

## TECHNICAL REGULATIONS | Supercar, NRX NEXT

SEASON 1 2022 -2023

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### 1. OVERVIEW

1.1. These Technical Regulations are equally applicable to the SUPERCAR and NRX NEXT vehicle classes unless specifically identified otherwise.

1.2. All devices, features, functions, modifications and/or activities which are not explicitly allowed by these regulations and subsequent amendments and/or bulletins are forbidden. An authorized device, feature, function, modification and/or activity may not include an unauthorized one.

1.3. All vehicles competing must at all times fulfill the criteria for their vehicle class as set forth in these Technical Regulations.

### 1.4. APPROVED VEHICLES

1.4.1. Invited vehicles to the Championships are defined according to Articles 1.4.2. and 1.4.3. of these Technical Regulations.

#### 1.4.2. SUPERCAR Class

Production based internal combustion engine powered vehicles according to the class rules set forth in Article 9 of these Technical Regulations.

#### 1.4.3. NRX NEXT Class

Single configuration internal combustion engine powered vehicles according to the class rules set forth in Article 10 of these Technical Regulations.

### 2. DRIVER, VEHICLE AND PADDOCK SAFETY EQUIPMENT

#### 2.1. General Information

2.1.1. All driver and vehicle safety equipment must be presented during scrutineering. It must be in good condition, fully functional, installed per the manufacturer's instructions and must bear proper certification, date and/or inspection labels valid through the duration of the Event.

2.1.2. Driver and vehicle safety equipment without a clearly defined expiration date established by its certifying agency (either explicitly stated or calculated based on date of manufacture) will be considered valid for use until December 31 of the calendar year ten (10) years after the date of manufacture marked on the item.

2.1.3. Manufacturer installation instructions for all safety related equipment should be retained for review at events in the event installation related questions

arise during scrutineering. The manufacturer's installation instructions will govern decisions on suitability. Absent the manufacturer's installation instructions, the judgment of Scrutineering will govern decisions on suitability.

## 2.2. Helmets

- Helmets, straps and face shields/visors shall be in good condition.
- FHR anchors shall be properly installed, in good condition and match the FHR they will be used with.
- Helmets meeting the following specifications may be used:
  - FIA 8859-2015 (Ref. FIA Technical List No. 49)
  - FIA 8860-2010 (Ref. FIA Technical List No. 33)
  - FIA 8860-2018 (Ref. FIA Technical List No. 69)
  - FIA 8860-2018-ABP (Ref. FIA Technical List No. 69)
  - Snell SA2010
  - Snell SAH2010
  - Snell SA2015
  - Snell SA2020

## 2.3. Frontal Head Restraint (FHR)

- All drivers shall use a frontal head restraint.
- The restraint and straps/tethers shall have current labeling and be in good condition with no cuts, abrasions or twists. The straps/tethers to the helmet shall match the FHR and the anchors on the helmet.
- Frontal head restraints meeting the following specifications may be used:
  - FIA 8858-2002 (Ref. FIA Technical List No. 29)
  - FIA 8858-2010 (Ref. FIA Technical List No. 29)
  - SFI Spec 38.1.

## 2.4. Driver Suit

- The driver suit must be in good condition with no holes, tears or malfunctioning closures.
- The driver suit must be labelled in accordance with the NRX brand requirements and Commercial Regulations.
- Driver suits meeting the following specifications may be used:
  - FIA 8856-2000 (Ref. FIA Technical List No. 27)
  - FIA 8856-2018 (Ref. FIA Technical List No. 74)
  - SFI Spec 3.2A/5
  - SFI Spec 3.4/5

## 2.5. Driver Apparel

- Drivers must wear approved fire-resistant apparel in good condition with no holes or tears including:
  - Head sock/balaclava,
  - Long sleeve undershirt,
  - Long underpants,
  - Socks,
  - Shoes,
  - Gloves.
- Apparel meeting the following specifications may be used:
  - FIA 8856-2000 (Ref. FIA Technical List No. 27)
  - FIA 8856-2018 (Ref. FIA Technical List No. 74)

- SFI Spec 3.3.

## 2.6. Safety Seats

- All cars must be equipped with an FIA-approved driver's seat with an FIA label current through the end of the Competition.
- Seats in compliance with FIA standard 8862-2009 are recommended for all vehicle classes.
- Seats in compliance with FIA standard 8855-1999 and FIA 8855-2021 may be used provided they are manufactured with a full-length integral head surround that meets NRX approval.
- The use of seat supports homologated with the seat is compulsory.
- It is recommended that competitors discuss with their seat supplier the best match of seat, seat supports, seat cushioning and impact absorbing seat inserts to best provide enhanced vertical impact protection.
- Seats meeting the following specifications may be used:
  - FIA 8855-1999 (Ref. FIA Technical List No. 12)
  - FIA 8855-2021 (Ref. FIA Technical List No. 91)
  - FIA 8862-2009 (Ref. FIA Technical List No. 40)  
- Recommended

## 2.7. Safety Harness

- All the cars must be equipped with an FIA or SFI approved safety harness.
- Safety Harnesses must have a minimum of six (6) anchorage points conforming to the specifications of FIA Appendix J Article 253-6.
- The two shoulder straps must have separate anchorage points.
- All elements of the harness must be from a matching set, in good condition with no cuts, abrasions, twists or bent elements.
- Webbing must not be in direct contact with any metal edges (e.g., seat support brackets, protruding fasteners, etc.).
- All snap latches shall be secured with pins or safety wire.
- Safety harnesses meeting the following specifications may be used:
  - FIA 8853/98 (Ref. FIA Technical List No. 24)
  - SFI FIA 8853-2016 (Ref. FIA Technical List No. 57)
    - SFI Spec 16.1
    - SFI Spec 16.5
    - SFI Spec 16.6

## 2.8. Driver Restraint Racing Nets

- Driver Restraint Racing Nets are required on the interior side and the exterior side of the Driver for all vehicle classes.
- The nets must be installed in accordance with the FIA requirements. (Ref "Racing Nets Installation Specification for Touring and Grand Touring Cars - 04-12-2019 v8").
- Driver Restraint Racing Nets meeting the following specifications may be used:
  - FIA 8863-2013 (Ref FIA Technical List No. 48).
  - SFI Spec 37.1

## 2.9. Extinguisher System

All the cars must be equipped with an approved fire extinguisher system meeting the installation and operation requirements of FIA Appendix J Article 253.7.2. The extinguishing system must be able to be activated by emergency personnel from outside the vehicle and by the driver when seated normally with their safety belts fastened. For safety reasons, this must be possible at all times during the event from the beginning of Practice through Qualifying, Heats, Semi-finals and Final to the Parc Fermé period expiry or when the car is returned to the team. Exceptions can only be issued by the responsible Technical Delegate

- The inspection/filling date label must show a date no more than two years before the end of the competition.
- The date label should be located where it is readily visible during scrutineering.
- A pressurized system must indicate it is fully charged.
- The self-check function and/or the continuity of electrical operating/activating systems will be checked during scrutineering. Teams are asked to have a test lamp available for checking the continuity of the on-board fire extinguisher system switches.

### SUPERCAR SPECIFIC REQUIREMENTS

- Extinguisher systems meeting the following specification must be used:
  - FIA 8865-2015 (Ref FIA Technical List No. 52)
  - The extinguishing agent and system must be rated for use with fuels with greater than or equal to 80% Ethanol (FIA Class IV or FIA Class V listed for Ethanol).

### NRX NEXT SPECIFIC REQUIREMENTS

- NRX NEXT vehicles must have internal and external release handles or activation switches for their onboard extinguisher system.
- Extinguisher systems meeting the following specification is recommended:
  - FIA 8865-2015 (Ref FIA Technical List No. 52)
  - The extinguishing agent and system must be rated for use with fuels with greater than or equal to 80% Ethanol (FIA Class IV or FIA Class V listed for Ethanol).
- Fire extinguisher systems meeting the following specifications will be accepted:
  - FIA Standard for Plumbed-in Fire Extinguisher Systems in Competition Cars (1999) (Ref FIA Technical List No. 16)
  - SFI Spec 17.1
  - The extinguishing agent must be identified as alcohol compatible and/or resistant (AR)

## 2.10. Safety Fuel Tanks

- Vehicles must be equipped with a safety fuel tank.
- It is recommended that the tank be filled with MIL-B-83054 or equivalent type safety foam.
- It is recommended that competitors discuss with their Safety Fuel Tank supplier compatibility of their current bladder and safety foam with the

particular fuel blend the NRX Series has specified under Article 3 of these Technical Regulations.

- The tank must be mounted in a manner that allows the checking of the tank's certification and expiry date at scrutineering.
- Access to this information may be via a leak-proof cover, made from non-flammable material, easily accessible and removable only with the use of simple hand tools, installed in the protection for the tank.
- Safety fuel tanks meeting the following specifications may be used:
  - FIA Approved FT3-1999
  - FIA Approved FT3.5-1999
  - FIA Approved FT5-1999
  - SFI Spec 28.3

## 2.11. Roll/Safety Cage Padding

- Impact absorbing padding must be applied to the roll/safety cage.
- Those areas identified in Appendix J- Article 253.8.3 must be padded.
- Additionally, all safety cage tubes situated within a perimeter of 50 cm (19.7 inches) around the driver's helmet, this measurement being taken with the driver sitting in the driver's seat with their harness fastened, must be padded.
- Roll/safety cage padding meeting the following specifications may be used:
  - FIA 8857-2001 Type A (Ref FIA Technical List n°23)
  - SFI Spec 45.1

## 2.12. Roll/Safety Cage

Vehicle roll/safety cage must follow the design guidelines of FIA Appendix J Article 253.8. Approval papers for the roll/safety cage must be available for review at scrutineering. Approval must be in one of the following manners:

- FIA Homologated
- ASN Homologated
- In exceptional circumstances, a Non-Homologated Safety Cage may be permitted for use, at the NRX's absolute discretion. NRX Officials will set specific requirements on a case-by-case basis.

## 2.13. Safety/Emergency Switch Markings

- The extinguisher activation switches/pulls must be marked with a letter "E" inside a white circle with red edge. The external switch marking must be at least 10 cm in diameter. The internal switch/pull marking shall be as large as practical up to 10 cm in diameter dia.
- The master electrical disconnect switches must be marked with a red lightning bolt in a blue triangle. The external switch marking must be at least 10 cm high. The internal switch marking shall be as large as practical up to 10 cm high.

## 2.14. Towing Attachment

It is compulsory that every car must be equipped with one towing attachment in the front of the car and one towing attachment in the rear of the car.

The towing attachment must be of a belt type made of soft material and have a minimum opening diameter of 60 mm. The towing attachment's design and position must be such that it can be used if the car has stopped in loose dirt or similar. The towing attachment location must be marked with an arrow painted yellow, red or orange to contrast with the color of the car. The Technical Delegate reserves the right to order a competitor to change their towing attachment's shape, construction and/or location.

- 2.15. **Paddock Fire Extinguisher**  
Each Competitor is responsible for ensuring that a dry chemical fire extinguisher of at least 5kg (10 pounds) capacity for each entered vehicle is available within the vehicle's paddock stall.
- 2.16. **Paddock Protective Ground Cover**  
Each Competitor is required to ensure that a plastic sheet (minimum dimensions 4m x 5m [13ft x 16ft]) is spread on the ground in the paddock location reserved for their team where work is to be done on their car to prevent any pollution in case of an accidental spill, leak, etc.
3. **FUEL**
  - 3.1. P1 Performance Fuels GmbH has been designated as the official fuel supplier for the internal combustion engine powered classes of the 2022 NRX Series. All vehicles must use P1 Bio Racing 100% fuel (100% Renewable E80, Product Code P-RG-041-01) for all Events during the 2022 NRX Season.
  - 3.2. The use of any device, either in- or outside the car, intended specifically to reduce the temperature of the fuel is forbidden.
  - 3.3. During an Event NRX Officials have the right to freely and unimpeded by the competitor, take a fuel sample from the driver's car and/or any container used for refueling. Such fuel tests will be conducted in accordance with fixed rules for this procedure by NRX Officials. These tests may be analyzed and compared with the specified control fuel by qualified personnel using specialized testing equipment provided at the venue. Any discrepancy between these samples will result in the matter being reported to the Stewards who may impose a penalty. Any further analyses will be carried out in a laboratory approved by NRX Officials. Stewards can suspend any driver from the Championship until the case has been decided.
  - 3.4. All cars must be fitted with a self-sealing connector which can be used by Scrutineering to remove fuel from the car's fuel tank. It must be possible for a pipe supplied by the competitor to be fitted to this connector. The sampling connector must be placed in a non-lockable area. This device, once installed,

may be used for the sampling and for the simulation of a pipe rupture.

- 3.5. No refueling and/or removing of fuel is permitted during practice, on the starting grid, during a race, or before scrutineering after a completed race. At least 3 liters of fuel must be left in the tank after a completed race. Failure to follow this may result in disqualification from the race.

## 4. WHEELS AND TIRES

- 4.1. NRX has specified Yokohama as the single tire supplier for the Championship classes for the 2022 NRX Season.

### 4.2. General Tire Rules

- 4.2.1. The tires listed in Article 4.4 of these Technical Regulations for each vehicle class are the only approved tire for use during NRX Events.
- 4.2.2. The tires must be used with the tread pattern as molded for all track conditions. Tire cutting in any form is not allowed.
- 4.2.3. Tires may not be modified or treated in any manner by either physical or chemical means.
- 4.2.4. The use of tire pre-heating or heat-retaining devices is prohibited. Heating as might occur from natural exposure to the sun is acceptable.
- 4.2.5. Tires may only be filled with ambient air, dried ambient air or nitrogen.
- 4.2.6. The registered tires, and only the registered tires, may be used by the vehicle they are registered to for all competition portions of an Event from the start of Practice through to the conclusion of the Finals.
- 4.2.7. Tires used during test days, jump practices and media rides must be approved tires, but they do not need to be registered tires.
- 4.2.8. All tire mounting must be performed by Yokohama at Events.
- 4.2.9. Wheels presented for tire mounting must be cleaned.
- 4.2.10. Standard mounting procedure includes using tire mounting lubricant.
- 4.2.11. The maximum pressure used at Events to seat the tire to the wheel is 116 psi ( 8.0 bar ). Any wheel that will not allow the tire to be properly seated at or below this pressure will be rejected.
- 4.2.12. Beadlock wheels may not be used.
- 4.2.13. Yokohama will provide Event/track specific guidance to all teams on Minimum Cold Inflation Pressures, Target Hot Pressures, Camber, etc. based on track configuration, track surface conditions and operational experience during the course of each Event. To the extent possible, this information will be included in the Supplementary Regulations for each Event.

### 4.3. Tire Allocation and Registration

- 4.3.1. Vehicle Specific NRX Tire Registration Forms will be provided and distributed to Teams by Scrutineering at each event.
- 4.3.2. The Tire Registration form contains the following sections:

- Team Wheel Marking – Team's may optionally enter information here if they use an internal wheel/tire identification system.
  - Outer Tire Marking – Enter the complete number adjacent to the bar code label on the tire.
  - Inner Tire Marking – The inner and outer tire numbers should be identical. Contact the Chief Scrutineer if they are not before submitting the Form.
  - NRX Assigned Wheel Marking – Contact the Chief Scrutineer if the inner and/or outer labels are either missing or do not match. Alternate marking will be applied to the wheel/tire assembly by Scrutineering.
  - Team Signature – The team must sign the Form to indicate it is the official team submittal. Teams are advised to retain an image of the submitted Form.
- 4.3.3. Teams may register up to the following number of tires per vehicle entered for each race weekend:
- NRX NEXT – 12 tires - (Covers both Events of a double header weekend)
  - SUPERCARS – 12 tires - (Covers one Event)
- 4.3.4. Registered tires may be any combination of new and used tires at the team's discretion.
- 4.3.5. All registered tires must be present in the team paddock area, but they do not need to be mounted on rims at the time of registration.
- 4.3.6. Tire registration forms must be returned to Scrutineering no less than one (1) hour before the scheduled start of Practice for the vehicle class.
- 4.3.7. Scrutineering will scan the bar codes of the tires listed on the tire registration form in the team paddock before the start of Practice.
- 4.3.8. Tires may be checked for compliance with these regulations by Scrutineering at any time and location during the course of the Event.
- 4.3.9. Teams must schedule their arrival in Pre-Grid to allow sufficient time for the manual recording tire registration numbers by Scrutineering.
- 4.3.10. Replacement of registered tires will not be authorized for any on-track incidents during any portion of the Event, including but not limited to contact with curbs, contact with debris on the track, contact with other vehicles, etc.
- 4.3.11. Replacement of a registered tire during competition may be permitted if the tire failure experienced is jointly determined by the Yokohama Technical Representatives and the Chief Scrutineer to be the result of a manufacturing defect.
- 4.4. Yokohama Tire Application Information
- 4.4.1. Approved Tires for NRX NEXT class vehicles
- Model: Yokohama ADVAN A054 (P/N 150113007)
  - Size: 230/640R17
  - Approved Wheel Size – Vehicles in this class must use wheels specified in the Supercar Lites Part and User Manuals or Bulletins. (Currently Ref. P/N AV4043 – KMC 17" x 8" PCD4x108 ET60)
- 4.4.2. Approved Tires for SUPERCAR class vehicles



- Model: Yokohama ADVAN A054 (P/N 150113007)
- Size: 230/640R17
- Approved Wheel Size - 17" rims in compliance with FIA Appendix J - Article 279 Section 9.1.1.

4.5. Certain Events during the 2022 NRX season may require the use of alternate tires (e.g., winter/ice events). A formal Bulletin will be issued detailing the wheels and tires to be used and the technical application notes applicable to each vehicle class.

## 5. NOISE

5.1. The noise limit for combustion engine vehicles is 100 dB/A.

5.2. If required by local regulations, alternate noise requirements may be specified in the Supplementary Regulations for specific Events.

5.3. Cars must comply with noise regulations at all times during an Event.

5.4. The noise must be measured in accordance with the FIA noise measuring procedure using a sonometer regulated at "A" and "SLOW", placed at an angle of 45° to and a distance of 500 mm from the exhaust outlet, with the car's engine running at 4500 rpm.

5.5. Noise measurements will be taken at a fixed location adjacent to scrutineering. The exact location will be identified once an on-site inspection is conducted. Teams will be notified when the noise measurement station is open.

## 6. ON-BOARD CAMERA AND RECORDING SYSTEM

Each Championship vehicle must be fitted with a camera meeting the requirements for a Judicial Camera per Article 19 of the 2022 NRX Sporting Regulations. The camera must be installed in strict compliance with the relevant instructions and must record at all times during the Event when the vehicle is running outside its paddock stall. Entrants are responsible for obtaining this system, and for the correct installation and functioning thereof. Any cost arising in connection with this system is the Competitor's responsibility. Recorded footage must be made available to the Stewards on request. Failure to supply this footage may result in a penalty being applied by the Stewards. Systems included on FIA Technical List No. 60 may be used for this purpose.

## 7. VOICE AND DATA COMMUNICATIONS AND CAPTURE

7.1. Voice radio communications between the driver and their team is allowed.

7.1.1. Radio frequencies used by the driver and the team must be licensed for use within the respective country. Each team must inform NRX of which radio frequency each driver and the team will use prior to the start of the season when submitting their entry. Any modification of the radio

frequency must always be communicated and approved by NRX before use.

- 7.1.2. In the event that a radio frequency used by a competitor interferes with a frequency used by the track or a local rescue service or a third party, the competitor and team is required to immediately change their frequency to a non-interfering frequency first approved by NRX and which is in accordance with requirements and earlier approval. The driver and their team can be excluded from practice and competition until a change of frequency has been carried out.
- 7.1.3. Distorting or encoding radio transmissions in any way is prohibited.
- 7.2. Data telemetry to and/or from the vehicle is not allowed. Vehicle data may only be recovered when the vehicle is in its paddock space.
- 7.3. When requested, teams will provide NRX Officials with access to the Engine Control Unit (ECU), Instrument Display, Team Data Logger and any other onboard electronics installed on the vehicle and data files captured during the course of competition Events over the duration of the series. To aid in this process Teams must provide the following:
  - 7.3.4. Connection cables and software capable of interfacing with, extracting data from and displaying data from any and all onboard electronics in common engineering units and formats.
  - 7.3.5. Descriptions of overall onboard electronics and control system software logic, data logger software and logic and identification of data captured and its formats.
  - 7.3.6. Have available personnel from the Team with the specialist expertise to aid the NRX Officials in identifying, retrieving and interpreting requested data.
  - 7.3.7. Data files will not be collected by the NRX Officials, but Teams will be asked to provide documentation of findings (e.g., screen prints, plots or tables of selected data, etc.).
- 7.4. An NRX Series specified data logger system may be required by NRX at any point during the course of the season by bulletin.
  - 7.4.1. Details of the system's configuration, installation, functions and supplier and will be contained in the bulletin.
  - 7.4.2. Procurement and installation of the NRX Series specified data logger will be the responsibility of the Competitor.
  - 7.4.3. The requirement will only apply to the vehicle class(es) identified in the bulletin.
- 8. **VEHICLE EXTERIOR**
  - 8.1. The vehicle must be marked in accordance with the 2022 NRX Series Style Guide as set forth in the NRX Commercial Regulations. . No car will be allowed to practice or race in a championship or appear in a media promotional event without being marked correctly.

- 8.1.1. Series supplied stickers may not under any circumstances be modified. If attaching them requires cutting the stickers so that they fit within the car's openings, this should be done without distorting the championship's identity, logo or the sponsor's logo.
- 8.1.2. The placement of all markings is subject to approval by NRX.
- 8.1.3. NRX Officials have the right, at their own discretion, to uphold the exact placement and style of all required markings.
- 8.1.4. Vehicles must be in full compliance with the 2022 NRX Series Style Guide to clear scrutineering.
- 8.2. Car Numbers
  - 8.2.1. Car numbers will be assigned in accordance with Article 9 of the 2022 NRX Sporting Regulations.
  - 8.2.2. Car numbers shall be sized, styled and placed in accordance with the 2022 NRX Series Style Guide as set forth in the NRX Commercial Regulations.
  - 8.2.3. Car numbers shall be displayed on the windshield, rear side windows and roof as set forth in the NRX Commercial Regulations.
- 8.3. Driver's Name shall be sized, styled and placed in accordance with the 2022 NRX Series Style Guide as set forth in the NRX Commercial Regulations.
- 8.4. Sponsor labeling shall be sized, styled and placed in accordance with the 2022 NRX Series Style Guide as set forth in the NRX Commercial Regulations.
9. SUPERCAR SPECIFIC TECHNICAL RULES
  - 9.1. Vehicles competing in the Supercar class must be fully compliant with the December 16, 2021 release of FIA Appendix J, Article 279 – Technical Regulations for Rallycross and all other FIA Appendix J Articles referenced therein as they apply to RX1 category vehicles and as amended by these regulations.
  - 9.2. The applicable FIA regulations are incorporated herein by reference and will be used during this event for making determinations related to vehicle eligibility and conformity.
  - 9.3. Amendments to the FIA regulations, requirements of particular concern and requirements unique to the NRX Events will be addressed in detail herein.
  - 9.4. Vehicles not in full conformance with the requirements herein may be granted exemptions upon application to NRX at the sole discretion of NRX.
  - 9.5. An NRX Technical Declaration Form must be completed for each non-conforming vehicle (See Appendix 1 of these Regulations). The Technical Declaration Form must fully detail the deviations. Applications for exemptions must be submitted to NRX no later than six (6) weeks before the first Event the vehicle will be entered in.
    - 9.5.1. The purpose of the Technical Declaration Form is to:
      - Provide basic information on the vehicle to be entered in the Event

- Identify areas in which the car deviates from the NRX Technical Regulations.
  - Assist Scrutineers in understanding the deviations.
  - Aid in identifying required adjustments for the vehicle (e.g., added weight) to equalize competition.
  - NRX reserves the right to expand the use of the Technical Declaration Form and increase the items that must be included.
  - References to Article 279 mean the current version of FIA Appendix J Article 279
- 9.5.2. Undeclared deviations from the class rules discovered during the course of the season may be subject to penalty at the discretion of NRX up to and including exclusion from competition.
- 9.6. NRX reserves the option to accept other vehicles into an event or the series as a "Promoters Option".
- 9.6.1. Any vehicle accepted for the Event via the Event Promotor option must be substantially equivalent to those compliant with FIA Appendix J, Article 279 – Technical Regulations for Rallycross Cars and all other FIA Appendix J Articles referenced therein.
- 9.6.2. All entered competitors will be notified of any vehicles granted entry via the Event Promotor option.
- 9.7. NRX Specific SUPERCAR Technical Rules
- 9.7.1. Engine Control Unit software is free subject to the restrictions in FIA Appendix J, Article 279 and the restrictions and requirements set forth herein.
- 9.7.2. The number of vehicle and engine components that can be used during an Event or during the 2022 NRX Season will not be limited.
- 9.7.3. 279 Section 3.4 – Driving Aids
- 9.7.3.1. Any electronic driving aid system such as traction control, ABS, ASR, ESP or similar electronic driving aids not mentioned whether standalone or integrated into the ECU is prohibited.
- 9.7.3.2. Any torque demand control that is derived through a closed loop system is not permitted with the exception of the launch strategy.
- 9.7.4. Launch strategies may only be used for the start or restart of the race(s).
- 9.7.4.1. The launch strategy must be manually engaged by the driver by the use of a single button to control and hold the engine speed during the launch. The desired launch engine speed may be set by the driver to a desired RPM setting.
- 9.7.4.2. During the start or restart of a race, the ECU launch strategy may only act on engine parameters and no other vehicle functions or components. The launch strategy shall be active for a maximum of one half of one second (0.5 seconds) after the vehicle starts to move from its designated grid space.
- 9.7.4.3. A handbrake rear drive disconnect defeat may be used during launches, but it must be controlled by the driver completely independent from the ECU and other electronic controllers. The rear drive disconnect defeat may only be used before the car leaves the designated grid space.
- 9.7.4.4. Wheel brake pressure holding valves (e.g., line locks) may not be used.

# NITRO RX

- 9.7.4.5. The launch control strategy and associated hardware must be approved by NRX Series Officials before use. No additional launch control strategies may be used.
- 9.7.5. Vehicles may incorporate an engine speed limiter function for controlling vehicle speed over specific jumps designated at the Event. The function may not be used at any other point on the track.
- 9.7.5.1. This function is commanded via a driver activated ON/OFF input to the Engine Control Unit. The function is active immediately when engaged (ON) and deactivated immediately when disengaged (OFF). The "Jump Engine Speed Limiter" function may be considered comparable to a traditional RPM based "Pit Lane RPM/Speed Limiter".
- 9.7.5.2. A single engine speed limit within the permitted engine operating speed range may be commanded via the Driver through the Jump Engine Speed Limiter function. The jump engine speed limit value may not be driver adjustable while on track.
- 9.7.6. 279 Section 3.7 - GPS Units - The permitted GPS unit may be connected to a stand-alone dash mounted display for measured ground speed.
- 9.7.6.1. The display may be used at all NRX venues.
- 9.7.6.2. The display must be completely independent of the engine control system and cannot be connected in any way (wired or wireless) with any system of the car. Furthermore, its electrical harnesses must not be included in the car's main wiring loom. The harness should be a different color to make it easier to identify. The only permitted connection to vehicle systems is an independent cable to the battery.
- 9.7.7. 279 Section 5.2.3 - Restrictor - The drillings for sealing the restrictor must be 2.0 to 3.0 mm diameter to accommodate the cable on the seal.
- 9.7.8. 279 Section 5.4 - Custom Engine - Boxer configuration engines corresponding to legacy GRX/ARX rules may be used. The engine must conform to the following specification:

Configuration	4 Cylinder Boxer, Double overhead cam, 4 valves per cylinder
Block and Cylinder Head	Custom
Displacement	≤ 2000 cc
Cam Drive	Belt/Chain/Gear
Max Engine Speed	9500 RPM
Bed Plate Height	124 mm
Bore	≤ 92.015 mm
Stroke	Based on Bore
Cylinder Bore Spacing	113 mm
Compression Ratio	≤ 12.5
Piston Pin Outer Diameter	22.98 mm
Height of Piston	32.0 mm
Main Bearing Diameter	≥ 51.979 mm
Main Bearing Width	14.8 mm
Crank Pin Bearing Diameter	51.98 mm
Crank Pin Bearing Width	16.50 mm
Top Ring Height	1.2 mm
Second Ring Height	1.5 mm
Oil Scraper Ring Height	2.0 mm
Camshaft Bearing Diameter	30.0 mm
Cam Lobe Base Circle Radius	≥ 15.0 mm

# NITRO RX

Valve Stem Diameter	5.97 mm
Intake Valve Diameter	≤ 37.0 mm
Exhaust Valve Diameter	≤ 33.0 mm
Intake Valve Lift	≤ 13.0 mm
Exhaust Valve Lift	≤ 12.5 mm
Piston Weight	550 grams
Connecting Rod Weight	570 grams
Crankshaft Weight	7,600 grams
Crankshaft + Flywheel Weight	≥ 13,000 grams
Camshaft Weight-Intake (each)	1,000 grams
Camshaft Weight-Exhaust (each)	930 grams
Intake Manifold Volume	≤ 18.0 Liters

9.7.9. 279 Section 9.2 – Tires – Permitted tires are specified in Article 4.4.2 of these regulations.

9.7.10. 279 Section 10.2.14.d – Front Bumper – If standard U.S. sourced tubing is used, the maximum bumper tube diameter is 2.0 inches and the maximum wall thickness 0.065 inches.

## 10. NRX NEXT SPECIFIC TECHNICAL RULES

10.1. The NRX NEXT class is open to single make vehicles formerly referred to as RX2/ARX2/Supercar Lites designed, manufactured and supplied exclusively by Olsbergs MSE/Avitas. Vehicles must be in full conformance with the most recently published Technical Regulations, Technical Bulletins, User Manual and Spare Parts Manual as posted at <http://www.supercarlites.com/v1/the-car/>.

10.2. The vehicle and its components must not be modified in any way and must be used as delivered by the exclusive supplier. The setup may be changed only by using the basic mechanical settings available on the vehicle.

## 11. SCRUTINEERING

### 11.1. General Scrutineering Procedures

- Scrutineering will take place on the dates and during the time periods indicated in the Supplementary Regulations for the Event.
- In special circumstances, alternate arrangements for scrutineering may be made only with the advance consent of both the Chief Scrutineer and the Race Director.
- Scrutineering inspections will take place in the team paddock. The order in which the vehicle inspections are conducted will be random.
- The vehicle may be on the ground or on jack stands during the inspection. The electrical system must be capable of being energized and the engine started. Teams are asked to have the full set of each driver's safety gear out and ready for inspection when Scrutineering opens.
- Pre-event Scrutineering will, as a minimum, address those items on the 2022 NRX Scrutineering Form. The forms will be provided and distributed by Scrutineering. Additional items associated with both vehicle safety and technical rules compliance may be checked at the discretion of the Chief Scrutineer.

- In general, pre-event scrutineering will cover both Events of a double header weekend.
- The Scrutineering weigh scales will generally be open for teams to check vehicle weight at their own discretion. Official operations during competition will take precedence over team requests to check vehicle weight. The Scrutineering weigh scale readings are considered the official weight for rules compliance determination.

- 11.2. Presenting the car for scrutineering will be deemed an implicit representation by the competitor that the car fully complies with the regulations.
- 11.3. A vehicle will not be cleared for competition until the vehicle preparation is completed, all noted deficiencies have been corrected and the Chief Scrutineer is satisfied the vehicle is fit for competition. The team paddock will generally be revisited to conduct any required re-inspections.
- 11.4. Competitors must provide their logbook upon request for scrutiny of every car that will compete for each race. Teams are asked to have the vehicle safety roll cage homologation paperwork and any other ASN generated documents specific to the vehicle available for inspection. Teams are asked to have the vehicle and driver's safety equipment manufacturer's installation instructions available to help resolve any questions that arise concerning installation details.
- 11.5. The Technical Delegate may require that the competitors carry out necessary dismantling. Failure to do so can result in the Clerk of the Course arranging for such a dismantling and charge the costs to the competitor. Competitors will not be allowed to participate in the championship until the costs have been covered.
- 11.6. The Race Officials should at any time and place must be granted free and unrestricted access by the competitor to inspect and/or measure the any car registered for the Event.
- 11.7. During the season, NRX reserves the right to undertake detailed analyses of all electronic equipment used by the competitors and all other related material, to ensure that these do not contain any elements capable of use in a manner which may breach the Regulations. Competitors should, on demand, provide all electronic equipment, source codes, programs, machine codes and any other equipment deemed necessary to ensure a complete inspection and analysis to the Technical Delegate for scrutiny by an analyst appointed by NRX. The costs of such an analysis shall be borne entirely by the competitor. Other than in the case of breach of regulations, all details of the analysis will remain confidential to NRX and the competitor. Failure to allow or facilitate the inspection of such electronic equipment may be deemed a violation of the Regulations, which can

lead to disqualification from the championship by the Stewards.

- 11.8. SUPERCAR turbocharger restrictors and NRX NEXT engines will be sealed during Scrutineering. Scrutineering must be notified when a sealed component (e.g., turbocharger, NRX NEXT engine, etc.) is changed on the vehicle.

## Appendix 1 – NRX SUPERCAR Technical Declaration Form

### Owner/Team Details

Team name	
Name of person completing this form	
Position/role in team	
Email address	
Phone number	

### Car details

Make	
Model	
Chassis number or VIN	
Usual race number	

### Engine type

Manufacturer/make	
Custom (FIA)	
Custom (Boxer)	
ECU Make	
ECU Type	
FIA Homologated Software Version	

### Does the car comply fully with FIA Appendix J Article 279?

Yes	No
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# NITRO RX

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If yes, there is no need to complete further parts of this form.

If no, please work through the 2022 FIA Appendix J, Article 279 (Published by the FIA on 16.12.2021) and the 2022 NRX Technical Regulations and complete this form as necessary for the car referred to above.

In completing this Form, you are making a full and open declaration of all areas in which the car described varies from the 2022 FIA Appendix J, Article 279 Regulations and the 2022 NRX Technical Regulations . The information will be taken as being a definitive record of all variations.

Duplicate the following sheet as many times as necessary to provide all required information. Photographs or drawings should be included along with a brief written description for each regulation.

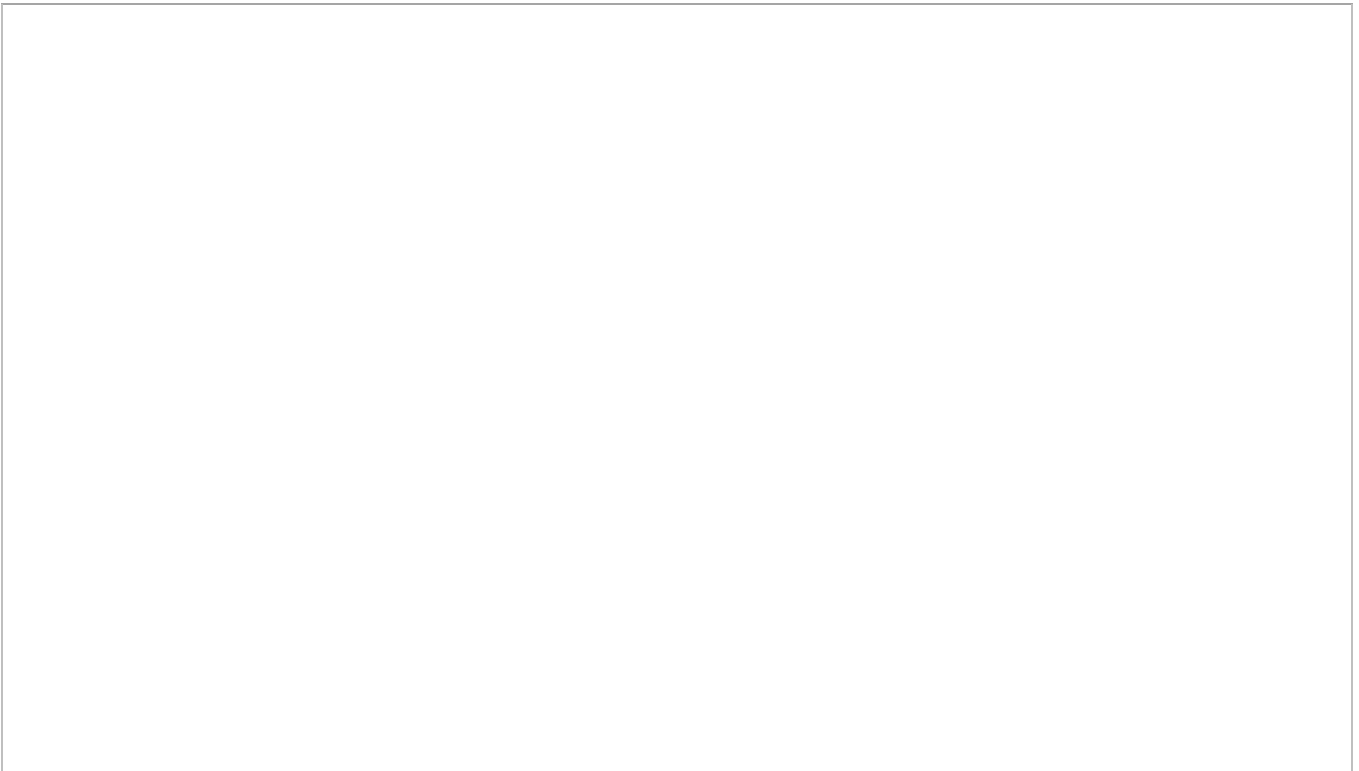
Return this form to Nitro Rallycross / Thrillone management not later than six (6) weeks before the first event at which the car referred to above will be used.

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## **Photographs**

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Front 3/4 view (front and driver's right side of car)



Rear 3/4 view (rear and driver's left side of car)

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# NITRO RX

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Regulation reference

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Description of difference

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Photographs or drawings (add as many as necessary)

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# NITRO RX

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