

NASA SPEC MIATA® CHALLENGE AND SPEC MIATA®

Official National Rules

1 Definition and Claim

The NASA Spec Miata Challenge™ (SMC) is an affordable racing series, primarily focused on road racing, and shall function as an advertising and marketing tool for the series sponsors, the independent sponsors of each team, as well as the official sanctioning body of the series. The trade name, “NASA Spec Miata Challenge,” and these rules are the property of the National Auto Sport Association, Incorporated® located at P.O. Box 21555, Richmond, CA 94820; 510-232-NASA (6272).

The marks “Mazda” and “Miata” are recognized as registered to Mazda Motor Corporation with the United States Trademark and Patent Office.

2 Intent

The intent of these rules is to provide mandates to ensure that all vehicles are constructed and modified within clearly established limits, so as to ensure an even platform, in which a contest of driving skill may provide the most talented drivers with great rewards.

3 Purpose

The purpose of this series is to provide an avenue to promote sponsor brand awareness on a national scale. Additionally, this series should provide a stage to showcase driving talent, in hopes that the most talented drivers will advance to even higher-level professional series.

4 Format

Modifications, addition or removal of parts are not allowed, unless specified or approved in these rules. Additional modifications are not permitted. These rules are not intended as guidelines; rather they shall serve as the national set of rules, and must be strictly followed. Each NASA Region is responsible for ensuring that all competitors running in the corresponding regional championship, conform to these rules.

5 Eligible Manufacturers

Mazda Motor Corporation is the only manufacturer of models that are legal for this series. However, other companies, including Mazda Competition Parts, which should be considered a separate company from Mazda Motor Corporation, may manufacture some legal and/ or required parts and components.

6 Eligible Models

1990 - 1993 Mazda Miata, 1600cc engine
1994 - 1997 Mazda Miata, 1800cc engine

7 Sanctioning Body

The NASA Spec Miata Challenge™ series is sanctioned by the National Auto Sport Association (NASA). All events are 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). All decisions made by the series administration are final, except under certain conditions, as specified by the CCR.

8 Safety

8.1 General

All safety standards not specified herein must conform to the NASA Club Codes and Regulations (CCR). Where conflicts are found between the CCR and these rules, these rules must supercede the conflicting rules found in the CCR. However, in the interest of safety, any participant that determines a conflict exists, must immediately report it to the series administration, for clarification.

8.2 Hardtops

Hardtop may be used, and if used, must be securely bolted in place. Aftermarket hard tops are allowed provided they meet the exact original equipment specifications for both design and weight.

8.3 Class Identification Markings

Mazda Logo must be displayed on both side rear quarter panels.
Mazda logo must be displayed on hood or front bumper.

9 Measurements

9.1 Specified Measurement

Whenever the manufacturer specifications or these rules do not specify a measurement, the common average measurement will be used. This common average measurement must 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 to the public. The second option is only permitted under circumstances where option number one becomes impractical, as determined by the series Race Director.

9.2 Tolerances

All published measurements infer a tolerance of +/- one-half (1/2) 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 must be rounded up or down in favor of the competitor. This section does not apply whenever the manufacturer specifications, or these rules, specify a tolerance.

10 Weight

10.1 Minimum - Vehicle

All minimum weight requirements must be met immediately following all qualifying sessions and races. 1990 – 1993 vehicles must weigh at least [two thousand two hundred ninety five](#) (2295) pounds including the driver. 1994 – 1997 vehicles must weigh at least [two thousand four hundred twenty](#) (2420) pounds including the driver.

10.2 Additional Weight - Ballast

Additional weight may be added to the vehicle providing that all of the following conditions are met:

- 10.2.1 Additional weight must serve no other purpose than to increase the weight of the vehicle. This additional weight shall be known as “ballast.”
- 10.2.2 Ballast must be made of solid metal, and must be installed securely. All ballast must be secured using at least one (1) 3/8-inch grade-5 bolt, two (2) ‘fender washers’, and a locking nut system for every ten (10) pounds of weight. Example: A seven (7) pound block requires at least one (1) bolt system as described herein. A thirty 30 pound block requires at least a three (3)-bolt system.
- 10.2.3 All pieces of ballast must be bolted [within the passenger compartment](#), 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 engines, components, and parts must have been offered for sale in a Mazda Miata, 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. [Ref:(9.2)]

- 11.2 The Race Series Administrator may claim any engine for the following: 1600 cc engines must be claimed at no less than one thousand (\$1,000.00) dollars U.S. currency; 1800 cc engines must be claimed for no less than fifteen thousand (\$1,500.00) dollars U.S. currency. The intent of this rule is to allow the administration to eliminate motors that are blueprinted, and/or expensively rebuilt.

All legal parts from a claimed motor will be auctioned off to the highest bidder. All proceeds from an auctioned motor shall go to a charity, or to the driver’s championship points fund [as determined by the Race Series Administrator](#).

If any illegal parts are found in a claimed engine, the entire engine assembly will become the property of NASA, and will not be sold, nor returned.

11.3 Balancing

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

11.4 Cooling System

Ethylene glycol-based anti-freeze is not permitted. Other additives, such as Redline Water Wetter, are permitted.

11.5 Radiator

Any radiator may be used, provided that it mounts in the stock location, with~~out~~ any modification of any part of the stock mounting location that is integral to the body.

11.6 Thermostat

Thermostats are optional and unrestricted, providing that they serve no other function than to control coolant flow from the engine to the radiator.

11.7 Seal Plate

Radiator Seal Plate PN NA75-50-0K7A approved for use on all vehicles.

12 Induction / Exhaust / Fuel Systems

12.1 Throttle Restrictor

1994 - 1995 1800cc engine powered vehicles must use a forty seven (47) millimeter throttle restrictor.

1996 - 1997 1800cc engine powered vehicles must use a forty five (45) millimeter throttle restrictor.

[All restrictor plates must be purchased from Mazda Competition Parts, and must be mounted between the throttle body and the intake manifold.](#)

12.2 Air Filter

1600cc engine powered vehicles may use a cone-type air filter.

1800cc engine powered vehicles must use the stock air filter housing. Any filter that fits into this box may be used, providing that is comprised of components and materials other than air cooling systems, cooling chemicals, or cooling chemical compounds.

12.3 Definition

For the purposes of Section 12.2, "cooling systems," "cooling chemicals," and "cooling chemical compounds" means any system or substance that enables a transfer of heat, by convection, conduction, or radiation that causes the air entering the engine to be cooler than ambient, and / or contain additional chemicals than normally found in 'air' as defined by the *Handbook of Physics and Chemistry (CRC)*.

12.4 Fuel Filler

The fuel filler trap door and restrictor plate in the filler neck may be removed.

12.5 Ignition System

Any spark plug and/or spark plug wires may be used. Any initial ignition timing may be used.

12.6 Exhaust System

The stock down pipe must be used. However any single exhaust pipe may be used, providing that it has a maximum outside diameter of 2.25 inches (+ 0.0625 tolerance).

The stock muffler may be retained, discarded, or replaced with any other muffler, providing that it serves no other purpose than to quiet the exhaust. All exhaust must exit aft of the rear sub-frame.

13 Transmission / Differential

13.1 Clutch

Any clutch disc and clutch cover (pressure plate) may be used, providing they mount on an unmodified flywheel.

13.2 Differential

13.2.1 1600cc engine powered vehicles

Viscous limited slip or Mazda Competition Parts, part number QN10-64-A00 (previously T0Y1-27-200 & 0000-02-5501) is optional. Gear ratios must remain stock.

13.2.2 1800cc engine powered vehicles

Stock Torsen limited slip is required. Gear ratios must remain stock.

14 Suspension Components

14.1 Mazda Motorsports Spec Miata package must be used.

(Part# K-SPEC-M5-SUSP - 1990-1993 1.6 Liter DOHC), (Part# K-SPEC-M5-SUS8 - 1994-2001 1.8 Liter DOHC). The package components are detailed in this subsection.

14.1.1 Bilstein Shocks

Front (Part# 0000-04-5225-BL Qty two (2) ea.)

Rear (Part# 0000-04-5226-BL Qty two (2) ea.)

14.1.2 Eibach ERS race springs , two and one-half (2.5) inch inside diameter

Front seven hundred (700) pounds, length six (6) inches (Part# 0000-04-9700-06 Qty two (2) ea.)

Rear three hundred twenty five (325) pounds, length seven (7) inches (Part# 0000-04-9325-07 Qty two (2) ea.)

14.1.3 Coil-Over Kit. (Part# 0000-04-5402AW) This kit provides all necessary components to locate the spring in the upper perch and includes modified bump rubbers/stops. Welding a two and one-half (2.5) inch spring-locator on the upper mount and modifying the stock-length original bump-stop rubbers to the diameter of two and one-quarter (2.25) inches is permitted.

14.1.4 Eibach sway bar kit.

1600cc engine powered vehicles: Front Bar twenty four (24) mm adjustable / Rear Bar fifteen (15) mm adjustable

(Part# 0000-04-5302-EB)

1800cc engine powered vehicles: Front Bar twenty seven (27) mm non-adjustable / Rear Bar fifteen (15) mm adjustable

(Part# 0000-04-5303-EB)

14.2 Maximum Camber

Front: not more negative than two (2.0) degrees negative.

Rear: not more negative than two and one-half (2.5) degrees negative.



14.3 Ride Height

All Models: Any ride height, providing that no metal part of the vehicle touches the ground so as to be hazardous in the opinion of the Race Director.

14.4 Suspension bushings must be stock.

14.5 Sub-frame connectors

All 1990-1991 model cars may utilize the 1992-1993 stock Mazda Miata rear sub-frame configuration. All 1995 and later model cars may utilize the 1994 stock Mazda Miata sub-frame connectors (front and rear).

15 Steering

Manual or power steering may be used. Power steering rack may be converted to manual. Steering lock may be removed.

16 Wheel Assembly

16.1 Rims

Any fourteen (14) inch or fifteen (15) inch diameter rim, with a maximum width of seven (7) inches, and a minimum weight of thirteen (13) pounds, may be used. All four (4) rims must dimensionally match.

16.2 Tires

Toyo brand tires must be used. Either the 205-50-15 RA1 or 205-55-14 RA1 may be used. All four (4) tires must be the same size specification. Under no circumstance shall the tire / rim protrude from the body / fender when viewed from above.

17 Brake System

17.1 Brake pads are unrestricted.

17.2 Steel braided brake lines may be used.

17.3 Disc brake backing plates may be removed.

17.4 The emergency brake level and/or cables and associated parts may be removed.

17.5 All anti-lock braking systems (ABS) must be disabled.

18 Appearance

18.1 Exterior

18.1.1 Air dams, wings or spoilers are not allowed other than "R" package chin spoiler.

18.1.2 Fenders and wheel openings must remain unmodified, except that rolling or flattening of inner fender lip for tire clearance is permitted.

18.1.3 Hood and inner fender plastic trim are optional and may be removed.

18.1.4 Any mirrors may be used.

18.1.5 Any paint scheme / colors may be applied.

18.1.6 Body molding, antennas, license plates, license plate frames, license plate lights, and insignias and emblems, other than "Mazda" and "Miata," may be removed.

18.1.7 Windshield clips and rear window straps are permitted and recommended.

18.1.8 Hood clips are permitted. Stock hood latches may be disabled or removed.

18.2 Interior

18.2.1 The driver's seat ~~may~~must be replaced with a seat suitable for competition, including a racing-type bucket seat. Factory seat tracks may be modified, reinforced or removed to facilitate replacement mountings provided they perform no other function. All driver seats must conform to the CCR.

18.2.2 Gauges may be added, replaced, or removed. They may be installed in the original instrument(s) location using a mounting plate(s) or any other location using a secure method of attachment. Other than modifications made to mount instruments and provide for roll cage installation, the remainder of the dash "board" and instrument panel must remain intact.

18.2.3 Any steering wheel and attachments may be used except wood rimmed type steering wheels.

18.2.4 Any shift knob may be used.

18.2.5 The air conditioning system may be removed. Modification or removal of the heater core and blower fan assembly is not permitted.

18.2.6 The carpet, center console, cargo bins, driver's seat belt, radio system, headliner, dome lights, and grab handles may be removed. The driver's side floor mat must be removed.

- 18.2.7 All insulating material may be removed from the interior.
- 18.2.8 Other than to provide for the installation of required safety equipment or other authorized modifications, no other driver/passenger compartment alterations or gutting is permitted.
- 18.2.9 Removal; or substitution of driver compartment panels is not permitted.
- 18.2.10 Any removable covers used to cover spare tires, tools, bins, etc. may be removed along with attaching hardware and brackets.
- 18.2.11 Carpets, mats and their insulating or attaching materials may be removed from the floor and recesses of the cargo/spare tire area.
- 18.2.12 Ducting may be added to provide fresh air to the driver/passenger compartment, providing that no modifications of windows and body structure are made to accommodate this addition.
- 18.2.13 The passenger seat, mounting hardware, and seat belts may be removed.