SCCA
CLUB RACING

2002 EDITION

SPORTS RACER CATEGORY SPECIFICATIONS

Sports Car Club Of America, Inc.
Club Racing Department
9033 E. Easter Place
Centennial, Colorado 80112

Printed in the United States of America

The General Competition Rules of the Sports Car Club of America are intended to assist in the orderly conduct of race events and to further participant and spectator safety. They are a guide and are in no way a guarantee against injury or death to participants, spectators, or others. No express or implied warranties of safety or fitness for a particular purpose shall be intended or result from publication or compliance with these rules.

FOREWORD

Effective January 1st, of each year, all editions of the SCCA Sports Racer Car Specifications are superseded by the following SCCA Sports Racer Car Specifications Category.

The SCCA reserves the right to revise these Specifications, and issue supplements to them at any time by Tech Bulletins, Racing Bulletins, and SCCA Memos in the FASTRACK section of SportsCar.

All dimensions are in inches unless otherwise noted.

This book is property of:

Name: _____

Address: _____

City: _____

State: _____ Zip: _____

Region: _____

Homologation is required of all SPORTS RACER cars registered after January 1, 1983.

Homologation forms must be on file with SCCA Inc., Centennial, Colorado for any car to be allowed to compete in any SCCA event.

SCCA Inc.
P.O. Box 3278
Centennial, Colorado 80155
ATTN: Club Racing Technical Manager

Modifications may be made to a vehicle after it has been homologated as long as said modifications stay within the scope of the rules.

Homologation Fees

Sports Racers	**$75.00 (Per Chassis)**
Replacement Certificates	**$200.00 Each**
Special Handling Fee	**$45.00**

A special handling fee shall be charged for any special attention over and above the normal processing time. Special handling is a twenty-four (24) hour turn around process, provided all documentation is in order. The certificate is returned via U.S. Postal Service first class mail. If overnight service is necessary, the express charges are not included in the special handling fee and shall be added to the fee.

17.1.5. SPORTS RACING CATEGORY

These specifications are part of the SCCA General Competition Rules (GCR) and all automobiles shall conform with GCR Section 17., Automobiles.

Supplementary Regulations for an event or series of events may provide for combining any of these classes.

A. SCCA SPORTS RACING CATEGORY PREPARATION RULES

The SCCA Sports Racing Category shall be for automobiles which are designed and constructed for road racing competition, offering provisions for driver and a passenger, or driver alone (single-seater). They shall conform to the following requirements.

New chassis of composite construction shall be proven to meet FIA specifications for composite chassis prior to being submitted to the SCCA for homologation.

Former Formula A (F-5000) cars with appropriate bodywork may compete as ASR. If the car remains in its original Formula A (F-5000) configuration, it may also compete in Regional events as an ASR.

Effective 1/1/97, those cars formerly known as Sports Renault and/or Spec Racers or any variants of this chassis/drive train/bodywork combination will not be allowed to compete in ASR in any SCCA sanctioned event.

Cars conforming to the 1978-1984 Can-Am specifications, with aerodynamic skirts removed, may compete in ASR.

Single-seat Formula car chassis (Ex.: FA, FC, FF, FV) fitted with enclosed bodies (as specified in these rules) may run in the Sports Racing Class (ASR, CSR, DSR) appropriate for their engine displacement and GCR Section 17.. This means that ALL Formula Atlantic, Formula Continental, Formula Ford, and Formula Vees running in Sports Racing categories shall have bodywork which complies with Section A.5., of the Formula and Sports Racing Specifications. The ex-Formula car chassis need not have any former engine(s) fitted. Converted cars will maintain their former SCCA registration

vehicle numbers. Each converted car shall be Homologated and have a new Vehicle Logbook (with new pictures); however, the former Logbook will be securely attached to the new Logbook. This procedure will enable Race Officials and Scrutineers to identify a single-seat Sports Racer as formerly having been a bonafide Formula car.

New Single seat Sports Racers may be of new construction. (Design plans/ pictures shall be submitted to the Club Racing Department for homologation before competing.) **This applies to C and D Sports Racers ONLY**. Where Weber or Weber-type carburetors are specified and used, they shall retain their standard configurations of fuel distribution. This is to prohibit annular discharge carburetors.
Sports racing cars shall be classified according to engine displacement and divided into classes as follows:

A Sports Racing - Regional Status Only (Former Can-Am and F-5000)

C Sports Racing

D Sports Racing

A.1. ASR Classification - (Regional Class Only)

Turbocharging/supercharging is prohibited.

Cars shall be classified according to engine displacement as follows:

Engine Type	Displacement	Induction	Weight With Driver
Rotary Piston	2292cc Max.	Unrestricted	1326 lbs.
Racing	1300-2000cc	Unrestricted	1200 lbs.
Racing	2001-3000cc	Unrestricted	1250 lbs.
Stock block & Cyl. Heads	3001-4000cc	Fuel Injection or Carburetor, one 4150 Holley 1 11/16	1602 lbs.
Stock block & Cyl. Heads	4001-5000cc	Fuel Injection or carburetor, one 4150 Holley 1 11/16	1811 lbs.

a. Engine, Rotary Piston

1. Changing the capacity of the working chamber(s) is prohibited.

2. The eccentric shaft may be replaced with another of the same basic material, but no changes in eccentricity of journal dimensions are permitted.

3. The rotor is unrestricted providing the number of lobes remains unchanged.

4. Alternate rotor housing is allowed only when submitted by the manufacturer and recognized by the Competition Board. No changes are allowed in the epitrocoidal curve in alternate housing.

5. Rotary engine cars shall be equipped with a suitable muffler.

A.2. CSR Classification -
(SCCA Oldsmobile Sports Racers, See Section F.)

Size	Type	Induction
Up to 1300cc	2 - cycle or 4 valves per cylinder max.	unrestricted
up to 1450cc	OHC crossflow 2 valves per cylinder	carburetors only
up to 1615cc	OHV crossflow or non-crossflow or OHC non-crossflow 2 valves per cylinder	*
up to 1615cc	OHC crossflow 2 valves per cylinder	*
Rotary	Mazda 12A *Bridgeport*	48mm IDA carburetor *w/34mm venturis*
	Mazda 12A (non-peripheral port, non-bridge port)	Unrestricted

* Unrestricted carburetors or fuel injection with the intake pipe to each cylinder shall incorporate an air venturi with a maximum diameter of 37mm. The venturi shall be mounted ahead of the throttle butterfly, and all intake air for each cylinder or the entire fuel-air mixture, if prepared before this point, shall pass through it.

NOTE: Volkswagen (1.6 liter) powered cars may use the VW 16-Valve head (from 1.8 liter engine) with induction restricted to two (2) carburetors with 34mm venturis. Alternate Eurospec Sports cylinder head may be used. Alternate cylinder block from 1.8 liter engine may be used. Engines may be bored to a maximum of 1615 cc. Cam drive is unrestricted.

Volkswagen (1.6 liter) powered cars with 8-Valve head may install alternate cylinder block (from 1.8 liter engine only), crankshaft, rods, and pistons to increase displacement to a maximum of 1835cc, weight 1300 lbs, with induction restricted to two (2) unrestricted carburetors, or fuel injection w/ 37mm venturi. Cam drive is unrestricted.

Manifold: individual runner, no plenum or balance pipe

Additional eligible engines: Motorcycle-based engines with 4 valves or less per cylinder, 1615cc maximum, 42mm venturis or intake restriction, minimum weight 1300lbs. Motorcycle-based engines with more than 4 valves per cylinder, 1310cc maximum displacement, no intake restriction, minimum weight 1300lbs.Cars prepared to DSR specifications may compete in CSR with the following exceptions: minimum weight—chain drive or belt drive 1000lbs, minimum weight—all other drive types 1100lbs.

All engines in the CSR class over 1300cc shall be derived from cars listed as eligible for the SCCA Production or GT Category. Toyota 1588cc, DOHC, 2 valves per cylinder are approved. Lotus Ford 1600 Twin Cam (alternate aluminum block allowed). Honda 1595cc VTEC is approved.

C Sports Racing engines over 1300cc may be modified as provided for in the current GT 2, 3, and 4 rules, except that the bore, crankshaft stroke, and flywheel are unrestricted, providing the appropriate specified displacement limit is not exceeded. The induction restriction on the 1615cc overhead cam crossflow still applies with the carburetors retaining their standard configuration of fuel distribution. Annular discharge carburetors are prohibited. Flat bottom Formula Atlantic cars with 1600cc Cosworth engine or Toyota DOHC 1600cc 16 valve engine are allowed. Cosworth 1600cc BD series engine is approved for all car configurations (allow any BD series

iron or alloy cylinder block). Turbocharging or supercharging is allowed with a displacement factor of 1.7, restricted to 1300cc equivalent (765cc). Restricted to 36mm venturi(s). Allow Lola T-596C to run the 1600cc BDA motor in CSR. This is for those cars originally built and registered as CSR. Those CSR cars utilizing the Toyota DOHC 16V shall run a stock approved carburetor with 42mm venturis. Cosworth BDA, unrestricted carburetion. Volkswagen 1835cc, unrestricted carburetors, or fuel injection w/37mm venturi. The following are approved: Weber, Solex, SK, Mikuni, and Del Orto. *Sports Toyotas homologated in CSR with OEM transverse DOHC 1.6 liter, 16-valve engine / OEM transaxle combination may use Pectel fuel injection assembly as equipped for pro-series. Competitors must have copy of pro-series rules that allow use of Pectel fuel injection system.*

Minimum weight (with driver) = 1200 lbs. **

** All four valve engines over 1300cc (with driver) = 1300 lbs.
** All Rotary engines (with driver) = 1300 lbs.

A.3. DSR Classification

Size	Type
Up to 850cc	**2 cycle**
Up to 1005cc	4 cycle
Rotary piston of equivalent displacement cc X 2= 900cc	
Up to 1025cc	4 cycle, 2 valves per cylinder max.
Up to 1305cc	Automotive-based 4 cycle 2 valves per cylinder max.

Minimum weight of all chain and belt-drive cars: 900 lbs., with driver. All other cars 1000 lbs., with driver.

NO ENGINES USED IN D SPORTS RACING SHALL HAVE MORE THAN FOUR CYLINDERS.

DSR Induction:

Carburetion unrestricted, fuel injection unrestricted, turbocharging and supercharging restricted to engines less than 620cc with four valves or less per cylinder.

Rotary Piston Engines:

Cars with rotary piston engines by the NSU-Wankel patents shall be classified on the basis of a piston displacement equivalent of twice the volume determined by the difference between the maximum and minimum capacity of the working chamber.

Other Designs:

Turbine and steam-powered engines are prohibited.

A.4. Safety Equipment --

Shall comply with GCR Section 17. In addition:

a. Glass headlight lenses and bulbs on the front of the car are prohibited.

b. All Sports Racing Category cars shall provide protection for lower torso and legs of the driver by means of tubing and/or monocoque structure.

c. Cars shall have two (2) red brake lights fitted with fifteen (15) watt (minimum) bulbs.

d. Roll cages/roll bars shall comply with Section 18., for Sports Racers.

A.5. Bodywork (See GCR Section 17.)

Bodywork shall provide comfort and safety for driver and a passenger or for a driver only. All elements of the bodywork shall be completely and neatly designed and finished, with no temporary or makeshift elements.

a. The bodywork as viewed from the side and above shall cover all mechanical components except that the intake, exhaust, and radiators may be exposed. The bodywork shall extend over the full width of the tires for at least one third (1/3) of their circumference as viewed from the side. Ventilation slots are permitted. The tires shall not be seen as viewed from above, although the rear tires may be exposed as viewed from the rear. Cycle-type fenders (which only cover the tire and are not continuous with the rest of the body) are prohibited. Fenders shall be firmly attached to the bodywork with no gap between body and fender. Aerodynamic skirts are prohibited. See next Section for definition.

b. <u>THIS SECTION APPLIES TO C & D SPORTS RACING ONLY</u>:

It is the intent of these rules to minimize the use of "ground effects" to achieve aerodynamic downforce on the vehicle. Thus, for the full width of the body the floor pan will be a minimum of 45% of the wheelbase; the lower surface (surface licked by the airstream) shall not exceed 2.54 cm (1 inch) deviation *in any longitudinal section through the plane forming the bottom of the tub or chassis floor. The 45% minimum (of the wheelbase) dimension is measured from the point that the surface meets the full width of the body (behind the front wheel or in front of the rear wheel)*. (This is not to be interpreted as requiring a floor pan beneath the motor, transaxle, transmission, or final drive housing.) No aerodynamic devices (e.g. "skirts," body sides, etc.) may extend more than 1cm (0.394 inches) below this lower surface anywhere on the car to the rear of the front axle. Seat bucket or other protrusions shall not circumvent this rule. Aerodynamic devices shall be securely mounted on the entirely sprung part of the car and not be movable when the car is in motion. It is not permitted to duct air through any part of the bodywork for the purpose of providing aerodynamic downforce on the car. All ducted air for heat exchangers (water/oil) shall pass through these heat exchangers.

c. Dimensions

1. Height: No part of the vehicle having special or significant aerodynamic function shall exceed a height of 115cm (45.25 in) above the ground with car in normal racing trim, driver aboard. Neither the safety roll bar or the engine induction intake shall provide an aerodynamic downforce.

2. Width: The maximum width shall not exceed 221cm (87 inches) including all aerodynamic devices. However, no portion shall extend more than 10cm (3.9 inches) beyond a plane tangent to the outer face of the front and rear wheels with tires. The minimum body width between the front and rear wheels shall not extend inwards beyond a vertical plane connecting the centerlines of the front and rear tires.

3. Length: The maximum overall length shall be 485.3cm (191 inches).

4. Cockpit: The driver's seat shall be capable of being entered without the removal or manipulation of any part or panel (except for those closed cockpit cars which are specifically allowed by the SCCA). The cockpit opening shall comply with the following minimum dimensions for both single and two seater sports racers: Cockpit length: 60cm (23.662 inches) Cockpit width: 45cm (17.717 inches) maintained over 30cm (11.811 inches) from the most rearward point of the seat backrest toward the front.

d. Visibility: Bodywork shall provide visibility for the driver forward and to both sides adequate for racing conditions. Rear view mirror(s) shall provide the driver with visibility to the rear of both sides of the car.

e. Windscreens are optional.

f. Bodywork shall provide comfort and safety for both driver and a passenger. There shall be seats of equal dimension and comfort for the driver and a passenger equally disposed on each side of the longitudinal axis of the car. Note: Paragraph f. does not apply to single seat sports racers.

Seats shall be firmly attached in the car, but may provide adjustment for the size of the occupant. The body surrounding the driver and passenger compartment shall be symmetrical about the longitudinal

axis of the car. The passenger's space and seat shall remain usable throughout the competition and shall not be encroached upon by an element of the car or equipment except as provided in these Rules.

A.6. Wheels and Tires

There shall be no restriction on the size of wheels except for a minimum diameter of ten (10) inches, provided they are identical for the right and left front axles, and identical for the right and left rear axles. Left and right front tires will be the same size; left and right rear tires will be the same size.

A.7. Self Starter

Cars shall be equipped with an automatic self starter and on-board power supply operated by the driver.

A.8. Brakes

These cars shall be equipped with a dual braking system operated by a single control. In case of leak or failure at any point in the system, effective braking power shall be maintained on at least two (2) wheels. A separate hand brake (emergency brake) is not required.

A.9. Bulkheads and Tanks

Fuel tanks shall be isolated by means of bulkheads and vented so that in case of spillage, leakage, or failure of a tank, fuel and fumes will not pass into the driver or engine compartment or around any part of the exhaust system. No part of any oil or water tanks shall be exposed to any part of the driver or passenger compartment. Safety fuel cells (per GCR Sections 17., and 19.) are required for all cars registered after January 1, 1983 and will be required on all cars registered prior to January 1, 1983 effective January 1, 1995.

A.10. Homologation

Sports Racers of new construction (design, plans/pictures) shall be submitted to the Club Racing Department for Homologation before competing.

A.11. EXCEPTION:

Cars classified to compete in other SCCA Sports Racing Categories that have been modified and do not qualify for that category may be allowed to compete in the A Sports Racing (ASR) Category, in Regional events only,

with the approval of the Chief Steward. These cars may exceed forty-five (45) inches in height provided that the part of the vehicle which is higher than forty-five (45) inches above the ground shall have no special or significant aerodynamic function.

A.12. TRANSMISSIONS (This applies to CSR/DSR only): Electronic assisted gear change mechanisms and electronically controlled differentials are prohibited. Air shifters that are activated by an electric solenoid are permitted.