



# 2018

## Pirelli World Challenge Championship Series

### TECHNICAL REGULATION – RADICAL CUP NORTH AMERICA

Initial Release – March 2018

The rules and regulations set forth herein are intended to assist in the orderly conduct of race events and to further participant and spectator safety. These regulations are in no way a guarantee against injury or death to participants, spectators, or others. No expressed or implied warranties of safety or fitness for a particular purpose shall be intended or result from publication or compliance with these rules. All event participants compete at their own risk.

The WC regulations, complete with updates from current season Technical Bulletins, are available on the Pirelli World Challenge website.

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## 0.0 Technical Rules and Regulations Overview

The 2018 Radical European Masters is for Radical Sportscars (SR3 RS, SR3 RSX, SR8, RXC Race Spyder and RXC) complying with these technical regulations. These Regulations are set out in accordance with standard principles and it must be clearly understood that, if the following texts do not clearly specify that you can do it, you must work on the principle that you cannot. Therefore, everything that is not specifically authorised and anything not specified in these regulations or any championship bulletin is strictly forbidden.

Each Radical model is manufactured to an identical class specification. In the interests of fairness and safety, competitors may not depart from this specification under any circumstances, other than as specified below.

All Radical parts must be supplied by Radical Sportscars or its appointed distributor and fitted in their original position and as supplied, unless specifically stated in these regulations. Parts may only be fitted to the appropriate designated model.

Whilst the Technical Delegate is empowered to check all competing vehicles for compliance and has been provided with the data to determine the continuing eligibility of each car, the onus of responsibility for the eligibility of vehicles competing in this Championship, rests with the entrant/Competitor. In the event of a dispute concerning the compliance of a vehicle with these Regulations, the onus will be on the Entrant/ Competitor to satisfy the Organisers with regards to such compliance, and NOT the organisers to prove non-compliance.

The 2018 Radical European Masters is a 'single-brand' race series, for competitors participating in the Radical SR3, RXC Spyder, RXC Coupe and SR8 as specified herein.

Masters Class	SR8 V8 – Chassis number 069 and above
	RXC Race Spyder V8 – All Chassis numbers
	RXC Race Spyder EcoBoost Twin Turbo – All Chassis numbers
	RXC Coupe EcoBoost Twin Turbo (GT3 Spec) - All Chassis numbers
1500 Class	SR3 RS 1500 – Chassis number 400 to 929
	SR3 RSX 1500 – Chassis number 930 and above
1340 Class	SR3 RS 1340 – Chassis number 400 to 929
	SR3 RSX 1340 – Chassis number 930 and above

Vehicle Manufacturer:  
Radical Sportscars  
24 Ivatt Way Business Park Westwood Peterborough PE3 7PG  
Tel: 01733 331616  
Fax: 01733 264959  
Email: [sales@radicalsportscars.com](mailto:sales@radicalsportscars.com)  
Website: [www.radicalsportscars.com](http://www.radicalsportscars.com)

# 1.0 SAFETY REGULATIONS

## 1.1 Fire Extinguisher Systems

An FIA approved fire Extinguisher System must be fitted and operation at all times when on circuit.

It is a mandatory requirement that all extinguishers must:

- Be situated within the survival cell at a distance greater than 300mm from outer edges of bodywork.
- Operate in any position, even if the car is inverted.
- Withstand a deceleration of 25g and operate between temperatures of -15 Deg. C to +80 Deg. C.
- Be removable for verification of full charge.
- Be capable of being activated by the driver whilst belted in the seat.
- Use a trigger system independent of vehicle electrics with a secondary EXTERNAL cut-off switch or cable. The switches location must be indicated by a E fire decal of Ø10cm.
- Be serviced and recertified by the manufacturer every **two** years.
- Must have a current label similar to the examples shown below:

<p><b>Technical List 16 Example</b></p>	<p><b>Technical List 52 Decal Example</b></p>	<p><b>Fire E Decal</b></p>
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## 1.2 Driver Restraint System

**Belts**  
The use of current FIA 6-point Safety Belts, complying with FIA 8853/98 and FIA 8853-2016, is mandatory at all times.

**Anchorage Points**  
The lap and crotch straps shall only pass through the seat. All lap straps must fit tightly in the bend between the pelvic crest and the upper thigh. Under no conditions must they be worn over the region of the abdomen. Care must be taken that the straps cannot be damaged through interference, twisting, edge loading or chafing against sharp edges. Two-inch lap belts are highly recommended as they have been shown to provide faster loading of the lap belt resulting in lower loads to the chest, head, and neck. Their fitment around the pelvis is better allowing the belt to be worn tighter while being more comfortable and easier to adjust.

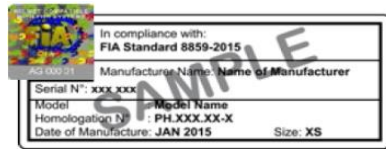
## 1.3 Seat and Headrests

- Only unmodified seats as supplied by Radical Sportscars are permitted.
- Any material covering seat including driver seat inserts must be of an approved fireproof material.
- All seats must be rigidly mounted to the vehicle.
- Any foam inserts must meet the material, location and sizes in FIA [Appendix J Article 257A](#).

## 1.4 Driver Safety Equipment

### 1.4.1 Helmets

- Only Full-face helmets on [FIA Technical list 25](#) to a standard below and within expiration dates.
- FIA 8860-2004, FIA 8860-2010, FIA 8859-2015 [FIA Technical list 49](#) are permitted.
- Snell SA2010, SAH2010 (+FIA 8858 2010) SA2015, SAH2015 are permitted.
- SFI Foundation - SFI 31.1, SFI 31.1A, SFI 31.2A (All expire 31st December, 2018) are permitted.
- Any exposed hair must be completely covered by protective, fire-resistant clothing.
- Any damaged helmets may be retained by PWC and forwarded to the certifying organization.
- All helmets must display the approved unaltered decal as shown below.



Not Valid after Dec. 2020



### 1.4.2 Head and Neck Restraints (HNR)

- Only HNR systems certified to FIA 8858 HNR or SFI spec 38.1 are permitted.
- The installation angle to the certified helmet must follow the homologation.
- Expired HNR devices will not be permitted. Typical recertification is every five years.
- Webbing based systems and components shall be replaced every three years or sooner.
- Webbing should be replaced if webbing shows any signs of cuts, abrasions, or excessive fading.

### 1.4.3 Fire Resistant Clothing

- m) Only fireproof clothing meeting FIA 8856-2000 or SFI spec 3.2A/5 is permitted.
- n) All approved FIA clothing is listed on [FIA technical list 27](#).
- o) All drivers must wear overalls, full underwear, gloves, balaclava, socks, shoes and gloves.
- p) Any clothing must be unmodified and pass scrutineering checks at each event.
- q) Any clothing must display the approved unaltered decal as shown in the examples below.

<p>Balaclava: FIA label and FIA holograms on the front face only</p> <p>Top: FIA label and FIA hologram either on front or back</p> <p>Pants: FIA label and FIA hologram either on front or back</p> <p>Socks: FIA label (not FIA hologram) on the sides</p> <p>FACE / FRONT      DOS / BACK</p>	<p>Garment Label before -2013</p>	<p>Socks Shoes Gloves Prior to 2016 Does not show year</p>
	<p>Garment Label from 01/01/13</p>	<p>Socks, Shoes Gloves from 01/01/16</p>

**stand21** *Racingwear*

**SA2015** *SAFETY*

**SFI** This Manufacturer certifies that this 22" length 3.2A/5 SFI 3.2A/5 A 028001

HANS to FIA 8858 HNR SFI 38.1

In compliance with FIA Standard 8856-2015  
Manufacturer name

Gloves Socks Label Before 01/01/2016  
In compliance with FIA standard 8856-2000  
Manufacturer name

In compliance with FIA Standard 8856-2000  
Manufacturer name  
Year of manufacture: 2016

Standard 8856-2000  
RS.000.00  
«Manufacturer's Name»  
Year of manufacture: 20XX

Garment + Underwear Label Before 01/01/2016  
Standard 8856-2000  
RS.000.00  
Manufacturer name  
Year of manufacture: 0000

CONCEPTEUR & FABRICANT  
since 1970  
DESIGNER & MANUFACTURER

## 2.0 Compliance

### 2.1 Technical Inspection

#### 2.1.1 Team Representative

- a) Designated representative (a single person, not multiple) who may OFFICIALLY speak for the team.
- b) Designee for any protests or appeal submissions or changes to entry or credential information.
- c) Changes to the designated representative must be in writing to the Series Administration.
- d) A Driver(s) cannot be a team representative unless they are the only team member.
- e) In the case that the primary representative is incapacitated, an alternative may be designated.

#### 2.1.2 Event Inspection

- a) At each event, all vehicles will be given a schedule time for an inspection of their vehicle for compliance.
- b) All Driver(s) safety equipment (fire suits, helmets etc.) will also be inspected for compliance.
- c) A maximum of three (3) team members are permitted during official inspection.

#### 2.1.3 Vehicle Declaration Sheet

To be submitted at each event prior to qualification, where details from the previous declaration have changed. Penalties up to disqualification may be applied for non-compliance. The [Vehicle declaration](#) summarizes vehicle parameters and "current" seals fitted to the vehicle. The competition department will continue to move towards allowing electronic submission of this information in 2018.

#### 2.1.4 Annual Inspection

It is required for all vehicles in the series for compliance with sanctioning body and series insurance:

- a) It must be completed at first event of the year the vehicle competes in.
- b) Inspections follows form(s) available on series web site.
- c) A Compliant vehicle will receive a USAC tamperproof "ID No." decal. The Decal will be mounted to the permanent chassis structure. Tampering or removal is prohibited with penalties.
- d) The Annual inspection serial number links all recorded vehicle information to the Radical Chassis Number.



#### 2.1.5 Re-Inspection

- a) Any vehicle(s) involved in incidents resulting in crash damage may have the tech sticker removed by an official.
- b) After the vehicle is satisfactorily repaired it will need to complete another/new annual inspection.

#### 2.1.6 Inspection – Vehicles Selected

- a) Concluding any official session, vehicles will be selected by the PWC Technical Manager for verification of legality.
- b) The series will determine which items are to be inspected and may request removal of parts from a vehicle.
- c) Entrant(s) shall stand the expense of disassembly, inspection and reassembly.
- d) The competition department may request "parts" for analysis of performance capabilities. "Parts" can be single or multiple components, complete cars or engines.
- e) Entrants shall take all necessary steps to enable any tests requested. It should be noted that WCV and USAC will work with manufacturers first to collect such information to prevent disruption to teams.
- f) The PWC Technical Manager may also seal, or impound, cars, parts, and/or equipment for this purpose.
- g) Neither PWC, WCV nor USAC are responsible for any loss or damage resulting from such analysis.
- h) Any results will typically remain provisional whilst such inspection or analysis takes place.

- i) Manufacturers or entrants may request that any additional inspections are completed off site.
- j) If the request is approved any and all costs for PWC to attend will be charged to entrant.
- k) A typical example would be disassembly of an engine at the engine builder's premises.
- l) Tests to establish the power output of any car may be carried out by Powertec America or Team Stradale under the supervision of the Radical Engine Department at their premises. The transportation of the car and the costs associated with same will be borne by the entrant. Such power testing will be carried out using rolling dynamometer equipment owned by Radical Engine Department and operated in accordance with the equipment manufacturers instructions.
- m) Where it is suspected that a component or structure fitted to the competing vehicle may render the vehicle ineligible under these regulations, the component or access to the component will be sealed by the Technical Delegate for subsequent examination. Where ineligibility is subsequently proven, all points accrued by the competitor from and including the date of sealing the said component, to the date of the examination, shall be forfeit.
- n) Where costs are incurred as a result of any eligibility check, as may be reasonably requested either by the Technical Delegate or the Championship Organisers, these will be borne by the competitor.
- o) As a method of control, any component on a competitor's car may be removed by the Technical Delegate and exchanged for a similar component provided by the Championship Organisers. This includes the ECU. Whilst efforts will be made to ensure that the condition of the exchanged parts is similar, responsibility for the care of exchanged components lies with the recipient. Exchanged components may be returned on completion of the race.

## 2.2 Official Measurement

All cars may be weighed during Parc Fermé – after any track session at the event as required by the Technical Delegate. The official scales are available for teams as specified in the event schedule except when being used for scrutineering. These scales will be identified and have a valid calibration certificate. Other scales may be nominated with the agreement of the Stewards. All dimensional measurements will be made using the official scales while the car is stationary on the flat horizontal surface **with the driver** in the vehicle.

### 2.2.1 Weight

Base Weights for each vehicle is listed below. Cars with drivers will be required to meet the minimum class weights with finishing driver and driver equipment, as weighed on the Championship Scales as provided by PWC and Radical Sportscars.

Class	Chassis	Minimum Weight
Masters Class	SR8 RX	800 kg / 1763 lbs
	RXC Race Spyder V8	890 kg / 1962 lbs
	RXC Race Spyder TT	1075 kg / 2370 lbs
	RXC Turbo (GT3)	1160 kg / 2257 lbs
1500 & 1340	SR3 RS, RSX	700 kg / 1543 lbs

### 2.2.2 Ride Height

- a) The ride heights at designated measuring points cannot be below the minimum **value of 40 mm**.
- b) Official measurements are from the series flat pad / surface.
- c) Official Hankook tire target hot pressures for 2018 are 26-28 psi for all vehicles. Post session pressure adjustment prior to technical inspection is prohibited.
- d) The minimum ground clearance is 40mm. Under no circumstance can any part of the bodywork, or of the suspended part of the car, be below a horizontal plane passing 40mm above the ground, the car being in normal racing trim with the driver aboard.
- e) A gauge of 40mm may be used by Technical Delegate before or after races or qualification practice to check the ground clearance. Location of ride height flat patch to be determined and communicated by the technical delegates at each event.

**NOTE:** Measurement allowances for a car with severe body damage, chassis damage, or suspension damage that would affect the measuring of the ride height will be on a case by case basis.

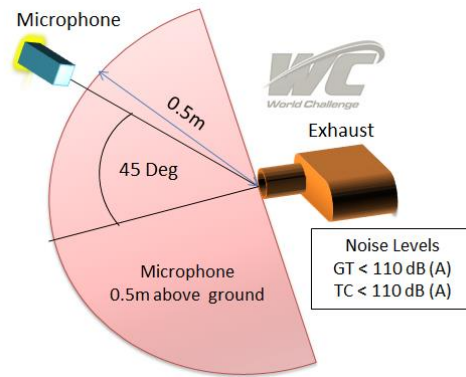


### 2.2.3 Sound Test

**All** vehicles must meet the WC sound requirements of **110dBA** or less. The exhaust noise will be measured at three-quarter of the maximum revs. Measurement will be taken at a distance of 0.5m (20") and at a 45 degree angle to the point of exit of the exhaust.

(This is the same requirements as the FIA Art 257A section 5.3)

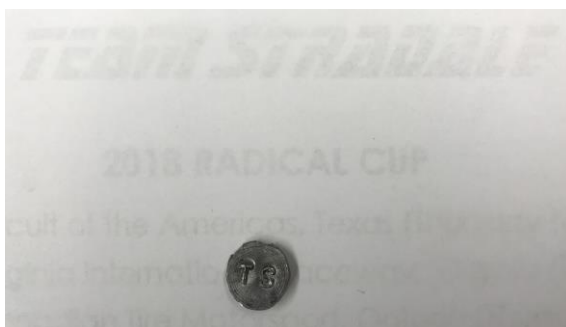
**NOTE:** cars exceeding the limit can be black flagged and removed from the track



Local circuit regulations, including the use of drive by noise measurement, **may** apply and competitors will be notified of any such procedures by either specific instructions for a meeting or notification by the co-ordinator.

### 2.3 Official Seals

- The team's responsibility is to ensure all mandatory seals are officially sealed and recorded prior to qualifying.
- Broken or incorrect seals to those recorded by officials will result penalties up to disqualification.
- Change of an engine at any time after qualifying results in a starting position at back of class
- Where possible manufacturers and technical suppliers are encouraged to utilize electronic sealing of their engines. Teams will generally be exempt from an electronically sealed engine(s) being dismantled and inspected at the track. Engines may be dismantled at the track under extenuating circumstances, such as suspected seal tampering, etc.



## 2.4 Non-Compliance of Vehicle

**Any** inspected vehicles found to be non-compliant during or after official sessions are subject to a penalty. The burden of proof to show that the vehicle is compliant rests with the entrant and not the series.

### 2.4.1 Non-Compliant Parts

Non-compliant parts/components are subject to seizure by PWC and may not be returned.

### 2.4.2 Non-Compliance Penalty

- a) The PWC Technical Manager will document the infraction, citing the rules broken and advise both the team and PWC Competition Director of suggested penalty. The PWC Competition Director will make the final approval for the penalty including interpretation of rules and specifications.
- b) Minor infractions causing the car to fail could be given a "Car Repair Order". If the infractions are not remedied in a timely manner, the penalties increase through fines, loss of times or exclusion.

## 2.5 Driver Safety

All drivers must meet the minimum safety requirements outlined in section TR 1.0 of these regulations.

### 2.5.1 Driver Exit Test

- a) Driver must be buckled in the race seat wearing all their race clothing.
- b) The driver must turn off the master electrical switch, touch the fire system actuator as if activating it, remove the steering wheel, release the harnesses, window nets equipment etc.
- c) Within Ten (10) Seconds, the driver must exit the vehicle through the door, and be standing with both feet on the ground outside the vehicle. (Note – FIA Appendix J Article 257A - 13.2 requires this same procedure in 7 seconds.)

### 2.5.2 Rear Visibility

- a) Two (2) OEM rear view mirrors for the correct vehicle make and model are required.
- b) Drivers, seated normally, may be tested that they can see vehicles following and alongside of them.

## 3.0 TECHNICAL SPECIFICATIONS

All references to standard parts and or materials in these regulations shall be taken as being the Radical Sportscars original specifications and drawings. In all cases of dispute, query or clarification or ruling, Radical Sportscars (UK) will have the final say on eligibility of parts.

### 3.1 Chassis

- a) Powder coated tubular steel space frame chassis with aluminium panels and integral roll over bar completely standard and unaltered. This includes thickness of panels and rivet spacing.
- b) Towing Eye: Towing eyes must be fitted conforming to FIA Appendix Art 259.14.6
- c) An FIA approved collapsible crash box structure supplied by Radical Sportscars must be fitted to the chassis during championship events.
- d) All Radical Models are manufactured to a standard specification and may not be altered. All chassis repair work must be carried out by Radical Sportscars Ltd.

### 3.2 Bodywork/Aerodynamics

- a) Any aerodynamic device manufactured by Radical Sportscars for the particular model, listed on the Radical SR3/ SR3 RSX and SR8/RXC Coupe/Race Spyder 2018 international order form or Radical web shop may be fitted as supplied, i.e. front splitter, front diffuser, dive planes, single plane rear wing, double plane rear wing, rear diffuser or roll bar fairing.
- b) Any SR3 Generation 3, "Short Stroke" variant i.e. an SR3 RS that displays a Red Air Box but is not an SR3 RSX may be retrospectively fitted with the SR3 RSX body work and rear wing.
- c) Any SR3 RS manufactured before April 31 2014 cannot be fitted with SR3 RSX bodywork or rear wing.
- d) Any SR3 RSX cannot be fitted with SR3 RS bodywork or rear wing.
- e) Any SR8 constructed prior to 01 January 2017 cannot be fitted with the MY2017 SR8 bodywork kit.

### 3.3 Engine

All engines are prepared and sealed by Radical Engine Department for Radical Sportscars Ltd. All repairs and rebuilds must be undertaken by Radical Engine Department.

Class	Car	Engine	Throttle Body (mm)
Masters Class	SR8	RPE 2700cc RPX V8	
	Spyder	RPE V8	
	Spyder	EcoBoost TT 3500cc V6	
	RXC GT3	EcoBoost TT 3500cc V6	
1500 Class	SR3 RS	Suzuki 1500cc Gen 1	42
	SR3 RS	Suzuki 1500cc Gen 2	42
	SR3 RSX	Suzuki 1500cc Gen 3 (Short Stroke)	45
	SR3 RSX	Suzuki 150cc Gen 4	45
1340 Class	SR3 RS	Suzuki 1340cc Gen 2	42
	SR3 RSX	Suzuki 1340cc Gen 2	42

- The starter, generator and ignition system must be Radical parts fitted as standard.
- All competitors must have all out of season engine work carried out by Radical Engine Department, Powertec America or Team Stradale.
- Competitors not having out of season work carried out will have their engine seals inspected by the Technical Delegate prior to qualification for the first event.
- Once registration for the 2018 Radical European Masters has been accepted ALL engine work for the duration of the 2018 Championship must be carried out by Radical Engine Department, Powertec America or Team Stradale.
- The oil to be used throughout the Championship will be the specification as specified by Radical Sportscars and Radical Engine Department. Technicians are at liberty to take random oil samples at their discretion to confirm adherence to oil specifications. Failure to conform to recommended oil specification and service intervals would render the engine warranty null and void. Use of non-specified oil will render the car non-compliant and therefore ineligible for that event.

### 3.4 Cooling System

- The oil and water radiators as supplied as standard by Radical Sportscars must be retained. It is permitted to tape off the radiator to control the temperature.
- Pre-heating of oil and water is permitted.

### 3.5 Induction System

- The entire induction system including injector system must be standard Radical parts for the engine. The standard air box and filter as supplied by Radical Sportscars must be retained and used.
- Previous generation SR8 (Chassis number 241 and below) cars must run the RX induction system.
- Any SR3 RS manufactured before April 31 2014 (Chassis 400 to 929) cannot be fitted with SR3 RSX throttle bodies.
- Heat resistant tape may be applied to the airbox.
- Officials may mandate the use of foam blocks in the air box to aid in meeting sound restrictions. These blocks must be used as supplied and may not be modified in any way.

### 3.6 Exhaust System

- The exhaust system including silencer must be standard as supplied by Radical Sportscars for that model and/or generation. Exhaust wrapping is not permissible. Ceramic coating is not permissible.
- Any SR3 RS manufactured before April 31 2014 cannot be fitted with SR3 RSX exhaust manifold or exhaust system.
- Officials may mandate the addition of noise quietening products to exhaust systems. These must be used as supplied and may not be modified in any way.

### 3.7 Ignition System

- a) The standard Radical Sportscars ECU must be retained. It is not permitted to reprogram the ECU. The Technical Delegate may on a regular basis supply a replacement ECU, which the competitor must change on request.
- b) The ECU must be located in the position as supplied from the factory. Heat shielding the ECU is free but it must not restrict removal when required.

### 3.8 Fuel Delivery System

- a) The standard fuel pump as supplied by Radical Sportscars must be retained.
- b) Heat shrink or heat insulation of fuel lines, wiring loom and wires may be fitted. This must be easily removable for inspection, if required.

### 3.9 Suspension

- a) All cars may be fitted with AVO or INTRAX shock absorbers supplied by Radical Sportscars. No internal modifications are permitted.
- b) Spring rates front and rear are free. Alternate front anti-roll bars and rear anti-roll bars as supplied by Radical Sportscars, may be used.
- c) The front and rear suspension is double wishbone. The front and rear suspension is fitted with the unique Nik-Link anti-roll system, except on the RXC Race Spyder/RXC Coupe.

### 3.10 Transmission

- a) A separate gearbox catch bottle must be located near to the gearbox breather and connected by a braided hose on all SR8 cars.
- b) The Radical Pneumatic paddle operated shift system may be fitted.
- c) The reverse drive system as supplied by Radical Sportscars must be retained and operational by the driver when seated in the driving position at all times.
- d) The final drive system must be standard as supplied by Radical Sportscars. Drive ratios may only be adjusted by changing sprockets/gears supplied by Radical Sportscars.

### 3.11 Electrics

- a) Exterior lighting must run with the minimum front lighting kit as specified below. Brake lights must be fitted and in working order, and must not be wired in a way that allows them to be switched off.

SR3 RS	Headlight buckets, covers and 1 pair of driving lights.
SR3 RSX	Headlight buckets, covers and LED array
SPYDER	Headlight buckets, covers and 1 pair of driving lights.
RXC	Headlight buckets, covers and 1 pair of driving lights.

- b) RXC Coupe will need additional FIA light if not fitted with an RXC Spyder tail.
- c) Radical Sportscars' high intensity LED rear lamps may be installed and in working order. Two lights may be installed equally spaced about the vehicle centre. A centrally mounted, high intensity FIA Approved LED rear light must be fitted and working. When Wet tires are fitted then the car MUST run with its high intensity LED rear light switched on.
- d) Battery - An electrically powered starter motor and battery are mandatory and must be operable by the driver when normally seated and capable of repetitive starts.
- e) Alternator - Must be standard as supplied by Radical Sportscars, and be in working order.
- f) Data logging – Only Data Loggers supplied by Radical Sportscars are permitted, however these will be used for drivers' guidance only. Official times will be provided by the official timekeeper.
- g) The fitting of a transponder is mandatory.
- h) The Technical Delegate shall have access to data and data equipment.

## 3.12 Brakes

### 3.12.1 General

- a) Only brake pads supplied by Radical Sportscars may be fitted.
- b) The fitting of a cockpit adjustable bias adjuster as supplied by Radical Sportscars is permitted.
- c) A mesh screen supplied by Radical Sportscars may be fitted across the brake duct apertures on all cars to prevent ingestion of grass and debris to the brake ducts.
- d) Radical Sportscars and the Technical Delegate may allow extra brake cooling to be fitted to cars based on specific track conditions. This will be notified by a Technical Bulletin issued to all teams for a specific event only.
- e) RXC Spyder models may be fitted with the Bosch M4 ABS and traction control system as supplied from Radical Sportscars.

### 3.12.2 Masters Class:

- a) RXC Race Spyder, Radical 6 pot front and 4 pot rear calliper Vented Discs, Front 360mm, Rear 330mm
- b) Optional RXC Vented Discs 350mm front and vented 310mm
- c) RXC Coupe Radical 6 pot front and 4 pot rear calliper Vented Discs, Front 380mm, Rear 330 mm
- d) SR8 Radical 4 pot calliper front and rear Vented 280mm discs
- e) Optional SR8 300mm vented discs
- f) Optional SR8 carbon 280mm vented discs

### 3.12.3 1500 and 1340 Class

- a) SR3/SR3 RSX Radical 4 pot calliper front and rear Vented 260mm diameter discs
- b) Optional 280mm (SR3 & SR3 RSX)
- c) Any SR3 RS manufactured before April 31 2014 cannot be fitted with SR3 RSX brakes or brake lines

## 3.13 Wheels and steering

- a) Single piece wheels as supplied by Radical Sportscars.
- b) Steering wheel diameter may be changed to suit drivers' preference, and all steering wheels must be supplied by Radical Sportscars.

## 3.14 Tires

Hankook tires marked with the Radical Trademark on the tire wall as supplied by Radical appointed tire distributor. Tire compound for each Event will be declared by Hankook.

### **A maximum of:**

Masters Class - (SR8/RXC Race Spyder/RXC Coupe)	8 slick tires
1500 and 1340 Classes - (SR3)	8 slick tires

- a) Tires may be used for qualifying and for racing. Timed practice tire usage is unrestricted but the same compound tire should be used throughout the Event. Wet weather tire quantities are unrestricted. Serial numbers from the slick tires to be used during qualifying and racing must be declared on the Radical Championship Tire form. Top copies of the form are to be retained by the team/driver and the bottom copy must be handed to the Technical Delegate prior to the start of each qualification.
- b) Should the Technical Delegate deem a tire unsafe for racing the competitor will be permitted to purchase a replacement tire. If the replacement tire puts the competitor over his/her permitted tire allocation, then for the following race he/she will forfeit 5 championship points per tire over and above the allocated number.
- c) The use of tire heating equipment/heat retention devices, tire treatments or compounds, is prohibited.
- d) All tire valves MUST be fitted with valve caps, during ALL sessions at the event.
- e) When necessary the organisers may set a maximum wheel camber setting. This will be communicated by Championship Bulletin and may require parts to be sealed by the Technical Delegate. Failure to comply with specified values will warrant the vehicle ineligible.

### 3.15 Fuel tank & fuel

- a) Fuel tank as supplied by Radical Sportscars must be retained and unmodified.
- b) Each car must be fitted with a Radical Fuel testing 'T' piece plus a Radical dry break valve fitted to the fuel line to facilitate safe fuel testing.
- c) There will be a control fuel from a single supplier. The nominated fuel supplier is Hyperfuels (Gulf Racing Fuels). Fuel used must be at Ambient Temperature as supplied.



## 11.0 Articles / Appendices

### 11.1 Official Tires

All Hankook tires must be purchased from an Official Radical Dealer as listed below. Tires should be ordered well in advance of the event. Tires must be used unmodified, as supplied by the Official Tire Supplier. Filing, buffing, or any other disguising of tire sidewall is prohibited. The use of tire warmers, chemical treatments, or any means to artificially enhance tire performance is prohibited.

#### Official Sizes and Compounds:

Chassis	Size	Tire Dry/ Wet
SR3 1340 / SR3 1500 / SR8	200/580 R15 F 260/610 R16 R	Ventus F200 Dry Ventus Z217 Wet
RXC Spyder / GT3	235/620 R17 F / 260/660 R18 F 300/660 R18 R	Ventus F200 Dry Ventus Z207 Wet

#### Tire Dealers:

<p>CALIFORNIA - RADICAL NORTHWEST Sonoma Raceway, 29681 Arnold Drive L5, Sonoma, CA 95476</p> <p>Anthony Ward mail@radicalnorthwest.com +1 (415) 716-6666 <a href="http://www.radicalnorthwest.com">www.radicalnorthwest.com</a></p>	<p>ILLINOIS - TEAM STRADALE Autobahn Country Club, 3795 Centerpoint Way, Joliet, IL 60436</p> <p>Francesco D'Avola info@teamstradale.com +1 (815) 727-7234 <a href="http://www.teamstradale.com/">www.teamstradale.com/</a></p>	<p>NEVADA - SPRING MOUNTAIN RACING Spring Mountain Motorsports Ranch, 3601 NV-160, Pahrump, NV 89048,</p> <p>Sean McGray sean@springmountainracing.com +1 (775) 727-6363 <a href="http://www.springmountainmotorsports.com">www.springmountainmotorsports.com</a></p>
<p>TEXAS - MOORESPEED 7910 Burleson Rd Bldg 2, Austin, TX 78744</p> <p>Price Cobb PriceCobb@moorespeed.com +1 (512) 474 7223 <a href="http://www.moorespeed.com/">www.moorespeed.com/</a></p>	<p>VIRGINIA - WISKO RACE ENGINEERING Virginia International Raceway, 1112 Ace Drive, Alton, VA 24520</p> <p>Danyel Torres Delgado info@wiskoracing.com +1 (844) GO-WISKO <a href="http://www.wiskoracing.com">www.wiskoracing.com</a></p>	
<p>CANADA - WEST August Luxury Motorcars 884 McCurdy Place, Kelowna, British Columbia V1X 8C8</p> <p>Dave Cormier dave@radicalcanadawest.ca +1 (250) 888-0208 <a href="http://www.radicalcanadawest.ca">www.radicalcanadawest.ca</a></p>	<p>CANADA - EAST 7033 Telford Way, Unit 23 Mississauga, Ontario L5S 1V7</p> <p>Robert Burgess robert@radicalcanada.ca +1 (416) 420-0057 <a href="http://www.radicalcanada.ca">www.radicalcanada.ca</a></p>	



Trackside Tire Fitment Service  
Hankook Race Tire – Danny Van Dongen  
[info@hankookracetire.com](mailto:info@hankookracetire.com)  
Tel: 1-800-287-5013 or 1-305-809-0356

## 11.2 Official Fuel



Official fuel is Gulf Racing Fuel - Radical. The use of any other blend, additive or manufacturer is prohibited.

### Fuel Testing

- a) Random Fuel testing will occur at each event.
- b) Fuel tested will be against a reference sample taken from the supplier at the individual tracks.
- c) Tests include but are not limited to Dielectric, Specific Gravity, Acid test, Gas Chromatography etc.
- d) Penalties for non-compliance may include points loss, disqualification, and/or fines to \$10,000.00.

### Ordering Information

- All Fuel **MUST** be pre-ordered **at least 14 days** prior to each event "load in" date, using the online form.
- See TR 11.11.2 for a summary of the contact information per race location.
- Note: A charge of \$100.00 per drum applies for all late orders.

### Gulf Fuel / Class Specifications:

Class	Fuel
Masters	Gulf Racing Fuels Radical 100 Unleaded
1500	Gulf Racing Fuels Radical 100 Unleaded
1340	Gulf Racing Fuels Radical 93 Unleaded

### Fuel Distributor:

All fuel must be ordered well in advance of the event. Please contact:

#### **HYPERFUELS, Distributor of Gulf Racing Fuels**

12455 Westpark Drive #G-6  
Houston, Texas 77082

Phone: 281-496-5100

Fax: 281-496-5101

Email: [sales@gulfracing.net](mailto:sales@gulfracing.net)

[www.gulfracingfuels.com](http://www.gulfracingfuels.com)



### 11.3 Data Monitoring

All vehicles are required to record data for the series. Radical supplied AIM dataloggers and LIFE engine management systems are mandatory and must be in full working order.

#### Pressure sensor (optional)

- An additional PWC series pressure sensor to record manifold pressure is optional.
- Installation must be at the approved location specified on the homologation or by competition department.
- Sensors must be connected directly with an uninterrupted continuous line of tubing to the manifold.
- Deliberate use of restrictive fittings, olives or adjustment of resistive measurement is prohibited.
- Example of Series sensor, fittings and calibration decals shown below.






Sensor displayed is the AEM 3.5 bar sensor with a 1% tolerance. (AEM # 30-2130-50).



## 11.4 In Car Cameras

- Teams must provide their own in car cameras.** The cameras must be set to the specification described below. It is recommended that teams have enough equipment and media cards to be able to accommodate multiple sessions per day.
- The Primary camera view is required and maybe requested by the Race Stewards. Teams not providing data at the Stewards request will be subject to penalties. See below for the current approved cameras list.
- Teams must provide their own memory cards.** Minimum SD card requirements are 16 Gb, class 10, with download speeds greater than 50 Mbyte/s.
- The Primary camera shall be mounted on the roll structure or on the bodywork, pointing forward. It must be positioned to record objects 60 feet away at heights from 22-52 inches. Cameras must be securely mounted right side up to withstand vibrations and a sustained 25-g deceleration.
- Minimum camera resolution is 1080p at 30 fps, with super wide FOV. Maximum camera resolution is 1080p at 60 fps, with super wide FOV.

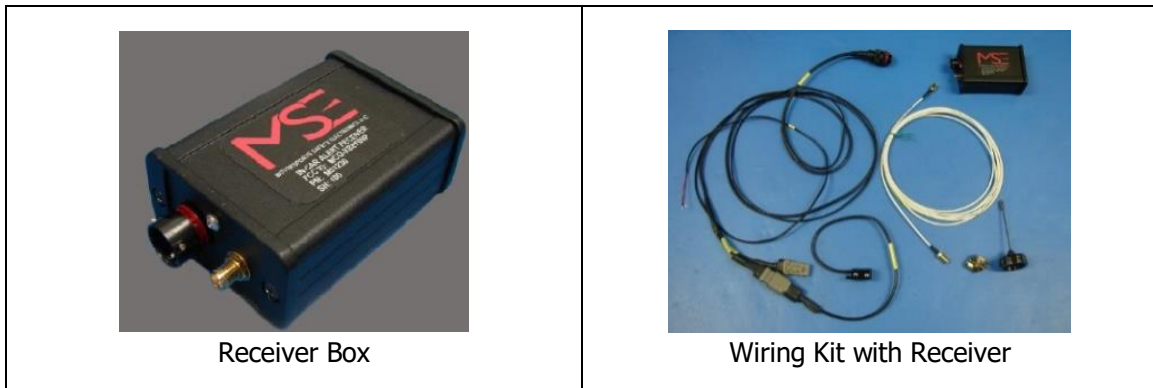
2018 Approved In Car Cameras List:

 <p>MoTeC V2 Camera</p>	 <p>Aim Smarty Cam HD</p>	 <p>Vbox Video HD</p>
 <p>Go Pro Hero 3 or Newer</p>	 <p>ReplayXD</p>	 <p>360 Fly HD</p>
 <p>Olf one.five 4K HDR</p>		

Note: If a camera is not listed above, please contact the PWC Competition Department for approval prior to the event the camera will be used.

## 11.5 On Board Yellow Light System (Optional)

**Please note for 2018 Radical customers are not required to install the yellow light system.** Race Control will still activate for any teams which have the system installed. When activated by race control, the system activates "in car" Yellow LED warning lights to illuminate and alert the driver when the course is full course yellow.



- Cars may be equipped with the specified yellow light system receiver, antenna, and warning light.
- The yellow warning light LEDs should be prominently located on the cars dash in clear sight for the driver, and secondarily of the required in-car camera.
- Integration of the warning lights into the data logging shift light system is permitted and recommended.
- Antennas must be mounted as high as possible on the bodywork or the roll structure.
- Modifications to the system is prohibited.
- All teams are responsible for purchasing a wiring kit. Wiring kits can be purchased directly from the manufacturer Motorsport Safety Electronics (MSE) See TR 11.7.4. Receiver Boxes can be purchased or rented. To purchase a receiver, contact the manufacturer MSE. Rental receiver boxes are rented directly from the series, on a per weekend, first come first served basis. Teams renting receiver boxes are still required to purchase a complete wiring kit. Contact Staci Langham, prior to an event, at [slangham@wcvision.com](mailto:slangham@wcvision.com) for more information on receiver box rentals.

### Supplier Information:

Motorsports Safety Electronics (MSE)

Bruce Natvig

+1 (765)-319-3399,

[bruce.natvig@motorsportssafetyelectronics.com](mailto:bruce.natvig@motorsportssafetyelectronics.com).

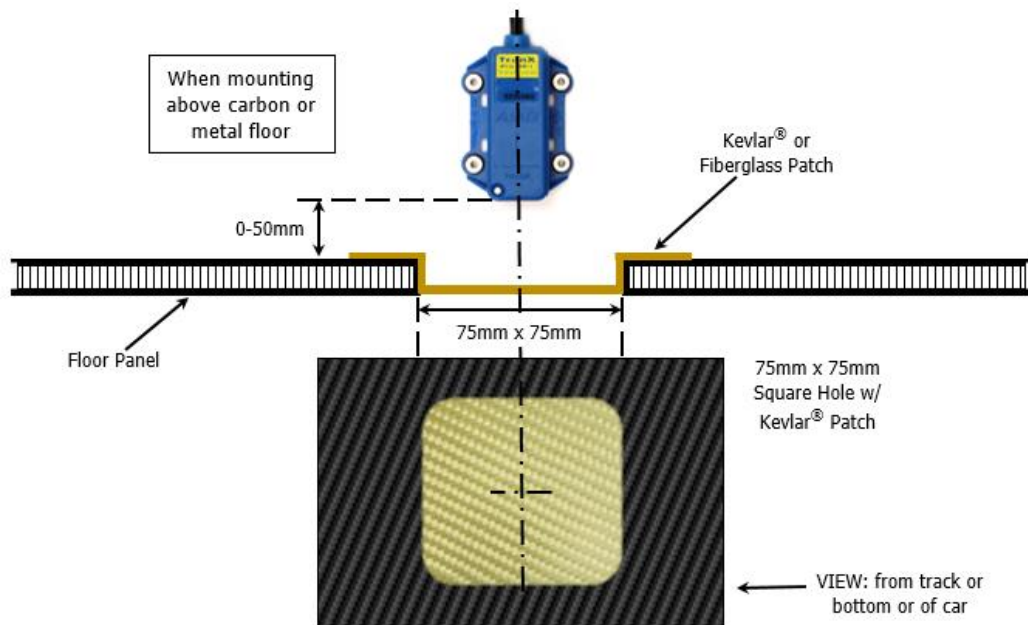
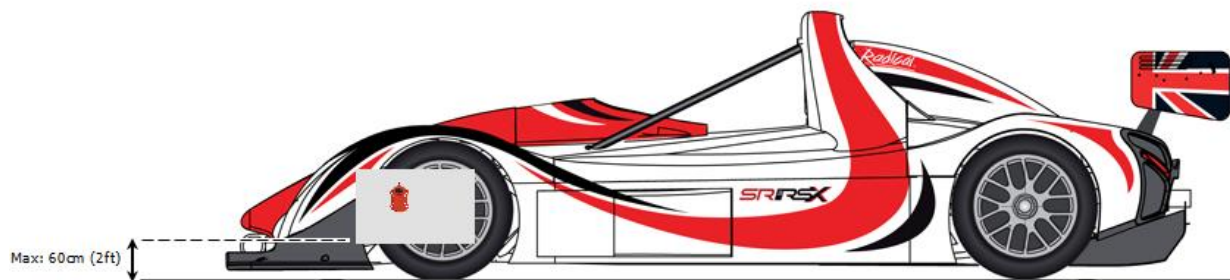
## 11.6 Transponder Specification

11.6.1 Transponder - A "standard" MYLAPS®/AMB® transponder is required.



### 11.6.2 Transponder Mounting

- Transponders shall be directly connected to master electrical switch, with no other switches inline. Mounting must be less than 60cm (2ft) from the ground and front axle centerline.
- Orientation must be vertical (arrow pointing to track "down") with LED facing outboard.
- Transponder must have clear view to track surface. If mounted above a carbon or metal floor, a 75mm x 75mm square hole is required. The hole can be covered with a Kevlar or Fiberglass patch.
- As per sporting regulations, intermittent or failed transponders that prevent a competitor from being scored and must be fixed, or the competitor/team may incur a penalty. The transponder serial number links Car Number, Vehicle class, Driver Name and Team Name. Any changes to these must be made in writing to the competition department.



### Lap Timing and Scoring Transponder – Vender information

MyLaps USA - Balton Aulls

2030 Powers Ferry Road (South East) -Suite 110, Atlanta, GA 30339 U.S.A.

+1 (678) 816-4000, [Balton.Aulls@mylaps.com](mailto:Balton.Aulls@mylaps.com)

## 12.0 Glossary

**ASN** (National Sporting Authority) - A national governing body of car competitions recognized by the FIA.

**ACCELERATION ZONE:** - Defined area defined by cones adjacent to course, prior to the Start Stand.

**ACCESSIBLE** - Capable of easily being reached.

**ACCUS-FIA** (Automobile Competition Committee for the United States) - The ASN of the United States of America.

**ACTIVE SUSPENSION** - Electro-mechanical and/or feedback control to any suspension components.

**ADHESIVE** - A chemical liquid that fuses multiple components together without fusing into a single component.

**AEROFOIL** - Any device or part of a car, whose principal effect is to create additional positive or negative force.

**ALTERNATE TRANSMISSION** - A variant to the OEM transmission, casing, ratios, engagement, shift etc.

**ALUMINIUM** - Original British pronunciation/spelling of Al<sub>3+</sub> Non Ferrous lightweight metal. See the Competition Director.

**ALUMINUM** - Current US pronunciation/spelling of Al<sub>3+</sub> Non Ferrous lightweight metal.

**ASSOCIATED PARTS** - The parts, hardware, etc. needed to make a component, or system, work.

**AUTOMOBILE** - See "Car". Used in reference to the automobiles approved for competition.

**BLOCKING** - A change of vehicle position "defending" driver's current position.

**BODYWORK** - All entirely sprung parts of the car in contact with the external air stream, except parts associated with the mechanical functioning of the engine, and tractive power.

**BOP - COMPETITIVE PARITY** - Conformity between cars based on a variety of performance window criteria.

**CAR** - Land propelled vehicle running on four non-aligned wheels, with at least two being used for steering.

**CHASSIS** - The structural part of the automobile that the body and mechanical systems are attached to.

**COCKPIT** - Also referred to as driver/passenger compartment. Internal volume of the main cell of the car.

- Area is defined by the OE dimensions of the roof, floor, doors, sides, windows, deck lid, and firewall.

**COLD AIR INDUCTION** - Takes cold air into engine without pressurizing the air.

**COMPETITION** - An event where at its conclusion, separate individual positions are awarded.

**CONTROL LINE** - The plane across the track which the cars are officially timed.

**DOOR** - Hinged floor to roof bodywork component that gives access to cockpit, excluding windows, or rear hatch.

**DOUBLE-FILE LINE** - Two adjacent, single-file lines.

**DRIVER** - A person named as the driver of an automobile in any competition.

**DUCT** - A pipe, tube, or channel used for transportation of a fluid including air.

**ELECTRONICALLY CONTROLLED** - Any process, that utilizes semi-conductor or thermionic, technology.

**ELECTRONIC DRIVER AIDS** - Any system that may or may not be initiated by the driver that causes a parameter, component(s), to adjust independently, in order to increase efficiency, or help minimize driver error

- Examples include paddle shifting, stability control, launch control and traction control.

**ENCLOSED** - Surrounded by a material.

**ENTRANT** - Person or organization who submits the entry for a competition. The entrant may also be the driver.

**EVENT** - Shall consist of official practice, qualifying and a race(s).

**FAIRING** - Any item whose primary function is to produce a smooth outline to reduce drag and air resistance.

**FASTENER** - Mechanism to maintain component in a fixed position serving no other purpose (Bolt, nut, screw).

**FIA** (Federation Internationale de l'Automobile) - The International Federation of National Automobile Clubs.

**FINISHER** - See Sporting Regulations .

**FIREWALL** - Sealed bulkhead providing separation of the cockpit area from the engine compartment,

**FLOORPAN** - Material that makes up the bottom of the cockpit, from the firewall rearward.

**FOOTWELL** - Areas of the floor pan occupants place their feet while seated. Excludes areas under OEM front seats.

**FORCE MAJEURE** - An event or effect that cannot be reasonably anticipated or controlled; an Act of God.

**INDUCTION SYSTEM** - Any attached part(s) from the outer face of the throttle body to the inlet port.

**INTAKE** - An opening through which fluid/air enters an enclosure.

**INTERNATIONAL SPORTING CODE** - Texts of the various regulations as published by the FIA.

**JOKER TIRES** - Substitute tire(s) that maybe used in a marked qualifying set without penalty.

**LAP RECORD** - The official fastest lap for each class, at each circuit. It can **ONLY** be classified for race time.

**LUBRICANT** - Friction reducing liquid used on any moving parts to prevent "sticking" between multiple surfaces.

**MARKED TIRE SET** - Tires uniquely marked by the series for use in qualifying or race.

**MECHANICAL COMPONENTS** - All those necessary for the propulsion, suspension, steering and braking, as well as all accessories, whether moving or not, which are necessary for their normal working.

**METALLIC** - Typically opaque or shiny material with good electrical and thermal conductivity.

**ORIGINAL** - Also referred to as OE, OEM or STOCK, as fitted to a new car approved by the DOT, or equivalent, for sale and road use. By default, U.S. spec parts shall be used if car is sold in U.S.

**ORIGINAL PROFILE of BODYWORK** – Unmodified OE profile of PRODUCTION bodywork. Shall include all lines, creases, openings for ducts/vents, etc.

**OUTLINE** - A line marking the outer-limits of an object or figure.

**PASS** - The overtaking car being clear ahead of the overtaken car.

**PWC** - Pirelli World Challenge.

**RAM AIR** –Intake design which by vehicle motion increases static air pressure inside of the induction system above ambient pressure. Air tight systems using piping/hose from a duct or other sealed inlet source located in a high-pressure area of the vehicle are also considered ram air systems.

**REAR SEAT PLATFORM** - The raised area of the floor pan where the bottom cushion of rear seat is mounted.

**REPLICA** - Reproduction parts (excludes decals of parts) made to resemble the OE part or assembly.

**RESTRICTIVE** - Serving to restrict and regulate.

**SANCTION** - The documentary authority, granted by the official sanctioning body, to organize and hold a competition.

**SEMI-AUTOMATIC GEARBOX** – Transmissions where a gear change is aided by electro-mechanical components.

**SEVERE BODY DAMAGE** - Bodywork damage of multiple panels that require replacement, or significant repair.

**SINGLE-FILE LINE** - A line of cars arranged one vehicle **behind** another with no visible overlap as view from the front (not straddled behind).

**SPECIFICATION** – Detailed documentation of dimension, measurement, etc.

**SPEED EVENT** – Event(s) timed over a defined distance, or timeframe at vehicles maximum performance.

**SPRUNG SUSPENSION** - Whereby, all wheels are suspended from the body/chassis unit by a spring medium.

**SR** – Sporting Regulations

**SRO** – Stephane Ratel Organization

**SUPERCHARGING** - Increasing mass flow of the fuel/air mixture in the combustion chamber (over the mass flow possible by normal atmospheric pressure, ram effect and/or dynamic effects in the intake and/or exhaust system) by any means whatsoever. The injection of fuel under pressure is not considered to be supercharging.

**SUPERFICIAL ACCIDENT DAMAGE** - Minor damage on the chassis, drivetrain, or suspension not requiring component replacement.

**SUPPLEMENTARY REGULATIONS** - Additional to the general regulations which apply to a specific event.

**SURROUND** - To enclose on all sides.

**SURVIVAL CELL** - The area located inside of the roll cage structure located within the cockpit of the car.

**SUSPENSION STABILIZER** – A removable device that when added controls or limits suspension movement.

- Watt's linkage, trailing arm, panhard rod, radius arm, traction rod, torque arm, lateral link, etc.

**TELEMETRY** - The wireless transmission of data between a moving car and a third-party device.

**TIRE** – The rubber ring mounted around the rim of a car wheel.

**TOOL** - An implement for performing or facilitating mechanical operations. Cannot be a person.

**TR** – Technical Regulations

**TRACK** - Distance from outermost point on the passenger side wheel to equivalent point on the driver's side.

**TURBOCHARGING** - See "Supercharging".

**USAC** – United States Auto Club – Official FIA sanctioning body of the Pirelli World Challenge.

**VEHICLE** - See "Automobile". Used in rules in reference to the automobiles approved for competition.

**VISIBILITY** - Capability of being seen, perceptible to the eye, apparent, evident.

**WCV** - WC Vision, LLC

**WELDING** - The process of fusing one or more components into a single unit (e.g. TIG, MIG,)

**WHEEL** - Center and rim. The addition of a tire constitutes a "Complete Wheel".

**WHEEL RIM WIDTH** – Measurement from bead seat to bead seat.

**WHEEL WICKERS OR PEELS** – Any aero device that attaches to the body and sticks out in front of the tire.