



H2R Challenge Miata Class

Rules 2.8 - 01/2/2023

The “SPIRIT” of this H2R Challenge is as follows:

A wheel-to-wheel racing event, similar to those of larger sanctioning bodies, except:

*Friendly competition, encouraging camaraderie and skill improvement, open to Harris Hill Raceway Members only.

*Designed to be kept as inexpensive as possible.

*Machines that are as equal in performance capabilities as possible.

The “SPIRIT” of the H2R Challenge Miata Class is as follows:

The original intent of the series was for members to take \$500 - \$1500 100% OEM 1989-1993 1.6L Miatas with over 100,000 miles on the drive train and outfit them with safety equipment specified in the H2R Challenge General Rules.

The reality is that most of the cars in the series now are former Spec Miatas from SCCA or NASA series. In order to keep the H2R Challenge competitive and affordable for everyone, please pay close attention to the rules outlined below, as they will likely involve removing some after market items and replacing them with OEM or equivalent parts.

Drivers whose cars do not meet the OEM or performance rules MAY be allowed to race in limited circumstances, but will not be scored or earn points for the event or series.

If any questions arise from the interpretation of these rules, or during an event, the SPIRIT of the rule will be the guideline for the final decision by the race committee.

Expense Mantra:

Racing costs money.

Spec Miata costs a lot more.

This event costs a lot less.

Used parts are extremely affordable and easy to find. Racing costs money.

When asked to make changes to your car or safety gear to comply with these event rules, please refer to the racing expense mantra. If the costs of this event offend your sensibilities or exceed your budget, then racing this event is not for you.

This is an OEM stock production based class.

All parts of the car must be OEM stock as equipped on the greater majority of 1989–1993 1.6L production Mazda Miatas.

NO changes, additions, removals or modifications are allowed unless specifically addressed in the rules.

NO “Mazda Speed” replacement parts are accepted unless specifically mentioned. If the rules do not specifically say you can do it, you are not allowed do it.

*If you cannot determine the difference between a safety and performance rule, consult a race steward BEFORE making the purchase, change or modification.

H2R Allowed performance changes to the car:

Suspension:

Shocks- The shocks must be OEM 1989-1993 Mazda Miata or KYB OE replacements shocks with fixed collar locations, and non-serviceable (non-rebuildable!). Available at a discount from Danny Benzer at Roger Beasley Mazda Central.

Springs- The springs must be OEM 1989-1993 Mazda Miata or Racing Beat springs (which can be purchased though Danny Benzer at Roger Beasley Mazda Central). If you choose to use OEM springs, you may cut them so that your car meets minimum ride height.

-Minimum ride height is 4 3/4". Ride height will be measured at the non- crushed pinch weld of the driverless car immediately behind the front tires and immediately in front of the rear tires at all 4 points.

-Rubber/Silicone/urethane/similar (NOT solid) replacement bushings for suspension components are open.

-The factory bump stops may be replaced with 5X Racing Sport Bump Stops, available at 5xracing.com, SKU: 5XRNA46/36

-The factory sway bars and links may be replaced; specification is open.

Brakes:

-Brake pads must be 1989 -1993 Mazda Miata spec, but the brand/manufacture is open. Racing compounds are permitted and encouraged.

-Brake rotors must be OEM 1989 -1993 Mazda Miata spec, but the brand/manufacture is open.

-Brake fluid, engine oil, transmission oil, rear diff oil is open. -Stainless brake lines at the calipers are permitted.

-Parking brake removal is open.

Power and Exhaust:

-Fuel must be "pump" fuel, 93 octane or less. -Octane boost is not permitted.

-Minor repair and/or replacement parts for the engine and drive train may be aftermarket parts. The parts must be the same specification as OEM 1989 - 1993 Mazda Miata, with no performance enhancement or appearance change. (Examples are water pump, timing belt, seals, gaskets, hoses, filters). Major parts such as the crankshaft, block, head, cams must be OEM 1989 -1993 Mazda Miata. If there is ANY question on this, consult a race steward FIRST.

-Engine coolant is open.

-The exhaust must be OEM 1989-1993 Mazda Miata from the header to the muffler. The muffler must be either stock or Bosal replacement, available from rockauto.com, part # 284567.

-The Catalytic converter must be either removed and replaced with a "test pipe" or cored out. This is for fire safety. The "test pipe" may be welded in, but may not exceed the length of the OEM catalytic converter by more than 6 inches total.

ECU: The engine computer may be updated with an aftermarket unit (such as Link, Megasquirt, EasyEFI), which can be relocated inside the vehicle to shield from heat and fluids. Additional sensors, such as a wideband lambda sensor, air temperature sensor, MAP, etc., may be added to optimize the performance of the

ECU. NOTE: Any vehicle with this modification must be tested on the H2R dyno and tuned to meet a torque curve averaging 95 ft lb between 3500 and 6500 rpm. Max rpms cannot exceed the stock 7200rpm. Only one verified map is allowed; map switching is not allowed.

Airbox and Airbox Snorkel: The air intake must be OEM 1989-1993 Mazda Miata, with the exception of the airbox and snorkel. Both are open; however; if stock airbox is used, it cannot be modified (no drilling holes or relocating MAF). If the airbox is removed, the car must be equipped with a catch can with at least 1/2 liter capacity filtered venting. Catch can must be located in the engine bay. Aftermarket cone filters may be used, but must be located in the engine bay. No ram-air like setup is allowed.

Throttle Position Sensor: TPS may be changed to accommodate an aftermarket ECU; but location must remain the same, and stock throttle body must be used (at this time).

Wiring: In an effort to improve reliability, an updated/custom wiring fuse and relay box and are allowed to replace the aging loom. Wiring for systems not used in the series (headlights, indicators, emission monitoring, etc.) may be deleted. Wipers, brake lights, O2 sensor must remain; but the latter may be replaced with a wideband sensor, if the car is equipped with an aftermarket ECU.

-Post race dyno checks. 100 HP as measured on the H2R track dyno is the maximum allowed for either Miata Class H2R Challenge competition. After selected races, several of the finishing cars may be selected to be tested on the dyno. There will be no post-race "practice" dyno runs. Each Driver is responsible to make sure their car is at or below the maximum HP. Those cars above the maximum will be disqualified.

Transmission and Drive Train:

- The differential may be from either a 1.6 or 1.8 car, open or limited slip.
- The clutch pressure plate must be OEM or OEM spec.
- The clutch disc is open.

Wheels and Tires:

For the **2023** Season, both Miata classes will be required to run:

Dunlop Direzza ZIII (205/50-15)

Or

Falken Azeni RT615K+ (205/50-15)

-Wheels are open, but must be compatible with the tire specified above. Fenders may have the inner edges bent upward to clear the tires but the outer shape of the fenders may not be altered for clearance. Use the correct wheel offset.

-A “race” alignment adjustment is permitted and encouraged. Front wheel camber may not exceed 2.75 degrees negative. Replacement bushings to achieve camber within spec is permitted. Cars will be checked without driver in the car.

Body, etc:

-Power steering and A/C system removal is open.

-Front headlamps must be removed

-An OEM or fiberglass replacement hard top is optional, but must be attached at all 4 OEM points. If a hard top is installed, the convertible top and frame **MUST** be removed from the car.

If the hard top is NOT installed, the folding convertible top may be up and secured while racing. If the top is folded down during the race, the frame must have at least 2 wraps/attachments (zip ties, wire) around the frame and to the body to prevent it from deploying during a crash or catastrophic event. If the car has only the folding frame and no vinyl top, it **MUST** be removed from the car.

-The H2R Challenge does allow complete removal of interior plastic, carpet, switch assemblies, wiring, heating, A/C and non-metallic items, including the plastic dash.

-Metal removal from the interior for the purposes of safety is acceptable (eg, roll cage clearance for rear shoulder belt mount), but must done at a minimum. For example, you cannot cut off the seat belt towers when a notch or simple design change is possible. When in doubt, consult a race steward **BEFORE YOU CUT!!!**

-Shift knobs, pedals, gauges and other driver “comfort” items are open.

-Fender liners, mud flaps may be removed.

- The **absolute** minimum weight of the car and driver is 2300lbs, post race. A maximum of 100lbs of ballast may be added to achieve minimum weight. All ballast must be **securely and safely** attached to the passenger side floorboard. After selected races, some or all of the competitors may be weighed. There will be no post-race “practice” weights. Each Driver is responsible to make sure their car is at or above the minimum weight. Those cars below minimum weight will be disqualified.