

# 2017 TBAC AUTOCROSS

## CLASSING CLARIFICATIONS

All points taken under the 2016 Registration Form must be taken in full. NO PARTIAL POINTS CAN BE TAKEN UNDER ANY CIRCUMSTANCES.

### DEFINITION: ORIGINAL SPECIFICATION AND VEHICLE EQUIVALENCY PRINCIPLE

Throughout this document, a vehicle is said to be **modified from its original specification** when it uses a component not available as original equipment or as a factory option in **North America** for the EXACT vehicle in question.

#### **Vehicle Equivalence Principle**

If various model years and trim levels of the same vehicle appear in the same class, the most highly spec'd model year and trim level will be considered to be stock for all model years and trim levels.

The Mazda Miata is **illustrative** of this concept as the car spans 2 generations (the 2006 to 2015 NC is the Mazda MX-5, not the Miata) and 1989 to 2005.

In 2015, all of these cars had the same base class, meaning that:

- factory tire sizes range from 185mm to 205mm
- some cars had limited-slip differentials and others did not
- engines varied between 1.6L and 1.8L, some with variable valve timing (Mazaspeed Turbo-equipped cars are not in the same base class)
- some cars had 5-speed gearboxes and others had 6-speed gear boxes
- there were 4 final drive ratios

#### **Under the Vehicle Equivalence Principle, all Miata's should consider their stock values to be:**

- tire width: 205
- limited slip differential: Mazda Miata Torsen LSD is on the car
- stock engine is a 1.8L with variable valve timing

For gearing, answer yes if any one of the following is true:

- transmission is not a transmission that came on the cars from the factory
- transmission and final drive combination is not one that could be purchased in North America
- final drive ratio is not one that was offered by Mazda in North America.

Apply this approach in the consideration of your own vehicle.

## SECTION 1: TIRES

*Ultimate grip R-compound slicks with TW ≤40  
(V710, A6/A7, Z214, Toyo RR, BFG R1) +28*

These points apply to autocross oriented tires with very soft tread compound. Typically, “slick” type R-compound tires.

*R-compound tires with TW ≤100  
(R888, RA1, NT01, A048) +25*

These points apply to R-compound tires which do not fit into the previous points item, and are generally of harder compound than the “slick” type R-compound tires.

*Extreme Performance Summer tires with TW ≤ 200  
(Azenis, RE-11, R-53, \*Spec, V720, Pilot Super Sport, Rival) +17*

These tires are sold as Extreme Performance Summer tires. They have an advantage over regular street tires since their design is highly performance oriented. Take these points if your vehicle is equipped with any of the listed tires or tires that fall within this category.

Note: If your specific tire is not listed above, it does not guarantee belonging to the corresponding treadwear (TW) category. Treadwear is used to compare compounds *within* manufacturers only; therefore, it is not a true representation of one tire's ability over another. The Competition Director and/or Tech Inspector reserve the right to decide which category a specific tire falls into based on performance. We also reserve the right to change the list of tires and categories as new tires and compounds are released.

*Tires ≥ 20mm wider than stock +2  
Tires ≥ 40mm wider than stock +3*

These points apply when the tire you use is of greater width than the OEM tires specified for the vehicle. This information can be found from the first three-digit number of the tire size on its sidewall. For example, a vehicle using tires of 225mm tread width will take 2 points if the OEM specified tire width is 205mm or less.

## SECTION 2: WEIGHT REDUCTION

The weight reduction points schedule is a three-leveled system which applies increasing points as the vehicle weight is reduced. The percentage of original vehicle weight that has been removed can be used as a means of differentiating between the three levels of weight reduction. As shown in the registration form, Level 1 weight reduction applies when the weight removed from the vehicle is approximately 5% or less than its original curb weight. For example, up to 150lbs could be removed from a 3,000lb vehicle within the Level 1 weight reduction guideline. Similarly, up to 300lbs could be removed within the Level 2 guideline.

Typical modifications used to reduce the vehicle's weight include but are not limited to: removal of interior pieces, carpeting, sound deadening, seats, removing the air condition system, removing the power steering pump, and replacement of body panels/glass with lightweight alternatives.

The negative points for the addition of a non-OEM safety roll bar/roll cage can only be taken if points are taken for Level 1, 2, or 3 weight reduction as well. Cosmetic roll hoops are not eligible for the negative points allotment.

## SECTION 3: ENGINE

*Engine swap - move car to donor's class or +7  
whichever is greater (if increased displacement, does not  
entail displacement points)*

For example, Jane Doe changes the engine in her car to one of greater displacement. The engine is taken from a car with base class of B, while the original base class of her own car is C. Jane must now consider her car as having a base class of B. Points for other modifications will be added to the new base class in order to determine the effective class of Jane's car. If the new motor has a greater displacement than her original one, increased displacement points are not taken unless the new engine is modified to further increase its displacement.

*Unmodified factory turbo or supercharger +3  
Modified or replaced a factory turbo or sc +6  
Added a turbo or supercharger +13 (i.e. non-original forced induction)*

Take these points if you A) have a stock factory turbocharged or supercharged vehicle, B) modified/upgraded a factory turbo or supercharger OR replaced it with a non-OEM unit or C) added forced induction to an engine that was originally naturally aspirated.

*Aftermarket air intake **FREE***

No points are given for modification or addition of any air intake system components. This applies only to components upstream of the throttle body. Modifications to the throttle body and intake manifold fall within the "Other Internal Engine Modifications" section.

*Replacement pulleys +1*

Take these points if you have replaced any or all of your engine's accessory pulleys with parts of different diameter. For example, this applies to "under drive" pulley kits.

*High performance carburetor +1*

Take these points if your vehicle is equipped with a non-original performance carburetor.

*Cat-back exhaust +1*

Take these points if your vehicle is equipped with any non-original cat-back exhaust system, or components thereof.

*High-flow catalytic converter or test pipe +1*

Take these points if a catalytic converter has been removed from your exhaust system or replaced with a high-flow unit.

*Aftermarket header or exhaust manifold +2*

Take these points if your vehicle is equipped with any non-original exhaust header(s) or exhaust manifold.

*ECU modifications or programmable electronics (flash/chip/piggyback or stand alone) +2*

Take these points if the programming of your vehicle's electronic engine control system has been modified in any way.

*Boost controller or altered factory boost level +6 (COBB AP takes these + above points)*

This applies to vehicles with forced induction. Take these points if your vehicle is equipped with any non-factory adjustable boost controller or the factory boost level has been altered in any way. If you have a COBB Access Port or equivalent, that is capable of adjusting boost levels on top of other parameters, take these points plus above points for ECU modifications or programmable electronics.

*Lightweight flywheel +1*

Take these points if your vehicle is equipped with a flywheel that weighs less than the O.E.M. specified flywheel. This also applies to vehicles with O.E.M. flywheels that have been lightened by machining.

*Other internal engine modifications +4 (cams, valves, injectors, pistons, etc.)*

Take these points if any modifications to the engine internals have been done that are not already covered by the points schedule. This may include things such as camshafts, pistons, connecting rods, etc. Also includes larger injectors or fuel rail. Additional points are not to be taken for multiple "other internal engine modifications" that are covered in this section.

*Aftermarket or upgraded intercooler +2*

Take these points if your vehicle is equipped with any non-original intercooler.

*Aftermarket downpipe(s) +2*

Take these points if your vehicle is equipped with any non-original downpipe.

*Changed factory limited slip differential +2*

Take these points if your vehicle is equipped with any non-original specification limited slip differential. This could include front, center, and rear differentials. If more than one differential is changed, the points taken remains at 2. The vehicle must have been originally equipped with some form of limited slip differential for this points item to apply.

*Added limited slip differential +4*

Take these points if a limited slip differential has been added to your vehicle and the original equipment was an open type differential.

*Increased displacement or stroking +5 (factory service manual stock overbore is **FREE**)*

Take these points if the displacement of your vehicle's motor has been increased in any way, except for factory service manual stock overbore.

*Non-stock Gearing +3 (take points only once for any or all: transmission change; gear ratio, final-drive or ring and pinion change; diameter of stock wheel changed by more than 1")*

These points apply to vehicles on which the overall drive ratio has been altered. This can be accomplished by changing the specifications of the transmission gears, differential, or rolling radius of the tires. Take these points if you have replaced your transmission with one containing different gear ratios; or changed the specifications of any transmission gears or differential; or if the outside diameter of your tires differs by 1 inch or more from the OEM tire size. These points are only taken once, even if the transmission, differential, and tire specifications are all altered.

## SECTION 4: SUSPENSION AND BRAKES

### *Non-adjustable performance shocks +2*

Take these points if your vehicle is equipped with any non-original, non-adjustable performance shock absorbers/dampers. Note: OE replacement shocks/dampers are FREE.

### *Adjustable performance shocks +5 (rebound and/or compression)*

Take these points if your vehicle is equipped with any non-original, adjustable shock absorbers/dampers. If these points are taken, do not take points for "Non-adjustable performance shocks."

### *Performance/lowering springs +3*

Take these points if your vehicle is equipped with non-original performance springs and/or springs which lower the vehicles ride height.

### *Adjustable lower spring perches +2 (if you can adjust ride height, take these points)*

Take these points if your vehicle is equipped with non-OEM adjustable spring perches. The spring perch is the surface on which the spring is mounted. Adjustability of the spring perches allows the ride height of the vehicle to be adjusted. If you are able to adjust your vehicle's ride height, take these points unless this adjustability is present on the car as it comes from the factory.

### *Changed/added anti-roll bar(s) +3*

Take these points if your vehicle is equipped with any non-original sway/anti-roll bar(s). Take these points only once whether you have changed one bar or both.

### *Non-stock alignment +3 (any alignment outside the factory service manual specifications)*

Take these points if the wheel alignment of your vehicle is outside the specifications listed for normal street use in the vehicle's service manual. Points are not taken for alignment components such as adjustable camber arms or bolts. It is possible to have such components installed without taking alignment points if the vehicle's wheel alignment remains within the specifications listed in its service manual.

### *Suspension geometry changes +4 (altered location of any mounting points, etc.)*

Take these points if the suspension geometry of your vehicle has been modified from its original specification. This involves changing the geometric location of any mounting point of any suspension component. This does not include wheel spacers or changes in geometry associated with wheel alignment. Typical components which alter the suspension geometry are roll center adjusters (RCA's) and bump-steer adjusters.

### *Brake pads, rotors, calipers = FREE*

No points are to be taken for use of any brake pads, rotors, and/or calipers.