stipulations

### 5.1 General

Aside from the technical rules in Section 4 of this tender, the following special technical stipulations apply.

Everything not expressly permitted in these rules is prohibited.

Permitted modifications must not result in prohibited modifications or infringements of the rules.

# 5.2 Engine

2010 model RENAULT SPORT Type F4R 832 Engine capacity: 1,998 cm<sup>3</sup>

2009 model RENAULT SPORT Type F4R FRS Engine capacity: 1,998 cm<sup>3</sup>

# 5.2.3 Maintenance of the RENAULT engine F4R FRS/F4R 832 required engine test

The engines for Formula RENAULT are sealed when delivered by RD.

Preparation, maintenance, and repairs of the engines may be performed only by Oreca, Magny-Cours (F).

Engines without seals or engines of a different origin are not allowed to be used in the NEC.

The engine must be tested on an engine testing station by Oreca in Magny-Cours (F) before the season begins. The certificate issued by Oreca is to be submitted with the technical acceptance.

2009 model: An engine sealed by Oreca in 2009, 2010 or 2011 is permissible.

The technical commissioner gives ORECA the right to randomly test the engines/control unit at any time.

# 5.3 Power transmission

#### 5.3.1 Transmission and gearbox

Only the original RENAULT SPORT transmission for the NEC may be used. Only transmissions listed in the technical requirements for the NEC are allowed.

#### 5.3.2 Reverse gear

All vehicles must have a reverse gear which can be engaged at any time during the event when the engine is running and the driver is seated in the vehicle.

# 5.3.3 Traction control

A system for automatic traction control is prohibited.





### 5.3.4 Transmission maintenance

The transmission may only be maintained in accordance with valid NEC standards.

### 5.4 Brakes

Only the original brake system may be used.

### 5.4.1 Ventilation

The use of any air cooling system for ventilating the front and rear brakes is prohibited (hoses, scoops, ducts, extractors fitted to the wheels, etc.).

#### 5.5 Steering

Only the original steering may be used.

#### 5.5.1 Steering wheel and steering wheel hub

The following is mandatory:

- a steering wheel, irrespective of shape and design, with closed steering wheel rim,
- original, removable steering wheel hub.

#### 5.6 Wheel suspension

All wheels that come into contact with the ground and their axles must be suspended in relation to the chassis/bodywork unit. In other words, the axles must not be directly connected to the chassis/bodywork unit. Accordingly, the axle stubs and hubs must have free spring deflexion.

#### 5.6.1 Active suspension

Active wheel suspensions are prohibited.

#### 5.6.2 Chrome-plating of suspension parts

Chrome-plating of any wheel suspension parts is prohibited.

#### 5.6.3 Suspension

Only original parts may be used.

#### 5.7 Wheels (hub + rim) and tyres

Only tyres from Deutsche Michelin Reifenwerke KgaA, or a service commissioned by it, with the side inscription "NEC" may be used.

#### 5.7.1 Wheel rim dimensions

#### 2010 model:

- Width at front : 9 inches
- Width at rear : 10.5 inches
- Diameter : 13 inches

Aerodynamic modifications or installation of extractors is prohibited.

#### 2009 model:

- Width at front : 8 inches
- Width at rear : 10 inches
- Diameter : 13 inches

Aerodynamic modifications or installation of extractors is prohibited.

# 5.7.2 Tyres 2009 model:

	Dimensions:	Type:			
Front:	16 x 53 x 13	Slick:	FR2.0		
Rear:	23 x 57 x 13	Wet:	P220		





#### 2010 model:

	Dimensions:	Туре:	
Front:	20 x 54 x 13	Slick:	RST 2.0
Rear:	24 x 57 x 13	Wet:	RST 2.0R

# 5.7.2 Tyre treatment

Use of tyre warmers or insulating covers or any other materials to modify or maintain tyre temperature is prohibited throughout the entire duration of the event.

All modifications to tyres, including recutting, retreading or surface treatment (including chemical) are prohibited.

### 5.7.3 Restrictions on use of slick tyres

The following new slick tyres may be used per vehicle (start number) for the duration of the event with **2** races (i.e. open training, qualifying and races 1 and 2):

- 4 front, marked with start number.
- 4 rear, marked with start number.

The following slick tyres, already marked for a previous NEC 2011 event, may be used per vehicle (start number) for the duration of the event with **2** races (i.e. open training, qualifying and races 1 and 2):

- 4 front, marked with start number.
- 4 rear, marked with start number.

The following new slick tyres may be used per vehicle (start number) for the duration of the event with **3** races (i.e. open training, qualifying and races 1,2 and 3):

- 6 front, marked with start number.
- 6 rear, marked with start number.

The following slick tyres, already marked for a previous NEC 2011 event, may be used per vehicle (start number) for the duration of the event with **2** races (i.e. open training, qualifying and races 1 and 3):

- 2 front, marked with start number.
- 2 rear, marked with start number.

The following new, marked slick tyres may be used for a test during the official test and tune runs:

- For a test over one day
  - 4 front, marked with start number.
  - o 4 rear, marked with start number.

The driver is responsible for marking the tyres.

- For a test over two days
  - o 6 front, marked with start number.
  - o 6 rear, marked with start number.

The driver is responsible for marking the tyres.

The following slick tyres, already marked for a previous NEC 2011 event, may be used for a test during the official test and tune runs:

- For a test over one day
  - o 2 front, marked with start number.
  - o 2 rear, marked with start number.

The driver is responsible for marking the tyres.

- For a test over two days
  - o 4 front, marked with start number.
  - 4 rear, marked with start number.

The driver is responsible for marking the tyres.

Used slick tyres without the NEC marking can be authorised for use during the first test and tune run (kick-off event).



#### 5.7.4 Marking and checking tyres

Tyres for the respective vehicle must be inspected for technical acceptance before the event.

The commissioners/assistants mark the outside of the tyre or, at the request of the participant, the inside as well. Marking includes the start number and a special symbol for the respective event.

Only these tyres marked with start numbers may be used during the entire event (according to the definition in Section 4.13.4).

Each participant is personally responsible for mounting tyres on the vehicle; these tyres are marked legibly on the outside for the event. These tyres must be designed to ensure safety during the entire event. In the event that tyres are found to be unsafe, the driver can be banned from entering or re-entering the track.

### 5.7.5 Tyre parc ferme

The three participants with the highest point totals and two other participants chosen by the technical commissioner must submit their new slick tyres to the tyre parc ferme during the event.

These tyres are mounted by Michelin technicians and then marked as described in Section 5.7.4. The participants are issued with eight wheels before open training, time training and the races.

### 5.7.6 Restrictions on use of wet tyres

The race director decides whether it is justified to use wet tyres on the track. The decision must be announced to the participants promptly.

After the "WET RACE/WET PRACTICE" board is displayed, the participant has the choice of which tyres to use in observance of this section. The participant must assume that the race director will not interrupt the training or race.

The decision to change tyres can apply only for the complete set of tyres; a mixture of wet and slick tyres is not permitted.

The Michelin tyre service has one set of wet tyres per weekend on hand for each participant. If more are needed, the participant must order and transport the wet tyres in advance.

#### 5.7.8 Joker tyres (not applicable)

#### 5.7.9 Tyre pressure control valves

Use of tyre pressure control valves is prohibited.

#### 5.8 Bodywork and dimensions

#### a) External bodywork

#### 5.8.1 Overhang and vertical axis

To measure the overhang, the vertical axis is determined as follows:

The vertical axis of the wheel is the line which is perpendicular to the vehicle base on each side of adjacent levels in the middle of the tyre's rolling surface. This is determined by projecting vertically to the ground the foremost and rearmost points of the complete wheel at the median plane of the rolling surface. The two points determined in this manner are connected to each other on the right and left sides. The middle of these two points is the vertical axis.

#### 5.8.2 Height measurements

All height measurements are performed on the race-ready vehicle with the driver in normal driving position.

#### 5.8.3 Overall height (not applicable)



#### RENAULT SPORT 5.8.4 Front bodywork height

No part of the bodywork forward of the rearmost part of the complete front wheels and more than 30 cm from the longitudinal axis of the vehicle may be located closer than 50 mm to the reference plane or higher than the front wheel rims.

# 5.8.5 Reference planes/vehicle underbody

Reference plane: located between the rear edge of the complete front wheels and the forward edge of the complete rear wheels, symmetrical to the longitudinal axis of the vehicle.

Stepped plane: all suspended vehicle parts that are visible from below and are not in the reference plane must be located 50 mm above the reference plane.

# 5.8.6 Overhangs

### 2010 model

No part of the vehicle may protrude more than 643 mm beyond the centre line of the rear wheels and more than 1,001.8 mm beyond the centre line of the front wheels.

### 2009 model

No part of the vehicle may protrude more than 550 mm beyond the centre line of the rear wheels and more than 110.5 mm beyond the centre line of the front wheels.

### 5.8.7 Aerodynamic influence

Only wing profiles supplied by RENAULT may be used. Adding parts which exert an aerodynamic effect is prohibited.

### 5.8.8 Wheel base and tracks

The tracks (front and rear) must remain original.

### 5.8.9 Aerodynamic aids

#### Rear wing profiles

Only original wing profiles from Renault may be used for the NEC. Max. permissible wing height from the ground: 900 mm

#### 5.8.10 Transponder

The transponder must be secured on the left side behind the front pivot point of the suspension arm.

#### b) Cockpit

#### Dashboard

Only the original RENAULT dashboard may be used.

#### c) Additional equipment

#### Padding in the cockpit

Parts within the cockpit that are used solely to improve the comfort and safety of the driver. It must be possible to remove these parts quickly and without the need for tools.

#### 5.10 **Electrical equipment**

#### 5.10.1 Starter

Only the original starter may be used. It works with the on-board electrical source and must be operated by the driver in normal driving position.

#### 5.10.2 External starting devices

The engine can be started in the pit or at the starting position using an additional battery that is temporarily connected. This plug must be installed behind the rear axle.





# 5.10.3 Battery

Only the original battery supplied by RENAULT or an Odyssey, type PC 680 or DEKA Power Sport, type ETX20L may be used. Location: Original Mounting bracket: Original The positive pole must be shielded.

# 5.11 Fuel circuit

### 5.11.1 Fuel tank

Only the original fuel tank may be used.

The approved fuel tank must have a code printed on it with the manufacturer's name and technical specifications stating how the tank was manufactured and clearly displaying the manufacturing date.

Fuel tanks may not be used more than five years after the manufacturing date, unless they are inspected and approved for another two years by the manufacturer.

#### 5.11.2 Lines and their connecting parts

Only original lines and connectors may be used for the NEC.

**5.11.2.1** No fuel lines may be fed through the cockpit.

**5.11.2.2** All lines must be installed in such a way as to ensure that no liquid can enter the cockpit in the event of a leak.

**5.11.2.3** No part containing fuel may be positioned more than 55 cm from the longitudinal axis of the vehicle.

#### 5.11.3 Refuelling

**5.11.3.1** Fuelling and emptying the fuel tank during qualifying and racing is prohibited.

**5.11.3.2** Refuelling upon entering the starting position is prohibited.

#### 5.12 Lubrication system

#### 5.12.1 Location of the oil tank

Only the original tank located in the clutch bell housing may be used.

#### 5.12.2 Oil catch tank

The vehicle's lubrication system has an open housing breather. This breather must vent into the catch tank.

#### 5.12.3 Oil replenishment

Oil replenishment is not allowed during a race.

#### 5.12.4 Oil lines

Only the original lines for the NEC are permitted.

### 5.13 Data transmission/telemetric equipment

All telemetric systems (see definition in Section 4.13.7) and their associated electrical equipment are forbidden during the test and tune runs, qualifying and during the races. Systems for voice radio links between driver and pit or vice versa are permitted. The operator is responsible for the system.

Only the on-board data recording system approved by RD is permitted.



# RENAULT SPORT 6. Appendices/Figures: Appendix for the execution rules

- Registration/entry form
  Change notifications/bulletins

# Appendix for the technical rules

- Nomenclature (2009 and 2011)
  Repair manual (2009 and 2011)
- Spare parts manual (2009 and 2011)
  Technical bulletins