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944-SPEC Racing Series™ Official National Rules

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1 Definition and Claim

The Porsche 944™-924S™ spec class is a class for those individuals that wish to race a Porsche in a competitive series with limited expense and low cost of operation. These rules are intended to control costs and reduce any performance advantage from the cars so that driving ability and race setup are the greatest factors in determining winners. The following are approved and disapproved items for the class. The spirit of the class is for all cars to be equal in weight and horsepower and be competitive with one another. The focus will be on driver ability and not dollar ability. This class is not intended to be an engine builder or innovator's class.

The mark Porsche is recognized as registered to Porsche Cars North America with the United States Trademark and Patent Office.

1.1 Every effort will be made to ensure these rules remain unchanged with the exception of CCR mandated safety requirements or clarifications until December 1, 2009.

1.2 944-Spec is a restricted class. Therefore no modifications/changes are allowed unless specifically outlined in these rules.

2 General Rules

2.1 Parts

All parts must be factory stock from one of the eligible year models, except where otherwise noted.

2.2 Parts Update/Backdate

Stock parts may be updated or backdated, except where otherwise noted.

~~2.3 Allowed Modifications~~

~~In general, modifications which improve aesthetics, access to systems, safety or reliability will be allowed and encouraged provided they offer no performance advantage whatsoever. Any such modification not specifically allowed elsewhere in these rules must receive prior approval of the Series Director. The final decision will be at the sole discretion of the Series Director.~~

3 Format

These rules are not intended as guidelines; rather they shall serve as the complete set of rules, and must be strictly followed. These rules and addendums specify the only modifications allowed.

If these rules do not expressly state a modification is allowed, it is prohibited.

All rules and regulations disputes will be resolved per the Club Codes and Regulations© (CCR).

4 Eligible Models

1983-1988 Porsche 944, Normally Aspirated, 2479 cc, **eight valve** engine

1987-1988 Porsche 924S, 2479 cc, **eight valve** engine

4.1 Chassis Swaps

A 944 spec may utilize any year chassis in the above eligible models as well as the 1987-1988 944S and 1989 944. No other 944 or 924 type chassis may be used to build up a 944 spec. In all cases body work, engine, transmission, engine electrical and suspension components must conform to the list of eligible models and to the modifications expressly listed in these rules.

5 Sanctioning Body

The 944-SPEC Racing Series™ is sanctioned by National Auto Sport Association (NASA). All events are governed by these rules, applicable addendums, and prima fascia rules, as well as those found in the latest version of the NASA Club Codes and Regulations © (CCR).

All decisions made by the series administration are final, except under certain conditions, as specified by the CCR.

6 Safety

6.1 General

All safety standards not specified herein shall conform to the NASA Club Codes and Regulations (CCR). All rules related to safety are intended to meet or exceed those of the NASA CCR.

6.2 Roll Cages

Roll Cages must conform to the specifications found in the CCR using six (6) or eight (8) mounting points to the chassis (except as noted below). The seventh and eighth points, if used, must attach to the firewall or front foot wells. Only two (2) bars are one (1) bar is allowed to attach to each of these points extending from the closest roll cage A-pillar. No bars may pass through the firewall. The front floor mounts must be either on the floor or the doorsill of the car. Cages may be welded to the A and B pillars for safety using no more than four (4) additional mounting points for a total of twelve points (12). Cages may be bolted or welded in place.

6.3 Electrical Master Switches

Electrical master switches are required and must be installed per the Section 15.8 of the 2007 CCR.

7 Decals

All 944 SPEC racecars are required to permanently affix specified decals and logos. This is in addition to any decals required per the NASA CCR. Series sponsor decals may also be required.

8 Measurements

8.1 Specified Measurement

Whenever the manufacturer or these rules do not specify a measurement, the common average measurement will be used. This common average measurement shall be determined by either 1) calculating a mean average of at least three measurements from the corresponding parts found on other vehicles, or 2) the series technical administrator will make a determination based on any other reasonable method, providing that the data, system, or logic that was used be made known. The second option is only permitted under circumstances where option number one becomes impractical, as determined by the Series Director.

8.2 Tolerances

All published measurements infer a tolerance of +/- one-half of the last specified decimal place. All rounding will be done to the nearest decimal place that is specified by the manufacture or these rules. In a case where a measurement falls exactly on the halfway mark, it shall be rounded up or down in favor of the competitor. This section does not apply whenever the manufacturer, or these rules, specifies a tolerance.

9 Protests

Competitors may protest the mechanical compliance of another competition vehicle by filing a protest according to the NASA CCR.

10 Weight

10.1 Minimum - Vehicle

Minimum weight requirements must be met immediately following all qualifying sessions and races. The car including driver must weigh at least 2600 pounds. ~~The battery may be replaced but it must be securely mounted in the stock location and must be capable of starting the car.~~

~~Lexan may be substituted for window glass only in the doors.~~

10.2 Additional Weight – Ballast

10.2.1 Additional weight shall serve no other purpose than to increase the weight of the vehicle. This additional weight shall be known as “ballast.”

10.2.2 Ballast shall be made of solid metal, and must be installed securely. All ballast must be secured using at least one 3/8-inch grade 5 bolt, two ‘fender washers’ and a locking nut system for every ten pounds of weight.

Example: A seven-pound block requires at least one bolt system as described herein. A 30-pound block requires at least a three-bolt system.

10.2.3 All pieces of ballast must be bolted through the floor pan on the passenger side of the cockpit, no further rearward than the front holes of the seat bolts. **The floor pan may be reinforced as required to ensure a secure mounting of the ballast. The ballast must be mounted on the top surface of the floor pan.**

11 Engine

11.1 General

All rules related to engines are intended to ensure parity in horsepower between cars. All engines, components, and parts must have been offered for sale in a Porsche 944 from model years 1983-1988 with 2.5 liter eight valve engines only, sold by a dealer in the United States of America. All engines and their internal components must remain stock, except as provided by these rules, and within factory specified tolerances. Cars may be updated and backdated with parts from the Porsche 944 and 924S from model years 1983-1988 with 2.5-liter eight-valve engines only.

11.2 Balancing

Balancing and lightening of engine parts and engine components is not allowed.

11.3 Cooling System

Ethylene glycol-based anti-freeze is prohibited for track safety. Distilled water is recommended as a replacement. Use of additives, such as Redline Water Wetter is permitted. Heater core bypass or block off systems are allowed. No additional water cooling devices are allowed. Radiator fans may be direct wired with switches.

11.4 Radiator

Any radiator may be used provided it is mounted in the factory OEM location without modification.

11.5 Heads

Cylinder heads may be shaved for trueness. Maximum compression ratio allowed for all cars is 10.5:1 for all eligible model years. This is intended to allow the maximum compression ratio specified for 1988 US cars plus sufficient allowance to true the head more than once. This compression ratio may be achieved in earlier model year engines by shaving the head.

11.6 Gaskets

OEM or OEM replacement gaskets are required.

11.7 Thermostat

Any thermostat is allowed. The thermostat may be removed. **ADVISORY:** In the interest of engine reliability, a thermostat is strongly recommended.

11.8 Oil Cooling

Any external oil cooler, such as the factory turbo unit, may be added or used to replace the factory oil cooler. Oil pressure reservoirs, such as the Accusump, may be installed provided their installation conforms to NASA CCR.

11.9 Engine Modifications to Improve Reliability

The following modifications may be made to the internal components of the engine to ensure reliability. No other modifications may be made.

11.9.1 Crankshafts may have one additional hole drilled in each rod journal.

11.9.2 A “trap door” baffle in the bottom of the oil pan may be added to prevent oil starvation in left hand corners. This baffle typically consists of a vertical plate with a free swinging one way panel. This plate shall be welded in to the sump of the oil pan in the approximately 2” from the side of the oil pan which contains the drain plug. Non-stock windage trays and non-stock crank scrapers are not allowed.

11.9.3 A ring around the oil pickup screen may be added. The oil pickup and drain tube may be reinforced or extra supports added.

11.9.4 A steam vent may be added to the rear of the cylinder head. The steam vent shall consist of a hole drilled into rear vertical surface of the cylinder head approximately 1" below the cam tower mating surface. A thread fitting (or plug) shall be installed in this hole with a hose routed to the coolant expansion tank with a T-fitting into the radiator vent line. The radiator vent line is the small (approximately ¼ diameter) line extending from the top of the radiator to the coolant expansion tank.

12 Induction / Exhaust / Fuel Systems/Engine Management

12.1 Throttle Body, Intake Manifold and Air Flow Meter

The throttle body and intake manifold must remain stock with no modifications. The external surface of the intake manifold may be painted or powder coated for an improved appearance only. Insulation of any part of the air intake system from the inlet of the airflow meter is not allowed. The air flow meter must be unmodified but can be adjusted (tuned).

12.2 Air Filter

Any air filter or filtration system may be used.

12.3 Ignition System

Any spark plugs and spark plug wires may be used. Offset woodruff keys are not allowed between camshaft and camshaft gear.

12.4 Fuel Filler Neck

Fuel filler restrictor must remain in the stock location. The steel spring loaded flapper door may be removed.

12.5 Computer Engine Management System

The stock computer engine management system (DME) is required. Factory unmodified chips are required.

12.6 Fuel Delivery System

All components of the fuel delivery system must remain stock and unmodified, except for the following. ~~addition of a fuel cell~~

12.6.1 The stock fuel tank may be replaced with a fuel cell(s) conforming to the NASA CCR's, located in the rear of the car no farther forward than the forward edge of the stock tank. The maximum capacity of the fuel cell system is 21.1 gallons.

12.6.2 Any fuel cap may be used.

12.6.3 A fuel sampling port maybe added.

12.6.4 A fuel tank drain system maybe added.

12.7 Exhaust System

12.7.1 The OEM/Stock exhaust manifold (header) is required. The stock header consists of two separate manifolds, one connecting cylinders 1 and 4 and the other connecting cylinders 2 and 3. Headers may be welded to repair cracks and headers may be wrapped with appropriate materials so long as the wrap is removable. Headers may not be coated or painted inside or outside.

12.7.2 Exhaust system rearward of the OEM header is unrestricted provided it serves no other function than to expel exhaust gases.

12.8 Throttle Cam

The throttle cam may be modified or replaced.

12.9 Wire Harness

The engine wire harness may be repaired or simplified. Additional sensors may be added, but they shall be for monitoring only and may not alter engine operation in any way.

12.10 Emissions Controls

All emission controls systems and devices may be removed or modified. Unused vacuum ports shall be plugged. The vacuum reservoir tank may be removed.

13 Transmission / Differential

13.1 Clutch

Any clutch disc may be used. The pressure plate and flywheel must be OEM or exact equivalent

of no less weight for particular model of car.

13.2 Differential

The stock 3.889 (9:35) final drive ratio must be used. Differentials are free.

13.3 Transmission

~~13.2.4~~ First through fourth gears must remain stock for the Porsche 1983-1988 944 naturally aspirated and 924S models. Updating to the stock shorter fifth gear from the 924S and the 1988 944 is allowed.

The allowed gear ratios (gear tooth count) are:

First	3.6000 (10:36)
Second	2.1250 (16:34)
Third	1.4583 (24:35)
Fourth	1.0714 (28:30)
Fifth	0.7297 (37:27) or 0.8286 (35:29)

13.3.1 Transmission shift linkage may be modified to remove slop or to repair worn components. The length of the shift lever and the distance of throw of the shifter may not be modified. "Short Shifters" are not allowed.

14 Suspension Components

14.1 Components

All suspension components must be stock factory parts and mounted in unmodified original factory mounting locations. Updating or backdating of suspension components (e.g., control arms, trailing arms, hubs, spindles, or factory spacers) from eligible model years is allowed provided the maximum track width is not exceeded.

14.2 Track Width

The maximum track width for all cars shall not exceed the stock 944 width ~~of 58.1 inches in the front and 57.1 inches in the rear~~. The 924S models may increase stock width by use of updated suspension components or adding spacers providing that the tires do not touch the fenders or springs at any point in the suspension travel.

14.2.1 For the purposes of inspection and compliance the maximum track as measured in 14.2.2 shall be no greater than 68.0 inches front and 67.0 inches rear.

14.2.2 Track width shall be measured by use of a mark made on the ground at the outside edge of the tires using the side wall as guide and in line with the center of the hubs front and rear. This is measured with driver as the car comes off the track. Care must be taken to ensure the suspension is not bound as this could cause a false reading.

14.3 Shocks

Shocks must be either the original factory installed shocks or the following models and part numbers. Custom valving is not allowed.

1) Koni

Front: 8641-1038 Sport, 8641-1414 Sport

Rear: 26-1209 Sport, 8040-1035 Sport

2) Bilstein **ADVISORY: These shocks may be removed from the approved list in 2009 or 2010.**

Front P30-0104

Rear: B36-0161, B36-2052

14.3.1 Shock tower braces are allowed but may only attach to the stock shock tower using the factory shock tower bolts holes.

14.3.2 Camber plates are allowed provided they bolt to the chassis using existing shock mounting holes and make no modification to the shock tower.

14.4 Springs

Any rate spring is permissible in the factory original location only. ~~Multiple coil springs are not allowed.~~ Coil-over systems are prohibited in the rear. Solid rear torsion bars up to a maximum of thirty millimeters (30mm) O.D. allowed. Hollow rear torsion bars up to a maximum of thirty one millimeters (31mm) O.D. allowed.

14.4.1 In the interest of improved maintainability, torsion bar support end caps and torsion bar ends may be modified to allow for simplified rear ride height adjustments. Holes may be drilled into the body to allow for removal of the torsion bars while the torsion bar carrier is still mounted

in the body.

14.5 Sway Bars

Any sway bars are permissible as long as they are not cockpit adjustable.

14.6 Ride Height

Any ride height is allowed, providing that no part of the vehicle touches the ground (except the tires), while in operation on track.

14.6.1 Non-metallic bumpstops may be replaced, removed or modified provided they serve no other function. Their chassis mounting points may not be modified. Cars may not rest on the bumpstops or bumpstop mounting points in static form with the car at race weight.

ADVISORY: Excessive lowering of ride height may cause premature failure of ball joints especially in aluminum control arms.

14.7 Suspension bushings

~~Any non-metallic bushings may be used.~~ Stock rubber suspension bushings may be replaced with any non-metallic bushing. Stock bushings, consisting of rubber and metal, may be replaced with a combination of non-metallic/metallic bushing so long as the metallic portion does not exceed that of the stock bushing. Factory 968 style caster blocks are allowed. No bushing may alter original suspension geometry.

14.8 Steering

OEM manual or OEM power steering may be used. The power steering rack may be converted to manual. The steering lock may be removed.

14.9 Rims

Only 15 x 7 inch ATS (Cookie Cutter) or "Phone Dial" stock wheels with offsets of 23.3 or 52.3 mm are allowed. Steel lug nuts must be used. Wheel spacers are allowed as long as the maximum track width is not exceeded.

14.10 Tires

Toyo Proxes R888, 225/50/15 must be used. No other tire brand or sizes are allowed.

14.11 Steel A-Arms

Stock steel A-arms may be box welded to increase strength.

15 Brake System

The brake system must remain stock including calipers, rotors and cylinders except as noted. ABS must be disabled even if installed by the factory.

15.1 Brake Pads

Any brake pads are allowed.

15.2 Brake Lines

Steel braided brake lines are allowed.

15.3 Backing Plates

Disc brake backing plates may be removed, replaced, or modified to accept brake duct lines.

15.4 Parking Brake

The parking brake lever and/or cables and associated parts may be removed.

15.5 Brake Fluid

Any brake fluid is allowed.

15.6 Brake Cooling

Brake cooling systems are allowed provided they use only air for cooling. Air may be vented through the fog light area in the front air dam for brake cooling. Brake cooling ducts may be installed.

15.7 Brake Rotors

Only stock rotors are permitted. Cross drilling or gas slotting of the rotors is allowed.

15.8 Brake Bleeders

Brake and clutch bleeders may be relocated, modified or replaced to improve maintainability. Excessively long lines that may aid in cooling or modifications that may allow for bleeding in motion are not allowed.

16 Appearance/ Body Structure

16.1 Exterior

The exterior must have a clean and neat appearance.

16.1.1 No air dams, wings or spoilers are allowed other than stock components.

Modification of the front air dam ~~consisting of removing the element between the fog light buckets~~ to enhance cooling is permitted. The 944 front valance may be replaced with a fiberglass unit providing that it is an exact replica. ~~Debris screens may be added to the front spoiler to protect the radiator and other openings so long as they serve no other purpose. These screens may not be used to improve aerodynamics.~~

16.1.2 Fenders and wheel openings shall remain unmodified. The front fender liners may be removed ~~or modified~~. Front and rear wheel fender opening lips may be rolled inward to maximize tire/wheel clearance. ADVISORY: This may be necessary for the 924S ~~at the to achieve its~~ maximum track width.

16.1.3 Stock "flag style" exterior mirrors mounted in the stock locations ~~on the driver and passenger doors~~ are required. Any interior mirror(s) may be used.

16.1.4 Any paint scheme/colors may be applied.

16.1.5 Body molding, antennas, license plates, license plate frames, license plate lights, and insignias and emblems may be removed. ~~Turn signals and marker lights maybe removed. Exposed holes in the body work from these lights may be left open or filled in. Tail lights must remain intact, but may be taped over with exception of the brake light area.~~

16.1.6 Hood pins are permitted. Stock hood latches may be disabled or removed.

16.1.7 No part of the bumper system may be removed or modified except for the rubber bumper moldings. ~~Tow hooks may be added to the bumpers.~~

16.1.8 Rear Hatch must be run the in stock closed position. ~~External latches are allowed.~~

16.1.9 Body work may be updated/backdated between the 924S and 944 only as a complete package including, but not limited to, front fenders, front spoiler and rear quarter panels. Body panels must be stock or OEM equivalent. Stock 924S and 944 rear spoilers (83-88 model years) may be interchanged on the 924S and 944 with no restrictions.

16.1.10 Exterior door handles in the stock locations are required.

16.2 Interior

The interior must be clean with no loose objects.

16.2.1 The driver seat shall conform to the NASA CCR. ~~The passenger seat may be removed or replaced with a racing seat. The rear seats may be removed.~~

~~16.2.2 Factory dashboard instrument panels must remain intact. Additional gauges may be added. In cars with early dashboards, replacing of the tachometer and speedometer with aftermarket components, in the factory location is allowed. Modifications to the dash as necessary to accommodate the roll cage tubing are permitted.~~

16.2.2 Dashboards may be modified or replaced with panels that will conceal the instrument cluster and remaining dashboard wiring. Dash areas must maintain a clean and neat appearance. Additional gauges may be added. Stock gauges may be removed or replaced.

16.2.3 Turn signal and wiper stalks may be removed.

16.2.4 Steering wheels may be replaced. Quick disconnects and steering wheel spacers are allowed.

16.2.5 The air conditioning system may be removed. The heater core and blower fan assembly may be modified or removed.

16.2.6 All interior trim including radio, speaker, headliner, stock seat belts, sunvisors center console, carpet, soundproofing and coatings may be removed.

16.2.7 Unused wiring, brackets, nuts bolts and studs may be removed.

16.2.8 Ducting may be added to provide fresh air to the driver/passenger compartment, providing that no modifications of the body structure are made to accommodate this addition.

16.2.9 Spare tire and emergency jack may be removed.

16.2.10 Doors may be gutted on driver and passengers sides. This includes removal of the window glass, glass operating mechanism and door structure. It is recommended that factory side impact bars be retained in the doors. Both doors must be capable of opening and closing and the stock latch must remain intact. Interior door handles may be replaced or relocated. Door windows must be open during operation.

16.3 Body Structure

The chassis structure must remain intact and stock except as noted.

16.3.1 Headlights and headlight motors may be removed. If the headlights are removed, the stock covers must be installed in the front body work in the stock location in a secure fashion. Headlight cover gaps may not be filled in or taped over. Headlight positions may not be used for ducting of air in any way. Headlights may be run in the down or up position for all daylight races. Supplemental regulations for night time racing may supersede these rules.

16.3.2 The metallic support structure of the hood must remain intact. Hood insulation padding may be removed or replaced.

16.3.3 Windshield wipers, motors and associated hardware may be removed, replaced or modified.

16.3.4 Heat shielding may be removed. This includes both foam and glued on heat shielding as well as bolt on metallic panels.

16.3.5 The stock under tray extending under the radiator to the engine support cross member may be removed. Modifications to the stock undertray are allowed, but the size of undertray may not be increased. Aluminum or plastic may be used to fabricate an undertray of the same size and shape as stock. No fabricated or modified undertray shall be sufficiently heavy as to act as ballast.

16.3.6 Sunroofs must be securely mounted. All sunroof components such as motors, cables etc may be removed. Replacement of the sunroof with a metal panel is allowed. Filling in of the gaps to create a non-sunroof appearance is allowed. Entire roof panels may be replaced with panels similar in contour and weight of stock non sunroof cars. Roof support structure on sunroof cars may be modified to match a non-sunroof configuration.

16.3.7 The battery may be replaced with a unit of any size, but it must be securely mounted in the stock location and must be capable of starting the car.

16.3.8 Lexan may be substituted for window glass in the doors only.

16.3.9 All undercoatings may be removed.

16.3.10 Unused wiring, brackets, nuts, bolts and studs may be removed.

16.3.11 Additional trailer tie down points may be added.

16.3.12 The spare tire well may be modified to allow for its removal and replacement all or in part. An example of this would be cutting the box off or making an access hatch, then reattaching the box or hatch with fasteners. The spare tire well must retain its stock shape and location in all cases. The intent of this rule is to allow for better access to the transmission while preventing any underbody aerodynamic advantages that may result from removing the tire well from the air stream on cars with 17.4 gallon steel fuel tanks. Only cars using the larger stock plastic 21.1 gallon fuel tank may remove the spare tire well entirely and install a metal panel to cover the hole at the level of the rear cargo deck.

16.3.13 The spare tire well and rear cargo deck may be removed or modified to allow for a fuel cell installation conforming to section 12.6.1 and the NASA CCR's. Underbody panels may need to be added to ensure a similar to stock airflow under the back of the car. Consult the series director for guidance.

17 Special Transition Allowance – Regional Races Only

The following modifications are allowed for 4 regional races per season as defined below in the interest of easing the transition of cars to the 944-Spec class. Drivers are encouraged to modify their cars to comply with the standard rules as soon as possible. This section does not apply for any races at NASA Nationals.

17.1 Special Transition Modifications

17.1.1 Aftermarket engine management chip is allowed with a 25lbs increase in minimum weight.

17.1.2 Aftermarket headers are allowed with a 25lbs increase in minimum weight

17.1.3 Flywheels lighter than stock are allowed with a 30lbs increase in minimum weight.

17.2 Implementation of Weight Increases

Allowances listed in 17.1 may be applied individually or all together. If multiple allowances are used then weights will be added to generate the new minimum weight. For example if just an engine management chip is used minimum weight would increase to 2625lbs, if all 3 allowances are used then it requires an 80 lbs increase in minimum weight to 2680lbs with driver.

17.3 Notification requirements

Drivers must inform the local 944 series director any time that section 17 will be used. This must be done before taking part in any 944 spec sessions. Failure to do so will be considered as “non-compliance” to the rules even if the increased minimum weight is achieved at impound. 944 Series directors should make a note in the logbook documenting the allowance, the new minimum weight and the date. If a car is inspected at impound or protested the driver is required to inform the tech officials of allowances used and the revised minimum weight before the inspection occurs.

17.4 Driver/Car Eligibility

This allowance is intended for new drivers and new cars to 944-spec. Eligibility requirements for the special transition allowance apply to the car, not the driver. Drivers attempting to use multiple cars to circumvent these requirements may be subject to harsh penalties. The requirements are as follows.

17.4.1 Car started four(4) or fewer NASA 944-spec class races in the region in the prior season.

17.4.2 Car started zero(0) races NASA 944-spec class races in ANY region in the current season while under the standard 944-spec rule set and not running under the section 17 Allowance.

17.4.3 Car started three(3) or fewer NASA 944-spec class races using this allowance in the region for the current season. A maximum of four(4) races per season per region may be run using the special transition allowance.

17.5 Driver Points/Contingencies

Drivers are eligible for all normal season points and contingencies while meeting the requirements of this section of the rules.