



General Regulations for Rallies

2016 v1

GRR Section 6

RallySxS(TM) Regulations

Notice: The term "RallySxS(TM)" refers to NASA Rally Sport's program allowing SxS (Side by Sides) to compete in a stage rally format. RallySxS(TM) is the NASA Rally Sport's brand of this kind of competition. Be sure to use the (TM) when referring to the program.

1 SxS Eligibility

1.1 SxS Registration Papers

It is understood that SxSs are generally not street legal, and will not be required to present registration documents at registration.

1.2 Street Legality

Allowing SxSs to compete at a rally within this rule set, by itself, grants no special legal authority for these vehicles to drive on public roads. Each rally must restrict SxSs to transiting only on routes where they are allowed, whether by permission of landowners, by applicable laws, or special permits issued by the appropriate authorities.

1.3 SxS Insurance Papers

It is understood that SxSs are generally not street legal, and will not be required to present submit insurance information at registration.

1.4 SxS Eligibility

A SxS is a vehicle with a similar layout to a standard two seat automobile with a driver and co-driver with the exception that the envelope of the cockpit is not fully enclosed. Vehicles must be production based SxSs constructed by a recognized national manufactures which are available for purchase by the general public. Exterior bodywork and pieces must be present and visually similar to the original components unless specifically allowed in these regulations. Otherwise non-eligible vehicles may compete at the discretion of NASA Rally Sport. "One-off" vehicles specially built from the ground up for competition use are prohibited.

All vehicles must be inspected by a NASA Rally Sport Technical Inspector prior to the event.

No SxSs with two stroke engines are permitted.

No custom framed SxSs are permitted. The intent is for these rules to apply to commonly available SxS that one can purchase from a dealer, and not to custom, desert race buggy-style vehicles.

The engine and chassis must be of a matched design. Engine swaps or replacements with an equivalent stock engine are allowed. Replacing the engine with an engine different than the stock spec is not allowed.

All SxSs must use the stock frame or chassis without major modifications. Suspension attachment locations must remain stock.

2 Vehicle Preparation Regulations

All SxSs must meet these NASA Rally Sport RallySxS(TM) Regulations. Each series or event may impose additional regulations.

2.1 General Requirements

Checks may occur at any time during the rally for the proper functioning of any equipment listed in these General Requirements. At any moment during the event it is each competitor's responsibility to prove to technical stewards or sporting stewards that their SxS conforms to the regulations in their entirety.

2.2 Lights

- a) One headlight minimum.
- b) A red rear light and brake light.
- c) All SxSs must have two front and two rear turn signals when participating in any events where the SxS transits on public roads.

The headlight and taillight must be switched on throughout the race so as to facilitate overtaking of and by other competitors or organizers vehicles. Failure to respect this regulation will result in a one minute penalty per stage or transit where it is observed.

2.3 Wheels and Tires

2.3.1 Wheels

- a) Each wheel must have a maximum diameter of 15".
- b) Each wheel must have a maximum width of 9".
- c) Wheels made from forged magnesium are forbidden (including OEM magnesium wheels).
- d) The wheels are otherwise unrestricted.

2.3.2 Tire Rules for Gravel/Sand/Unpaved Events

- a) The choice of tire is free except that no "Blade" or "Sand" tires are permitted.
- b) Each tire must be a maximum of 26" in diameter.
- c) Inner tubes are allowed.
- d) The use of studded tires is forbidden for non-snow/ice events.
- e) The use of any device for maintaining the performance of the tire with an internal pressure equal to or less than the atmospheric pressure is forbidden. Mousse, Tireballs, or other non-standard inflation systems are prohibited.
- f) The interior of the tire (either within the inner tube or the space between the rim and internal part of the tire) must be filled only with air or nitrogen.

2.3.3 Tires Rules for Tarmac Events Only

Tarmac events will be limited by the following additional restrictions. All tires must be designed to work in a rain environment. *Examples* of legal tarmac tires are: Pirelli MT 90 A/T Scorpion, Michelin Anakee, Metzeler Tourance, Continental TKC-80, Pirelli MT60-R.

Tire choice is restricted:

- a. No racing slicks
- b. No knobbies
- c. No DOT knobbies
- d. The stock tire pattern must have grooves that begin within three quarters of an inch of the usable edge of the tire.
- e. Inner tubes are allowed.
- g) The use of studded tires is forbidden.
- h) Tarmac tires that are “full-dirt” or “100% dirt” are forbidden.
- i) Tarmac tires that are “full-street” or “100% street” are forbidden.
- j) The use of any device for maintaining the performance of the tire with an internal pressure equal to or less than the atmospheric pressure is forbidden. Mousse, Tireballs, or other non-standard inflation systems are prohibited.
- k) The interior of the tire (either within the inner tube or the space between the rim and internal part of the tire) must be filled only with air or nitrogen.

2.3.4 Tires Rules for Snow/Ice Events Only

- a) The choice of tire is free.
- b) Inner tubes are allowed.
- c) The use of studded tires is allowed.
- d) Stud length, as measured from the outer surface of the tire, is unrestricted.
- e) Studs must be installed from the outside of the tire without piercing the inner wall of the tire.
- f) The quantity of studs installed is unrestricted.
- g) The use of any device for maintaining the performance of the tire with an internal pressure equal to or less than the atmospheric pressure is forbidden. Mousse, Tireballs, or other non-standard inflation systems are prohibited.
- h) The interior of the tire (either within the inner tube or the space between the rim and internal part of the tire) must be filled only with air or nitrogen.

2.4 Exhaust System

Mufflers are required.

Exhaust systems must not be of a temporary nature. Exhaust gases must exit at the extremity of the system.

Parts of the frame may not be used to carry exhaust gases.

Spark arrestors are not required.

Noise limit testing procedure will be per SAE J2825. The maximum permitted noise level from the exhaust shall be 92db (A scale) at idle. During a slow RPM increase to 3500 the limit is 96 db (A scale). The measurement will be taken at a distance of 20 inches from the SxS in an area 45 degrees either side from the centerline of the exhaust outlet.

2.5 Identification

Each SxS shall provide a 8" high by 8" wide space on each side of the SxS for identification numbers. The organizer will provide numbers to be affixed to these spaces. Any other large numbers on the vehicle must be covered.

No indication of class is required.

2.6 Miscellaneous

- a) A horn with a 90 Db minimum noise level is required.
- b) A rear view mirror is required.

2.7 Navigation

The following devices and items are allowed for use in navigating the course:

- a) The organizer-supplied 2.25" roll chart.
- b) The organizer-supplied route book.
- c) The stock odometer.
- d) An auxiliary odometer with visual output may be added or may replace the stock odometer. It is allowable that this additional odometer can be calibrated.
- e) Paper maps.
- f) GPS devices.

2.8 Engine

The lower engine cases and crankshaft must be from a production engine. Preparation is free. Repairs during the race are free.

2.9 Frame

The materials for frame construction are free, with the exception of titanium being excluded. Titanium is allowed for the rear sub-frame and seat support if originally specified by the manufacturer.

2.10 Modifications

Modifications not restricted elsewhere are free.

3 Classes

Production (SXSP) and Turbo Production (SXSTP).

Production Class:

- 1000cc maximum
- No turbo allowed

Turbo Production:

- 1000cc maximum
- Turbo allowed

A sample of vehicle eligible to compete are:

- Can Am Commander 1000X & 1000XT
- Can Am Commander 800R
- Can Am Maverick 1000R & 1000X rs
- Polaris RZR XP 900
- Polaris RZR S 800
- Artic Cat Wild Cat 1000

3.1 SXS ATV General Regulations

All SxS vehicles must meet pieces of the GRRs Section 3 as noted in the appendix with the following exceptions listed in 3.1.1 and 3.1.2:

3.1.1 Bodywork

1. The bodywork shall be original in appearance, though original and aftermarket bodywork accessories may be fitted, such as a windscreen or rear tray deletion kit, provided the original external shape can be identified.
2. A securely fitted panel of rigid material such as aluminum or GRP shall be fitted to the door opening to restrain limbs within the confines of the vehicle.
3. A roof plate covering the entirety of the roll cage must be fitted. It may be made of 0.125" aluminum installed with clamps. No drilling of the roll cage will be allowed to attach the roof plate.

3.1.2 Interior

1. The interior of the vehicle is free except those items regulated by Section 3 or Appendix B.
2. Seat Mountings may be replaced to allow for aftermarket seats to be installed.

3.2 Vehicle Safety Specifications

5, 6, or 7 point harnesses are required as per GRR 3.9.

One 10BC or two 5BC fire extinguishers are required per GRR 3.13.

A tow strap is required per GRR 3.29

Regardless of the presence of a full windscreen or not, all racers must have shatterproof eye protection. The visor of a full face helmet does fulfill this requirement.

3.2.1 Roll Cages

Aftermarket well-built roll cages made for racing are recommended. No factory stock roll cages will be allowed. Factory cages will only be allowed if modified and reinforced and tied into rear bumper/frame at multiple points. Gusseting of the factory cage is required.

At a minimum:

- 1 Stock roll cage may be used with the following mandatory changes:
- 2 The stock roll cages forged joints must be removed and joint welded per Appendix B.
- 3 The stock roll cages must be mounted by welding to the frame per Appendix B
- 4 Appendix B diagram 253-6 Reinforcement of the main roll cage to the center frame rail or front upper cross member.
- 5 Gussets must be installed at all major intersections, including diagonal and rear down braces, where single weld fractures can affect occupant's safety.
- 6 There must be one or more diagonal braces in the main hoop.

3.3 Lights and Vision

Per Section 3.23.

It is recommended windshield of made of 1/4" Lexan be installed

3.4 Engine

The engine shall be unmodified from the manufacturer's original specification per Section 3.5.6.

3.5 Transmission

1. The original gearbox, differential/s and drive shafts must be used.
2. The CVT drive belt is free.
3. The clutch is free.

4. Infrared sensor to monitor CVT belt temperature recommended and may become required in the future for stage rally events with stages exceeding 10 miles in length.

3.6 Electrical

Refer to Section 3.5.6, Article 8

3.7 Shock Absorbers

Refer to Section 3.5.6, Article 11

3.8 Suspension

Refer to Section 3.5.6, Article 12

4 Safety Requirements

4.1 Road Worthiness

All competing vehicles must be roadworthy and, the following items in particular must be adequate and functioning properly:

- a) All brakes
- b) Horn
- c) Headlight and taillight
- d) Tires
- e) Exhaust system
- f) Front and rear indicators

4.2 First Aid Kit

A comprehensive first aid kit shall be carried. The first aid kit at a minimum must include:

- a) Gauze pads or rolls
- b) Adhesive tape
- c) Elastic/Ace bandage
- d) Safety pins
- e) Scissors
- f) one "space blanket"
- g) First aid manual.

4.3 Warning Devices

The rider must carry three standard, full-sized, warning triangle meeting Federal Motor Vehicle Safety Standard #125. Removing the internal ballast is allowed.

Each SxS must carry a full color laminated 8.5"x11" "Green OK / Red Cross" paper. Printing the following links and laminating them is sufficient.

<http://www.nasarallysport.com/organizer-resources/Route-Book-Red-Cross.pdf>

<http://www.nasarallysport.com/organizer-resources/Route-Book-Green-OK.pdf>

4.4 Helmets and Race Suits

All Drivers must wear all safety equipment during competition per Section 3.35 including 3.35.1.3 (Head and Neck Restraint device).

4.5 Window Nets

Ribbon style window nets meeting the SFI standard must be installed on each passenger opening.

5 GRR Applicability

The entirety of the GRR sections 1 and 2, shall apply to RallySxS(TM) competitors. While the GRR Sections 1 and 2 are written to be "vehicle-neutral"

with respect to the wording of "car" versus "SxS" it is to be understood that the all GRRs concepts apply to SxS riders.