

# CARS Autocross 2013 Series Competition Rules

## SECTION A: General Competition Rules

### 1. ATTIRE

(a) The following requirements apply to all competitors and passengers:

- i. Helmets are mandatory.
- ii. No short pants, sleeveless tops or slippers will be allowed.

### 2. PROTESTS

(a) Protests are allowed and encouraged to help monitor the “developments” that your fellow racers do to their cars during the course of the year. If you raise a protest, it will cost you **TT\$100**. If you win the protest, your money is returned and any cost incurred in satisfying the protest must be paid by the competitor who lost the protest. If this competitor fails to pay CARS any costs incurred, he will be disqualified from further championship participation.

### 3. PENALTY POINTS SYSTEM

(a) Modifications have been weighted using a penalty points system.

(b) The Penalty Points will be assigned by the scrutineers based on the modifications observed and/or declared for each vehicle.

(c) The first class bump is 4 points, the next bump is 5 points and all other bumps are 6 points.

### 4. CHAMPIONSHIP POINTS

(a) Competitors' championship points will be tabulated as usual, with the winner of the class on a day earning 100 points (whether or not a championship entrant) and everyone else earning a percentage of those points based on time difference from the winning time.

(b) Championship Point Awards:

<b>Category</b>	<b>Points</b>	<b>Selection</b>	<b>Maximum</b>
Winning a class in Autocross competition	100	5 out of 7	500
Working at Autocross events	Averaged	Average over all events to date	99
<b>Maximum Potential Championship Points for a Year</b>			500

## 5. NUMBER OF CHAMPIONSHIP EVENTS

- (a) There will be 7 Autocross championship events and of each there will be 6 runs per competitor. Competitors would be allowed to drop 2 championship events. Therefore, a total of 5 out of 7 events will count towards the Autocross 2013 championship competition.

## 6. WORKING AT EVENTS

- (a) Each competitor who pays to enter a competition and signs up for work on the day of the event will earn an average of all their championship points to date, up to a maximum of 99 points.
- (b) A competitor can only receive points for working at 1 event for the championship year.
- (c) The Competitor will be assigned to one of the following positions by the Chief Marshal for the event:
- i. Course marshals (M1- M4)
  - ii. End marshal
  - iii. Start/Grid marshal
  - iv. Scrutinizer
  - v. Announcer
  - vi. Course setup and pull down

## 7. OVERALL CHAMPIONSHIP SHO7287 ENTRANTS

- (a) The Championship shootout event will have a maximum of 17 competitors consisting of the top two competitors in each of the eight (8) championship classes GS, HS, ES, ESP, SS, EP, EPR and Open. The overall champion from the previous year will be the 17<sup>th</sup> entrant once the minimum entry requirements are satisfied.

## SECTION B: Class Definitions

There will be eight (8) championship classes in the Autocross **2013** series. These are listed in **Table 1** below and include the addition of an Open Class where any and all modifications are allowed. Cars that cannot fit into the other 7 defined classes based on **Section C** will be placed in the Open Class.

**Table 1 – Championship Classifications**

<b>CLASS</b>	<b>W/P Ratio Range</b>
GS	30+
HS	26 - 29.9
ES	20 - 25.9
ESP	14 - 19.9
SS	11.5 - 13.9
EP	10.1 - 11.4
EPR	8.6 - 10.0
Open Class	8.5 and under

**NB:** Rookies will be placed in regular competition classes. The Rookie status will be allowed for one

## SECTION C: Class Determination

A competitor's Final Class will be determined using one of the following methods depending on the type of vehicle and/or competition class entered into.

### *I - Championship Competitors*

1. Those taking part in the **2013 championship** will be placed in a Base Class as determined by their vehicle's Weight/Power (W/P) ratio. The W/P ratio will be recorded by CARS or its agents through approved and supervised measuring devices (scales and dynos). Weight will be expressed in pounds (no driver, ½ tank of gas) and power as Brake (crank) Horsepower (**bhp**). Measured wheel horsepower (**whp**) will be converted to **bhp** through the following conversion factors:
  - (a) 2 wheel drive cars :  $WHP * 1.15$  (front or rear wheel drive)
  - (b) 4 wheel drive cars :  $WHP * 1.20$
  
2. Once the Base Class is established, penalty points for modifications made to the vehicle will be awarded to establish the competitor's Final Class for the championship based on Tables 2 & 3.
  
3. The Base Class determinations will already incorporate all engine and weight modifications that alter the car's W/P ratio, so such modifications are not further penalized by the penalty awards system. Exceptions to this (**that are penalized**) are:
  - (a) VTEC/VVC/VVTLi controllers because they don't increase power to affect the W/P ratio, but alter the power delivery characteristics, and

- (b) After market boost controllers which competitors can use to alter power easily between the measuring sessions and race events.
4. Note that it is now **mandatory** for all championship competitors to have their vehicles measured in competition trim by CARS or its agents. If this is not possible AND you want to participate in the championship, you will be placed in an appropriate class as determined by the CARS Autocross Competition Committee with no chance of appeal. You will only be re-classed (bumped) by the Committee under these circumstances, if they deem it necessary based on observed performances over two (2) events or more.
  5. Championship competitors must declare all modifications prior to AND during the championship season. Failure to do so will result in a maximum penalty of disqualification from the championship competition for the year if found out via the scrutineer process or protest activities.

## ***II - Non-championship Competitors***

1. Non-championship competitors will have their Base Class determined by published Manufacturers' specifications of Power and Weight to determine the W/P ratio for the stock vehicle.
2. Using Power to Weight ratios for base classification are deemed sufficient. Although these are primarily measures of engine performance, there is a reasonable assumption that a manufacturer will match engine performance with suspension modifications. As such, cars in a higher power trim level are expected to also have higher suspension trim levels than equivalent cars with lower power when purchased stock.

### **III - Frankenstein Builds**

1. Competitors with cars that have unknown W/P ratios, unauthorized modifications or can't otherwise be placed into a Base or Final class as determined by **Section C I & II** will be placed in the Open Class.
2. Cars determined to be race prepared (non OEM seam welds, weight reductions, radical engine and drive train mods etc.) would be placed in the Open Class until an assessment of performance can be made or a Base Class can be determined via the stipulations outlined in **Section C – I and II**.
3. If a competitor's car falls into categories (1) and (2) above and he intends to take part in events (championship or non-championship), the onus is on the competitor to provide CARS with credible performance information or subject the car to testing at the competitor's expense to be classed properly. Failure to do so will result in the car remaining in the Open Class.

### **IV - CLASS BUMPING**

1. A car's performance potential will be re-assessed if CARS receives an official protest from a competitor within the same class.
2. If a car is found to be outside of its class at any time during the competition year because of a modification change or classification error (as opposed to false declarations), that car would be retroactively re-classed.
3. Championship points earned will be recalculated based on the bump, and any trophies won by the competitor(s) during the year must be surrendered for redistribution to the competitor(s) who would have held the finishing position of the incorrectly classed car at the various events.

## ***V - Penalty Awards for Final Classification***

**Table 2 Penalties Applicable to Classes: GS, HS, ES**

<b>Ite</b>	<b>Description</b>	<b>Penalty Awarded</b>
Tires	Tires above a width of 225	1 point penalty
Racing Tires	R- Compound Tires	4 Points (automatic class bump)
Upgraded suspension	Shock / spring / coil-over	3 point penalty
Upgraded suspension	Lowering springs alone	1 point penalty
Anti roll / Sway Bars	Any	2 point penalty
LSD	OEM/Aftermarket	2 point penalty
Boost Controllers		3 points

**Table 3: Penalties Applicable to Classes: ESP, SS, EP and EPR**

<b>Item</b>	<b>Description</b>	<b>Penalty Awarded</b>
Tires	Tires above a width of 255	1 point penalty
Racing Tires	R- Compound Tires	automatic one(1) class bump
Upgraded suspension	Shocks / springs combo	3 points penalty
Upgraded suspension	Lowering springs alone	1 point penalty
Anti roll / Sway Bars	Any	2 points penalty
Added OEM LSD	Any	2 points penalty
LSD	OEM / Aftermarket(Eg: 4WD – 2 LSD’s – 4 points)	2 points penalty
Traction control System	Aftermarket	2 point penalty
V-TEC Controllers	Any	2 point penalty
Alternate Gear Ratios		3 point penalty
Upgraded brakes	Calipers / rotors size increase	2 point penalty
Boost Controller		3 points penalty

**NB:** Note that there are no penalty awards in the open class.

## **SECTION D: Allowable Class Modifications**

The items listed in this section are “free” modifications. If an item is not listed in this section, it attracts a penalty. If such an item is not listed under **Section C-V** at present, it will be assessed and awarded a penalty value which would be applied to the car or cars found with the new item.

### **Applicable Classes—GS, HS, ES**

#### **1. TYRES:**

- a) Any tire which is OE on a car eligible for Stock Category may be used.
- b) Tires up to and including a width of 225.
- c) Tires must have a minimum tread wear rating of 140.
- d) Tire must fit the allowable wheels and fender wells without modification.
- e) Any wheels up to 7.0" in width that fit over stock brakes

#### **2. SHOCK ABSORBERS / SUSPENSION**

- a) The make of shock absorbers may be substituted providing that the number, type (e.g., tube, lever, etc.), system of attachment and attachment points are not altered, except as noted below. The interchange of gas and hydraulic shocks absorbers is permitted.
- b) Both the front and rear suspension may be adjusted through their designed range of adjustment by use of factory adjustment arrangements or by taking advantage of inherent manufacturing tolerances. This encompasses both alignment and ride height parameters, if such adjustments are provided by the stock components and specified by the factory as normal methods of adjustment. However, no suspension part may be modified for the purpose of adjustment unless such modification is specifically authorized by the factory shop manual for non-competition purposes.



### **3. BRAKES**

- a) The make and material of brake linings may be changed.
- b) Substitution of clutch and brake hydraulic lines with solid metal or braided metal is allowed on all cars.

### **4. ANTI-ROLL (SWAY) BARS**

- a) The use of any bushing material or links is permitted.

### **5. ENGINE AND DRIVE TRAIN**

- a) The engine air filter element may be removed or replaced.
- b) Any part of the exhaust system may be modified. However this may modify your base class as per section **C - I**
- c) Thermostats may be added or substituted.
- d) Silicone replacement hoses are permitted as alternate components provided the size, shape, location, and performance equivalences are not altered.

## **Applicable Classes—ESP, SS, EP AND EPR.**

### **1. GENERAL**

(a) The ESP, SS, EP and EPR classifications of vehicle modifications are meant to fit between the current Stock (up to ES) and Open class.

### **2. BODYWORK**

a) Pedal kits and other interior cosmetic accessories may be added.

b) The driver and front passenger seats may be replaced, with the following restrictions: The seating surface must be fully upholstered and must be fitted in the stock location. Racing Harnesses are allowed provide that they are properly attached to the vehicle.

### **3. TIRES**

a) Tires up to and including a width of 255.

b) Tires must have a minimum tread wear rating of **140**.

c) Tires must fit the allowable wheels and fender wells without modification.

### **4. SHOCK ABSORBERS**

a) Shock absorber bump stops may be altered or removed.

b) Any shock absorbers may be used. Shock absorber mounting brackets which serve no other purpose may be altered, added, or replaced, provided that the attachment points on the body/frame/ sub-frame/chassis/suspension member are not altered.

c) The system of attachment may be changed. The number of shock absorbers shall be the same as Stock.

d) No shock absorber may be capable of adjustment while the car is in motion, unless fitted as original equipment. MacPherson strut equipped cars may

substitute struts, and/or may use any insert. This does not allow unauthorized changes in suspension geometry or changes in attachment points (e.g., affecting the position of the lower ball joint or spindle). It is intended to allow the strut length changes needed to accommodate permitted modifications which affect ride height and suspension travel.

## **5. BRAKES**

- a) Cross drilled and/or slotted brake rotors are permitted, same size and type as standard.
- b) Brake lines may be substituted with alternate DOT approved flexible brake lines.
- c) Original equipment ABS braking systems may be electrically disabled, but may not be removed or altered in any other way.

## **6. ANTI ROLL / SWAY BARS**

- a) Bushing material, method of attachment, and locating points are unrestricted.

## **7. SUSPENSION**

- a) Ride height may only be altered by suspension adjustments, the use of spacing blocks, leaf spring shackles, torsion bar levers, or change or modification of springs or coil spring perches. This does not allow the use of spacers that alter suspension geometry, such as those between the hub carrier and lower suspension arm.
- b) Springs must be of the same type as the original (coil, leaf, torsion bar, etc.) and except as noted herein, must use the original spring attachment points. This permits multiple springs, as long as they use the original mount locations.
- c) Coil spring perches originally attached to struts or shock absorber bodies may be changed or altered, and their position may be adjustable.
- d) Spacers are allowed above or below the spring.

- e) Suspension bump stops may be altered or removed.
- f) Camber bolts may be installed providing these parts use the original, unmodified mounting points. Caster changes resulting from the use of camber bolts are permitted.

## **8. ELECTRICAL SYSTEM**

- a) The make, model number, and size of the battery may be changed but not its voltage.
- b) Relocation of the battery or batteries is permitted but not into the passenger compartment.

## **9. ENGINE**

- a) Original equipment traction control systems may be electrically disabled, but not removed or altered in any other way.
- b) The air intake system up to, but not including, the engine inlet may be modified or replaced.
  - i. For naturally aspirated engines, the engine inlet is the inlet to the throttle body or carburetor.
  - ii. For turbocharged or supercharged engines, the engine inlet is the compressor inlet.
  - iii. The existing structure of the car may not be modified for the passage of ducting from the air cleaner to the engine inlet. Holes may be drilled for mounting.
- c) Exhaust manifolds and headers may be replaced with alternate units.
- d) The mass airflow sensor must remain in its approximate original location.
- e) Any accessory pulleys and belts of the same type (e.g., V-belt, serpentine) as standard may be used.
- f) Fuel pressure regulators may be replaced in lieu of electronic alterations to the fuel system.