



# New England Hillclimb Association (NEHA) **2018 Annual Awards Banquet and 2019 Season Rules Meeting**

## Classification

**Submitted:** Emmanuel Cecchet and Margaret Sharron (Submitted 02-Jan-2019)

**Section:** 7. RALLY SPRINT A. Class Requirements Section 1.

### Proposal:

Add "ARA" to the list of accepted logbooks:

1. Properly Rally Logbooked cars only-includes NASA Rally, RA, FIA, CARS, **ARA**. Rally Sprint cars do not need to be registered/street legal as there are no transits.

**Thoughts:** RA (Rally America) is disappearing this year and is replaced by the American Rally Association (ARA) that is sanctioning most rallies in the US now (Don is a tech inspector for ARA). Cars logbooked recently mostly have an ARA logbook.

**Submitted:** Emmanuel Cecchet and Margaret Sharron (Submitted 02-Jan-2019)

**Section:** 7. RALLY SPRINT B. Rally Sprint Class Determination

### Proposal:

Remove sanctioning body specific class names and regulations and put a generic rule for restrictors:

1. R1 Turbo/supercharged/high displacement cars (~~RA's Open, G5; NASA's 2wd/4wd Heavy~~) AWD turbo cars in R1 must use a ~~34mm~~ turbo restrictor **in accordance to current US rally regulations.**

2. R2 Non-turbo cars (~~RA's Open Lite, G2; NASA's 2WD/4WD Lite~~)

**Thoughts:** RA (Rally America) is gone, the classes in the rules do not exist anymore and the ARA classes are missing. ARA classes are different and regulations can change mid-year with bulletins. There is no real need to drag the specific class names into our rules.

To keep the hillclimb rules in sync with the current rally rules without having to rewrite the rules every year, we just put a generic rule on restrictors to be compliant with whatever regulation is currently being enacted by the rally sanctioning bodies (the idea is that the cars are prepared to run in a specific rally class, as long as they are good for the rally rules, they are good for the hillclimbs).  
*(continued on next page)*

For example ARA now allows from FIA S2000 1.6T with 28mm restrictor ([https://docs.wixstatic.com/ugd/240f15\\_02af3236a6e843dc846f5a97fdb56a2.pdf](https://docs.wixstatic.com/ugd/240f15_02af3236a6e843dc846f5a97fdb56a2.pdf)) and up to a 36mm restrictor in Limited AWD cars ([https://docs.wixstatic.com/ugd/240f15\\_c0d5fdbb8bdc4769b97c4a7db81c5dd0.pdf](https://docs.wixstatic.com/ugd/240f15_c0d5fdbb8bdc4769b97c4a7db81c5dd0.pdf)).

For info, both the PrincesSTI and the FrogSTIr will be running 36mm restrictors in their ARA rally class this year; we would be ineligible under the current rule.

**Submitted:** Jesse O'Brien (Submitted 03-Jan-2019)

**Section:** All sections

**Proposal:**

Document with all changes accepted and a version with tracked changes are included below.

Online version that has tracked changes and comments is available here:

[https://docs.google.com/document/d/1qxX0mOGN9UZIEbOx\\_BkfoViUIGsGq2FBCzVOjoVNB4w/edit?usp=sharing](https://docs.google.com/document/d/1qxX0mOGN9UZIEbOx_BkfoViUIGsGq2FBCzVOjoVNB4w/edit?usp=sharing)

**Thoughts:** The goal is to consolidate 21 classes down to 14.

In 2018, we had 18 competitors with enough points to qualify for a class championship. Of those, 8 were the only candidate for their class.

In 2017, we had 13 competitors with enough points to qualify for a class championship. Of those, 10 were the only candidate for their class.

## Technical

**Submitted:** Don Taylor (Submitted 05-Feb-2019)

**Section:** 1. Clothing, E. Head and Neck Support

**Proposal:**

Add:

2. SFI tag must be no older than 5 years. FIA tag does not expire at this time, but the tether strap must be no older than 5 years. (Rule to take effect January 1, 2020)

**Thoughts:** -

## Technical

**Submitted:** John Reed (Submitted 09-Feb-2019)

**Section:** Replacement of many sections

### Proposal:

These regulations are set forth to provide for the orderly conduct of hillclimb time trial events.

Participants are cautioned that all motor sports have inherent risks; It is the Participant's responsibility to take adequate precautions in light of these risks.

No express or implied warranty of safety or freedom from risk shall result from publication of or compliance with these rules and regulations. The participant warrants that all Articles presented for inspection are correctly marked, represented, or identified.

The rules and regulations are intended as a guide for the conduct of this motor sport and are in no way a Guarantee against property damage or injury to participants, spectators, or others.

- a) Double-letter designation [AA, BB, etc.] refers only to Prepared cars.
- b) Letter designation with # {i.e. Q#} Refers to cars requiring a rollcage per 4. \_.\_
- c) Certifications, tags, or similar identifiers are acceptable proof of spec. compliance. Condition and correct operation remain the primary criteria for acceptance.
- d) Specs. Given are minimums. Tech accepts equivalent items on a discretionary basis only.

### 1. CLOTHING

#### A. Shoes

1. No exposed nylon, nylon mesh, or plastic.
2. Closed construction, flat sole, leather or canvas. *(No platform soles, high heels, sandals).*

#### B. Clothing

1. No nylon or other thermoplastic synthetics. Natural fibers recommended.
2. Long sleeves, long pants, socks
3. Fire-retardant outer clothing and underwear recommended.
4. All gloves used must be flame-retardant, driving type gloves *(Nylon "mechanics" gloves are specifically banned)*

#### B# clothing

1. Fire retardant driving gloves required, to meet or exceed SFI 3.3/1 (no expiration or recertification req.)
2. Fire retardant outer clothing, to meet or exceed SFI 32a/1. *(No expiration or recertification req.)*

#### BB. Clothing

1. Fire-retardant outer clothing required, to meet or exceed SFI 32a/1. *(No expiration or recertification req.)*
2. Fire retardant underwear (ref. SFI 3.3) recommended (especially with /1 rated suit)
2. Fire-retardant gloves required, to meet or exceed SFI 3.3/1 *(No expiration or recertification req.)*
3. Fire-retardant hood or helmet skirt required in open engine/cockpit cars, to meet or exceed SFI 3.3 *(No expiration or recertification req.)*
4. Strongly recommend SFI 3.2a/5 suits and SFI 3.3/5 gloves in such cars.

## Technical

**Submitted:** John Reed (Submitted 10-Feb-2019)

**Section:** Replacement of many sections

**Proposal:**

4.A.3 add "and installed with the correct hardware."

4.A.5 Replace all with "Seat belt and harness anchor points must each be capable of a loading equal to weight of the car, applied in line with the load of the harness. Sub belt points must be capable of ½ of this load."

4.C. All (Replace)

1. All drivers, co-driver seats must meet State Inspection requirements.
2. All seats used with 5+ point harness must be fixed- back, fully supportive type, (i.e." racing seat") with back extending to shoulder harness point's of intersection with seatback, as worn. Seat width and height must fit driver(s). Headrest: max. 3" behind driver's helmet, as seated, area to contain head to headrest area.
3. All seats must have sufficient framing and reinforcement, and be mounted and supported correctly. Mountings must align with harness loads, and at comparable strength. Installation per the manufacturer spec is the minimum requirement. {FIA spec \*\*\*\*\* seats are acceptable, must be mounted and used per that specification [i.e. without tracks.]
4. Seat assembly should mount to same elements of structure as the harness assembly, and be mounted/supported in direct line with the loads of the harness as worn, i.e. back braced near harness intersection., in line with shoulder,

Delete 1st sentence of 4.E.4, now redundant.

**Thoughts:** -

**Submitted:** John Reed (Submitted 10-Feb-2019)

**Section:** 4. Cockpit E. E. Collision Protection minimum requirements

**Proposal:** Replace sections 10 through 13 with the following:

10. Roll cages must be mounted to the primary structure of the car at 6 points minimum. We strongly encourage, and DO NOT limit, additional cage mountings and/or chassis reinforcement. Welded mountings must engage (by socketing, plating, gusseting, etc.) the same area of metal as the tube wall. ( Eg.  $1.75 \times \pi \times .094 = .52 \text{ sq.in} = .032 \times 16.15 \text{ linear inches of weld}$ )
11. Bolted or welded foot plates must be a minimum of 4" x 5" (20 sq.in.), = to cage wall thickness. Bolted plates: Min. 3 ea. 3/8" grade 5 (ISO 8.8) bolts, backup plates the same as foot plates. Reinforcement of these mountings is strongly recommended.[ Bolted in cages, beginning in 2020, will be required to bolt to the original outer (& inner ?) lap belt and shoulder belt mountings, as well as their foot plates).
12. Full, continuous (stamped, OE) floor pan will be considered adequate structure in regard to meeting safety requirements. (Ref. 3.A.1). Or protection for the foot well area, and from "driveline intrusion" (Ref. 3.A.1)

must be incorporated into the chassis/rollcage structure Repairs or removable sections must equal the original in strength.

13. Non-continuous, composite, fibre, adhesive mounted, sectioned or seamed floors are not, themselves, even if OE, considered adequate structure for rollcage mounting, , and "drive train intrusion", [foot well protection, seat, and harness mounting]
14. Energy absorbing deformable structure must be incorporated into the chassis structure, at minimum ahead of the driver's feet and to the side closer to the driver.

Items in square brackets [-----] are to be considered as possible amendments to the original motion.

**Thoughts:** -

## General

**Submitted:** John Reed (Submitted 10-Feb-2019)

**Section:** Add between 26-27 or 27-28; giving the editors option to append it to any of these

**Proposal:**

Add:

The “New England Hillclimb Association”, “NEHA”, and the “New England Hillclimb Series” (\*”NEHA Family”) are registered trademarks of the New England Sports Car Club Council, Inc. (NESCCC), for the use of its member clubs in the promotion and operation of hillclimbs. The Council, and its member clubs, are not owned by, or subordinate to, any other sanction or organization. Any specifications incorporated herein are for reference purposes, and represent known and accepted practices, trade standards, and equivalences.”

**Thoughts:** We are HILLCLIMB. One of the original challenges of the automobile, it remains truer to its original form than most others. For over 60 years, the larger enthusiast community of New England has presented and competed in these events, independent, and faithful to our origins.

**All Changes Accepted**

## 1. FORMULA LIBRE

### a. Class Requirements

- i. A car not meeting class requirements below may enter Formula Libre provided technical and safety regulations are met.
- ii. A car legal for any NEHA class may bump to Formula Libre at the entrant's request.

## 2. PREPARED

### a. Base Class Determination

- i. PREPARED 1 - Cars with a displacement of 4501 cc to 8000 cc.
- ii. PREPARED 2 – Cars with a displacement of 2201 cc to 4500 cc.
- iii. PREPARED 3 – Cars with a displacement of 1601 cc to 2200 cc.
- iv. PREPARED 4 – Cars with a displacement of 1600 cc or less.

### b. Displacement Factors - The following factors will be applied to engine displacements for determination of Prepared classes.

- i. Supercharging, turbocharging, or nitrous oxide induction: Multiply actual displacement by 2.
- ii. Rotary engines: Multiply rated displacement by 1.62.
- iii. Factored displacement from 2.B.1 and 2.B.2 will apply as actual displacement for use of the following factors:
  - Cars competing on >100tw: Deduct 12% of actual displacement.
  - Four Wheel Drive: Multiply actual displacement by 1.25
  - Cars configured for production class racing (i.e. Retains stock chassis structure and suspension mounting points.) Deduct 12% of actual displacement.
    - a. Classes recognized as production classes include SCCA IT and AS; production classes in SCCA, EMRA, and SVRA; and most Street Stock classes. Criteria for recognition of existing classes, or for use of this factor on cars not originating in these classes, are retention of all-original body, frame, floors, and firewalls; use of all original control arms and original suspension geometry; original configuration of engine, in stock position.

### c. Traction control is not allowed in PREPARED. See tech rules 2.BB.1 and 5.FF.1.

## 3. STREET PREPARED

### a. Class Requirements

- i. This category is based on stock production vehicles that are easily recognized as such, and must have operational lights, horn, glass, wipers, mirrors, door handles, bumpers, bumper reinforcement bars (in good condition OEM or equivalent), both front seats, heater and dashboard.
- ii.
- iii. The floor and trunk area must remain intact and in stock location. Any modifications to the floor or trunk area must be sealed as well as the factory original.
- iv. All exterior body panels must appear as stock and remain in place (fender flares are free).

- v. Relocation of accessories, batteries, fuel system, electrical components is allowed, provided that the exterior of vehicle remains as produced.
  - vi. Interchange of production options within the model is free (while adhering to the adjustments from the norm section).
  - vii. Engine/ driveline modifications are allowed.
  - viii. Rim size may be changed. Wheel openings shall retain their original contour when viewed from the side.
  - ix. Tires must be DOT approved and 100 treadwear rating or higher. Tire tread may not be seen from above.
  - x. The above items do not void any applicable safety requirements as listed in the Technical and Safety Requirements.
- b. Street Prepared Class Determination
- i. Street Prepared 1
    - AWD forced induction cars
    - AWD naturally aspirated cars 3500 cc or larger
  - ii. Street Prepared 2
    - AWD naturally aspirated cars less than 3500 cc
    - 2WD forced induction cars
    - 2WD naturally aspirated cars 3500 cc or larger
  - iii. Street Prepared 3
    - 2WD naturally aspirated cars less than 3500 cc

#### 4. UNPREPARED

- a. Class Requirements
- i. All cars shall be as produced, available in the North America, and at least 500 made by the manufacturer.
  - ii. Must be capable of passing a Vermont State Vehicle Inspection.
  - iii. No stock equipment or parts may be removed unless they were available as an option on that particular vehicle. The only exception is removal of the A/C system.
  - iv. Some interior parts may be minimally altered (but not removed) to allow installation of safety equipment.
  - v. The engine is to be the original type and size for that year, make, and model car.
  - vi. Other than the air filter and its housings the induction system may not be modified to allow more air into the engine, such as oversize throttle bodies, carbs, or intake manifolds.
  - vii. A piggyback computer that can modify the mass air flow or MAP sensor is illegal.
  - viii. No modifications to the exhaust manifold. The exhaust system may be replaced with a “cat-back” system (where applicable) that runs in the stock location and exits in the stock location.
  - ix. Bolt-on bracing and minor suspension reinforcements that require no cutting or fabrication for installation are allowed.
  - x. Springs must be on original seats.
  - xi. Rim size may be changed. (Fender lip may be flattened to help prevent tire chafing.)



- xii. Tires must be DOT approved and 200 treadwear rating or higher. Tire size is free. Tire tread may not be seen from above..
  - xiii. OEM flexible brake lines may be replaced with aftermarket or motorsport braided stainless steel lines.
- b. Unprepared Class Determination
- i. Unprepared 1
    - AWD forced induction cars
    - AWD naturally aspirated cars 3500 cc or larger
  - ii. Unprepared 2
    - AWD naturally aspirated cars less than 3500 cc
    - 2WD forced induction cars
    - 2WD naturally aspirated cars 3500 cc or larger
  - iii. Unprepared 3
    - 2WD naturally aspirated cars less than 3500 cc

## 5. ELECTRIC VEHICLES

- a. Class Requirements
- i. Electric vehicles must use only electric power during racing. Motor(s) must be powered only by a charge storage device (batteries, capacitors, other charge accumulators), or by fuel cell. A hybrid electric vehicle (e.g., Toyota Prius) may be raced in electric-only mode.
- b. Electric Vehicle Class Determination
- i. UE Unprepared Electric class is for unmodified electric vehicles built by a recognized manufacturer to U.S. DOT standards.
  - ii. PE Prepared Electric (PE) class is for modified, converted, or custom electric vehicles, and must comply with the technical and safety rules for prepared electric vehicles.

## 6. RALLY SPRINT

- a. Class Requirements
- i. 1. Properly Rally Logbooked cars only-includes NASA Rally, RA, FIA, CARS. Rally Sprint cars do not need to be registered/street legal as there are no transits.
  - ii. Driver and co-driver must have all safety gear required by Logbook's sanctioning body. Driver and co-driver must be as listed on the entry. No Rally license required.
  - iii. Tires: Must be DOT tires or Tarmac Rally Tires. Slicks are disallowed: "slicks" are defined as any tire that does not have a minimum of 1.6mm (2/32") tread depth over at least a 17% void area.
  - iv. Any rule not directly addressed by the rally sprint class rules defaults to NEHA SP class rules. (Example: all cars with a kill switch must have an air horn installed)

## 7. Rally Sprint Class Determination

- a. R1 Turbo/supercharged/high displacement cars (RA's Open, G5; NASA's 2wd/4wd Heavy) AWD turbo cars in R1 must use a 34mm turbo restrictor.
- b. R2 Non-turbo cars (RA's Open Lite, G2; NASA's 2WD/4WD Lite)

# Tracked Changes

## 1. FORMULA LIBRE

### a. Class Requirements

- i. A car not meeting class requirements below may enter Formula Libre provided technical and safety regulations are met.
- ii. A car legal for any NEHA class may bump to Formula Libre at the entrant's request.
- iii.

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**Deleted:** Cars in Formula Libre must be legal for some other NEHA class with the exception that cars not legal for Prepared because of engine displacement or tech rules. 2.BB.1 and 5.FF.1 are legal in Formula Libre.

## 2. PREPARED

### a. Base Class Determination

- i. PREPARED 1 - Cars with a displacement of 4501 cc to 8000 cc.
- ii. PREPARED 2 – Cars with a displacement of 2201 cc to 4500 cc.
- iii. PREPARED 3 – Cars with a displacement of 1601 cc to 2200 cc.
- iv. PREPARED 4 – Cars with a displacement of 1600 cc or less.

### b. Displacement Factors - The following factors will be applied to engine displacements for determination of Prepared classes.

- i. Supercharging, turbocharging, or nitrous oxide induction: Multiply actual displacement by 2.
- ii. Rotary engines: Multiply rated displacement by 1.62.
- iii. Factored displacement from 2.B.1 and 2.B.2 will apply as actual displacement for use of the following factors:

- Cars competing on >100tw; Deduct 12% of actual displacement.
- Four Wheel Drive: Multiply actual displacement by 1.25
- Cars configured for production class racing (i.e. Retains stock chassis structure and suspension mounting points.) Deduct 12% of actual displacement.

**Deleted:** Cars with a throttle plate area of less than 0.65 mm<sup>2</sup>/cc: Deduct 12% of actual displacement.

**Deleted:** DOT tires

**Deleted:** tires meeting the requirements of Sec. 2.C.4 (DOT tires)

- a. Classes recognized as production classes include SCCA IT and AS; production classes in SCCA, EMRA, and SVRA; and most Street Stock classes. Criteria for recognition of existing classes, or for use of this factor on cars not originating in these classes, are retention of all-original body, frame, floors, and firewalls; use of all original control arms and original suspension geometry; original configuration of engine, in stock position.

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### c. Traction control is not allowed in PREPARED. See tech rules 2.BB.1 and 5.FF.1.

**Deleted:** <#>The following items may be removed: emissions equipment, sound deadening, sound system, head liner, floor covering, trunk area covering, rear seating (provided that proper separation remains or is installed between driver and fuel area). Removal in excess of the above invokes the excessive lightening penalty.¶  
<#>Plastic side or rear windows will invoke the excessive lightening penalty unless 30 lbs of compensating weight is added to the car.¶  
Doors may not have any structure removed causing them to be excessively lightened – i.e.; intrusion bar, outer framework and basic structure of the door must remain intact.

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## 3. STREET PREPARED

### a. Class Requirements

- i. This category is based on stock production vehicles that are easily recognized as such, and must have operational lights, horn, glass, wipers, mirrors, door handles, bumpers, bumper reinforcement bars (in good condition OEM or equivalent), both front seats, heater and dashboard.
- ii.
- iii. The floor and trunk area must remain intact and in stock location. Any modifications to the floor or trunk area must be sealed as well as the factory original.

- iv. All exterior body panels must appear as stock and remain in place (fender flares are free).
- v. Relocation of accessories, batteries, fuel system, electrical components is allowed, provided that the exterior of vehicle remains as produced.
- vi. Interchange of production options within the model is free (while adhering to the adjustments from the norm section).
- vii. Engine/ driveline modifications are allowed.
- viii. Rim size may be changed. Wheel openings shall retain their original contour when viewed from the side.
- ix. Tires must be DOT approved and 100 treadwear rating or higher. Tire tread may not be seen from above.
- x. The above items do not void any applicable safety requirements as listed in the Technical and Safety Requirements.

**Deleted:** Tire size is free but the tread may not be seen from above. Tires must be DOT approved.

**b. Street Prepared Class Determination**

**i. Street Prepared 1**

- AWD forced induction cars
- AWD naturally aspirated cars 3500 cc or larger

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**ii. Street Prepared 2**

- AWD naturally aspirated cars less than 3500 cc
- 2WD forced induction cars
- 2WD naturally aspirated cars 3500 cc or larger

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**iii. Street Prepared 3**

- 2WD naturally aspirated cars less than 3500 cc

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**4. UNPREPARED**

**a. Class Requirements**

- i. All cars shall be as produced, available in the North America, and at least 500 made by the manufacturer.
- ii. Must be capable of passing a Vermont State Vehicle Inspection.
- iii. No stock equipment or parts may be removed unless they were available as an option on that particular vehicle. The only exception is removal of the A/C system.
- iv. Some interior parts may be minimally altered (but not removed) to allow installation of safety equipment.
- v. The engine is to be the original type and size for that year, make, and model car.
- vi. Other than the air filter and its housings the induction system may not be modified to allow more air into the engine, such as oversize throttle bodies, carbs, or intake manifolds.
- vii. A piggyback computer that can modify the mass air flow or MAP sensor is illegal.
- viii. No modifications to the exhaust manifold. The exhaust system may be replaced with a "cat-back" system (where applicable) that runs in the stock location and exits in the stock location.
- ix. Bolt-on bracing and minor suspension reinforcements that require no cutting or fabrication for installation are allowed.

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- x. Springs must be on original seats.
- xi. Rim size may be changed. (Fender lip may be flattened to help prevent tire chafing.)
- xiii. Tires must be DOT approved and 200 treadwear rating or higher. Tire size is free. Tire tread may not be seen from above.
- xiii. OEM flexible brake lines may be replaced with aftermarket or motorsport braided stainless steel lines.

**b. Unprepared Class Determination**

**i. Unprepared 1**

- AWD forced induction cars
- AWD naturally aspirated cars 3500 cc or larger

**ii. Unprepared 2**

- AWD naturally aspirated cars less than 3500 cc
- 2WD forced induction cars
- 2WD naturally aspirated cars 3500 cc or larger

**iii. Unprepared 3**

- 2WD naturally aspirated cars less than 3500 cc

**iv.**

**5. ELECTRIC VEHICLES**

**a. Class Requirements**

- i. Electric vehicles must use only electric power during racing. Motor(s) must be powered only by a charge storage device (batteries, capacitors, other charge accumulators), or by fuel cell. A hybrid electric vehicle (e.g., Toyota Prius) may be raced in electric-only mode.

**b. Electric Vehicle Class Determination**

- i. UE Unprepared Electric class is for unmodified electric vehicles built by a recognized manufacturer to U.S. DOT standards.
- ii. PE Prepared Electric (PE) class is for modified, converted, or custom electric vehicles, and must comply with the technical and safety rules for prepared electric vehicles.

**6. RALLY SPRINT**

**a. Class Requirements**

- i. 1. Properly Rally Logbooked cars only-includes NASA Rally, RA, FIA, CARS. Rally Sprint cars do not need to be registered/street legal as there are no transits.
- ii. Driver and co-driver must have all safety gear required by Logbook's sanctioning body. Driver and co-driver must be as listed on the entry. No Rally license required.
- iii. Tires: Must be DOT tires or Tarmac Rally Tires. Slicks are disallowed: "slicks" are defined as any tire that does not have a minimum of 1.6mm (2/32") tread depth over at least a 17% void area.
- iv. Any rule not directly addressed by the rally sprint class rules defaults to NEHA SP class rules. (Example: all cars with a kill switch must have an air horn installed)

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**Deleted:** <#>UNPREPARED AND STREET PREPARED CLASS DETERMINATION¶  
 <#>Base Class Determination¶  
 <#>Classes are determined within a category by the ratio of adjusted engine displacement (in cubic centimeters) to vehicle weight (in pounds).¶  
 <#>Curb weights are those published in the N.A.D.A. used car dealer guide, if available, or on the vehicle manufacturer's tag if equipped and not tampered with. If the tag weight is used, it will be given in gross vehicle weight and must be adjusted. Subtract 175 lb per occupant, from the GVW to get curb weight.¶  
 <#>Actual displacement is adjusted by factors from the "norm" and then divided by the curb weight. (Norm = 2 valves and 1 injector per cylinder normally aspirated, in-line configuration.) This number will be used to class the car.¶  
 <#>Side-intake-port Wankel rotary engine displacement is multiplied by 1.62 prior to applying factors.¶  
 <#>Some classes in Unprepared and Street Prepared are limited to two-wheel drive (2WD) vehicles.¶  
 <#>No kit cars and no engine swaps will be allowed in Unprepared. In Street Prepared kit cars and engine swaps will be classed where deemed most competitive.¶  
 <#>To determine your car's class, multiply your car's actual displacement by each applicable adjustment under 5.F. Take the sum and divide this by the car's weight to come up with your class factor. Apply this number to the chart above. Then come run and have fun!¶  
 <#>There will be no penalty for a roll cage regardless of how it is tied in to the body structure, or for racing seats.¶  
 <#>Updating or backdating within the model will not be penalized (factors will be assessed after the changes).¶  
 <#>Emission requirements shall not be considered in the enforcement of these rules.¶  
 <#>Unprepared Base Class Determination¶  
 <#>Unprepared 1 1.550 and above cc/lb¶  
 <#>Unprepared 2 2WD 1.550 and above cc/lb¶  
 <#>Unprepared 3 Less than 1.550 cc/lb¶  
 <#>Unprepared 4 2WD Less than 1.550 cc/lb¶  
 <#>Unprepared 5 Less than 1.000 cc/lb¶  
 <#>Unprepared 6 Less than 0.840 cc (... [1]

7. Rally Sprint Class Determination

- a. R1 Turbo/supercharged/high displacement cars (RA's Open, G5; NASA's 2wd/4wd Heavy)

AWD turbo cars in R1 must use a 34mm turbo restrictor.

R2 Non-turbo cars (RA's Open Lite, G2; NASA's 2WD)

## UNPREPARED AND STREET PREPARED CLASS DETERMINATION

### Base Class Determination

Classes are determined within a category by the ratio of adjusted engine displacement (in cubic centimeters) to vehicle weight (in pounds).

Curb weights are those published in the N.A.D.A. used car dealer guide, if available, or on the vehicle manufacturer's tag if equipped and not tampered with. If the tag weight is used, it will be given in gross vehicle weight and must be adjusted. Subtract 175 lb per occupant, from the GVW to get curb weight.

Actual displacement is adjusted by factors from the "norm" and then divided by the curb weight. (Norm = 2 valves and 1 injector per cylinder normally aspirated, in-line configuration.) This number will be used to class the car.

Side-intake-port Wankel rotary engine displacement is multiplied by 1.62 prior to applying factors.

Some classes in Unprepared and Street Prepared are limited to two-wheel drive (2WD) vehicles.

No kit cars and no engine swaps will be allowed in Unprepared. In Street Prepared kit cars and engine swaps will be classed where deemed most competitive.

To determine your car's class, multiply your car's actual displacement by each applicable adjustment under 5.F. Take the sum and divide this by the car's weight to come up with your class factor. Apply this number to the chart above. Then come run and have fun!

There will be no penalty for a roll cage regardless of how it is tied in to the body structure, or for racing seats.

Updating or backdating within the model will not be penalized (factors will be assessed after the changes).

Emission requirements shall not be considered in the enforcement of these rules.

### Unprepared Base Class Determination

Unprepared 1 1.550 and above cc/lb

Unprepared 2 2WD 1.550 and above cc/lb

Unprepared 3 Less than 1.550 cc/lb

Unprepared 4 2WD Less than 1.550 cc/lb

Unprepared 5 Less than 1.000 cc/lb

Unprepared 6 Less than 0.840 cc/lb

### Street Prepared Base Class Determination

Street Prepared 1 1.500 and above cc/lb

Street Prepared 2 2WD 1.500 and above cc/lb  
Street Prepared 3 Less than 1.500 cc/lb  
Street Prepared 4 2WD Less than 1.500 cc/lb  
Street Prepared 5 Less than 1.060 cc/lb  
Street Prepared 6 Less than 0.900 cc/lb  
Unprepared and Street Prepared Displacement Factors  
Variable valve timing 25%  
Four-wheel drive 25%  
Wheel size (diameter and width) per .5 inch 1%  
Tire treadwear rating (50–150 U Class) (< 100 SP Class) 8%  
Non-stock antiroll bars (SP only) 5%  
Non-stock springs (SP only) 5%  
Modified suspension (SP only) 5% (other than shocks, alignment, and bolt-on reinforcement)  
6-point roll cage (U Class) – 5%  
6-point roll cage (SP Class) – 20%  
Intact interior (SP only with full cage) – 5%  
Excessive lightening (SP only) 15%  
More than 2 valves per cylinder \* 10% each (Stratified charge valves not included.)  
More than 1 camshaft per bank of cylinders 5%  
V type engine configuration 10%  
1 venturi or injector per 4 or more cylinders – 20%  
1 venturi or injector per 2 cylinders – 10%  
Non-stock exhaust manifold (SP only) 10%  
Non-stock induction (SP only) 10%  
Turbocharger 30%  
Supercharger 25%  
Intercooler 25%  
Excessive sound (over 96 dB) at 50 feet 15%  
Nitrous oxide (mandatory fire system) (SP only) + 1 Class

Diesel – 25%