

- i. Hardware to meet or exceed the strength of DOT or SAE approved type. Example: forged eyebolts with 7/16" SAE threads.
- ii. Attachments must be to the car or roll bar, and not to the seat structure or seat frames. Lap belts may be secured to the factory seat belt locations using Brey-Krause mounting hardware (P/N R9001) for cars with 450 or fewer mod points with stock seats.
- iii. Attachments to sheet metal portions of the car must have adequate backing plates.
- iv. Lap belts should be mounted so as to approximately bisect the angle between the thigh and the spine as viewed from the side.
- v. Competition shoulder harnesses should be mounted so that the rearward horizontal portion leaves the shoulder at an angle of approximately 90 degrees to the spine as viewed from the side. Competition shoulder harnesses that pass between the headrest posts are acceptable
- vi. Shoulder harness mountings that depend upon the seat back, either for position or support in a crash, will not be permitted.
- vii. Where the anti-submarine belt does not pass through the seat cushion (which is the recommended approach where seats have a pass-through provision) they should pass under the drivers seat and be anchored at or near the lap belt attachment points. Anti-submarine belts may be secured to the factory seat track mounting locations using Brey-Krause mounting hardware (P/N R9030) for cars with 450 or fewer mod points with stock seats.
- viii. All belts and bolts should be adequately fastened. Examples, cotter keys, double nuts and/or lock nuts. Additionally, any belts attached to eyebolts with spring clips must have the spring clips positively secured closed through the use of cotter keys, hitch pins or similar approaches.
- ix. Good restraint system installation practice should include, but not be limited to, the above guidelines.

3.4 INSPECTION

- a. All cars are required to pass a tech inspection for the purpose of safety, and must meet the requirements of 3.2 and 3.3 prior to being allowed on course. A car judged to be in unsafe operating condition shall be barred from participation until the deficiency is corrected. The judgment may be made at any time during the event by the Chief Technical Inspector or by the series chairperson or by the event chairperson.

3.4T Driver's Education/Time Trials

- a. Inspections will be located at a site or sites designated by the event Chairperson. The vehicle must be inspected in the condition it will run. If substantial changes, such as adding an oil cooler or adding race tires, are made to the vehicle after inspection, it must be re-inspected at the event.
- b. All required numbers and designation letters must be at the Tech site.
- c. All cars participating in the GGR DE/TT series shall have a minimum of one annual full technical inspection at a designated annual tech site or a suggested tech station. Be sure to have the DE/TT tech form stamped and signed by the inspector. It is the participants responsibility to also fill out the same form for each event they attend after that.
In the event that a car has the annual technical inspection at the track with prior approval of the chief technical inspector, then a fee of \$40 will be collected from the participant unless the participant lives over 50 air miles from all of the annual tech sites and all of the approved tech stations. If prior approval of the chief technical inspector was not obtained for a full tech at the track the fee shall be not more than \$75.
- d. Helmets and all driving clothing must be brought to the tech site.
- e. Roll bars will be inspected at the first event, and a designation to indicate they have passed tech will be put on them.
- f. Any car, which has run a racetrack event (race, Solo I, other club time trial, etc.) after attending pre-tech, must report to the Tech Inspector before being allowed on the track.

4.0 AUTOMOBILES

- 24
- (a) It is the responsibility of each driver to properly classify their car. Each entrant shall submit a completed car classification form,

declaring the answers to each modification question as well as base model selection on or before registration. These classification forms will be publicly available for inspection by other competitors.

Forms may be maintained from event to event, provided they are current for that event.

- (b) The classification of your car is achieved by adding the Base Points (See appendix A) and the sum of the Modification Points (also referred to as mod points) together to achieve a point total for your car. This point total is then referenced against the Car Classes table (see Appendix B) to determine your car class for the TT series, AX series or both.

A Car Classification form is provided in Appendix C of this rulebook, which steps you through the process of classifying your car.

Note that Base Points and/or Modification Points and resulting car classes may be different for AX and TT. The tables in the appendices show the specific points for both the AX and TT Series

- (c) Base Points (Appendix A):

- i) The base points are allocated by selecting your car model from the base model list. If your car does not have the same model engine as the car model's original, there are some special instructions in item 38) of the Modifications List that indicate how to alter your base model selection if required.
- ii) Rare, specialty, or race cars are not included in the base classes. Drivers may request a specific base point assignment from the event director or competition director for a single year. If the car appears in at least 3 events in a single year then the base assignment and wheel points can be submitted to the DEC for permanent inclusion in the Base Models table (Appendix A). Alternatively, these cars can run in Fun Category with safety rules at discretion of Time Trial Chair, Competition Director or designee.

- (d) Modification Points:

- i) The modification points are allocated by checking each modification question to determine whether such a modification applies to your car and if so, applying the modification point value to your running modification point sub-total. Your modification points total is then the sum of all the modification points that apply to your car.
- ii) Items not mentioned carry zero points. The Competition Chair and Event Chairs reserve the right to adequately remedy any gross omission or unexpected exploitation of this provision.

Again note that points for a specific modification may be different for AX and TT classifications.

- (e) Car Classes (Appendix B):
 - i) The point total for AX and/or TT determines the class of the car. For example, 575 TT points would fall into TT9. Since this class has a point total range from 551 to 600, there is room to absorb a further 25 points before moving into the next higher class.
 - ii) For Time Trials only, cars with 650 or greater modification Points will be classified using Appendix B.
- (f) Update/Backdate: Any car may be entered as a different car than originally manufactured, provided it matches the car as which it is being run in all performance-related specifics. These include (but are not limited to) weight, weight distribution (front/rear and side-to-side), center-of-gravity height, gearing, power, torque, suspension, and airflow.
- (g) U.S. Delivered Cars: Cars are defined as U.S. model specification Porsches that were normally delivered to the U.S. public for general road use through the manufacturer's authorized sales outlet.
- (h) Noise: Site Restrictions may require effective noise mufflers. Students are required to run effective mufflers to allow instruction.
- (i) Fuel: Any gasoline fuel is permitted. Additives (non-oxygen bearing) may be used as long as they do not constitute more than 10% of the fuel.
- (j) Aerodynamic Devices: Which articulate or adjust when the car is in motion are prohibited, except for the normal devices on cars such as C2s, C4s, 993s, 996s and Boxsters.
- (k) Fun Category is for Porsche cars, which choose not to run in any class, rare, and specialty or race cars that do not conform to any of the other categories (from (c)(ii) above). Drivers of Historic Porsches and other factory racecars are encouraged to participate in Fun Category. All cars must be classed for the purposes of applying safety requirements of their normal class if one exists, or else at the discretion of the Time Trial Chair, Competition Director or designee.
- (l) Additionally, Special classes, to be designated S1, S2, etc., can be created by any three or more competitors who decide to run against each other. The competitors must petition the chairperson of the series (autocross or time trial) before the end of the first event of the season. Cars will comply with the safety regulations of the class they would normally fall from the designated classes. Year-end trophies shall be awarded only if at least three competitors participate in enough events to earn an award.

4.1 MODIFICATION POINTS

Each line item must be answered, resulting in affirmative or negative, and the points assigned with that answer.

Line items with multiple choices, such as 10a), 10b), 10c), are designed to be mutually exclusive, and you should select the choice that provides the least points, yet remains in full compliance.

	Modification	TT Points	AX Points
	Wheels		
1)	Select this option if the car has wheels (front or rear) that are wider than the base wheel widths as specified in Appendix A for your base model. The car will receive 25 mod points for each whole or fractional inch that your front or rear wheel width is over the base width. EXAMPLE: From Appendix A, the base wheel widths for a Boxster (F/R) are 6"/8" and the car being evaluated is running 7" and 8.5" wheels. It would receive 25 points for the front wheels (7 – 6 = 1 inch) and an additional 25 points for the rear wheels (8.5 – 8 = 0.5 which counts as a fraction of an inch). The total mod points for wheels would be 50 points. NOTE: It is possible and expected that in some cases, stock wheels delivered from the factory may incur mod points on this line item. This is to account for cars delivered with narrower wheels in the same model and year.	25/inch	25/inch
2)	Select this option if the car has any of the following: The car has non-stock wheel spacers greater than 0.25" thick. NOTE, If the car was delivered from the factory with wheel spacers of any size, then it is not required to check this option.	5	10
3)	Tires - Select one of three options		
3a)	The car has Street tires that are marked with a wear rating of greater than 100	0	0
3b)	The car has "R Compound" tires that are DOT legal tires marked with a wear rating of less than 100.	100	150
3c)	The car has racing slicks or tires that are not DOT legal.	150	175
	Brakes		
4)	Select this option if the car has any of the following: The car has the brake rotor dust shields and/or backing plates removed. NOTE, This is a zero points modification that is included to differentiate from modifications that attract points in item 5)	0	0
5)	Select this option if the car has any of the following: The car has any non-stock brake cooling system that includes the removal of materials, or the addition of materials. Typical examples of this include: · Cutting an air inlet in your front valance or spoiler to direct air to the front wheel wells · Adding hoses to join existing air inlets in the valance or spoiler directly to fittings on the wishbone or hubs	5	0

	Modification	TT Points	AX Points
	<ul style="list-style-type: none"> · Adding air scoops to the wishbones or hubs. · Adding modified brake dust shields / backing plates. 		
6)	<p>Select this option if the car has any of the following:</p> <p>The flexible brake hoses have been replaced with non-stock components.</p> <p>NOTE: This is a zero points modification that is included so that brake lines of a different material are declared without penalty during the car classification process.</p>	0	0
7)	Brake Calipers - Select one of two options		
7a)	The car has stock brake calipers.	0	0
7b)	<p>The car has non-stock brake calipers.</p> <p>Some common installation examples of non-stock brake calipers are:</p> <ul style="list-style-type: none"> · The upgrade of an early 911 from M to A series calipers. · Upgrade of a 911 to 911 3.2 Carrera front calipers designed for thicker rotors. · Upgrade of 914-4 to 914-6 brake calipers. · Upgrade of normally aspirated 964 to 964 C2 Turbo calipers. · Upgrade of pre - 1984 911 to 911 3.2 Carrera rear calipers. · Aftermarket non-Porsche calipers. 	10	0
8)	Brake Rotors - Select one of two options		
8a)	<p>The car has stock brake rotors or thicker or thinner rotors of the same diameter as stock.</p> <p>NOTE, This is a zero points modification that is included to differentiate from modifications that attract points in item 8b)</p>	0	0
8b)	The car has brake rotors that are larger diameter than stock	20	0
9)	<p>Select this option if the car has any of the following:</p> <p>The car has a master cylinder that has been replaced with a unit of different bore diameter.</p> <p>The number of master cylinders has been altered.</p> <p>A brake power assistance system has been added or deleted.</p>	5	5
10)	<p>Select this option if the car has any of the following:</p> <p>The car has non-ferrous brake rotors that are not stock.</p> <p>NOTE : Examples of non-ferrous rotor materials include, but are not limited too, aluminum, aluminum matrix, titanium, carbon, and ceramic or other non-ferrous brake rotors that were not installed as original or optional equipment.</p> <p>NOTE : Item 10) pertains to brake rotors only. This question does not pertain to brake pad material.</p>	20	5

	Modification	TT Points	AX Points
11)	<p>Select this option if the car has any of the following:</p> <p>The car has a modified brake pressure balancing system.</p> <p>The car has any kind of non-stock adjustable kinematic system or non-stock adjustable pressure valve installed in the brake system.</p> <p>NOTE : An adjustable kinematic system is a force dividing mechanism that allows different force values to be applied to the two hydraulic systems supplying the front and rear brakes.</p> <p>NOTE : Many Porsches are equipped with brake balance devices by way of fixed value proportioning valves. Select this option if the factory style proportioning valve has been modified, removed, or a valve of different or adjustable value has been installed in any location in the system.</p>	5	5
12)	<p>Select this option if the car has any of the following:</p> <p>The ABS has been modified with any device other than an electrical on/off switch.</p> <p>The car has an ABS control unit that is not stock.</p> <p>The car has received any re-programming of the ABS control unit, which might include, but is not limited to, additional external controllers.</p> <p>The stock ABS controller has been exchanged with a Porsche Motorsports ABS controller unit.</p> <p>The speed trigger rings or any other sensor in the ABS system have been modified.</p> <p>The car was not originally equipped with ABS and now uses an ABS brake system.</p>	10	10
	Battery		
13)	<p>Select this option if the car has any of the following:</p> <p>The stock battery has been replaced with a smaller battery.</p> <p>Any of the batteries have been removed completely.</p> <p>NOTE: Typical examples are the 1973 and earlier 911s that were equipped with 2 batteries. Removing one battery would require this option to be checked.</p> <p>NOTE: An exception is the mid 70's 911s which had a single huge battery. It is acceptable to replace this with the smaller of the original batteries that was used during the same period with non-air-conditioned cars.</p>	5	5
14)	<p>Select this option if the car has any of the following:</p> <p>The battery or batteries are not located in their stock positions.</p> <p>NOTE: A smaller than O.E. battery located within the footprint of the original battery can be considered to be in the stock location. In that case, it would not be necessary to check this option.</p>	5	5
	Glass		

	Modification	TT Points	AX Points
15)	Select this option if the car has any of the following: The car has any of the glazing replaced with non-stock components. The car has any factory lightweight glazing that was supplied for limited edition models, homologation models, or Club Sport models. The car has any glazing completely removed. NOTE: Glazing refers to any transparent material installed in the position of the stock window frames.	10	20
16)	Select this option if the car has any of the following: One or more window lift mechanisms has been removed or altered NOTE: O.E. hand crank mechanism to replace electric lift is accepted.	5	10
17)	Seats – Select one of three options		
17a)	The car has all the stock seats.	0	0
17b)	The car has one or more non-stock seats with angle adjustable backrests.	5	5
17c)	The car has one or more single piece racing style seats.	10	10
18)	Interior Trim – Select one of three options		
	These line choices are for the reduction of weight that is the result of interior modifications. Porsche factory lightweight cars typically achieved this with simplified door panels, lighter carpet, removal of carpet padding, removal of sound insulation, and removal of panel quieting materials such as tar panels. “Trim” or “trimmed panels” refer to the visible finished surface materials as well as their underlying substrate panels. For example: a door trim panel is typically comprised of a plastic or hardboard substrate panel which is covered in vinyl or carpet. The O.E. panel would be in compliance with 18a) If the vinyl or carpet is removed or replaced with a non-stock material, then item 18b) would apply. If the door trim panel is removed completely, exposing the sheet metal structure of the door, item 18c) would apply. This example can be applied to any interior trim component. Replacement of Seats is declared separately in item 17). Do not include seats in this item.		
18a)	Interior is stock. Minor cutting or removal of trim is permitted for the installation of safety systems, such as harness bars, roll bars, roll cages and fire extinguishers. If the interior of the car is stock as described above, then select this choice.	0	0

	Modification	TT Points	AX Points
18b)	Interior remains fully trimmed but is not stock . Interior is fully trimmed and no bodyshell or substrate panels are exposed that are normally covered by trim material. Typical examples of modifications that do not comply with stock interior but do comply with this choice: · RS style door panels on a 911 · Lightweight carpet kit · Clubsport interior · RS America trim for a C2	5	10
18c)	Interior trim is partially or completely removed. The car has exposed bodyshell or substrate panels that would be covered by trim in the stock configuration.	10	20
19)	Fenders – Select one of two options		
19a)	The fenders are stock. Fender lips may be rolled or trimmed without changing the size or shape of the fender opening.	0	0
19b)	The fenders are not stock. The fenders have any kind of flaring or material added that results in a wider fender section.	10	10
20)	Select this option if the car has any of the following: The car has non-stock front or rear bumpers. The car has front or rear bumpers that match the stock appearance but are manufactured from non-stock materials.	20	20
	Bodywork		
21)	Select this option if the car has any of the following: The car has a non-stock front hood. The car has a front hood that matches stock appearance but is manufactured from non-stock materials. NOTE: This item includes hoods constructed from composites and light metals, if not stock for your VIN #.	5	20
22)	Select this option if the car has any of the following: The car has a non-stock rear hood. The car has a rear hood that matches stock appearance but is manufactured from non-stock materials. NOTE: If the car has a non-stock rear hood of any kind, including additional aerodynamic devices, this option must be checked. The aerodynamic merit of this modification is assessed in the wings and spoilers section.	5	20

	Modification	TT Points	AX Points
23)	<p>Select this option if the car has any of the following:</p> <p>The car has non-stock door(s). The car has door(s) that match stock appearance but are manufactured from non-stock materials</p> <p>The car has door(s) with any of their structural material removed. This includes the removal of anti-intrusion bars from later model doors.</p> <p>Exceptions to this rule would be:</p> <ul style="list-style-type: none"> · Early cars installing later model stock doors containing anti-intrusion bars not present in the original doors. · Substantial removal of interior side door panel structure to allow for the installation of NASCAR style door bars in a roll cage design. 	20	20
24)	<p>Select this option if the car has any of the following:</p> <p>The car has non-stock engine or transmission mounts.</p> <p>NOTE: Factory Sport mounts, or interchange of any direct replacement O.E. part number is permitted without checking this option.</p>	5	5
25)	<p>Select this option if the car has any of the following:</p> <p>The car has received any modification to the sunroof to remove material or components from the sunroof assembly.</p> <p>The car has a sunroof panel that matches stock appearance but is manufactured from non-stock materials.</p>	5	5
26)	<p>Select this option if the car has any of the following:</p> <p>The car has one or more windshield wiper arms removed.</p> <p>NOTE: This is a zero points modification that is included to differentiate from modifications that attract points.</p>	0	0
27)	<p>Select this option if the car has any of the following:</p> <p>With the exception of air conditioning systems and gasoline heaters, the car has been modified by the removal or replacement of any ancillary system parts.</p> <p>NOTE: This item is intended to allocate points to any components either removed or replaced that are not covered specifically in other line items. This item applies if the car has complete systems removed or only specific components removed, regardless of whether the system functionality has been restored using other components (it is assumed the motive for removing the O.E. equipment was weight reduction.)</p> <p>Exceptions to this rule are the removal of those components necessary to allow for the correct installation of safety equipment.</p> <p>Examples of Exceptions to this rule would be:</p> <ul style="list-style-type: none"> · Removal of the O.E. seatbelt retractor when it interferes with a roll bar or roll cage installation. · Removal of a bumper over-rider for the installation of a permanent tow hook. 	5	5
28)	<p>Select this option if the car has any of the following:</p> <p>The car has any part of an O.E. air conditioning system removed.</p> <p>The car was delivered with the "Air conditioner delete" option.</p> <p>NOTE: If the car had a "dealer-installed" or "aftermarket-installed" air conditioner system that has been partially or fully removed – you do not need to select this</p>	5	5

	Modification	TT Points	AX Points
	option.		
29)	Wings and Rear Spoilers – Select one of five options		
29a)	The car has no static or speed deployed rear aerodynamic device of any kind. NOTE: The exception to this rule is the stock Boxster moving spoiler lip.	0	0
29b)	The car has a stock rear aerodynamic device that was O.E.	5	0
29c)	The car has any stock or aftermarket replica of stock rear aerodynamic device that was available on any factory model, regardless of year.	10	0
29d)	The car has any rear aerodynamic device of any design not covered in 29a), b) or c) that is no taller than the roof height and no wider than the bodywork. Bodywork width includes the additional width of any fender flares installed.	20	5
29e)	The car has any rear aerodynamic device that exceeds the limitations of the other options above.	30	10
	Front Spoilers		
30)	Select this option if the car has any of the following: The car has any non-stock front spoiler, air dam, or front aerodynamic device. Examples: · Do not check this option for a 1971 911T that was equipped with the “S” front spoiler as part of the factory “S” options package for 1971. · Do check this option for a 1975 911S with a 1975 911 Carrera rubber lip spoiler installed.	10	10
31)	Transmission – Select one of three options		
31a)	The car has a stock transmission or a correct series transmission with stock gear ratios and final drive ratio. NOTE: If the gear ratios and final drive ratio remain in stock specification the addition of a Limited Slip Differential is acceptable within 31a) the LSD points will be applied in item 33) NOTE: If the car has a replacement transmission of the same series - from a different year, the car might not have the correct ratios for the VIN #. If the transmission has been exchanged, overhauled, or updated, it might be necessary to check the next option.	0	0
31b)	The transmission gear ratios or final drive ratio are not stock. The transmission has been rebuilt with alternate gear ratios, or final drive ratio that are not stock for your Vin #.	20	20
31c)	The car has a stock Sportomatic or Tiptronic transmission.	-15	-10
32)	Select this option if the car is an early model 914 in which the “tailshift” version of the 901 transmission has been updated to the later model “sideshift” configuration. NOTE, This is a zero points modification that is included so that this specific 914 transmission modification can be declared without penalty during the car classification process.	0	0

	Modification	TT Points	AX Points
33)	Select this option if the car has any of the following: The transmission has a limited slip differential of any design, stock or non-stock. NOTE: If the car has more than one differential, this option must be checked if any differential is a limited slip unit.	15	30
34)	Select this option if the car has any of the following: The transmission has been modified with the addition of any transmission cooling system. NOTE: Cars equipped with stock transmission cooling systems of any configuration do not have to check this option if the transmission cooling system remains stock. If a factory transmission cooling system was optional for the VIN # and the car has the stock factory system installed complete, then do not select this option.	5	0
	Flywheel and Clutch		
35)	Select this option if the engine has any of the following: The engine has a flywheel that is not stock for the engine type.	5	10
36)	Select this option if the engine has any of the following: The stock rubber center clutch friction disc has been replaced with a spring centered clutch friction disc. The rubber center clutch replacement is a zero points modification that is included to differentiate from modifications that attract points. If the replacement of the rubber centered clutch friction disc included the necessary replacement of the flywheel too, the previous option must also be checked.	0	0
37)	Select this option if the engine has an of the following: The engine has a clutch that is a smaller diameter than stock or a clutch mechanism assembled from lighter components than the stock clutch design per engine type.	15	15
38)	Engine Swaps and Capacity Increases (per chassis number)		
	NOTE: In all cases, unless specified otherwise, the Engine modifications are measured as deviation from the stock configuration of the engine type – regardless of whether the engine is installed in the original chassis. If the car has the original engine type, the modifications will be those deviations from stock. If the car has an engine swap, the stock specification of the engine type is relative to the stock configuration in the original chassis it was installed. This includes configuration of the entire induction and exhaust system. Determine the engine capacity points by locating the increase capacity bracket applicable to the engine installed above the capacity of the stock engine. Use the engine capacity table when instructed in item 38c) d) or e). NOTE: There are no points reduction for reduction from stock engine capacity NOTE: For any forced induction engine swaps – regardless of the chassis – the forced induction engine capacity increases will be subject to a 1:1.4 capacity multiplier. e.g. a motor swap from a 2.0 liter engine to a 3.0 liter engine is a 1000cc increase in capacity. If the 3.0 liter engine has forced induction the capacity increase will be assessed as 1400cc.		

Modification			TT Points	AX Points	
	From cc	To cc	Points		
	0	250	75		
	251	500	100		
	501	750	125		
	751	1000	150		
	1001	1250	175		
	1251	1500	200		
	1501	1750	225		
	1751	2000	250		
	2001	2250	275		
	2251	2500	300		
	2501	2750	325		
	2751	3000	350		
	3001	Plus	375		
39)	Engine Swaps and Capacity Increase – Choose one of five options				
39a)	The engine type is stock for the VIN #. Answer all engine modification options as deviations from the stock configuration of the engine type. NOTE: Up to 30 cc increase from the stock swept volume capacity for the engine type capacity is allowed for a stock engine rebuilt with stock oversize pistons.			0	0
39b)	The engine type is not stock and meets ALL of the following conditions: · The engine was originally installed in the same bodyshell group. Bodyshells are considered in the same group if they are from consecutive model years and have the similar curb weights, and wheelbases per the list below. Body Shell Groups 356 All 911 and 912 1965 – 1968 911 and 912 1969 – 1973 911 and 912 1974 – 1977 911 SC 3.2 Carrera 911 Turbo through 1989 914 All 924 and 924 turbo 928 All 944, 924S, 968 All 964 All 993 All			See Appendix A	See Appendix A

	Modification	TT Points	AX Points
	<p>996 All Boxster All Cayenne All Carrera GT</p> <p>· The engine has the same number of cylinders as the stock engine type.</p> <p>· The engine has up to 30cc increase from the stock swept volume capacity for the engine type #.</p> <p>ACTION : Go back to the base model choice and select the specific model where the engine type # was factory installed.</p> <p>Answer all engine modification options as deviations from the stock configuration of the engine type for the base model now selected.</p>		
39c)	<p>The engine has the same number of cylinders as stock but this engine type # was not available in the same bodyshell group.</p> <p>ACTION : Go back to the base model choice and select lowest base point model available for the year of the Vin # and in the same bodyshell group</p> <p>ACTION : Go back to the engine capacity table and select the correct option for capacity increase.</p> <p>Answer all engine modification options as deviations from the stock configuration of the engine type for the base model now selected.</p>	See Appendix A	See Appendix A
39d)	<p>The engine does not have the same number of cylinders as stock, but an engine type with this number of cylinders was available in the same bodyshell group.</p> <p>ACTION : Go back to the base model choice and select the car, from the same body shell group and the same number of cylinders as the engine type now installed.</p> <p>ACTION : Go back to the engine capacity table and select the correct option for capacity increase.</p> <p>Answer all engine modification options as deviations from the stock configuration of the engine type for the base model now selected.</p>	See Appendix A See Capacity Chart	See Appendix A See Capacity Chart
39e)	<p>The engine does not have the same number of cylinders as stock.</p> <p>ACTION : Go back to the base model choice and select lowest base point model available for the year of the Vin # and in the same bodyshell group</p> <p>ACTION : Go back to the engine capacity table and select the correct option for capacity increase.</p> <p>Answer all engine modification options as deviations from the stock configuration for the engine type.</p>	100	100
	Fuel and Intake		

	Modification	TT Points	AX Points
40)	Select this option if the engine or chassis has any of the following: The year of the car is eligible for California smog testing and the car is missing any of the required smog equipment. The car is missing the catalytic converter or the catalytic converter has been replaced with a bypass pipe.	5	5
41)	Select this option if the car has any of the following: The car has a fuel tank or fuel cell with less than 15 gallons capacity.	5	5
42)	Select this option if the engine has any of the following: The engine has a throttle body or throttle bodies that are different from stock. The stock throttle body or throttle bodies are similar appearance to the stock unit but the butterfly plate(s) have been increased in area.	10	10
43)	Select this option if the engine has any of the following: The engine air cleaner housing has been modified in any way, including the removal of any material. The engine air inlet ducting has been modified in any way, including the removal or addition of any material. The air filter element has been removed or replaced with a non-stock filter element. The fresh air delivery system for the engine intake has modified in any way.	5	5
44)	Select this option if the engine has any of the following: The engine has been modified to use a non-stock intake system The stock CIS fuel injection system has been replaced with an EFI system. The stock fuel injection system has been replaced with carburetors. The stock carburetor system has been replaced with fuel injection.	15	15
45)	Ignition and Engine Management – Select one of four options		
45a)	The engine has an ignition system that is stock per engine type. NOTE: Stock does not allow for any variation or alteration of the mapping in the engine management programs. Stock does not allow the replacement of any ignition component with stock components from another engine type – exceptions noted below. NOTE: Mechanical breaker points may be replaced with a with non-mechanical breaker device as long as this device is installed in the position of the stock breaker points. NOTE: An ignition coil may be replaced with a non-stock ignition coil.	0	0
45b)	The engine has a non-stock engine management chip for that engine type. The engine has an aftermarket replacement chip The engine management chip has been re-written with non-stock parameters. The engine management system has been augmented with an additional control unit used in conjunction with the stock engine management system.	5	5

	Modification	TT Points	AX Points
45c)	The engine has a non-stock rev-limiting device. The engine has non-stock rev-limiting electronics. The engine has non-stock rev limiting software. The engine has an altered distributor curve. The engine has a distributor that was manufactured by a different supplier than the original equipment supplier(s) for the engine type	5	5
45d)	The engine uses a non-stock engine management system for that engine type. The engine uses an aftermarket engine management system. The engine uses an engine management system that includes non-stock sensors, wiring, or control unit.	20	20
46)	Select this option if the engine has any of the following: The engine has a non-stock dual ignition system for that engine type. The engine has a stock dual ignition system that has been modified in any way.	5	5
47)	Forced Induction – Select one of four options		
47a)	The engine is normally aspirated.	0	0
47b)	The engine uses forced induction and the complete engine is stock per engine type.	0	0
47c)	The engine has a forced induction system that has been modified from stock in any manner. Examples: · The engine has a forced induction system that has a non-stock replacement turbo charger unit. · The engine has a forced induction system that has a non-stock intercooler device. · The engine has a forced induction system that has a non-stock boost control device or system. · The engine has a non-stock fuel enrichment system. · The engine has a non-stock wastegate system. · The engine has a non-stock exhaust manifold.	50	50
47d)	The engine type was originally normally aspirated and now has a forced induction system of any style or origin.	40	40
48)	Select this option if the engine has any of the following: The engine has a boost level different from stock. The range of adjustments available with the original components have been used to achieve a boost level higher than stock per engine type.	50	50
49)	Select this option if the engine has any of the following: The engine has any type of fluid or gas injection other than gasoline. The engine has any type of total loss injection device used to cool the engine intake system. The engine has any type of fuel mixing system used to add alternative fuel to the gasoline.	30	30

	Modification	TT Points	AX Points
50)	Compression Ratio - Select one of two options		
50a)	The engine has a compression ratio that is not greater than 1.0 ratio point higher than stock per the engine type. The engine is a R.O.W. engine installed in a chassis with a R.O.W. VIN # and has not been modified to increase the compression ratio.	0	0
50b)	The engine has a compression ratio that is greater than 1.0 ratio point higher than stock per the engine type.	30	30
51)	Select this option if the engine has any of the following: The engine has camshafts that are not stock per the engine type. The engine has stock camshaft cores that have been re-ground to an alternate profile.	40	40
52)	Select this option if the engine has any of the following: The cylinder heads have been ported. The cylinder heads have ports that are larger than the stock ports for the engine type. The cylinder heads show evidence of material removal, material addition, smoothing or reworking.	40	40
53)	Select this option if the engine has any of the following: Updated to Carrera oil pressure fed cam chain tensioners. NOTE: This is a zero points option that has been included for clarity during the car classification process.	0	0
54)	Select this option if the car has any of the following: The engine or car has a non-stock engine oil cooler system. The engine or car has a non-stock water cooling system. The engine or car has additional oil cooler or water cooler elements added to the stock system. The oil system has increased capacity over the stock configuration.	0	0
55)	Exhaust (per engine type) - Select one of two options		
55a)	The engine has a stock or stock replacement muffler. A stock replacement muffler is a design that is visually similar, similar in weight, and utilizes a similar configuration and diameter of inlets and outlets to the stock muffler.	0	0
55b)	The engine has a non-stock muffler.	5	5
56)	Heat Exchangers – Select one of two options		

	Modification	TT Points	AX Points
56a)	<p>The engine has stock or stock replacement heat exchangers per engine type.</p> <p>The engine has a stock or stock replacement exhaust manifold per engine type.</p> <p>NOTE: Stock replacement heat exchangers are a design that is visually similar, similar in weight, utilizes a similar configuration and diameter of inlets and outlets, and has a similar heater jacket configuration to the stock heat exchangers.</p> <p>NOTE: Stock replacement exhaust manifold is a design that is visually similar, similar in weight, similar in manufacturing process, and utilizes a similar configuration and diameter of inlet and outlets to the stock exhaust manifold.</p>	0	0
56b)	<p>The engine has heat exchangers that are not stock per engine type.</p> <p>The engine has exhaust manifold(s) that are not stock per engine type.</p> <p>The engine has any non-stock components between the exhaust port of the cylinder head and the inlet to the muffler.</p>	10	10
	Suspension		
57)	<p>Select this option if the car has any of the following:</p> <p>The car has non-stock sway bars.</p> <p>The car has sway bars that were original equipment on another Porsche that is not from the model year and series of the car.</p> <p>The car has sway bars that are installed in a different position to the stock position per VIN #.</p>	20	30
58)	<p>Select this option if the car has any of the following:</p> <p>The car has a non-stock front or rear strut tie bar.</p> <p>A strut bar can be considered to be any non-stock fabricated or removable link between the strut tops or the chassis surfaces around the strut tops.</p>	5	5
59)	<p>Select this option if the car has the following:</p> <p>The car has "Turbo tie rods ends" that are not stock.</p> <p>This is a zero points option that has been included for clarity during the car classification process.</p>	0	0
60)	<p>Select this option if the car has any of the following:</p> <p>The steering rack has been re-located by the use of spacers between the chassis and the steering rack housing.</p> <p>The steering rack has been re-located by any modification to the steering rack housing, or the mounting positions on the chassis or sub mount.</p>	0	0
61)	<p>Select this option if the car has any of the following:</p> <p>The outboard end of the steering track rod is mounted in a non-stock manner.</p> <p>The outboard end of the steering rack is mounted by using a "bump steer kit".</p> <p>Any non-stock components have been added to the outboard end of the steering track rod.</p>	10	10

	Modification	TT Points	AX Points
62)	<p>Select this option if the car has any of the following:</p> <p>The car has a factory installed, or post delivery installed M030 suspension kit that was optional per the VIN #.</p> <p>The car has any factory designed optional suspension kit that was optional per the VIN #.</p> <p>NOTE: This does not include factory kits like M491 that included suspension, brakes, wheels and other components.</p>	15	20
63)	<p>Select this option if the car has any of the following:</p> <p>The car has a non-stock power steering system.</p> <p>The car has the power system removed when a power steering system was stock.</p> <p>The car has a power steering system added when no power steering was stock.</p> <p>The car has a power steering system that uses alternate components to the stock system.</p>	5	5
64)	<p>Select this option if the car has any of the following:</p> <p>The car has rear torsion bars and uses non-stock adjustable spring plates.</p> <p>The car has rear torsion bars and uses adjustable spring plates that were not stock equipment per the VIN #.</p> <p>The car uses spring plates that are modified to allow a greater range of adjustment than stock.</p> <p>The car no longer uses torsion bars and has an alternate component in place of the original spring plate.</p> <p>If changes to the spring plate include not using stock spring plate bushings, then the appropriate alternate bushing options must also be selected.</p>	5	10
65)	<p>Select this option if the car has any of the following:</p> <p>The car has non-stock torsion bars.</p> <p>The car has non-stock coil springs.</p> <p>The car has stock coil springs with the static open length modified.</p> <p>The car has coil springs that are a different spring rate than stock.</p>	30	45
66)	<p>Select this option if the car has any of the following:</p> <p>The car was originally delivered with torsion bars on any axle that have been replaced with a coil springs system.</p> <p>The car was originally delivered with torsion bars only which have been augmented by the addition of a coil spring on the same axle.</p> <p>Any corner of the suspension has had the stock spring medium replaced or augmented with an alternate system.</p> <p>NOTE: If you selected item 66) you must also select item 65)</p>	10	10

	Modification	TT Points	AX Points
67)	<p>Select this option if the car has any of the following:</p> <p>The car has coil springs with a non-stock adjustable platform.</p> <p>The car has replacement damper units that have an adjustable spring platform when the stock damper unit had non-adjustable spring platforms.</p> <p>The car has replacement damper units with continuous adjustments to the spring platforms where the stock dampers had incremental adjustments to the spring platforms.</p> <p>NOTE: If you selected option 66), you are not required to select 67) in respect to spring platforms.</p>	10	20
68)	<p>Select this option if the car has any of the following:</p> <p>The car has non-stock front control arms.</p> <p>The car has stock front control arms that have been modified by the addition or removal of material.</p> <p>NOTE: Aftermarket, or 968 version replacement front lower control arms for the 944 series cars are acceptable if they maintain the stock suspension geometry.</p> <p>NOTE: Modification of the 914 and 911 front lower control arms by the addition of mounts for the front sway bar drop links is acceptable without selecting this option.</p>	10	15
69)	<p>Select this option if the car has any of the following:</p> <p>The car has non-stock rear control/trailing arms.</p> <p>The car has stock rear control/trailing arms that have been modified by the addition or removal of any material.</p> <p>Examples where you must select this option</p> <ul style="list-style-type: none"> · Installing aluminum banana arms on a car where steel arm were stock. · Boxing trailing arms by welding additional reinforcing plates to the outside of the trailing arm. · Installing control/trailing arms from one model on another model, with or without modification to the chassis or control/trailing arm. 	5	10
70)	<p>Select this option if the car has any of the following:</p> <p>The car has non-stock spherical bearings on any suspension component except sway bar drop links and strut top bearings.</p> <p>The car has adjustable rod-end bearings on any suspension component other than sway bar drop links and steering rack control arms.</p> <p>The car has non-stock spherical bearings used in the mounting of the dampers.</p>	10	15
71)	<p>Select this option if the car has any of the following:</p> <p>The car has non-stock suspension pick-up locations.</p> <p>The car has suspension components that have modified dimensions to allow installation on this chassis.</p> <p>The car has been modified by the re-location of any suspension pick-up location – even if the stock suspension components are re-installed.</p> <p>NOTE: This rule is specifically in reference to the geometry of the suspension –</p>	20	30

	Modification	TT Points	AX Points
	not the design or appearance of the suspension components.		
72)	Select this option if the car has any of the following: The car has non-stock strut tops that use any design or configuration of spherical bearing.	5	10
73)	Select this option if the car has any of the following: The car has any suspension modifications that require the installation of non-stock components not covered by any other item. The car has any suspension modifications that require the removal of stock components not covered by any other item. The car has any suspension modifications that require the addition of any material to any component not covered by any other item. The car has any suspension modifications that require the removal of any material from any component not covered by any other item. The car has any suspension component not covered by any other item that allows for non-stock adjustment . NOTE: If you have declared a modification that required any of the above conditions in another section of the rules, do not select this option unless additional modifications not already covered require declaration.	10	20
74)	Select this option if the car has any of the following: The car has suspension bushings that are not made from the stock rubber material. The car has been modified by the replacement of stock rubber bushings with another semi rigid rubber, plastic or composite materials. NOTE: Do not select this option if you have already selected non-stock spherical bearings in item 69)	5	15
75)	Shock Absorbers - Select one of two options		
75a)	The car has shock absorbers with a single external adjustment device per unit.	0	0
75b)	The car has shock absorbers with double or greater adjustment device per unit. The car has shock absorbers with separate externally adjustable bump and rebound features. The car has shock absorbers that allow for separate bump and rebound adjustment without disassembly of the shock absorber unit.	10	15

4.2 PERFORMANCE INDEX AUTOCROSS CATEGORY

- (a) Purpose: The purpose of the Performance Index Autocross (PAX) Category is to allow for cars of different categories to compete equally on corrected time.
- (b) Indexes shall be developed for all categories and classes of Porsche cars.
- (c) Indexes will be updated yearly.
- (a) The PAX table was not available at the time of this printing, and will be published separately

5.0 RULE CHANGES

- (a) The Drivers' Event Committee establishes the rules and this section describes methods for changing and updating these rules. Effective January 1st of each year, all previous editions of the GGR Rulebook will be superseded by the current edition. No revisions previously published in Tech Bulletins will remain in effect unless included in the new edition.

5.1 YEARLY UPDATE

- (a) Any member can propose a change to the rulebook prior to the upcoming year deadline. These change proposals shall be submitted in writing to the Competition Director for appropriate action. Both the Autocross and Time Trial members of the Drivers' Event Committee shall also solicit from the participants of their respective series requests and suggestions for rule changes. These inputs and those from other sources shall be prepared into a set of proposed rules changes for yearly update.
- (b) An open meeting shall be held to discuss this proposal. Rules update proposal shall be made available to the general membership for review prior to the open meeting. Publishing the proposal in the Nugget or on the GGR Website shall satisfy this requirement.
- (c) Utilizing the ideas and responses from this meeting, the committee shall meet to finalize the rules changes. The Competition Director shall publish the updated rules and have them available to the participants.

5.2 CORRECTIONS TO CURRENT YEAR RULEBOOK

- (a) If circumstances create a situation where a rule clarification or correction is found to be necessary to be implemented before the next yearly update, the Competition Director may issue a Tech Bulletin stating the correction and its effective date. These Tech Bulletins shall be published in the Nugget and on the GGR Website.

Appendix A: Base Model List

Base points were determined by using power to weight ratios as a starting point, and subjective examination to account for real world performance. It is recognized that a newer car, of equal power to weight ratio to an older car is likely to have a performance advantage due to evolutionary changes in chassis, power characteristics, and suspension. It is recommended that base points be scrutinized using this criteria, and serve as a starting point for assigning base points to new models.

	Model Year(s)		Base Wheels F/R	TT Points	AX Points
1	356	1950-1964	5.5/5.5	150	150
2	912	1966-1969	6/6	175	175
3	912 E	1976	6/6	125	125
4	914/1.7/1.8	1970-1975	5.5/5.5	150	250
5	914/2.0	1973-1974	5.5/5.5	200	300
6	914/2.0	1975-1976	5.5/5.5	150	250
7	914/6	1970-1972	6/6	250	350
8	911	1964 - 1968	6/6	250	250
9	911 L	1968	6/6	250	250

10	911 T	1968-1969	6/6	250	250
11	911 T	1970-1973	6/6	275	275
12	911 E	1969	6/6	300	300
13	911 E	1970-1973	6/6	350	350
14	911 S	1967-1968	6/6	350	350
15	911 S	1969	6/6	375	375
16	911 S	1970-1973	6/6	400	400
17	911	1974	6/6	300	300
18	911 S	1974	6/6	350	350
19	911 S	1975-1977	6/6	325	325
20	911 Carrera	1974	7/8	350	350
21	911 Carrera	1975	7/8	325	325
22	911 SC	1978-1983	7/8	350	350
23	911 Carrera	1984-1986	7/8	400	400
24	911 Carrera	1987-1989	7/8	400	400
25	964 C2	1990-1994	7/8	425	425
26	964 C4	1989-1994	7/8	425	425
27	964 RS America	1992-1994	7/8	425	425
28	993 C2	1993-1998	8/10	450	450
29	993 C2S	1997-1998	8/10	475	475
30	993 C4	1993-1998	8/10	450	450
31	993 C4S	1996-1998	8/10	475	475
32	996 C2	1998-2001	8/10	500	500
33	996 C2	2002-2003	8/10	525	525
34	996 C4	1999-2001	8/10	475	475
35	996 C4	2002-2003	8/10	475	475
36	996 C4S	2003-2004	8/10	500	500
37	996 GT3	1999-2004	8.5/11	725	725
38	997 Carrera	2005-2006	8/10	525	525
39	997 Carrera 4	2006	8/10	500	500
40	997 Carrera 4S	2006	8/11	525	525
41	997 Carrera S	2005-2006	8/11	550	550
42	997 GT3/GT3RS	2007-	8.5/12	750	750
43	930 Turbo	1976-1977	7/8	425	425
44	930 Turbo	1978-1979	7/9	450	450
45	930 Turbo	1986-1989	7/9	500	500
46	964 Turbo	1991-1992	7/9	475	475
47	964 Turbo	1993-1994	7/9	525	525
48	993 Turbo	1996-1998	8/10	575	575
49	993 Turbo S	1997-1998	8/10	575	575
50	996 Turbo	1999-2004	8/11	550	550
51	996 Turbo S	2006-	8/11	575	575
52	997 Turbo	2007-	8/11	600	600

53	996 GT2	1999-2004	8.5/12	800	800
54	924	1977	6/6	150	150
55	924	1977.5-1982	6/6	175	175
56	924 S	1987	6/6	250	250
57	924 S	1988	6/6	275	275
58	924 Turbo	1980	6/6	250	250
59	924 Turbo	1981-1982	6/6	300	300
60	944	1989	7/8	275	275
61	944	1983-1988	7/8	225	225
62	944 S	1987-1988	7/8	325	325
63	944 S2	1989-1991	7/8	375	375
64	944 Turbo	1985-1988	7/8	350	350
65	944 Turbo/Turbo S	1988-1990	7/8	425	425
66	968	1992-1994	7/8	400	400
67	968 Sport	1994-1995	7/8	400	400
68	968 Turbo S	1993-1994	7/8	525	525
69	928	1978-1979	7/9	350	350
70	928	1980-1982	7/9	325	325
71	928 S	1983-1984	7/9	350	350
72	928 S	1985-1986	7/9	425	425
73	928 S4	1987-1991	7/9	450	450
74	928 GT	1989-1991	7/9	475	475
75	928 GTS	1992-1995	7/9	475	475
76	Boxster	1996-1999	6/8	350	400
77	Boxster	2000-2002	6/8	375	425
78	Boxster	2003-2004	6/8	400	450
79	Boxster S	2000-2004	7/8.5	450	500
80	987 Boxster	2005-	6.5/8	425	475
81	987 Boxster S	2005-2006	8/9	475	525
82	987 Boxster S	2007-	8/9	500	550
83	Cayman	2007-	6/5	425	475
84	Cayman S	2006-	8/9	500	550
85	Cayenne	2004	7.5/7.5	N/A	250
86	Cayenne S	2004	8/8	N/A	350
87	Cayenne Turbo	2004	8/8	N/A	450
88	Cayenne Turbo S	2007-	8/8	N/A	500
89	Carrera GT	2005	9.5/12.5	1000	1000

Appendix B: Car Classes List

Note: For Time Trial only, cars with 650 or greater modification Points will be classified using the GT chart below

Car Classes			
Time Trial Classes		Autocross Classes	
Points Class		Points Class	
1151 - 3500	TT1	1251 – 3600	AX1
1051 - 1150	TT2	1151 – 1250	AX2
951 - 1050	TT3	1001 – 1150	AX3
851 - 950	TT4	901 – 1000	AX4
751 - 850	TT5	801 – 900	AX5
701 - 750	TT6	751 – 800	AX6
651 - 700	TT7	701 – 750	AX7
601 - 650	TT8	651 – 700	AX8
551 - 600	TT9	601 – 650	AX9
501 - 550	TT10	551 – 600	AX10
451 - 500	TT11	501 – 550	AX11
401 - 450	TT12	451 – 500	AX12
351 - 400	TT13	401 – 450	AX13
301 - 350	TT14	351 – 400	AX14
251 - 300	TT15	301 – 350	AX15
0 - 250	TT16	0 – 300	AX16

GT Classes for cars over 650 Modification Points

- GT-C All Cup Cars
- GT-1 All turbocharged cars, having engines over 3.4 liters displacement (after the 1.3 multiplication factor)
- GT-2 All normally aspirated cars having engines over 3.4 liters displacement
- GT-3 All normally aspirated cars having engines over 2.808 liters and up to 3.4 liters displacement and all turbo charged cars having engines of these displacements (after the 1.3 multiplication factor).
- GT-4 All normally aspirated cars having engines over 2.2 liters and up to 2.808 liters displacement and all turbocharged cars having engines of these displacements (after the 1.3 multiplication factor).
- GT-5 All normally aspirated cars having engines over 1.75 liters and up to 2.2 liters displacement.
- GT-6 All normally aspirated cars having engines up to 1.75 liters displacement.

Appendix B2: PAX INDEX (AUTOCROSS)

To be published later

Appendix C. Car Classification Form

Introduction:

This is a classification form to help calculate the total points from section 4.1. This is meant solely as a manual calculation form, and in case of omissions or conflicts, section 4.1 shall prevail. It is recommended that drivers use the automated online form from www.pca-ggr.org as a more convenient method of calculation.

The questions on the Car Classification form are written specifically to allow you to answer affirmative, or negative. If clarification is needed, refer to section 4.1 for the exact rule..

For the items that provide multiple choices – select the lowest points option where the car is in full compliance.

Cars with greater than 650 modification points will be classed as PCA Gt classes.

Name	TT Points	AX Points
E-Mail Address		
Car #		
Car model ID (from Append. A)		
Modification Points		
Total		

Modification	TT Points	AX Points
Wheels		
1) Non stock wheels – 25 pts per inch wider front, 25 pts per inch wider rear.	25/inch	25/inch
2) Car has non-stock wheel spacer more than .25” thickness.	5	10
3) Tires - Select one of three options		
3a) Car has DOT tires treadwear rating over 100	0	0
3b) Car has DOT tires treadwear rating under 100	100	150
3c) Car has non DOT legal tires or racing tires	150	175
Brakes		
4) Car has brake dust shields removed	0	0
5) Car has non-stock brake cooling system		0
6) Car has non-stock brake hoses	0	0
7) Brake Calipers - Select one of two options		
7a) Car has stock brake calipers	0	0
7b) Car has non-stock brake calipers	10	0
8) Brake Rotors - Select one of two options		

	Modification	TT Points	AX Points
8a)	Car has stock or thicker brake rotors maintaining stock diameter	0	0
8b)	Car has brake rotors larger diameter than stock	20	0
9)	Car has non-stock brake master cylinder	5	5
10)	Car has brake rotors made from non-stock material	20	5
11)	Car has non-stock brake balance device	5	5
12)	Car has non-stock ABS system or components	10	10
	Battery		
13)	Car has smaller battery or battery removed	5	5
14)	Car has battery re-located	5	5
	Glass		
15)	Car has non-stock glazing	10	20
16)	Car has window lift mechanism removed	5	10
17)	Seats – Select one of three options		
17a)	Car has all original seats	0	0
17b)	Car has non-stock seats - with adjustable seat back angle	5	5
17c)	Car has one or more racing style seats.	10	10
18)	Interior Trim – Select one of three options		
18a)	Car has stock interior	0	0
18b)	Car has a complete interior – no untrimmed surfaces	5	10
18c)	Car has incomplete interior	10	20
19)	Fenders – Select one of two options		
19a)	Car has stock fenders or fender lips rolled	0	0
19b)	Car has flared fenders added	10	10
20)	Car has non-stock bumpers	20	20
	Bodywork		
21)	Car has non-stock front hood	5	20
22)	Car has non-stock rear hood.	5	20
23)	Car has non-stock doors	20	20
24)	Car has non-stock engine mounts.	5	5
25)	Car has modified sunroof	5	5
26)	Car has one or more windshield wipers removed	0	0
27)	Car has ancillary systems modified or removed	5	5
28)	Car has any part of a stock airconditioning system removed	5	5
29)	Wings and Rear Spoilers – Select one of five options		

	Modification	TT Points	AX Points
29a)	Car has no rear spoiler – or is a stock Boxster with no spoiler	0	0
29b)	Car has a stock rear spoiler	5	0
29c)	Car has a stock rear spoiler originally from another model	10	0
29d)	Car has a rear aerodynamic device no taller than the roof, or wider than the body	20	5
29e)	Car has a rear aerodynamic device that does not comply with 3	30	10
	Front Spoilers		
30)	Car has a non-stock front spoiler	10	10
31)	Transmission – Select one of three options		
31a)	Car has a stock transmission	0	0
31b)	Car has a transmission with non-stock gear ratios or final drive	20	20
31c)	Car has a tiptronic or sportomatic transmission	-15	-10
32)	Car is a 914 that has converted from tailshift to sideshift	0	0
33)	Transmission has a limited slip differential	15	30
34)	Transmission has a non-stock transmission cooler	5	0
	Flywheel and Clutch		
35)	Engine has a non-stock flywheel	5	10
36)	Select this option if the engine has any of the following: Engine has rubber center clutch replaced with spring center clutch	0	0
37)	Engine has a clutch that is smaller than stock diameter	15	15
	Engine Swaps and Capacity Increases (per chassis number)		
38)	Engine Swaps and Capacity Increase – Choose one of five options		
38a)	Engine is stock	0	0
38b)	Engine has same number of cylinders and comes from model in same series.	See Append A	See Append A
38c)	Engine has same number of cylinders but does not come from model in same series.	See Append A	See Append A
38d)	Engine has different # of cylinders - this # of cylinders was available in the model series.	See Append A	See Append A
		See Capacity Chart	See Capacity Chart
38e)	Engine has different number of cylinders	100	100

	Modification	TT Points	AX Points
	Fuel and Intake		
39)	Engine must comply with CA smog laws but has equipment removed (includes Catalyst)	5	5
40)	Car has fuel tank less than 15 gallons	5	5
41)	Engine has throttle body different to stock	10	10
42)	Air cleaner or housing, or air inlet ducting is not stock.	5	5
43)	Complete induction system has been replaced with alternate system	15	15
44)	Ignition and Engine Management – Select one of four options		
44a)	Engine has the stock ignition system	0	0
44b)	Engine management chip is not stock	5	5
44c)	Engine has non-stock rev limiter	5	5
44d)	Engine uses a non-stock engine management system	20	20
45)	Engine has non-stock dual ignition..	5	5
46)	Forced Induction – Select one of four options		
46a)	Engine is normally aspirated	0	0
46b)	Engine has forced induction and is stock	0	0
46c)	The engine has forced induction and is not stock	50	50
46d)	The engine was normally aspirated and now has forced induction of any design.	40	40
47)	The engine has forced induction and the boost level is not stock	50	50
48)	The engine has injection of any fluid or gas other than gasoline	50	50
49)	Compression Ratio - Select one of two options		
49a)	The engine has a compression ratio not more than 1.0 ratio point higher than stock	0	0
49b)	The engine has a compression ratio more than 1.0 ratio point higher than stock	30	30
50)	The engine has non-stock camshafts	40	40
51)	The cylinder heads have been ported	40	40
52)	The engine has been updated to Carrera oil pressure fed cam chain tensioners	0	0
53)	The engine has a non-stock oil cooler or water cooling system	0	0
54)	Exhaust (per engine type) - Select one of two options		
54a)	The engine has a stock muffler	0	0
54b)	The engine has a non-stock muffler	5	5
55)	Heat Exchangers - Select one of two options		

	Modification	TT Points	AX Points
55a)	The engine has stock heat exchangers or stock exhaust manifold	0	0
55b)	The engine has non-stock heat exchanger or exhaust manifold.	10	10
	Suspension		
56)	The car has non-stock sway bars	20	30
57)	The car has a non-stock front or rear strut tie bar	5	5
58)	The car has non-stock Turbo tie rod ends	0	0
59)	The car has steering rack spacers	0	0
60)	The car has non-stock steering track rods – excluding Turbo tie rod ends.	10	10
61)	The car has M030 or other factory suspension upgrade kit	15	20
62)	The car has non-stock power steering	5	5
63)	The car has non-stock adjustable spring plates	5	10
64)	The car has non-stock springs or torsion bars	30	45
65)	The car has torsion bars replaced with coil springs, or coils springs added	10	10
66)	The car has non-stock adjustable coil spring platforms	10	20
67)	The car has non-stock front control arms (944 replacements OK)	10	15
68)	The car has non-stock rear control arms	5	10
69)	The car has non-stock spherical bearings – except strut top and sway bar drag link bearings.	10	15
70)	The car has non-stock suspension pick-up locations	20	30
71)	The car has non-stock strut tops	5	10
72)	The car has any non-stock suspension parts not covered in other choices	10	20
73)	The suspension has non-stock suspension bushes not covered in item 69)	5	15
74)	Shock Absorbers - Select one of two options		
74a)	The car has shock absorbers with single external adjustment	0	0
74b)	The car has shock absorbers with greater than one external adjustment	10	15
	Total		

Appendix D: Rollbars & Cages

These specifications are mandatory and represent minimum requirements. Specific installations are subject to approval by the Technical and Safety Inspector at each event.

Rollbars are specified in sections 1 through 7, roll cages in section 8.

1. Basic Design Considerations

- (a) The basic purpose of the roll bar is to protect the driver if the car turns over or is involved in a serious accident. This purpose should not be forgotten.
- (b) The top of the roll bar must be minimum of 2 inches above the top of the driver's helmet when the driver is sitting in normal driving position (or as near the roof as possible on closed sedans and convertibles when their tops are up) and shall not be more than 6 inches behind the driver.
- (c) The roll bar must be designed to withstand compression forces resulting from the weight of the car coming down on the roll structure, and to take fore-and-aft loads resulting from the car skidding along the ground on the roll structure.
- (d) The two vertical members forming the sides of the hoop shall not be less than 15 inches apart inside dimension. It is recommended that the roll bar extend the full width of the cockpit to provide maximum bearing area.
- (e) A system of head restraint to prevent whiplash and to prevent the driver's head from striking the underside of the roll bar must be installed on all vehicles. The head restraint must be capable of withstanding a 200-lb impact in an aft direction.
- (f) Boxsters and 996 Cabriolets with 250 or less points for Time Trials may run with only the factory installed roll over protection as long as the soft top is up or a hard top is installed. Boxsters greater than 250 mod points and less than or equal to 450 mod points may run with a Brey-Krause extension. Boxsters with greater than 450 and less than or equal to 650 points must have an approved rollbar. Except for the specific cases mentioned above, Boxsters and 996 Cabriolets must comply with all other stated rollover safety standards set forth in these rules.

2. Material

- (a) Any roll bar/cage approved by SCCA for competition purposes, meeting current SCCA specifications or current PCA Club Racing specifications, or previously approved by GGR for time trial use may be used provided it has not been damaged, except cosmetically, in any way. If damaged and repaired, the roll bar/cage must be re-certified by the Safety Chairperson prior to its use in a GGR event. The roll bar hoop and all braces must be seamless, ERW or DOM mild steel tubing or chrome molybdenum alloy steel such as SAE 4125 or SAE 4130. It is recommended that mild steel tubing be used as chromium alloys present difficulties in welding and must be normalized to relieve stress. Proof of the use of alloy steel will be the responsibility of the entrant.
- (b) For the purpose of determining tubing sizes, the vehicle race weight is without driver. The size of the tubing shall be determined as follows:

Vehicle Race Weight	Roll Bar		Roll Cage	
	Mild Steel	Alloy Steel	Mild Steel	Alloy Steel
Under 2500#	1.75 x .120	1.625 x .095	1.50 x .095	1.375 x .095
Over 2500#	1.75 x .120	1.625 x .095	1.75 x .095 or 1.50 x .120	1.500 x .095

- (c) An inspection hole of at least 3/16 inch diameter may be drilled in a non-critical area of the roll bar hoop to facilitate verification of wall thickness.
- (d) Where bolts and nuts are used, the bolts shall be at least 3/8 inch diameter SAE Grade 5 or equivalent aircraft quality.

3. Fabrication

- (a) One continuous length of tubing must be used for the hoop member with smooth continuous bends and no evidence of crimping or wall failure. It is recommended that the radius at the roll bar hoop be such that the minimum outside width measured at a point four inches below the uppermost point is 12 inches.
- (b) Whenever possible the roll bar hoop should start from the floor of the car and, in the case of tube frame construction, be attached to the chassis tubes by means of gussets or sheet metal webs in order to distribute the loads.
- (c) All welding must be of the highest possible quality with full penetration. Arc welding particularly heliarc, should be used wherever possible. The welds should be inspected by magnaflux or dye penetrant after fabrication. Alloy steel must be normalized after welding.

4. Bracing

- (a) Full cockpit width (two seats) roll bar hoops must have two fore/aft braces with tubing of dimensions at least equal to that required for the hoop itself. Diagonal lateral bracing of equal dimension tubing must be installed to prevent lateral distortion of the hoop. (In most cases, a lateral brace from the bottom corner of the hoop on one side to the top corner of the hoop on the other side is sufficient)
- (b) The bracing must be attached as near as possible to the top of hoop but not more than six inches below the top of the hoop and at an included angle of at least 30E. If a single brace is used, it must be attached at the top of the main hoop.
- (c) If the fore/aft bracing must be removable, the connection between the roll bar hoop and the brace-rod must be of the double lug type fabricated from material at least 3/16 inch thickness and welded through a doubler or gusset arrangement to avoid distortion or excessive strains caused by welding.
- (d) It is recommended that the fore/aft brace be attached to a rear chassis member through a double lug connection. If attached to the engine, it must mount to a major component such as a head stud or combination of head studs.

5. Mounting Plates

- (a) Roll bars and braces must be attached to the frame of the car wherever possible. Mounting plates, regardless of whether welded or bolted to the frame, must be at least 3/16 inch thick.
- (b) In the case of cars with unitized or frameless construction, or cars with frames where frame-mounting of the roll bar is impractical, mounting plates must be used to secure the roll bar structure to the floor of the car. The important consideration is that the load be distributed over as large an area as possible.
- (c) Mounting plates bolted to the structure shall not be less than .1875 (3/16) inch thick with a back-up plate of equal size and thickness on the opposite side of the panel with the plates through-bolted together.
- (d) Mounting plates welded to the structure shall not be less than .080 inch thick. Whenever possible the mounting plate should extend onto a vertical section of the structure such as a door pillar.

6. Removable Roll Bars

- (a) Removable roll bars and braces must be very carefully designed and constructed to be at least as strong as a permanent installation. If one tube fits inside another tube to facilitate removal, the removable portion must fit tightly and must bottom on the permanent mounting, and at least two bolts must be used to secure each such joint. The telescope section must be at least eight inches in length.

7. Installation on Cars of Space Frame and Frameless Design

- (a) It is important that roll bar structures be attached to cars in such way as to spread the loads over a wide area. It is not sufficient to simply attach the roll bar to a single tube or junction at tubes. The roll bar must be designed in such way as to be an extension of the frame itself, not simply an attachment to the frame. Considerable care must be used to add as necessary to the frame structure itself in such way as to properly distribute the loads. It is not true that a roll bar can only be as strong as any single tube in the frame.
- (b) On cars of frameless construction, consideration should be given to using a vertical roll bar hoop of 360E completely around the inside of the car, and attached with suitable mounting plates. This type of roll bar then becomes a substitute for the frame.

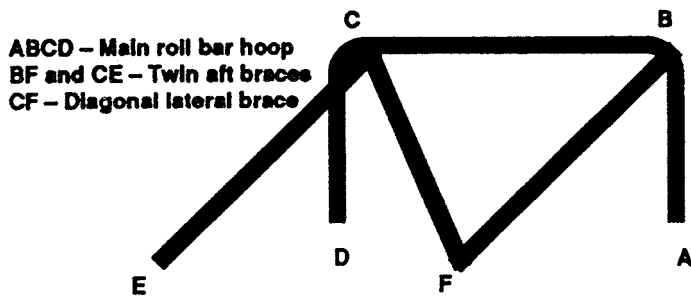
8. Roll Cages

- (a) It is recommended that all cars utilize a roll-cage type of construction. Cars with altered uni-bodies (such as removal or replacement of doors, windshields, structural members, or other panels that may serve to strengthen the uni-body) must have a roll cage installed.
- (b) The main roll bar hoop must extend the full width of the driver/passenger compartment and must be a minimum of two inches above the top at the driver's helmet with the driver sitting in normal position, or as near the roof as possible in closed cars, and shall not be more than six inches behind the driver. The size and material of tubing shall be determined from Table D. The fabrication and bracing on this hoop must meet the specifications of a rollbar.
- (c) A similar hoop must be in front supporting the front pillars, with horizontal bars connecting the front hoop to the main hoop at each side of the top. The material of this tubing shall be at least 1.5 x .102 inches and required bolts and nuts shall be as specified under roll bar requirements.
- (d) Side protection shall be provided by means of side tube(s), approximately at dashboard height, connecting the front and rear hoops across the door openings.

9. Alternate Tubing Sizes

Roll bar tubing of an alternate diameter and wall thickness equal to or exceeding the bending strength of those specified in Table D may be used.

NOTE: The following alternates are permitted; although installing the diagonal lateral brace in the main hoop is the strongest (and hence most preferable) alternative, there may be instances where such an installation is not practical. In such situations, the installation of the diagonal brace as shown below will be acceptable.



Appendix E: 914 Bracing

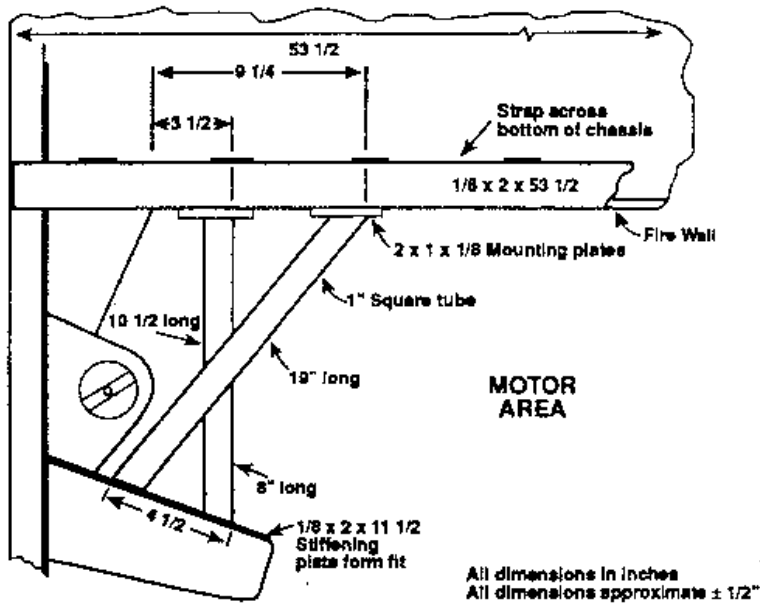
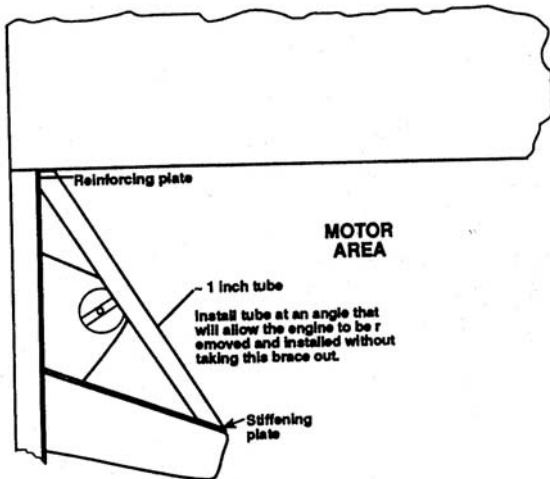


Illustration 1. (Looking up from the bottom of the car)

Note: bolted flanges may be used to hold 1@ square tubing X-brace to the body. This is to allow the motor to be removed.



Looking up from the bottom of the car.

Appendix F: PCA National Driver's Education Minimum Standards

(Retrieved from https://www.pca.org/drivers_ed/standards.html on December 15, 2006)

The DE Advisory Team, as the name implies, is advisory in nature. The team's first task was to collaborate on a set of "Minimum Standards" to be used as a common set of safety based rules upon which to build and improve regional DE programs. These Standards were designed to be basic in nature, with an emphasis on proven safe practices, and are designed to be expanded upon as each region tailors their own programs to their entrants.

MINIMUM STANDARDS

1. **Open Cars:** Any make of car delivered with factory-installed roll over protection meets the minimum standards for PCA DE events. In these cars the soft-top must be in the up position or the hard top installed.

If a car does not have factory installed roll over protection, a roll bar must be installed, which meets the "broomstick" rule (the driver's helmeted head is below a bar placed on top of the rollbar and windshield). All targa tops must be installed unless there is addition roll over protection. All sunroofs must be in the closed position. The windshield alone is not considered to be factory roll over protection.
2. **Equal Restraints:** Both student and instructor shall have the same restraint system. All vehicles must be equipped with a properly installed lap and shoulder restraint system.
3. **Medical Personnel** at the site: The minimum standards are one EMT trained attendant and an emergency equipped vehicle.
4. **Fire & Emergency** at the site: There must be personnel trained in fire and emergency situations and the site must have either a fire truck and /or a tow truck equipped with fire emergency equipment.
5. **Insurance:** All events must meet the PCA insurance carrier's requirements and everyone entering the event location must sign the insurance waiver.
6. **Driver's License:** All entrants must have a valid driver's license (state, country or province as appropriate).
7. **Car Occupancy:** If two people are in a car, one must be an approved event instructor and the other must be a registered entrant in the event. There are no exceptions to this rule. Registering people for the sole purpose of allowing instructor rides is not an acceptable procedure. A registered entrant is defined as a person who will be participating in substantially all appropriate aspects of the event (on track, classroom and exercises). This does not mean, however, that a registered entrant must attend the event full time, or participate in classroom sessions or exercises that are not scheduled for such entrant (e.g., instructors and advanced students need not participate in classroom session or exercises developed for novice drivers.)
8. **Corner Workers:** A minimum of one person per designated station and the station must be equipped with an appropriate complement of flags, fire extinguisher, and communication equipment (radio or track hardware system).

9. **Run Groups:** The grouping of drivers into run groups shall be assigned in terms of their track driving experience and capability, as well as speed potential of the cars. All novice drivers shall be assigned an event-approved instructor to ride with them for in-car instruction.
10. **Clothing:** All car occupants must wear a Snell approved helmet, which has the current available Snell rating or the one previous Snell rating. Footwear must be enclosed, non-slip, with a relatively smooth sole. Hiking type deep lugged soles are not acceptable.
11. **Eye Protection:** If the car does not have a windshield, the driver must be equipped with eye protection.
12. **Drivers' Meeting:** All events must have a drivers' meeting prior to putting cars on the track to review event procedures and policies.
13. **Car Safety Inspection:** The car owner must certify that the car is safe to run on the track and that the car has been inspected by an regionally approved person or shop within thirty days prior to the event.
14. **Final Safety Inspection:** A final safety inspection of the car shall be performed within 24 hours at a site near or at the event facility. This should include inspection of the helmet, the restraint system, all loose objects to be removed, gas cap must be tight and any other items deemed necessary by the event chairman. The car is identified with a sticker or some other means as having passed the final inspection.
15. **Passing Zones:** Passing zones for all groups shall be well defined at the Drivers' Meeting. All passing must be completed by the end of the passing zone as defined by the event organizer. THERE WILL BE NO PASSING IN THE TURNS AND UNDER RED FLAG CONDITIONS THERE IS ALSO NO PASSING UNDER YELLOW FLAG CONDITIONS EXCEPT FOR SLOW-MOVING VEHICLES WHOSE DRIVERS HAVE SIGNALLED THAT THEIR VEHICLES ARE DISABLED. Road courses associated with super speedways may use the super speedway turns as passing zones; e.g., Turn 3 at Pocono, or NASCAR Turns 1, 2, 3 and 4 at Texas Motor Speedway. Kinks in a straight area of the track will not be considered turns unless specified by the Event Chairman. The Event Chairman shall take into consideration the areas of the track that are preferred for passing, and may restrict certain passing zones to advanced run groups.
16. **Passing Signals and Procedures:** All passing in the designated areas will be with the use of hand signals to direct the passing car safely around the car being passed. It is preferred that the car being passed remains on line allowing the faster car to pass safely. In the event of drivers who, due to a physical impairment, are unable to use hand signals, the use of turn signals to signal passing will be permitted. It is recommended that such drivers and their cars, if any, be identified in the Drivers' Meeting.
17. **Event Control Center:** The event control center must have the ability at all times when cars are on the track, to be in communication with the corner stations and track fire and emergency center.
18. **Grid/PIT Marshall:** The event organizers must designate a grid and/or pit-out Marshall to control the flow of cars on and off the track.
19. **Chief of Course:** The flag station or person that communicates with event control and all corners. The chief of course is responsible for all reports and actions of each of the corner stations. The person coordinates all of the actions of the corner stations. It can be the same person as in Event Control but tracks that use professional corner workers will usually designate one person on their team for this role.
20. **PCA Observers' Report:** The PCA Observers' Report form must be completed by an impartial party (i.e., not the Event Chairperson or the Chief Instructor) who attended the event.

21. **Chief Instructor:** The event chairman must designate an individual as Chief Instructor who may also be the Attitude Adjustment Counselor.
22. **Safety Inspector:** The event organizers shall designate a person responsible for car inspection at the event.
23. **Novice Meeting:** There shall be a mandatory session for all novice drivers, which could include track etiquette and flagging responsibilities.
24. **Erratic Driving:** Four wheels off, spin, and/or contact, the driver must come into the pits to have the car looked over and to be queried for the cause.
25. **Entrant Age:** The minimum age for any driving entrant is eighteen years.
26. **Identification:** All cars must be identified with a legible number. Either the car or the driver must be identified by run group. The use of colored wrist bands to identify the entrant and his or her run group is highly recommended.
27. **Lap Timing:** PCA DE Programs are not timed events. Any timing is done for instructional purposes only, and is not part of the operation of the event.
28. **NO ALCOHOL OR CONTROLLED SUBSTANCES CAN BE CONSUMED BY ANY PARTICIPANT DURING THE HOURS OF EVENT OPERATION, OR BY ANY PERSON AT THE SITE OF THE EVENT DURING THE HOURS OF EVENT OPERATION.** This is not intended to prevent participants from taking medication as long as it does NOT have an effect upon the person's ability to control a vehicle at speed.
29. **Event Registration:** Every entrant must complete a registration form which must include an emergency contact and minimum medical information; such as, allergies, blood type, and any unusual medical conditions.
30. **Instructor Qualification:** Every region and Zone who organizes a DE event must have an instructor qualification program.
31. **Track Contractual Requirements:** The event organizers must adhere to any facility safety requirement that is more stringent than the PCA minimum standards; e.g., track density, open car standard, etc.
32. **Accident Policy:** In the case of physical damage to an automobile the preferred policy is that if the car can be driven a report need not be written. If the car can not be driven than a report should be written and submitted to John Heckman, National Insurance Chairman. In the case of bodily injury to any individual at the event, a report must be written and submitted to our insurance carrier on the next business day.

2007 rules were prepared by:

2006 Drivers' Events Committee

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Andrew Forrest - Time Trial Chairperson
Bill Benz - Time Trial Representative
Bill Dally, Glynn Dennis, Brian Lay, Paul Smith - Autocross Chairpersons
Mark Powell - Autocross Representative
Larry Sharp - Zone 7 Representative

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John Beck - Time Trial Representative
Doug and Dana Ambrisko - Autocross Chairperson
Boris Tekslar - Autocross Representative
Larry Sharp - Zone 7 Representative

The 2006 rules are based on a comprehensive proposal by:

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Chet Bottone	Hayden Burvill
Robert Murillo	Mark Powell
Larry Sharp	Dean Thomas
Gary Walton	

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Boris Tekslar - Autocross Representative
Tim Fleming - Zone 7 Representative

2004 rules were prepared by:

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John Beck - Time Trial Representative
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Larry Sharp - Autocross Representative
Tim Fleming/Dean Thomas - Zone 7 Representative

2003 rules were prepared by:

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David Leong - Autocross Chairman
Harold Williams - Time Trial Representative

Steve Silver - Autocross Representative
Tim Fleming - Zone 7 Representative

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2002 Drivers' Events Committee

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Chris Murray - Time Trial Chairman
John Seidel - Autocross Chairman
John Beck - Time Trial Representative
Bert Delvilano - Autocross Representative
Tim Fleming - Zone 7 Representative

2001 rules were prepared by:

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Masuo Robinson - Time Trial Chairperson
John Seidel - Autocross Chairperson
John Beck - Time Trial Representative
Hank Watts - Autocross Representative
Bud & MaryAnne Behrens - Zone 7 Representatives

The 94-2005 rules are based on a comprehensive proposal by:

The Evolution '94 Committee

Hank Watts, Chairman
Bud Behrens David Blanchard
Kirk Doberenz Gary Dorigi
Ken Mack Tom Poole