



# 2025 Rules

Version 2025.1

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Significant additions or changes are highlighted.

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## Introduction

Welcome to 86 Challenge. Drivers of all skill levels are welcome and there is no charge to participate.

See [86challenge.us](https://86challenge.us) for more information, including schedule, historical results, and forms for registering for GT Radial's Championship Cash Prize and tire contingency program.

Questions, corrections, and clarifications can be raised on our [Facebook Group](#) or [Discord Server](#).

## 1. General Rules

1.1. Chassis must be one of the following (hereafter referred to by its *Designation*):

Designation	Chassis
Gen. 1	<ul style="list-style-type: none"><li>• 2012–2016 Scion FR-S</li><li>• 2012–2020 Subaru BRZ</li><li>• 2017–2020 Toyota 86</li></ul>
Gen. 2	<ul style="list-style-type: none"><li>• 2022+ Subaru BRZ</li><li>• 2022+ Toyota GR86</li></ul>

### 1.2. Registration

- 1.2.1. Registration with 86 Challenge (separate from buying a ticket with the trackday organizer) must be submitted prior to the start of each event. Late registrations are allowed only for a driver's first 86 Challenge event.
- 1.2.2. Drivers must declare the class they wish to compete in on the registration form for each event.
- 1.2.3. A car may be shared by different drivers. Please enter one event registration per driver and indicate the class *and* run group each driver is participating in.

### 1.3. Timing

- 1.3.1. The following timing methods are accepted (see table below). Priority is given from top to bottom if more than one method is available for a given lap:

Timing Method	Time Penalty (s)
Official timing transponder	0.0
Data logger with at least 10Hz GPS (e.g. AiM, Racebox)	0.2
Data logger with at least 1Hz GPS (e.g. smartphone)	0.5
Unedited onboard video (may be accepted for a driver's first event only)	0.5

- 1.3.2. **Tiebreaker:** If multiple competitors have identical times in an event, the tie is broken by comparing each driver's second fastest lap, then third fastest lap, and so on.

## 1.4. Scoring

- 1.4.1. Points are awarded at the end of each event according to the table below:

Finishing Position	Points
1st	10
2nd	7
3rd	5
4th	4
5th	3
6th	2
7th+	1

- 1.4.2. Separate points tallies are used to track championship standings and tire contingency:

Type	Definition
<b>Total Points</b>	The sum of a driver's points earned from all events
<b>Championship Points</b>	The sum of a driver's 7 best finishes, only from the class the driver is participating in for the championship (see <a href="#">Changing Classes</a> )
<b>Tire Points</b>	The sum of a driver's points earned satisfying the terms of the GT Radial Tire Contingency program

- 1.4.3. **Changing Classes** If a driver changes classes during a season, they can choose to:

- Keep the *Championship Points* earned in their previous class and not earn *Championship Points* in the new class; or,
- Forfeit the *Championship Points* earned in their previous class and earn *Championship Points* in the new class.

- 1.4.4. The per-class standings are determined by *Championship Points* (most points wins).

- 1.4.5. **Tiebreaker:** Championship ties are broken via finishing position countback: The competitor with the most 1st place finishes wins. If still tied, the countback moves to 2nd place, 3rd place, and all subsequent finishing positions. If still tied, the competitor who held a lead last wins.

## 1.5. In-Season Rule Changes

- 1.5.1. All rule changes will be announced on our [Discord Server](#) and [86challenge.us](#). Announcements will include the date on which changes become effective.

- 1.5.2. Changes which make the rules more *restrictive* will be announced 60 days before enforcement.

- 1.5.3. Changes which make the rules more *permissive* may be enforced immediately.

## 1.6. Protests

- 1.6.1. A competitor may protest the results of an event to the Rules Board if they believe a competitor was out of compliance with the rules.

- 1.6.2. The Rules Board will review the protest and may move a competitor to a different class or invalidate their results for one or more events.

1.6.3. After the first event of new season, the previous season's results are final.

## 2. GT Radial Stock Class

*Designed to keep costs to a minimum and be attractive to drivers with nearly-stock vehicles. Participants are eligible for GT Radial Championship Cash Prizes and GT Radial Tire Contingency.*

- 2.1. Vehicles in this class are only allowed performance modifications included in this section.
- 2.2. In order to balance performance between Gen. 1 and Gen. 2 cars, a time handicap will be added to Gen. 2 lap times, according to the table below. For any tracks/configurations not listed below, the closest comparable track configuration will be used.

Track	Handicap Time (s)
Buttonwillow Raceway #1	2.5
Buttonwillow Raceway #13	2.0
Buttonwillow Raceway New Track	1.5
Laguna Seca	2.5
Sonoma Raceway	2.5
Thunderhill 5-mile Bypass	4.0
Thunderhill East	2.5
Thunderhill West	1.5

### 2.3. Engine & Powertrain

- 2.3.1. Engine software must be OEM.
- 2.3.2. Oil coolers, catch cans, accumulators, and/or sump changes are allowed.
- 2.3.3. Gen. 2 intake charcoal filters shall be present and unaltered.
- 2.3.4. Any pump gasoline (including blending high-octane pump gasoline) is allowed.

### 2.4. Wheels

- 2.4.1. Wheels must have a maximum width of 8.0 in.
- 2.4.2. Wheel spacers are allowed.

### 2.5. Tires

- 2.5.1. Tires must be one of the following:

Models	Sizes
GT Radial Champiro SX2 or HPY	• 215/45R17 • 225/45R17
Michelin Primacy HP (OEM)*	• 215/45R17
Michelin Pilot Sport 4 (Gen. 2 OEM)*	• 215/40R18

\* OEM tires are only allowed for a competitor's first 2 events. Competitors will not earn Championship Points or Tire Points while using OEM tires.

### 2.6. Alignment

- 2.6.1. Front camber shall not exceed (be more negative than) -2.5 degrees.
- 2.6.2. Front camber may be adjusted using only the following parts:

Description	Allowed Parts
Crash bolt (i.e. 14 mm lower bolt used in upper position)	• Toyota SU003-02818 • Subaru 901000394
Camber bolts (in either/both positions)	• SPC 81280

Description	Allowed Parts
	<ul style="list-style-type: none"> <li>• SPC 81305</li> <li>• Whiteline KCA416</li> <li>• Whiteline KCA414</li> <li>• Eibach 5.81305K</li> </ul>
Front Strut Mounts	<ul style="list-style-type: none"> <li>• Pedders PED-580096</li> <li>• Whiteline KCA335</li> </ul>
Camber plates	<ul style="list-style-type: none"> <li>• Any</li> </ul>

2.6.3. Rear camber with stock, unmodified, and undamaged components is not restricted.

2.6.4. Rear camber with adjustable components shall not exceed  $-2.0$  degrees.

2.6.5. Rear camber may be adjusted using only the following parts:

Description	Allowed Parts
OEM-style, adjustable, stamped steel rear lower control arms	<ul style="list-style-type: none"> <li>• SPC 67660</li> <li>• Moog RK100136</li> <li>• Whiteline KTA216A</li> </ul>
Camber bolts	<ul style="list-style-type: none"> <li>• H&amp;R TC112</li> </ul>

2.6.6. Toe angle may be adjusted without limitation.

2.6.7. Cutting or bending of any vehicle sheet metal or suspension components to change alignment or ride height is not allowed.

## 2.7. Aero

2.7.1. STI lip and TRD lip are not allowed.

2.7.2. Gen. 1 BRZ tS wing is not allowed.

2.7.3. Gen. 2 ducktails (OEM or equivalently-sized) are allowed.

## 2.8. Safety

2.8.1. Any safety device may be used.

2.8.2. Cars equipped with a full aftermarket safety system (bucket seats, racing harnesses, neck restraint system, full or half roll cage, etc.) are allowed, as long as total curb weight of the car remains above **2800 lbs without driver and with a full tank of fuel**. The car will need to be weighed at a location approved by the Rules Board before it is allowed to enter Stock Class.

## 2.9. Misc

2.9.1. Braking upgrades are allowed.

2.9.2. Replacing OEM parts with newer/older OEM parts is allowed (e.g. dampers, sway bars, etc).

2.9.3. No lightweight replacement parts are allowed (e.g. battery or lighter-than-OEM trunk) or removal of parts allowed.

2.9.4. Removal of spare tire, floor mats, and tools is allowed.

2.9.5. OEM-style, off-the-shelf dampers are allowed as long as they have: non-adjustable damping, non-adjustable ride-height, and unaltered valving.

2.9.6. Non-OEM cat-back exhaust with a weight greater than 32 lbs **or axle-back with a weight greater than 19 lbs** is allowed (removal of any catalyst is prohibited).

# 3. GT Radial Street Class

*Allows moderate modification flexibility and balances competition between generations through Modification Points. Participants are eligible for GT Radial Championship Cash Prizes and GT Radial Tire Contingency.*

3.1. Drivers are allotted 3 [Modification Points](#).

3.2. Any performance modification not listed in [Modification Points](#) is prohibited.

3.3. Minimum weight is 2800 lbs without driver and with a full tank of gas.

### 3.4. Wheels

3.4.1. Wheels must have a maximum width of 9.0 in.

### 3.5. Tires

3.5.1. Tires must be one of the following:

Models	Sizes
GT Radial Champiro SX2 or HPY	• 17" with 245 mm maximum section width
Michelin Primacy HP (OEM)*	• 215/45R17
Michelin Pilot Sport 4 (Gen. 2 OEM)*	• 215/40R18

\* OEM tires are only allowed for a competitor's first 2 events. Competitors will not earn Championship Points or Tire Points while using OEM tires.

## 4. Touring Class

*Allows significant modification freedom, with a balance of performance handicap based on Modification Points. Participants are eligible for GT Radial Tire Contingency.*

4.1. Drivers are allotted 10 [Modification Points](#).

4.2. Maximum tire section width is 255 mm.

4.3. Minimum weight is 2750 lbs without driver and with a full tank of gas.

4.4. Event standings will be determined by *Adjusted Track Time*, as defined below:

$$\text{Adjustment Factor} = \frac{\text{Street Class record at event track}}{\text{Street Class record at Thunderhill East Bypass}}$$

$$\text{Touring Handicap} = \text{Adjustment Factor} \times \max(0, \text{Modification Points} - 3)$$

$$\text{Adjusted Track Time} = \text{Raw Time} + \text{Touring Handicap}$$

4.5. You can use the following table to find the *Touring Handicap* (s) given *Modification Points* and track.  
(Builds with 3 points or fewer receive a 0s handicap.)

Track / Mod Points	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Buttonwillow	0.0	0.5	1.0	1.5	1.9	2.4	2.9	3.4	3.9	4.4	4.9	5.3	5.8	6.3	6.8
Laguna Seca	0.0	0.4	0.8	1.3	1.7	2.1	2.5	2.9	3.3	3.8	4.2	4.6	5.0	5.4	5.8
Sonoma	0.0	0.5	0.9	1.4	1.8	2.3	2.8	3.2	3.7	4.1	4.6	5.1	5.5	6.0	6.4
Thunderhill 5-Mile	0.0	0.8	1.7	2.5	3.3	4.1	5.0	5.8	6.6	7.4	8.3	9.1	9.9	10.7	11.6
Thunderhill East	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0
Thunderhill West	0.0	0.3	0.7	1.0	1.4	1.7	2.1	2.4	2.8	3.1	3.5	3.8	4.1	4.5	4.8

## 5. Unlimited Class

*Allows unconstrained builds to achieve the ultimate 86 lap times. For people who don't like to conform to rules!*

5.1. Anything goes!

## 6. Modification Points

This section applies only to GT Radial Street Class and Touring Class.

## Chassis

Points	Chassis
0	Gen. 1 (2013–2020 model years)
2	Gen. 2 (2022+ model years)

## Tires

*Any tire not on this list is automatically 6pts*

Points	Modifications		
–1	<ul style="list-style-type: none"> <li>• 17" GT Radial SX2</li> <li>• 17" GT Radial HPY</li> <li>• 17" Michelin Primacy HP</li> </ul>		
0	<ul style="list-style-type: none"> <li>• Michelin Pilot Sport 4 (OEM size only 215/40R18)</li> <li>• <b>Yokohama Advan Apex V601</b></li> </ul>		
1	<ul style="list-style-type: none"> <li>• 18" GT Radial SX2</li> <li>• GT Radial SX2 RS</li> </ul>		
2	<table border="0"> <tr> <td> <ul style="list-style-type: none"> <li>• Continental ExtremeContact Sport (ECS)</li> <li>• Dunlop Direzza ZII Star Spec</li> <li>• Dunlop Direzza ZIII</li> <li>• Falken Azenis RT615K</li> <li>• Federal 595 RS-RR</li> <li>• Goodyear Eagle F1 Supercar 3</li> <li>• Hankook Ventus RS-4</li> <li>• Kumho Ecsta V730</li> <li>• <b>Maxxis Victra VR-1</b></li> </ul> </td> <td> <ul style="list-style-type: none"> <li>• Michelin Pilot Sport 4S</li> <li>• Michelin Pilot Sport Cup 2 (180TW)</li> <li>• Michelin Pilot Sport Cup 2 Connect</li> <li>• Nankang NS-2R</li> <li>• Nexen Nfera SUR4</li> <li>• Nitto NT01</li> <li>• Nitto NT05</li> <li>• Toyo Proxes R888</li> <li>• Yokohama Advan AD08R</li> </ul> </td> </tr> </table>	<ul style="list-style-type: none"> <li>• Continental ExtremeContact Sport (ECS)</li> <li>• Dunlop Direzza ZII Star Spec</li> <li>• Dunlop Direzza ZIII</li> <li>• Falken Azenis RT615K</li> <li>• Federal 595 RS-RR</li> <li>• Goodyear Eagle F1 Supercar 3</li> <li>• Hankook Ventus RS-4</li> <li>• Kumho Ecsta V730</li> <li>• <b>Maxxis Victra VR-1</b></li> </ul>	<ul style="list-style-type: none"> <li>• Michelin Pilot Sport 4S</li> <li>• Michelin Pilot Sport Cup 2 (180TW)</li> <li>• Michelin Pilot Sport Cup 2 Connect</li> <li>• Nankang NS-2R</li> <li>• Nexen Nfera SUR4</li> <li>• Nitto NT01</li> <li>• Nitto NT05</li> <li>• Toyo Proxes R888</li> <li>• Yokohama Advan AD08R</li> </ul>
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5	Treadwear 40–99		
6	Racing slicks or any tire not listed above		

## Engine Mechanical & Drivetrain

### Free Modifications

- Removal of intake resonators
- Any drop-in replacement air filter for OEM intake
- Gen. 2 charcoal airbox filter removal
- Aftermarket radiator, oil cooler, oil catch can, oil pan baffle, and/or modified sump
- **Any transmission cooling or diff cooling system**
- Any cat-back exhaust
- **Any pump gasoline (including blending high-octane pump gasoline)**

*Take points for EACH applicable row:*

Points	Modifications
0.5	Aftermarket intake, header, front-pipe, overpipe, and/or any removal of OEM catalytic converter

Points	Modifications
0.5	Lighter-than-OEM rotational inertia flywheel, clutch, and/or driveshaft
0.5	Non-OEM limited slip differential
1	Non-OEM transmission
2	FA20 to FA24 engine swap
5	Forced induction
TBD	Any other engine swap (contact Rules Board for individual engine swap classification)

### Engine Tuning

Octane ratings below use (RON+MON)/2 or AKI. This is the octane number displayed at the pump in the US.

*Take points for ONE of the following:*

Points	Modifications
0	OEM tune or forced induction tune for 93 octane gasoline or lower (only when taken with 5 point FI modification)
0.5	NA tune for 93 octane gasoline or lower (non-OEM)
1.5	NA tune for greater than 93 octane gasoline or greater than 15% ethanol content
2	FI tune for greater than 93 octane gasoline or greater than 15% ethanol content

### Front Aero

*Take points for ONE of the following:*

Points	Modifications
0	No aero modifications or any device extending less than 50 mm forward/outward/rearward from the bottom leading edge of the bumper (including STI lip and TRD lip)
1	Any device extending 50-74 mm forward/outward/rearward from the bottom leading edge of the bumper
1.5	Any device extending 75-124 mm forward/outward/rearward from the bottom leading edge of the bumper
3	Any device extending greater than 125 mm forward/outward/rearward from the bottom leading edge of the bumper

### Rear Aero

*Take points for ONE of the following:*

Points	Modifications
0	No aero modifications, OEM rear spoiler, OEM wing (except Gen. 1 BRZ tS wing), or any aftermarket spoiler less than 60 mm in height
0.5	Aftermarket rear spoiler greater than 60 mm in height
1	Gen. 1 BRZ tS, SARD LSR, or any wing with maximum width of 1400 mm, maximum stand height of 200 mm, maximum chord length of 200 mm, and no added gurney flap
1.5	APR GTC-200, Voltex Type 12, Voltex Type 1S, or any wing with maximum width of 1460 mm, maximum stand height of 245 mm, and maximum chord length of 250 mm
2	Any wing wider than 1460 mm, higher than 245 mm, or with a chord length greater than 250 mm

## Other Aero

Take points for EACH applicable row:

Points	Modifications
0.5	Canards, dive planes, hood vents, fender vents, and/or vertical deviations on splitters
0.5	Any rear diffuser extending forward of the rear axle or backward beyond the rear bumper

## Suspension

### Free Modifications

- Any spherical bushings including strut top mounts
- Any alignment bolt/kit, bump steer kit, tie rod end, roll center adjuster
- Any bolt-on chassis bracing
- Any sway bars
- OEM-style, non-adjustable dampers with fixed spring perches and unaltered valving

Take points for EACH applicable row:

Points	Modifications
0.5	Non-OEM springs
0.5	Adjustable dampers (valving or ride height) or modification to off-the-shelf damper valving
0.5	Shock volume-expanding devices (e.g. remote reservoirs or piggybacks)

## Weight Reduction

### Free Modifications

- Any lightweight battery

Take points for EACH applicable row:

Points	Modifications
1	Removal of any interior trim pieces or seating not required for installation of a roll cage

## Safety

### Free Modifications

- Any in-cabin safety equipment
- Aftermarket brake calipers, rotors, pads, or brake ducting