

NASA 944 Challenge
Official Class Rules for:
944 SPEC
944 Cup

A. Purpose of 944 Challenge

The purpose of the 944 Challenge is to create a pair of race classes for front engine Porsche's that allows some flexibility and individuality by allowing limited modifications to improve the performance of the cars. The rules contained herein are to be considered National, thereby creating a standard for all NASA Regions throughout the United States and the NASA National Championships.

B. Classes of 944 Challenge

There are three 944 Challenge classes: 1) 944 SPEC, 2) 944 Cup and (3) 944 Super Cup. The rules for each class will be listed in two separate sections; Appendix A for 944 SPEC and Appendix B for 944 Cup/944 Super Cup. The following rules are not guidelines for the class but an actual listing of the allowed and/or permitted modifications. These rules and addendums specify the only modifications allowed. **If these rules do not expressly state a modification is allowed, it is prohibited.** No item, which is allowed, shall also perform a prohibited function. Rules from 944 SPEC and 944 Cup may not be "mixed" to create a hybrid car.

C. Eligible Models

944 SPEC

1983-1988 Porsche 944, Normally Aspirated, 2479 cc engine
1987-1988 Porsche 924S, 2479 cc engine

944 Cup

All Years Porsche 8-valve: 924, 931, and Normally Aspirated 944.

944 Super Cup

All Years Porsche 8-valve 924s/944, 944S, 944S2, 951, 951S, 928, 968, 1983-84 928S.

D. 4. Sanctioning Body

The NASA 944 Challenge is sanctioned by the National Auto Sport Association (NASA). All events are governed by the 944 Challenge rules, applicable addendums, prima fascia rules, as well as those found in the latest version of the NASA *Club Codes and Regulations* © (CCR). All competitors agree to abide by the rules set forth in the NASA's Club Codes and Regulations (NASA CCR) and any supplemental rules issued by the 944 Challenge Series Directors.

Appendix A

January 9, 2008 v5

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 engine

1987-1988 Porsche 924S, 2479 cc engine

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 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.

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.

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 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.

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 addition of a fuel cell.

12.7 Exhaust System

The OEM/Stock exhaust manifold (header). 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.

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 final drive ratio must be used. Differentials are free.

13.2.1 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.

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.

14.3 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

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.

14.5 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.

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. 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

As of June 2, 2008 the Toyo R888, size 225/50/15 must be used during competition. The Toyo RA1 may be used during practice and all non timed or non competition sessions.

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.

16 Appearance

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 to enhance cooling is permitted. The 944 front valance may be replaced with a fiberglass unit providing that it is an exact replica.

16.1.2 Fenders and wheel openings shall remain unmodified. The front fender liners may be removed. 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 maximum track width.

16.1.3 Stock exterior mirrors mounted in the stock locations 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.

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.

16.1.8 Rear Hatch must be run the in stock closed position.

16.2 Interior

The interior must be clean with no loose objects.

16.2.1 The driver seat shall conform to the NASA CCR.

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.

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

Appendix B

December 5, 2007 v4

Official National Class Rules 944 Cup Classes

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1 General Rules

The purpose of the 944 Cup National Classes are to create an affordable race class for the front engine Porsche that provides for some flexibility and individuality by allowing limited modifications to improve the performance of the cars while maintaining a level playing field by adjusting minimum car weights.

There are two 944 Cup classes: (1) Cup Class, and (2) Super Cup Class. The Cup Class is designed for normally aspirated eight (8) valve front engine Porsches, with the exception of the turbo powered 2.0L model (931). The Super Cup Class is designed primarily for higher horsepower cars such as the sixteen (16) valve normally aspirated and turbo equipped front engine Porsches.

All vehicles described in these rules must use factory stock parts (OEM) from one of the eligible year models, except where otherwise noted in these rules or required by NASA safety rules. Stock parts may be updated or backdated for that model, except where otherwise noted. Stock replacement parts may be obtained from sources other than the manufacturer provided they are the exact equivalent of the original parts (OEM equivalent). Any modifications not specifically allowed elsewhere in these rules are not permitted. Note- the terms "stock," "OEM," and "OEM equivalent" are defined to be interchangeable for the purposes of these rules.

Cars may not use any driver accessible systems while on track that allow adjustment of horsepower levels that would serve to alter Dyno readings. Examples of such systems are driver-adjustable electronic tuning and engine timing advance devices, fuel pump output modification devices, boost controllers, adjustable MAP and MAF voltage clamps, and any other system that could alter the Dyno readings when measured for compliance purposes.

For each Class, there are two basic categories of car preparation including "P" cars and "S cars." Allowed modifications for each category of car and corresponding minimum weights are described in detail below. Within each category of car preparation, there are different levels of modifications allowed, along with corresponding minimum weights and horsepower limits.

2 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).

3 Eligible Models

The 944 Cup Class is open to Porsche 8-valve: 924's, 931's, and non-turbo 944's. In addition, NASA 944-Spec cars are eligible providing that they meet all the current 944-Spec rules with the exception of minimum weight and other limited modifications specifically identified as allowed for 944-Spec cars in these rules.

The 944 Super Cup Class is open to most 16-valve 944's, 951's, 928's, and 968's.

In addition, provision is made to allow lightweight 8-valve 944's. All eligible models are listed in the charts contained in Sections 9.3 and 9.4.

4 Sanctioning Body

The 944 Cup National Classes are sanctioned by National Auto Sport Association (NASA). The 944 Cup National Championship event is governed by these rules, applicable addendums, prima fascia rules, as well as those found in the latest version of the NASA Club Codes and Regulations © (CCR).

5 Safety

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. However, in the interest of safety, any participant who determines a conflict exists shall immediately report it to the series administration for clarification.

6 Decals

All 944 Cup race cars are required to affix specified decals and logos. This is in addition to any decals required per the NASA CCR.

7 Technical Compliance

Each competitor must complete an official 944 Cup Technical Compliance Form for each race season. The form must be submitted to the Class Director prior to racing the car in an event. The race car must also be made available for inspection during the event upon request by the Director.

As required by the Director, competitors will submit cars for dyno testing that will produce sheets from three separate "reproducible" Dyno pulls with SAE correction, of which the highest horsepower numbers of the three will be used. Dynamometer tests must be conducted on a DynoJet Model 248 or 224. It is the responsibility of the competitor to be within the power guidelines for the car's model, year, and level of preparation. These guidelines have been established based on the estimated performance of an engine built to the allowed specifications of that car, and include built in allowances for some variance in the testing results. To ensure fairness, an appointed official or an approved technician will operate any cars being inspected on the chassis dynamometer. Prior to the chassis dynamometer inspection the competitor may top off any fluids needed to ensure the engine and drive train are not damaged during testing (however the operator/ official conducting the testing will not be held responsible for mechanical failures during the testing). The fluids must be added with a NASA Technical Inspector present and no other modifications or adjustments may be made to the car.

If a car is tested by Officials, and found to be outside the horsepower guidelines, the competitor will be disqualified for the last official track session whether that be qualifying, a qualifying race, or a championship race. If a competitor is disqualified, he/she will be allowed to modify the car for the next qualifying or race session to come within the horsepower guidelines. Another dyno testing session will be permitted to demonstrate compliance and allow the competitor to continue to race.

8 Allowed Modifications and Weights

For both the 944 Cup and Super Cup Classes, allowed modifications vary depending on the Category and Level of preparation chosen which are listed below. Modifications cannot be mixed between Categories or Levels.

8.1 The car models under Category "P" can be modified at 2 separate Levels: "Stock" and "Prepared". Car models under Category "S" have only one set of allowed modifications.

The only allowed modifications to NASA 944 Spec cars include aftermarket DME chips, aftermarket exhaust and headers, lexan in place of glass, any OEM factory wheel in size 7x15 inch, short shifters, any Bilstein shocks except rear coilovers, and deletion of any engine pulley belts.

8.2 Category "P" Cars: Allowed Modifications – "P- Stock"

8.2.1 Engine

- (a) As delivered from the factory. No modifications to the induction system between the air filter and the exhaust ports are allowed.
- (b) Stock fuel injection and DME must be retained. Use of non-OEM DME chip is permitted.
- (c) Cars equipped with turbos cannot exceed factory specified maximum boost, nor can any of the stock turbocharger plumbing, or boost control components be replaced with non-stock components or altered in any way..
- (d) Exhaust systems and modification are unrestricted.
- (e) Machining for balancing purposes only is allowed.
- (f) All parts related to the air conditioning system may be removed, and any AC delete bracket may be used.
- (g) The use of oil coolers is unrestricted providing that the cooler(s) serve no other function than to cool oil.
- (h) No substitution or modification of mass air flow system for stock air flow metering system is allowed.
- (i) Any ignition trigger which uses a standard distributor with the stock cap and rotor to deliver the charge to the cylinder is permitted.
- (k) Valve spring retainers and clips are unrestricted.
- (l) Direct plug-in aftermarket non-programmable CD units are allowed. Any spark coil and CD unit is allowed, so long as it is not capable of changing ignition timing or offer any other performance advantage. The stock engine revolution limiter and function must be retained.
- (m) Throttle cam may be modified or replaced with any aftermarket version.
- (n) Oil pans, pan baffles, scrapers, windage trays, oil pickups, lines, and filters are unrestricted. Oil and power steering hoses may be replaced with metal braided hose (i.e. Aeroquip). A pressure accumulator/"Accusump" may be fitted. Dry sump systems are prohibited
- (o) Turbo models must use factory KLR chip.
- (p) Allow any dual-mass flywheel to be replaced with a single-mass, ferrous material flywheel. The clutch disk must be the stock diameter.
- (q) Aftermarket radiators may be used but must be installed in the stock locations.
- (r) Engine pulley belts may be removed.

8.2.2 Transmission / Differential

- (a) Limited slip differentials are unrestricted providing that an OEM ring and pinion ratio is maintained. No locked differentials are permitted.
- (b) The use of a transmission fluid cooler(s) is unrestricted providing that it serves no other function than to cool the transmission fluid.
- (c) The transmission gear ratios must be from a legal OEM transmission.
- (d) Modification to, or substitution of, the shifter mechanism which reduces the range of motion is allowed.

8.2.3 Suspension

- (a) Suspension pick up points must remain as stock in location and type. Welding of additional flat metal is allowed to reinforce suspension mounting points or suspension pieces. Added material may not connect with roll cage components or otherwise significantly stiffen the chassis.
- (b) Slotting or adjustable camber plates used to achieve suspension settings is allowed.
- (c) Torsion bars may be replaced with coil over springs.

- (d) Any shock absorbers may be used providing that they are mounted in the stock location and serve no other function. Non-stock factory shock housings with potentially adjustable spindle height are allowed if welded in the stock position and hub mounting matches factory dimensions.
- (e) Any springs may be used providing that they are mounted in the stock location and serve no other function.
- (f) Sway bars (anti-roll bars) are unrestricted providing that they are mounted in the stock location, serve no other function, and are not cockpit adjustable.
- (g) Suspension bushing materials are unrestricted.
- (h) The steering lock must be removed.
- (i) Any bolt-in shock tower brace is allowed.
- (j) Front control arms may be modified or replaced with updated or aftermarket control arms providing that the mounting locations remain the same as OEM.

8.2.4 Tires and Rims

- (a) Any rim may be used providing that it meets all other aspects of these rules.
- (b) Any tire and rim combination meeting these rules may be used providing that it does not protrude from the stock fender when viewed from the top and the rim is not more than one inch (1") wider than original for the body's model-year. Note- fenders may not be modified, however, the inner fender lip may be "rolled" to provide extra tire clearance.
- (c) Wheel spacers are unrestricted providing that they do not cause a violation of rule 8.2.4.b. Note- some wheel spacers may cause excess sheer loads on the spindle and may not be permitted for safety reasons.
- (d) Any DOT approved tire is allowed except for 944-spec cars which must use Toyo RA1 Size: 225/50/15.

8.2.5 Brakes

- (a) Brake pad material is unrestricted.
- (b) Steel braided brake lines are allowed and recommended.
- (c) Brake calipers and rotors must be OEM for the model / year of the body of the vehicle (updating / backdating is not allowed).
- (d) Parking brake lever, cables and associated parts may be removed.
- (e) Brake fluid is unrestricted.
- (f) Brake ducts are permitted providing that they serve no other function.
- (g) Grooving, slotting, and cross drilling of rotors is allowed.
- (h) Removal, replacement, or modification of dust shields is allowed.
- (i) Master cylinders must be OEM for a legal make / model within these rules. Updating / backdating is allowed.
- (j) Non-OEM brake proportioning and brake biasing devices are not allowed.

8.2.6 Body / Chassis / Interior

Removal or substitution of components other than those specifically indicated below is not allowed.

- (a) Any mirrors are permitted.
- (b) Lexan or poly carbonate is permitted to replace any glass on the car. Replacement windshields must be at least three sixteenth inches (3/16") thick.
- (c) Sheet metal modifications in the rear deck, trunk and spare tire compartment are allowed for installation of a fuel cell or to the spare tire compartment to facilitate removal and installation of transmission.
- (d) The driver's seat must be replaced with a racing-type seat meeting the CCR.
- (e) For 924 models only, flared fenders or 944 fenders may be used.
- (f) Spoilers and air dams are free providing they do not exceed maximum factory body width by any amount, maximum factory body length (not including the bumpers) by more than one inch or maximum spoiler height of the vehicle by more than 6 inches. Stock bumpers may be modified, replaced, or removed, providing that they are not relocated and that they are not larger in height, width, and depth than stock.
- (g) Modifications to the underside of the car for the purpose of improving aero effects are not allowed.

- (h) Removal of the car interior, passenger seat, A/C and heating system, head lamps and related parts is allowed.
- (i) Spare tires must be secured or removed.
- (j) Ducting may be added to provide fresh air to the driver/passenger compartment providing that no modifications to body panels are made to accommodate the ducting.

8.3 Category “P” Cars: Allowed Modifications - “P- Prepared”

Any car meeting the criteria of Section 8.2 Category “P- Stock” of these rules and having one or more of the following modifications, will progress to Category “P- Prepared.”. Allowed modifications for Level “Prepared” are as follows.

8.3.1 Engine

- (a) Any ignition system is permitted.

8.3.2 Tires and Rims

- (a) Any tire and rim combination meeting these rules may be used providing that it does not protrude from the stock fender when viewed from the top and the rim is not more than two inches (2”) wider than original for the body’s model-year. Note: fenders may not be modified, however, the inner fender lip may be “rolled” to provide extra tire clearance.

- (b) Any DOT approved tire is allowed except for 944-spec cars which must use Toyo RA1 Size: 225/50/15.

8.3.3 Brakes

- (a) Calipers, rotors, and master cylinders are unrestricted, except the number of master cylinders must be the same as originally equipped.

8.3.4 Transmission / Differential

- (a) Any ring and pinion ratio is permitted.

8.3.5 Body/Chassis/Interior

- (a) Ducting for additional coolers allowed provided it does not change size and shape of factory panels
- (b) Fender flaring is allowed.
- (c) Rear wings may be added. The maximum wing height is 9” below the level horizontal line at the top of the roof.

8.4 Category “S” Cars: Allowed Modifications All Models and Years

The following modifications are authorized on all vehicles. Modifications shall not be made unless authorized herein.

8.4.1 Engine

- (a) The original, standard intake manifold shall be maintained. No porting or polishing of the manifold is permitted except as allowed by rule 8.4.1(o).
- (b) All air entering the intake tract shall pass through the fuel injection air inlet. The air intake source shall be within the confines of the engine compartment or stock location. (i.e. no hood scoops are allowed).
- (c) Cars may alter or replace the engine management computer, or ECU, provided that all modifications are done within the OEM ECU housing. Only the stock (unmodified) OEM ECU connection to the wiring harness may be used. The allowance to modify the ECU in no way permits the addition of wiring, sensors, or piggybacked computers outside of the OEM ECU housing. The stock (unmodified) wiring harness must be used.
- (d) Adjustable fuel pressure regulators are permitted.
- (e) Fuel lines may be replaced, relocated, and given additional protection.
- (f) Air cleaner assemblies may be modified, removed, or replaced.
- (g) Air flow meter must be operational and shall not be modified.
- (h) Exhaust emission control air pumps, associated lines, nozzles, and electrical/mechanical EGR devices may be removed. Engine pulley belts may be removed.
- (i) Oil pans, pan baffles, scrapers, windage trays, oil pickups, lines, and filters are unrestricted. Oil and power steering hoses may be replaced with metal braided hose (i.e. Aeroquip). A pressure accumulator/”Accusump” may be fitted.

Dry sump systems are prohibited

(k) Any ignition system which utilizes the original distributor for spark timing and distribution is permitted. Internal distributor components and distributor cap may be substituted. Any spark plugs and ignition wires may be used. Ignition timing is unrestricted.

(k) Adjustable timing gears are prohibited.

(l) Any exhaust header and exhaust system may be used.

(m) Engines may be bored to a maximum of .040 inch over standard bore size. Factory oversize replacement pistons or their exact equivalent shall be used. Cast or forged equivalent pistons shall provide the same dome/dish/valve relief configuration, ring thickness and spacing, pin height relationship, weight, and compression ratio as factory replacement oversize pistons. Piston rings are unrestricted.

(n) Balancing and "blueprinting" of the engine assembly is permitted. Lightening of parts beyond the minimum material removal necessary to balance is prohibited.

(o) Manifold and cylinder head port matching is permitted. No material may be removed further than one (1) inch in from the manifold to cylinder head mounting face. Valve guide material is unrestricted.

(p) A tolerance of twenty five thousandths of an inch (0.025") less than the factory service limit is permitted for truing of the head. Under no circumstances may the compression ratio be increased by more than one half (0.5) point over stock. An offset key may be used to return cam timing to the factory specifications.

(q) Any clutch disc and pressure plate of stock diameter may be used, provided that they are bolted directly to an unmodified stock flywheel. Balancing of the flywheel/clutch/pressure plate assembly is permitted. Lightening of the flywheel beyond the minimum material removal necessary to balance is prohibited.

(r) Cylinder head gasket may be replaced with any gasket having the same compressed thickness as stock. Other engine gaskets are unrestricted. Engine drive belts may be replaced with others of equivalent OEM specifications.

(s) The application and/or use of any painting, coating, plating, or impregnating substance (i.e. anti-friction, thermal barrier, oil shedding coatings, chrome, anodizing, etc.) to any internal engine surface, including intake manifold internal surface, is prohibited.

(t) Any radiator may be used, provided it is mounted in the original location, maintains the same plane as the original core and requires no body or structure modifications to install. No new openings created by fitting an alternate radiator may be used for the purpose of ducting air to the engine.

(u) Oil cooler(s) may be added or substituted. Location within the bodywork is unrestricted, provided that it/they are not mounted within the driver/passenger compartment.

(v). Water cooling fans may be removed or replaced. Electrically operated fans with manual or automatic actuation may be fitted. Thermostats may be modified, removed, or replaced with blanking sleeves or restrictors.

(w). Heater hoses may be plugged. Heater water control valve(s) may be added or substituted. Heater core and hoses shall not be removed.

8.4.2 Transmission / Differential

(a) Transmission gear ratio sets must remain stock. Updating and backdating of transmissions is permitted. Mixing of gear ratios between years for specific models is permitted.

(b) Transmission fluid coolers are unrestricted providing that they serve no other purpose than to cool the transmission fluid.

(c) Ring and Pinion ratio is unrestricted. Any limited slip or locked differential may be used.

(d) Modification to, or substitution of, the shifter mechanism which reduces the range of motion is allowed.

8.4.3 Suspension

(a) Shock absorbers may be replaced provided they attach to the original mounting points. Remote reservoir shock absorbers are prohibited. External shock adjustment limited to two. No shock absorber may be capable of adjustment while the car is in motion.

(b) Any springs may be used, provided they are of the same number and type as originally fitted, i.e., coil, leaf, torsion bar, and that they shall be installed in the original location using the original system of attachment. Coil over threaded body shock/struts are permitted.

(c) Sway bars (anti roll bars) are unrestricted providing that they mount in the original location and they are not cockpit adjustable.

(d) Adjustable camber plates are allowed.

(e) Bushing material, including that used to mount a suspension subframe to the chassis, is unrestricted.

(f) No other relocation or reinforcement of any suspension component or mounting point is permitted.

(g) The steering lock must be removed.

(h) Front control arms may be modified or replaced with updated or aftermarket control arms. Front control arm mounting points must remain in the stock location.

8.4.4 Tires and Rims

(a) Any DOT approved tire is allowed.

(b) Rim type and style are unrestricted.

(c) Maximum rim size is 7" x 16" for Cup Class cars. Maximum wheel size is 17" x 8.5" for Super Cup cars. No tire and/or rim may protrude from under the fender when viewed from the top. Note- fenders may not be modified (except as provided by these rules), however, the inner fender lip may be "rolled" to provide extra tire clearance.(d) Wheel spacers are unrestricted providing that they do not cause a violation of rule 8.2.4.b. Note- some wheel spacers may cause excess sheer loads on the spindle and may not be permitted for safety reasons.

8.4.5 Brakes

(a) Brake pad material is unrestricted.

(b) Steel braided brake lines are allowed, and recommended.

(c) Brake calipers and rotors must be OEM for the model / year of the body of the vehicle (updating / backdating is not allowed).

(d) Parking brake lever, cables and associated parts may be removed.

(e) Brake fluid is unrestricted.

(f) Brake ducts are permitted providing that they serve no other function.

(g) Grooving, slotting, cross drilling of rotors is allowed.

(h) Removal, replacement, or modification of dust shields is allowed.

(i) Brake proportioning valves may be used provided that they are of the in-line, pressure limiting type.

(j) No modification or substitution of the original master cylinder, its location, or mounting is permitted.

(k) Antilock braking systems must be disabled.

8.4.6 Body / Chassis / Interior

Removal or substitution of components other than those specifically indicated below is not allowed.

(a) Any mirrors are permitted.

(b) Lexan or poly carbonate is permitted to replace any glass on the car. Replacement windshields must be at least three sixteenth inches (3/16") thick.

(c) Sheet metal modifications in the rear deck, trunk and spare tire compartment are allowed for installation of a fuel cell or to the spare tire compartment to facilitate removal and installation of transmission.

(d) The driver's seat must be replaced with a racing-type seat meeting the CCR.

(e) Spare tires must be removed.

(f) Ducting may be added to provide fresh air to the driver/passenger compartment providing that no modifications to body panels are made to accommodate the ducting.

(g) Modifications to the underside of the car for the purpose of improving aero effects are not allowed.

(h) Removal of the car interior, passenger seat, A/C and heating system, head lamps and related parts are allowed.

(i) For Super Cup 924S and 944 models only, body panels may be replaced with replica panels of non-stock materials and 944 fenders may be used for 924S models.

9 Minimum Weights

Car minimum weights vary depending on the Category and Level of preparation chosen which are listed below. Minimum weight requirements must be met immediately following all qualifying sessions and races.

9.1 Cup Class --Category "P" Cars:

Horsepower Limits

Minimum Weights

Model	Year	Prep Level	Weight(lbs)	Displacement	RearWheel Max HP
944/924S	83-88	Stock	2600	2.5L	146
		Prepared	2750	2.5L	149
	83-88	Spec	2530	2.5L	146
	89	Stock	2800	2.7L	152
		Prepared	2950	2.7L	155
924	all	Stock	2100	2.0L	113
931	79-82	Stock	2600	2.0L	146
		Prepared	2750	2.0L	149

9.2 Cup Class -- Category "S" Cars:

Horsepower Limits

Minimum Weights

Model	Year	Wgt.(lbs)	Displacement	Rear Wheel Max HP
924S/944	83-88	2700	2.5L	149
	89	2900	2.7L	155
924	77-82	2200	2.0L	118

9.3 Super Cup -- Category "P" Cars:

Horsepower Limits
Minimum Weights

Model	Year	Prep Level	Weight (Lbs)	Displacement	Rear Wheel HP
924S/931/944	All	Stock & Prepared	2450	2.5/2.7L	155
944S	All	Stock	2550	2.5L	182
944S	All	Prepared	2650	2.5L	185
944S Club	All	Stock & Prepared	2750	2.5L	195
944S2	All	Stock	2900	3.0L	205
944S2	All	Prepared	3000	3.0L	208
944S2 Club	All	Stock & Prepared	3100	3.0L	219
951	All	Stock	3000	2.5L	212
951	All	Prepared	3100	2.5L	216
951S	All	Stock	3250	2.5L	230
951S	All	Prepared	3350	2.5L	237
968	All	Stock	3200	3.0L	226
968	All	Prepared	3300	3.0L	230
968 Firehawk	All	Stock	3350	3.0L	237
928	All	Stock	3100	5.0L	219
928	All	Prepared	3200	5.0L	222
928S	All	Stock	3250	5.0L	230

9.4 Super Cup Class -- Category "S" Cars:

Horsepower Limits
Minimum Weights

Model	Year	Weight(lbs.)	Displacement	Rear Wheel HP
924S/931/944	All	2450	2.5L	160
944S	All	2600	2.5L	185
944S2	All	2950	3.0L	205
968	All	3250	3.0L	226

10 Driver On-Track Conduct

10.1 Introduction

The 944 Cup racing series is intended to be a fun, safe and competitive race series. Good sportsmanship will be valued more than where you place during the race. Basically what this means is that clean, well-executed passing will be the trademark of the series. Punting one's competition off the race track or leaning against them to gain position is unacceptable. Everyone competing in the series must understand that a well thought out and safely executed pass is acceptable while a kamikaze pass which jeopardizes both drivers and cars is not, regardless of whether the position in contention is 10th place or 1st. Metal to metal contact, including bump drafting will result in a review and possible sanctions. While a format for administering a 13/13 rule is described below, the focus here should not be on the literal interpretation of the rules, but rather the spirit.

Passing Rules: Important to remember that the 944 Cup rules for a 944 passing another 944 differ somewhat from the general NASA passing rules.

- a. NASA requires that an overtaking car's front wheel must be up to the driver of the car being overtaken before the overtaking car has a right to be there and must be given "racing room". "Racing room" is defined by NASA as at least $\frac{3}{4}$ of one car width. This rule is applied for passing cars in other than the 944 Cup classes.
- b. The 944 Cup rules for passing require basically that once a pass is initiated by an overtaking car, i.e., a pass as defined by NASA, the overtaking 944 has a right to be there, and that the leading 944 must leave the overtaking 944 racing room on the paved surface. Per NASA, the act of passing is initiated when the overtaking car's front bumper overlaps with the lead car's rear bumper. Once this overlap occurs, the overtaking 944 has a right to be there.

In addition to the normal discretion of NASA officials to deal with inappropriate and unsafe conduct during all practice and race sessions, this series will employ a modified "13/13 Rule." What this means is any driver involved in car to car contact will most likely be subject to a prescribed set of sanctions points accumulated for the year end championship. Accidents will happen in automobile racing. This is a dangerous sport. The hope is that the modified 13/13 rule will set the tone for good sportsmanship within the series and minimize the danger and expense involved in racing.

10.2 The Modified 13/13 Process

10.2.1 Conduct Steward

In the 944 Cup, the Director of the series or designee will perform the role of the conduct steward to oversee driver behavior throughout each race weekend. This includes, but is not limited to:

- ❑ Monitoring and/or stopping over-aggressive driving, in practice, qualifying and race sessions. If a driver is viewed as a threat to the safety of other drivers on track, it is within the rights of the Director to take appropriate sanctions against that driver.
- ❑ In the event of car-to-car contact, the Director or designee is responsible for the following: collection of information from all drivers involved, including videos, collection of information from corner workers, where applicable, examination of cars involved in the incident, and reporting of findings to the NASA Race Director.

10.2.3 Car-to-Car Contact

Under the modified 13/13 rule, any incident which results in car damage during practice, qualifying or race sessions will cause the following events to take place:

All drivers involved in car to car contact will be required to report to the Director or designee. Based on the data available, the Director will make a determination which driver(s) is at fault for the incident and any sanctions to be taken against the driver(s). Any driver involved in car-to-car conduct must meet with the steward before returning to the track that day or during the weekend, otherwise the driver shall be presumed to be at fault.

- ❑ Contact caused by the mechanical failure of one or more cars. Typically there will be no fault found with any driver involved, and no sanctions will be taken against any driver.
- ❑ Minor incidents involving negligible damage such a paint scrapes or tire marks. In wheel to wheel racing, it is inevitable that incidental contact will take place. In these cases, drivers involved in the incident will not incur any sanctions. The Director or designee will determine if an incident is minor.
- ❑ Actionable incidents involving significant damage. Generally, any damage beyond minor incidents involving negligible damage such a paint scrapes or tire marks, will be consider as an actionable incident. A driver that is found at fault of significant damage to another race car, will be subject to the sanctions described in Section 2.03.

10.2.4 Driver Sanctions

In the event of actionable incidents involving significant damage, drivers determined to be at fault will be subject to the following sanctions:

- ❑ First incident, the driver will automatically be placed at the rear of the starting grid for the next race. If more then one driver is involved in a single incident and determined to be at fault, the drivers will be placed in the rear of the field in the order they were on the track at the time the incident took place.
- ❑ Second incident, the driver will be disqualified for that race and points forfeited, or if the incident occurs in practice or qualifying, the driver is disqualified for the next race.
- ❑ Third incident, the driver will be suspended from the series for the balance of the season and will forfeit any points earned for that race.

Under extreme circumstances, a driver may be subject to more severe penalties should the seriousness of any incident warrant such actions in the judgment of the Director.

10.3 The Appeals Process

Drivers may file an appeal an action to the series Director. Such appeals must be in writing and presented to the Directors within 7 days. Director findings will only be overturned in the event of compelling evidence in favor of the accused driver that was not available to the steward at the time of the original decision.