



Sports Car Club of America (SCCA) Southern Pacific Division SCCA – Cal Club Region

SPEC RX-7 Class Rules Effective: **January 1st, 2008**

This final approved rule set supercedes all previous rule sets
(Changes are noted in bold type)

1. GENERAL

Spec Rx-7 racecars are intended to be dual-purpose street and race vehicles. The class was conceived with the intention that costs be kept low while allowing close racing. To this end, these rules will be vigorously enforced at all SCCA-sanctioned events. These rules are absolute. They are not intended to be a guide to car preparation. Unless specifically mentioned or approved in these rules, no additional vehicle modifications may be made. Any sections referring to the GCR or the IT/CS rules that have been affected by an updating of those books, the most current versions of the GCR & IT/CS rule books apply. **Changes are shown in blue bold type.** This final approved rule change for 2007 supersedes all previous rule sets.

2. MAKE OF CAR

Mazda RX-7, 1981-1985, equipped with 12A rotary engine. S, GS, or GSL trim-level models are eligible.

3. PREPARATION RULES

All vehicles will remain Showroom Stock, as defined by SCCA General Competition Rules (2004 GCR Sec. 17.1.3 and continued in Showroom Stock Category Specifications) except for the following specifically required and/or allowed modifications.

Minimum weight - **2530 2480** lbs with driver.

A. ALLOWED REPLACEMENT PARTS.

Many of these items are available from Mazdaspeed Motorsports Development at 800-435-2508 or mazdaspeedmotorsports.com. All drivers should register with them in order to purchase Mazda Original Parts at a discount.

1. SHOCK ABSORBERS:



Brand: Tokico High Performance Gas
 Model: Front #HZ-1 069, Rear #HE-2317
 Notes: Non adjustable, blue body

2. SWAY BARS:

Brand: Suspension Techniques
 Model: 52170 is the current part number as of 2001
 (3-054 was the old number)

Notes: Front: 1 1/8", fixed; Rear: 5/8", adjustable. (Note: In the rear you may use the allowed replacement Suspension Techniques sway bar, any 1981-1985 12A model Rx-7 stock sway bar or no sway bar at all.)

3. SPRINGS:

Brand: TMC or Progress Group
 Model: TMC part number is CSM-400 "Street/Race" and
 Progress Group Part Number is 40.1150
 Notes: TMC color Blue or Black – Progress Group color Turquoise

4. AIR FILTER:

Brand: K&N
 Model: E-2700

5. ENGINE DRIVE PULLYS:

Single Belt Underdrive System

Brand: Mazda

<u>Part Name</u>	<u>Mazda Part #</u>
E-Shaft Pulley	0000-01-7201
Water Pump Pulley	0000-01-7211
Alternator Pulley	0833-78-153A

Dual Belt System

Brand: Mazdatrix or Racing Beat

<u>Part Name</u>	<u>Part #</u>
E-Shaft Pulley	11479
Alternator Pulley	11469



Note: Visit <http://www.mazdatrix.com/faq/pulley.htm> for critical information on e-shaft pulley replacement.

6. FAN CLUTCH and Fan may be removed and replaced with an electric fan. The shroud is not required

7. WATTS LINK BRACKET REINFORCEMENT

Brand: Mazdatrix
Part # MZ-1-WATT

B. TIRES

Brand: TOYO
Model: RA1 205/60R13

Notes: "Toyo Tire" designations must be displayed on the front and both sides of vehicle to be eligible for Toyo contingency. Contingency forms will be available online at teamtoyo.com. When ordering tires mention you are part of SOPAC Spec 7 group. .

C. SAFETY EQUIPMENT

1. The SCCA GCR Sections 17, 18 and 20 safety rules for seatbelts, window net, and fire extinguisher apply. The I.T.C.S. rules, sections 17.1.4.D.10.a.1-5, 17.1.4.D.10.b and 17.1.4.D.10.d-j are applicable for all other safety items.
2. Roll cage: Brand: Autopower Industries, Inc., Model RX-7, Part Number: 83591 made of 1-1/2" DOM material. ERW cages are grand fathered if the logbook was issued before 12/31/02. Material and construction defined by the SCCA GCR Sec. 18.1 and 18.2.
3. All cars must use the specified roll cage that will only be bolted in place. The following modifications may be made:
 - a. Mounting the window net and seat belt mounting brackets.
 - b. Early model roll cages must be modified to adhere to GCR 18.2.4.A, full horizontal bracing.
 - c. Outer dash vent louvers may be removed for roll cage clearance where needed.

- d. Per GCR section 9.4.2.G (2007) two side protection tubes (door bars) are mandatory on each side of car. For the purpose of safety, NASCAR style bars may be added to the Drivers and/or Passenger side.
 - e. Per GCR section 9.4.3.E.5, one (1) bar may be added in the horizontal plane between forward cage braces in the dash area, for the purpose of safety.
 - f. Per GCR section 9.4.3.H roll cage mounting plates may be added, for the purpose of safety. Each mounting plate shall not be greater than 100 square inches and shall be no greater than twelve (12) inches or less than 2 inches on a side.
4. Steering wheel lock must be removed.
 5. Watts Link Bracket Reinforcement (Mazdatrix) may be added, for the purpose of safety.

D. INTERIOR

1. The interior may be modified only as follows:
 - a. Driver's seat may be replaced with any aftermarket racing seat per the GCR ITCS, Section 17.1.4.D.9.a. Driver's Seat back must be braced per Improved Touring Category Specification (ITCS) Section 18.4.5 and head restraint per the GCR, Section 18.1.2. Passenger seat, if replaced, must meet the same criteria as the drivers seat, including mounting procedures. Both drivers and passenger seats are required.
 - b. Any steering wheel may be used, per ITCS 17.1.4.D.9.b.
 - c. The radio, amplifier, speakers, ashtray, cigarette lighter and clock may be removed. Any shift knob may be used.
 - d. Gauges may be added, but shall only be installed in the center console area previously occupied by radio equipment. Shift lights may be installed and mounted in any convenient location for driver.
 - e. Inside door handles and armrest assembly/door pocket box may be modified/removed for roll bar clearance.
 - f. The heater core may be disabled or removed
 - g. To facilitate seatbelt mounting, the stock driver's side seatbelt may be removed.
 - h. The stock interior mirror may be replaced with any aftermarket unit.

- i. All interior trim, carpeting, sound deadener can be removed except for the dashboard, shifter surround and door panels. Door panel(s) may be removed to facilitate the installation of NASCAR style roll cage bars.
2. If ballast must be added to bring the car up to minimum weight, it must be securely fastened to the floor of the passenger footwell or under the passenger seat. Refer to the GCR ITCS for ballast.
3. Alternate Pedal covers and extensions are permitted.

E. EXTERIOR

1. Cars may be repainted in non-factory colors.
2. Any exterior mirrors may be used, provided they are functional and fitted in the stock location **or mounted on the Front Fenders.**
3. Fender openings may be modified for tire clearance per ITCS Section 17.1.4.D.8.a.
4. Emblems, side moldings, side marker lights and related parts, turn indicators and related assemblies may be removed. Holes created by this removal may remain open or be used for air ducting as long as nothing protrudes beyond the body or outer portion of the bumper. Headlight sealed beams may be removed.
5. Lexan replacement windshields are authorized providing they meet the following minimum specifications. Refer to GCR Production Category Specifications (PCS), Sections 17.1.1.D.9.a.8. Hood pins and windshield clips may be added per ITCS Section 17.1.4.D.8.d.
6. The radio antenna may be removed. The remaining hole must be covered.

F. ENGINE

1. All engine electrical components must remain stock and unmodified, with the following specifically allowed modifications:
 - a. Any spark plugs may be used.
 - b. Any brand of spark plug wires may be used of 9mm diameter or less, providing they are of the original single-wire resistance type and do not include external grounding wires or any means of charge or spark boost.
 - c. Ignition coils may be replaced with any coils that will mount in the stock location.

- d. Ignition timing shall be stock (per manufacturer's specifications).
 - e. Distributor must remain unmodified.
 - f. All emissions equipment may be removed including the catalytic converter. Any equipment not removed must either be disabled or left to function as originally intended by the manufacturer. All disconnected ports and holes must be plugged. The shutter valve may be wired open but, may not be modified in any other way. The external shutter-valve actuator may be removed. Ported vacuum lines can be added for distributor advance.
2. Engine and drivetrain lubricants are free.
 3. Cooling system must remain operable and unmodified, with the exception of the following specifically allowed modifications:
 - a. Radiator may be replaced with a larger unit of the same type and material as the original, and must mount in the original, unmodified location.
 - b. 1983 and later cars may use the earlier oil cooler system, providing the early radiator is used.
 - c. 1981 and 1982 cars may use the later oil cooling system, providing the later radiator is used.
 4. Stainless steel braided oil lines may be used for oil cooler.
 5. A screen may be installed in front of the radiator and oil cooler to help prevent stone damage.
 6. Air conditioning, cold start assist system, and cruise control components in the engine compartment may be removed.
 7. Fuel system, including tank and filler, must remain unmodified, with the exception of the following specifically allowed modifications:
 - a. Fuel pumps and fuel pressure regulators are free. Regulators may be installed anywhere in the fuel delivery line to the carburetor. Replacement fuel pumps must be mounted within 12" of the original location.
 - b. The fuel tank return line shall remain as stock and shall not be used for fuel delivery to the carburetor.
 - c. The stock fuel-return check valve and fuel tank rollover valve may not be modified, bypassed or removed.

- d. Any fuel filter(s) may be used
- e. A fuel sample acquisition valve/port shall be installed per the GCR ITCS, Section 17.4.2
8. Carburetor must remain stock and unmodified except for the following specifically allowed modifications:
 - a. "Grose Jet" carburetor needles and seats may be used in place of stock carburetor needles and seats, providing the replacements are of identical size to stock.
 - b. The shutter-valve system may be disabled; however the shutter-valve butterfly may not be removed or modified.
9. Electrical charging system must be functional and operating as per manufacturer's specifications.
10. Battery must be as stock, Group 24, 24F, or 24R, and mounted in the original location. Minimum battery dimensions: H 7 1/4", W 6 1/2", L 9 3/4 minimum battery weight: 24 lbs. A 12Volt "Gell Cell" type Battery may be used as long as it is at least the same weight (24 pounds).

G. EXHAUST

1. The main catalytic converter may be removed, gutted or replaced by any E.P.A. or C.A.R.B. approved aftermarket converter. The converter fresh air system & pipe must be retained and vented to atmosphere or connected to converter. The inlet and outlet of the converter (if used), may be no larger than 2 1/4" O.D. The pre-converters may be removed and replaced with ~~2-1/8"~~ 2-1/4" O.D. pipe.
2. Exhaust must follow the stock routing (over the axle), and must exit from the stock location and extend to the rear bumper.
3. Maximum outside diameter for exhaust pipe is ~~2-1/8"~~ 2-1/4" O.D.
4. A muffler is not required, but all vehicles must meet sound standards per SCCA GCR Section 12. Any muffler may be fitted as long as the inlet and outlet diameter is no larger than 2 1/4" O.D. and tailpipe diameter is ~~2-1/8"~~ 2-1/4" O.D. Max.
5. The upper and lower exhaust system heat shields may be removed.

H. Drivetrain

1. Any stock style pressure plate and disc may be used, provided the replacement is the same weight or greater as original.
2. All vehicles not originally equipped as such may be fitted with the entire rear-end assembly from a GSL model (disc brakes and limited slip differential).
3. The differential ratio must be 3.9:1, using stock 81-85 Mazda RX-7 factory gears.
4. No modifications to the stock differential are allowed.
5. The stock wheel lug-bolt system may be replaced with wheel-studs and nuts.
6. Transmission must remain stock.

I. BRAKES

1. Any brake pad material or brake fluid may be used.
2. Braided steel brake lines may be used.
3. Adjustable brake-bias valves are allowed and may be installed in addition to, or as a replacement of, the stock valve, but must be installed in the engine compartment and must not be driver adjustable from the cockpit.
4. If rear disc brakes are installed on a vehicle not originally equipped with rear disc brakes, the master cylinder and proportioning valve from a disc-brake car may be installed. Otherwise, the brake master cylinder must remain unmodified.
5. Front brake dust-shields may be modified or removed.
6. Brake cooling is allowed per ITCS Section 17.1 .4.D.6.b. A duct of 3" maximum diameter may be used for brake cooling.
7. The plastic inner fender panels may be removed or modified.

J. SUSPENSION

1. Upper strut mounting holes may be slotted for increased camber/castor. Upper center strut locating hole may be modified to facilitate strut movement. Stock strut hat must be used and cannot be modified for clearance.
2. All suspension bushings must remain stock and unmodified, with the following exceptions:

- a. Urethane front control arm bushings (Energy Suspension part #11-3101) may be used.
 - b. Urethane strut rod bushings (Energy Suspension part #11-7101) may be used.
 - c. Rear axle bump stops may be modified, removed or replaced.
 - d. Stock rear sway-bar end links may be replaced with Energy Suspension part#9-8123.
 - e. Front suspension rubber coil spacers may be removed.
3. A maximum of two spacers (Mazda part #1011-34-013) may be added per side to the front strut assemblies for weight balancing.
 4. One stayrod may be added for chassis stiffening between the front upper strut towers per ITCS Section 17.1.4.D.5.d.5.
 5. Minimum ride height is 4 ½". On a smooth and level surface, lift, bounce or manipulate until satisfied. Roll forward three feet, let settle for 30 seconds and measure clearance of 4 1/2 " at the front cross-member, without the driver.
 6. Front wheel negative camber shall not exceed 1-1/4 degrees. No adjustments are allowed to the rear axle.
 7. Any brand of 13" diameter wheel — alloy, stock factory or steel — up to 7" wide may be used.
 - a. Wheel back spacing must be between 3 1/2" and 4 1/2".
 - b. Minimum weight for wheel, tire, and lug nuts is 26 lbs.
 8. Wheel spacers may not be used.

K. UPDATING and BACKDATING

1. Exterior body parts, interior trim, engine, drive shaft and rear axle may be exchanged or replaced with another of years 1981 to 1985, 12A model vehicles.
2. Any component updating or backdating must be done as an entire unit.

L. "NO TOUCH RULE"

1. The following components, or any part thereof, may not be modified, detailed or massaged in ANY way:
 - a. Engine (including intake or exhaust ports and all internal moving or stationary parts)

- b. Transmission
- c. Carburetor (except as allowed in Section 3.F.8).
- d. Intake or exhaust manifold.

M. RADIO COMMUNICATION

- 1. Two-way radio systems may be used.

N. ONBOARD DATA ACQUISITION SYSTEM

- 1. Onboard lap timing, lap counting or data acquisition systems may be fitted to the vehicle and used during any practice, qualifying or race session.
- 2. On board video recording, is allowed.

O. RULES FREEZE FOR CLASS

- 1. These rules are “frozen” until a two-thirds majority vote approves the change. Eligible voters are current car-owner members only. The intent is to eliminate “rules-creep” with small, but continuous, year to year changes. Amendments to these rules for the purpose of updating or correcting inconsistencies, ambiguities and technical data such as supplier part number revisions are to be accomplished without the two-thirds majority vote process. Those types of amendments are to be reflected in this document as soon as practical. The SCCA General Competition rules are the official guideline for club racing and supersede these rules should there be a conflict.