

SUPERMIATA

Allowed upgrades for S1 from S2

If not otherwise specified, allowable modifications in S2 are also allowed in S1

updated Feb 2 2017. Most recent changes in red

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B. SuperMiata prep guidelines

If you don't see it listed here, it's not legal. Feel free to contact Speed Ventures or SuperMiata for clarification

1. Safety

B.1.1. Vehicle

Minimum weight 2300 lbs. With driver in impound.

3. Engine

The intent of the engine rules and SPM Power Cap are to allow 100% OEM, unmodified BP05/BP4W/BP6D long blocks to remain competitive in Supermiata races. The max WHP (power), max WTQ (Torque) and Power Area values are all easily achieved with the aforementioned OEM long blocks. Aftermarket and modified internal engine parts are allowed only to improve reliability and cross-compatibility with other racing classes. All non-OEM engines must be detuned to meet SPM power output restrictions and dyno graphs submitted in order to be eligible for championship points. Any competitor utilizing aftermarket or modified engine internals may be disqualified or excluded from racing if their car is found to be outside of SPM power restrictions.

1. Update/backdate, mix and match of any years 90-05 USDM Miata engine components allowed. Intake manifold may be ported and emissions equipment modified deleted. Non USDM "square top" intake manifold allowed.

All cars must comply with lbs/hp ratio and Power Area regardless of weight or power.

2. Turbo system hot side hardware sourced from Trackspeed Engineering must be used. This includes a minimum of TSE exhaust manifold, Borg EFR6258 turbo .64 A/R, TSE downpipe. Manifold, downpipe and turbine housing may be coated or wrapped.

3. ≥ 11.5 lbs/hp maximum. Maximum allowable power measured at the wheels on a Dynojet 248 or 288 with onboard weather station active: 220 horsepower, 260 torque

4. Power area. Whp limited to a maximum "power area" as follows: Add whp at 4000,4500, 5000,5500,6000,6500,7000rpm. Total value must not exceed 1400

5. Maximum rev limiter setting for BP 1.8L engines: 7000rpm. Exception tracks WSIR and ACS are allowed 7400rpm rev limit.

6. ECU is free.

7. Intake piping: Material is free. All intake piping must be forward of the turbo CHRA (center housing)

8. Intercooler: Only one may be used. Intercooler must be air to air type. Size unrestricted. Must be located ahead of forward most part of valve cover. Intake piping may be wrapped, painted or coated.

9. OEM MAF/AFM may be modified or removed

10. Entire exhaust system is free but must exit behind rear axle centerline

12. Cooling system free. Radiator must be located within 12" of OEM location. This allows lowering, raising or tilting to improve cooling.
13. Any single throttle body allowed provided it is no larger than 64mm. OEM throttle plate and shaft may be modified to improve strength.
14. Allowed fuel: unleaded gasoline 100 octane maximum, E85.
15. Non OEM Engine coatings not allowed. Headers and exhaust may be coated with thermal insulation coating, wrap or paint.
16. Ignition system free
17. Wiring harness may be lightened and simplified
18. Emissions equipment, miscellaneous brackets and equipment in engine bay may be removed to lighten car provided min weight and power cap are observed
19. Launch control and traction control not allowed

4. Suspension/Drivetrain -

1. Front brakes:
 - a) May use Wilwood Dynalite, Dynapro Powerlite or Superlite 4 or 6 piston calipers
 - b) May use 11x.810 or 11.75x.810 rotors
 - c) Non-ferrous rotors not allowed
2. Coilovers with a maximum of 1 damping adjustment allowed
3. Spring rates free
4. Spec tire is 245/40/15 Maxxis RC-1. Wheels are free but must be one piece cast aluminum. No forged or multi piece wheels.
3. Diff mounts free
4. Any one piece sway bars allowed
5. End links free provided they attach in OEM locations
6. Any polymer suspension bushings allowed. No full metal bushings or spherical bearings allowed. Percentage of polymer to metal may be changed.
7. Eccentric offset control arm bushings or extended lower ball joints for camber correction allowed
8. Brakes may be updated/backdated in any combination of 90-05 components. Pads free. Brake ducts free
9. Final drive ratio can be 3.9, 4.1, 4.3. 3.9 offers the best performance with S1 torque curve and is recommended.
10. OEM optional Torsen or Tochigi-Fuji differential allowed. No aftermarket diffs allowed.
11. OEM 5 spd or 6 speed transmission only. Non-OEM transmissions not allowed
12. Rain tires: Maxxis VR-1 in 205/50/15, 225/45/15 or 245/40/15 allowed. Race will be declared "Wet Race" no later than 30 minutes prior to start. Protocol is entire track is wet, no dry line, 100% cloud cover and rain forecast to be declared a Wet Race.
13. Differential and transmission cooler may be added
14. Fuel cell may be added provided it is located entirely within OEM fuel tank compartment
15. Front & rear hub assemblies may be modified or replaced provide they retain OEM wheel location.
16. Twin disc clutches and flywheels may be installed. Clutch discs must be no less than 184mm (7.25") in outside diameter.

5. Body - Aero

1. Vertical front air dam allowed. Air dam must originate no higher than forward most point of OEM bumper skin. Air dam may extend laterally to shroud the front tires when pointed straight ahead, but

no wider. Air dam may not be canted more than 2° from vertical, measured from corrected ground plane.

2. Splitter:

- a) Material, free.
- b) Splitter may extend no more than 4" from air dam vertical surface.
- c) Splitter may not be wider than nor extend past ends of air dam.
- d) Splitter must be within 3° of horizontal, measured from corrected ground plane
- e) Lower most point of splitter forward of air dam plane must be no less than 3.5" above ground plane at 2300#
- f) Splitter must support 100 lbs vertical load applied at any point within 20" of car centerline
- g) Splitter must have no curvature in any direction except plan view (from top looking down)

3. Under tray may extend from front axle centerline to air dam. Under tray must be flat, have no more than 2° angle and have no curvature.

3. Rear wing:

- a) Must have mounts that originate from rear half of trunk lid.
- b) Mounts must go through trunk lid and attach to frame in side trunk.
- c) Foil (not including end plates) must be located entirely within a virtual "box" as follows: Forward limit is mid point of trunk lid measured on centerline of car. Rear limit is 6" behind the rearmost point of the rear bumper. Upper limit is the highest point of the roof. Lower limit is a plane 7" below the highest point of the roof.
- d) Foil can be no wider than 64" including end plates. No broader chord than 10.5". Camber limited to no more than 1" as measured with straight edge across chord to lowest point.
- e) End plates must be no greater than 11" tall or 14" wide. No greater than 154" square inches total.
- d) Uprights must attach to underside of foil. No "Swan" neck mounts.

4. Front fenders may be modified as follows: Up to 120 square inches of surface area, behind the axle centerline, may be modified or removed. Resultant edges must be finished and smooth in appearance. No rough or bare metal edges must be visible.

5. "A" pillars may have up to 1/2" flaps added. Flaps can only be added in same plane as A pillar and can extend from bottom to top of A pillar. Flap may extend inward or outward. Flap must not interfere with driver ingress / egress.

6. "B" pillars may have up to 4" flap/spoiler added. Flap can only be added in same plane as B pillar (hard top) and can extend from bottom to top of B pillar. Flap may extend inward only. Flap must not interfere with driver ingress / egress.

7. Rear window may be vented. Vents must be circular and no larger than 3" diameter. No more than 12 holes may be added. Vent holes may be placed in any location on the window.

8. Chassis may be fully seam welded

9. No limit to cage attachment points. FIA style cages recommended but not mandatory

10. Cage extensions to front shock towers may be added

11. External holes in bodywork for cooling may be added forward of the leading edge of the doors and base of windshield. Holes must be no larger than 200 square inches combined. Holes must not provide any significant or measureable down force.