

17. PREPARED CATEGORY

17.0.A. Intent

It is the intent of these rules to allow modifications useful and necessary in the preparation of a high performance, production based non-street-driven vehicle which is of unibody or tub-based construction. Tube-frame cars are allowed, subject to the requirements of 17.11. SCCA® will use the following guidelines in the determination of suitability for classification in the Prepared Category:

1. Cars classified shall retain their original design, structure, and drive layout unless otherwise specified in these rules. If in doubt about a modification, competitors should ask. If the rules do not specifically authorize a modification, it is not permitted.
2. Cars running in Prepared Category must have been series produced with normal road touring equipment, capable of being licensed for normal road use in the United States, and normally sold and delivered through the manufacturer's retail sales outlets in the US. Cars not specifically listed in Prepared Category classes in Appendix A must have been produced in quantities of at least 1000 in a 12-month period to be eligible for Prepared Category.
3. SCCA® may also class suitable non-production, full-bodied, full-fendered, strictly-specified cars into this category. Production quantities, EPA approval, and DOT approval are not required. SCCA® may choose not to classify any such vehicle it deems unsuitable for the Prepared category.
4. Within the scope of these rules, the definitions provided in Section 12 apply.
5. Specific allowances in Appendix A for a listed model supersede the limitations of Section 17. Minimum weights shall be established making it possible for all cars to reach minimum weight with reasonable modifications. The SEB recognizes that low minimum weights ultimately result in higher costs to the competitor. The rules shall discourage the use of high technology/high cost equipment. In some cases, this is accomplished by an outright ban on the equipment. In other cases, this is accomplished through the adjustments to minimum weight. See Section 17.11 for weight adjustments.

17.0.B. Specifications

The SCCA® shall publish specifications for each car specifically classed in the Prepared Category Section of Appendix A. These specifications will at a minimum specify each vehicle's allowed minimum weight and maximum wheel sizes.

1. Equipment and/or specifications may be exchanged between different years and models of a vehicle if:
 - a. The item is standard on the year/model from which it was taken, and

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- b. The years/models are listed on the same line of Appendix A, Prepared Classes. The updated/backdated part or the part to which it is to be attached may not be altered, modified, machined, or otherwise changed to facilitate the updating/backdating allowance unless the modification is specifically allowed by these rules. Cars not listed in the Prepared Category Sections of Appendix A may not be updated/backdated until approved by the SEB and published in the official SCCA® publication and/or on www.scca.com.
 2. The SCCA® may recognize certain optional components. Some non-original components may be made mandatory to obtain an adjustment of competition potential. In all cases, these components shall be listed in Appendix A. No permitted or alternate component or modification shall additionally perform a prohibited function.
 3. Requests for alteration, modification, and/or substitution of any specification or component shall be submitted for approval. The approval process will include, but not be limited to, an analysis of cost, availability, performance impact, rule enforceability, and competitor input.
- See Sections 3.8 and 8.3.1 for documentation requirements.

17.1 AUTHORIZED MODIFICATIONS

The modifications defined here in the Prepared Category are the only allowed modifications. The rules in this Section stand on their own; they do not build upon the Street, Street Touring®, or Street Prepared category rules. Modifications shall not be made unless specifically authorized herein. No permitted component/modification shall additionally perform a prohibited function. If the rules do not specifically authorize a modification, it is not permitted.

- A. It is not permitted to make any changes, alterations, or modifications to any component produced by the manufacturer unless specifically authorized by these rules.
- B. Any minor modification, intended to allow or facilitate any allowed modification, is permitted as long as it does not provide any intrinsic performance benefit in and of itself, and is not explicitly prohibited elsewhere within these rules. This rule is intended to allow minor notching, bending, clearancing, and grinding; the drilling of holes; affixing, relocating, or strengthening of brackets; removal of small parts and similar operations performed in order to facilitate the installation of allowed parts or modifications. Competitors are strongly cautioned to make the minimum amount of modification required to affix a given part and to not make tortured interpretations of this rule which will invoke Section 17.11 weight adjustments (e.g., moving frame rails inboard, regardless of the reason, is considered to be a tortured interpretation.)

Refer to Appendix F for past clarifications of these rules.

17.2 BODYWORK AND STRUCTURE

The purpose of the following rules is to maintain recognizable external fea-

tures of the manufacturer's make and model, while providing the necessary safety and performance modifications. Restrictions regarding external body shape and belly pans are aimed at preventing attempts to obtain ground effects or streamlining.

- A. The external shape of the body may only be changed where specifically authorized. Standard window openings, rain gutters, or approved facsimiles shall be retained. All external trim and model identification may be removed. Grilles may be removed, modified, or substituted.
- B. Chassis, frame, or subframe may be reinforced provided components and attachments are not relocated except where specifically permitted. Reinforcing does not authorize the use of underbody or belly pans forward of the firewall or aft of the front edge of the rear wheel opening. It is permitted to have jack points recessed into the rocker panels or to have one tube per side extending downward through the bottom of the door provided they do not extend beyond the overall width of the car or in an unsafe or dangerous manner. No part of the bodywork or chassis, to the rear of the front wheel opening, shall touch the ground when both tires on the same side of the car are deflated.
- C. The chassis, frame, or subframe may be notched or cut and brackets may be added for the purpose of attaching alternate suspension, steering, or drivetrain components except that the firewall may not be modified for engine block or cylinder head clearance. Holes may be cut to provide clearance for authorized suspension, steering, and drivetrain components through their entire range of travel. Clearance between the modified chassis, frame, or subframe and the suspension, steering, and drivetrain components is not to exceed 4.0" (101.6 mm). Additional structure may be added in order to attach allowed components to the chassis. Relocation, notching, or cutting of the chassis, frame, or subframe for tire clearance or moving the wheels inboard is not allowed. Replacement of inner fenders or wheel wells to enable wider wheels and tires is allowed.
- D. Replacement of any chassis component (e.g., subframe) in its entirety by one of alternate construction, unless specifically permitted, shall result in the vehicle being "in excess" of these rules which will invoke Section 17.11 weight adjustments.
- E. The floor in the driver/passenger compartment may be modified for installation of subframe connectors, exhaust components, battery boxes, ballast weights, and drivetrain clearance. For the same reasons listed, the rear seat floor area, defined as the area extending rearward from the back of the driver's seat to the trunk and between the frame rails, may be removed, modified, or replaced. The driver/passenger compartment must remain separate from any exhaust and drivetrain components by a metal panel.

Trunk floors may be modified, removed, or replaced. If replaced, the trunk

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floor must be replaced with metal panels of similar shape to the original. Removal of the trunk floor is allowable only when a metal bulkhead separates the trunk area from the passenger compartment.

- F. The firewall may be notched or recessed for clearance of exhaust headers, electric lines, coolant lines, fuel-carrying lines, fuel pumps, intercooling piping, carburetors, air horns, air cleaners, and distributor. Any material added to the firewall must be either steel or aluminum. This requires a sealed firewall between engine and passenger compartment. This rule is for driver's safety. Completely sealing all firewall openings is strongly encouraged, but no gap may be larger than $\frac{1}{8}$ inch (0.125", 3.2 mm), except around dynamic devices extending through the firewall (e.g., throttle linkage, transmission linkage, or other mechanical devices) and should be sealed to the extent that functioning of the device is not impaired. No more than 8.0" (20.3 cm) clearance is allowed between modified firewall areas and above listed components. The engine block, cylinder head, turbochargers, and/or superchargers may not intrude into the clearance areas authorized herein.
- G. Bumper components not integral to the bodywork may be modified, substituted with a replica of alternate material, or removed provided all projecting hardware is also removed. Bumper bracket holes in the bodywork may be covered provided such covering serves no other purpose. Bumper fascias integral with the bodywork may be modified or substituted with a replica of alternate material. Internal bumper components may be removed, replaced, or modified. Modified or replica bumpers/fascias must be of similar shape as standard components, completely cover the area of the OE bumper/fascia, and not confuse the identity of the vehicle.
- H. All interior trim, dash boards, gauges, floor covering, carpet, upholstery panels, and similar non-performance comfort or convenience items may be removed or replaced.
- I. The driver's seat may be replaced with a seat of any origin. All passenger seats may be removed or replaced with seats of any origin. The driver's seat must remain on the standard side of the car and may not cross the centerline of the car. The seat may be relocated fore/aft by up to 12.0" (30.5 cm) based on the centerline of the original front and rear mounting points. Rear bulkhead of the driver/passenger compartment may not be removed to relocate the seat and the driver's seat may not extend rearward past the bulkhead.
- J. Doors may be lightened and may be replaced by ones of alternate materials. Doors may be pinned, but not bolted, to prevent their opening in case of an accident. Quick release fasteners (e.g., Dzus fasteners) are allowed. Standard door hinges and latch mechanisms may be removed, but the doors shall be capable of being opened or removed. Interior door panels may be removed or replaced and the door window slots may be covered. Alternate attachment devices may be added to hood and deck lid to sup-

plement or replace the latches. Hood and deck lid hinges may be removed.

K. Windows

1. All windows may be replaced with polycarbonate material. The front windshield shall have a minimum thickness of $\frac{1}{8}$ inch (0.125", 3.16 mm). Tinting of the upper portion of the front windshield and the entire portion of all other windows is allowed. All window replacements shall remain in the same position in the frame or opening as the original glass it replaces; rubber molding is optional.
2. All window channels and window winding mechanisms may be removed.
3. Closed cars: All side window glass may be removed. All rear hatchbacks and deck lids shall be completely closed; poor alignment of bodywork or any other means to prevent complete closure is not permitted.
4. Open cars: All windows and windshields (including windshield frames) may be removed. The resulting window slots may be covered.
5. The installation of windshield safety clips, rear window safety straps, and windshield safety straps is permitted.

L. The contour of the fender may be altered (flared) for tire clearance provided the modifications do not confuse the identity of the car. Only standard production ventilation openings on the specific recognized model are permitted. Tires may extend beyond the bodywork. Fender wheel openings may be trimmed to provide tire clearance throughout the full range of suspension travel, but no more than is necessary for this purpose.

M. Inner fender panels separating the wheel wells from the engine compartment may be altered, replaced, or removed. Rear inner fender panels may be altered, replaced, or removed provided there are panels providing total separation between driver/passenger compartment and wheels. A shock/strut tower integral to the inner fender panel is considered part of the inner fender panel and is included in this allowance. This does not allow modification of frame/frame stubs beyond Section 17.2.C.

N. Replacement, addition, or removal of accessories (gauges, switches, indicators, etc.), or other interior modifications for driver convenience, or to permit installation of required safety equipment, is authorized provided such modifications have no influence whatever on the mechanical performance of the car. Such modifications do not include the substitution or replacement of any bodywork or chassis component except those specifically authorized by these rules.

O. The standard OE front spoiler or a non-standard front spoiler may be used. If a non-standard front spoiler is used it must comply with the following requirements: It shall not protrude beyond the overall outline of the car as viewed from above or aft of the forward-most part of the front fender opening (cutout) and shall not be mounted more than 4.0" (101.6 mm)

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above the horizontal centerline of the front wheel hubs. The spoiler shall not cover the normal grille opening at the front of the car. An intermediate mounting device may be used on cars whose front bodywork is above the 4.0" (10.2 cm) minimum. Openings are permitted for the purpose of ducting air to the brakes, radiator, and/ or oil cooler(s); equal openings may be placed in the standard lower front panel directly behind openings placed in the spoiler.

P. A spoiler may be added to the rear of the car provided it complies with either of the following:

1. It is a production rear spoiler which is standard or optional equipment of a US model of the vehicle or an exact replica in an alternate material.
2. It is a non-production rear spoiler which is mounted to the rear portion of the rear hatch, deck, or trunk lid. The spoiler may extend no more than 10.0" (25.4 cm) from the original bodywork in any direction. Alternatively in a hatchback, the spoiler may be mounted to the rear hatch lid at or near the top of the hatch in such a configuration the spoiler may extend not more than 7½ inches (7.50", 19.1 cm) from the original bodywork in any direction. The spoiler may be no wider than the bodywork. The use of endplates is prohibited. Spoiler endplates are defined as any vertical (or semi-vertical) surfaces attached in front of the spoiler which have the result of capturing and redistributing air (downforce) along all or any portion of the spoiler. The angle of attack is free. The spoiler may not function as a wing.
3. All OE rear wings and rear spoilers may be removed.
4. Vehicles equipped with an OE rear wing may add a rear spoiler only if the OE wing and wing attachments are first removed.

Q. The fuel tank may be modified, replaced, or relocated. If the fuel tank is modified or replaced, the following restrictions apply:

1. No part of the fuel tank or fuel cell shall be closer than 6.0" (15.2 cm) to the ground unless enclosed within the bodywork and mounted above the floor pan. A metal bulkhead is required that provides total separation between the driver compartment and the compartment containing the fuel tank and/or filler/neck. This includes fuel tanks that are flush mounted with driver compartment panels or otherwise exposed to the driver compartment. Fuel filler doors in the driver compartment must be positively fastened (non-metallic fasteners are not allowed). For the purposes of these rules, a fuel tank consisting of a structure containing a fuel bladder is considered to be the entire fuel cell including the containing structure. The containing structure of a fuel cell does not qualify as a bulkhead. A separate metal bulkhead must isolate the fuel cell from the passenger compartment.
2. Internal body panels may be modified to accommodate the installation of the fuel tank as long as such modifications serve no other purpose. In

the event installation includes encroachment into the driver's compartment, a metal bulkhead shall prevent exposure of the driver to the fuel tank.

3. Fuel tank breathers shall not vent into the driver/passenger compartment.
- R. All mirrors and their associated mounting hardware may be removed or replaced.
- S. The hood, hatchback, deck lid, and fenders may be lightened or replaced by ones of alternate material provided the shape is similar to the original and does not confuse the identity of the vehicle. Factory bolt-on fenders may be replaced in their entirety. Cars with non-removable fenders may replace the front fender panels going forward from the foremost door opening and the rear fender panels going rearward from the rearmost door opening. Closed cars must not remove standard material above the horizontal line placed at the lowest point of the driver's door window opening, with the exception that OE removable panels (e.g., T-tops, targa tops, sunroofs) may be removed or replaced with panels of alternate material provided that the dimensions of any replacement panel do not vary from those of the original by more than 1.0" (25.4 mm) in any direction. The approval of alternate body panels does not authorize the use of underbody or belly pans forward of the firewall or aft of the front edge of the rear wheel opening. Ground effect tunnels and/or attempts to gain ground effects are also not authorized. Any such elements incorporated in the otherwise approved components must be removed or disabled.

Front hoods and engine covers may be vented and/or louvered. The total area for all vents/louvers on a vehicle may not exceed 500 sq. in. (3225.8 cm²), unless provided as standard equipment. The total area is measured as the total open area or the perimeter of the louvers when viewed from above.

The location, number, and shape of vents/louvers is unrestricted provided they are fully contained on allowed panels. For vehicles having original vents/louvers exceeding these dimensions, no further openings are permitted. Louver openings must face rearward and may stand no higher than 1.0" (25.4 mm) above the original surface. No additional scoops, cowls, bulges, or ducts are permitted unless specified in Appendix A.

- T. All headlights, front parking lights, and front signal lights may be removed. Headlight doors may be removed, replaced, or modified. Any remaining openings shall be covered with a wire mesh screen or panel of fiberglass, Plexiglas®, metal, or other nonflammable material. Ducts from headlights, headlight doors, front parking lights, and front signal lights may be used for ducting air to the engine, front brakes, and/or oil cooler(s). Any opening used for ducting may not be relocated. These ducts may pass through interior panels for this purpose. The cross section area of a single duct

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shall not exceed the cross sectional area of the original (single) headlight.

- U. All side marker lights and tail/stop lights may be removed. If such an item is removed, the resultant opening must be covered.
- V. Spare wheel and tire may be removed.

17.3 TIRES

Any tire (including recaps) meeting the Solo® safety requirements and the applicable portions of 3.3 is allowed.

17.4 WHEELS

- A. Any wheel may be replaced in accordance with the Prepared class listings in Appendix A.
- B. Wheel spacers may be used.
- C. Any wheel mounting stud or bolt may be used.
- D. The use of center lock wheels and hubs is permitted.
- E. A manufacturer's standard wheel size exceeding the listing in Appendix A may be used, and must remain axle-specific relative to standard-size wheels with no additional weight. Track dimensions must comply with the listings in Appendix A.
- F. For classes CP, any diameter and width wheel may be used without additional weight adjustments.
- G. For classes DP, EP, and FP, wheels up to 10" wide are allowed with no weight increase. Wheels greater than 10" wide will receive a 100 lb. increase.

17.5 SHOCK ABSORBERS & SPRINGS

- A. Bump stop rubbers and bracketry may be removed or replaced with others of unrestricted origin.
- B. Electrically controlled active shocks are prohibited.
- C. LEVEL 1 PREPARATION (FULL PREP) VEHICLES
 - 1. Any springs or torsion bars may be used. Spring seats and points of attachment may be replaced or altered. Adjustable spring perches are permitted.
 - 2. Alternately, all cars may fit "coil-over" type springs with tubular, load bearing shock absorbers or struts. The shock absorber or MacPherson/Chapman strut shall be installed inside the spring. Such items shall not exceed one shock/strut per wheel. When load bearing shocks are used, the original springs may be removed.
 - 3. Any shock absorbers may be used. The total number of shock absorbers installed shall not exceed the number originally installed by the manufacturer.
 - 4. Attachment points for the shock absorbers may be changed. There shall be a metal panel, covering, or bulkhead separating non-standard rear attachment points from the driver.

5. Lever shock absorbers may be modified or entirely eliminated. When lever shocks are replaced with tubular shocks, the entire shock assembly may be removed and replaced with a control link and bracket that approximates the control function of the original lever shock.

D. LEVEL 2 PREPARATION (LIMITED PREP) VEHICLES

1. Any springs or torsion bars can be used provided the quantity and type of these items remains as standard. Springs and torsion bars must be installed in the standard location using the standard system of attachment. The use of tender springs is permitted provided the tender springs are completely compressed when the car is at static ride height. Static ride height will be determined with the driver seated in the normal driving position.
2. Shock absorbers are unrestricted provided the quantity and type (i.e., tube, lever) of these items remains as fitted standard. Shock absorbers must be installed in the standard location using the standard system of attachment. The mounting of the remote reservoir of a remote reservoir shock absorber is unrestricted. No shock absorber can be capable of adjustment by the driver while the car is in motion, unless fitted as standard.

17.6 BRAKES

Brake systems, including calipers, caliper mounts, disks, drums, lines, backing plates, pedals, boosters, master cylinders, handles, proportioning devices, pads, linings, etc. are unrestricted except for Section 3.3.3 requirements and as follows:

- A. Brake rotors/drums shall be located in the original position (i.e., inboard vs. outboard).
 - B. Brake rotor/drum friction surfaces must be ferrous metal. Carbon or ceramic composite brake rotors/drums are expressly prohibited.
 - C. Addition, replacement, or modification of Anti-lock Braking Systems (ABS) is prohibited. The standard system may be removed in its entirety or disabled electrically in a manner not readily accessible while driving, but not altered in any other way. Sensors and computers are considered part of the ABS system and may be not altered nor relocated.
- #### D. Level 2 Preparation (Limited Prep) Vehicles
1. Standard calipers must be retained. Alternate brake rotors and drums must be the standard diameter, width, and design. Rotors shall not be cross drilled or slotted unless fitted as OE.
 2. Cars fitted with rear drum brakes may convert to rear disc brakes. When converting from rear drum to rear disc brakes, the rear brake rotors can be no larger in diameter than the largest permitted front brake rotors.

17.7 ANTI-ROLL (SWAY) BARS

Any anti-roll bar, camber compensating device, panhard rod, watts linkage, and/or other suspension stabilizer is permitted. Attachment points of such components are unrestricted. Components may pass through body panels, chassis panels, and frame members.

A. LEVEL 1 PREPARATION (FULL PREP) VEHICLES

Components may extend into the driver/passenger/trunk compartments, but shall be covered with metal panels.

B. LEVEL 2 PREPARATION (LIMITED PREP) VEHICLES

Components and mounting cannot be located in the trunk or driver/passenger compartment unless fitted as standard.

17.8 SUSPENSION/SUSPENSION CONTROL

A. Spindles, hubs, bearings, bearing carriers, stub axles, etc. may be modified or replaced.

B. Suspension Control

1. Original suspension control arms may be reinforced, modified, or replaced with components of unrestricted origin.
2. The manufacturer's original basic type of rear suspension (e.g., independent, live axle, swing axle, MacPherson strut, A-arm, etc.) shall be retained unless otherwise stated in Appendix A.
3. Suspension bushings are unrestricted. Adjustable spherical bearings or rod ends are permitted on all suspension components.
4. The wheelbase of the vehicle shall not be changed or relocated in a fore/aft direction by more than $\pm 1.0"$ (± 25.4 mm).
5. The minimum track for all prepared cars is the OE track dimension. NOTE: This minimum also applies to cars utilizing Section 17.11.A to compete in Prepared.

6. LEVEL 1 PREPARATION (FULL PREP) VEHICLES

- a. Suspension pick-up points on the chassis or structure may be relocated. If such points are relocated, there shall be a metal panel, covering, or bulkhead separating the driver/passenger area from the suspension components.
- b. Front: Vehicles originally equipped with MacPherson strut front suspension may convert to double A-arm. Other vehicles must retain the manufacturer's system of front suspension. A-arm front suspension shall have the shocks attached outboard of the inner pickup point on the upper or lower control arm. Rocker arms, push-pull rods, etc., are prohibited unless otherwise stated in Appendix A.
- c. Rear: Rocker arms and push-pull rods may be used to augment the rear suspension members.

7. LEVEL 2 PREPARATION (LIMITED PREP) VEHICLES

- a. Suspension pick-up points on the chassis or subframe structure may not be relocated. Allowed alternate bushings/bearings must contain the pivot point within the space occupied by the OE bushing.
- b. Vehicles equipped with MacPherson/Chapman struts may slot the mounting holes or add additional adjustment plates provided that the center hole is not enlarged or relocated. The strut shaft must pass through the center hole. Mounting of adjustment plates is unrestricted.
- c. Camber and caster may be adjusted by modification or replacement of existing brackets which locate control pivots and bolt to the chassis or subframe structure. Any resulting change in the vertical position of the pivot points must remain within 1.0" (25.4 mm) of the original location.

C. Steering

1. Steering arms, pitman arms, steering racks/gears, and steering linkage component parts may be modified, reinforced, or substituted. Power-assist steering components may be added, removed, or modified. The steering system may be relocated or changed.
 2. The steering column is unrestricted. A collapsible-type steering column having a layout and design and/or a column structure with impact and energy absorbing characteristics is strongly recommended.
 3. Any steering wheel and wheel quick-release mechanism may be used. Steering wheel rake and steering column length may be altered. Steering quickeners may be added to the steering column.
- D. All spherical rod ends used on major suspension and steering components shall be retained either by the design of the mounting brackets, a larger area captive washer, or the inherent mechanical design of the unit (circlip or Messerschmitt joints).

17.9 ELECTRICAL SYSTEM

- A. The use of any driver operated electric starter is permitted.
- B. The use of any ignition system (except magneto ignition) is permitted provided the number of spark plugs remains the same as that of the standard production engine. If a distributor is removed, a blanking plate or breather may be fitted in its place.
- C. The original generator or alternator may be completely removed or replaced. Mounting location and drive system for the generator or alternator is unrestricted.
- D. The remaining components of the electrical system are unrestricted.
- E. It is recommended that all vehicles be equipped with an electrical system master cutoff switch.

17.10 ENGINE AND DRIVETRAIN

- A. Component Modification

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1. Where allowed, original and alternate components of the engine may be lightened, balanced, and modified by any mechanical or chemical means, provided that it is always possible to identify required components as original. Such means include, but are not limited to, shot peening, glass beading, heat treatment or hardening, plating, and milling.
2. No material or mechanical extension may be added to any required original component unless specifically authorized by these rules. Any repair performed to a required original component shall clearly serve no other prohibited function. Compression ratio may not be increased via welding of combustion chambers.

B. Induction System

1. Any air filter(s), velocity stack(s) and or air box(es) may be fitted. Air may be ducted to the carburetor or fuel injection provided that the ducting is contained within the engine compartment and that the air to be ducted is supplied through normal or specifically authorized openings in the bodywork. Headlight, front parking light, front signal light, and similar standard openings in the front of the car may be used for ducting air to the engine and ducts may pass through interior panels for this purpose. "Standard openings in the front of the car" includes ventilation system intake grilles.
2. Any throttle linkage may be used. All throttle linkages shall be equipped with more than one system of positive throttle closure. Any throttle pedal may be used.
3. All inducted air, with the exception of idle air, shall pass through the throttle venturi(s).
4. LEVEL 1 PREPARATION (FULL PREP) VEHICLES
 - a. Unless specifically listed in Appendix A, carburetors and fuel injection systems are unrestricted.
 - b. Intake manifolds are unrestricted except that no portion of any intake manifold may extend into the intake ports of the cylinder head or rotary engine end plate.
5. LEVEL 2 PREPARATION (LIMITED PREP) VEHICLES
 - a. All inducted air must pass through the throttle body and be subject to control by the throttle butterfly. All single-carbureted cars may fit a permitted optional carburetor per Appendix A. The standard or permitted alternate carburetor must not be modified. Carburetor jets needles, metering rods and needle valves are unrestricted. Choke mechanisms, plates, rods, and actuating cables, wires, or hoses can be removed. The number of carburetors must not be changed from OE.
 - b. Standard or permitted alternate carburetor(s) can use an adaptor plate and/or a spacer in addition to any standard spacer between

the carburetor(s) and the intake manifold. Material for the adaptor plate and spacer is unrestricted. No adaptor plate or spacer can serve any purpose other than to space out and/or mate the carburetor(s) to the permitted intake manifold. The adapter or spacer cannot create a plenum or change the carburetor orientation. The maximum thickness for the adapter, spacer, standard spacer, or combination of all is 1¼ inches (1.250", 31.75 mm). For the purpose of these rules an isolator is a spacer.

- c. Fuel Injection: The standard throttle body must be retained and may not be modified. The number of injectors must remain standard. The mounting position and injection point must be standard. In all other respects the fuel injection system is unrestricted.
- d. The intake manifold may be port matched on the port mating surface to a depth of no more than 1.0" (25.4 mm). Balance pipes or tubes on all intake manifolds can be plugged or restricted. The intake manifold cannot otherwise be modified.

C. Induction System - Turbocharged/Supercharged Engines

- 1. Turbocharging and supercharging is prohibited except for specific vehicles as listed in Appendix A.
- 2. Induction systems must have a restrictor on the inlet side. This restrictor orifice must not be more than 4.0" (10.2 cm) from the compressor inlet and must maintain the specified diameter for at least ½ inch (0.50", 12.7 mm). Induction system restrictors may be located within or be integral to the compressor housing, provided that all dimensional requirements of 17.10.C.2 are maintained. All inducted air must pass through this restrictor. The diameter for the restrictor shall be as follows (unless specified otherwise in Appendix A):
 - a. XP: No restrictor required
 - b. CP: 52 mm (2.047") restrictor
 - c. FP: 46 mm (1.811") restrictor
- 3. Only air-to-air intercoolers may be used. They must fit completely within the bodywork. They must be cooled only by the atmosphere. The use of coolants such as water, dry ice, ice, etc. is prohibited.
- 4. All turbocharged/supercharged cars are restricted to a single turbocharger/supercharger. The type size and model of turbocharger/supercharger is unrestricted.

D. Fuel System

- 1. Any fuel line(s) may be used. All non-standard fuel line(s) passing through the passenger compartment shall be made of metal or metal-braided hose or equivalent (e.g., Nomex, Kevlar, or nylon-braided hose) with AN Series threaded couplings or entirely covered and protected with a metal cover.

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2. Any fuel pump(s), filter(s), and pressure regulator(s) may be used. Such components may not be located in the passenger compartment but their location within the bodywork of the car is otherwise unrestricted. If a mechanical pump is replaced, a blanking plate may be used to cover the original mounting point.
 3. A cool-can, not exceeding one gallon in volume, may be used. The cool-can may not be installed in the passenger compartment.
- E. All emission equipment may be removed, in part or in whole. Removal is the only permitted modification to emission control equipment. When EGR air nozzles are removed from a cylinder head, the resultant holes shall be completely plugged.
- F. Cylinder Head
1. The original or a specified alternate cylinder head shall be used.
 2. Compression ratio may be altered by machining, using any head gasket(s), or elimination of head gasket(s).
 3. LEVEL 1 PREPARATION (FULL PREP) VEHICLES
 - a. Any valve guides and valve seats may be used.
 - b. Heads may be modified per Section 17.10.A.1.
 4. Level 2 Preparation (Limited Prep) Vehicles
 - a. Heads may be ported within 1.0" (25.4mm) of the manifold mounting surface.
 - b. Fuel injector ports must be plugged if carburetors are used.
 - c. Machining is allowed to accommodate the installation of O-rings to replace or supplement a cylinder head gasket.
 - d. Valve seats are unrestricted. Valve seat angles are unrestricted. The valve seat insert can be no taller than ½ inch (0.50", 12.7 mm).
 - e. Valve guide material is unrestricted, but must have standard external dimensions.
- G. Camshaft and Valve Gear
1. Cam timing chains, gears, belts, sprockets, and associated covers are unrestricted.
 2. A timing chain/belt tensioner may be added to those engines not originally so equipped, provided that it acts upon that portion of the chain/belt that travels from the crank drive to the first cam sprocket/gear. The timing chain cover may be modified to facilitate its use. Adjustable cam timing sprockets are permitted.
 3. Any metal valves may be used. Valve springs, valve retainers, keepers, seals, and adjusting shims are unrestricted.
 4. Pushrods are unrestricted except they must be made of metal.
 5. Any cam followers may be used.

6. Any valve covers may be used.
7. LEVEL 1 PREPARATION (FULL PREP) VEHICLES
 - a. Any camshaft(s) may be used.
 - b. Valve sizes are unrestricted.
 - c. Valve train rocker arms, shafts, and attendant assemblies (such as rocker stud girdles) are unrestricted.
8. LEVEL 2 PREPARATION (LIMITED PREP) VEHICLES
 - a. Camshafts are unrestricted except for limits as described in Appendix A. Where maximum valve lift is specified, valve lift is measured at the valve with zero lash or clearance.
 - b. Valve sizes are to remain standard unless specifically allowed in Appendix A.
 - c. Rocker shafts, when utilized in the same standard system, can be replaced by an alternate shafts and are unrestricted. Valve train rocker arms, cam followers, rocker ratios, and rocker/follower ratios must be standard.

H. Block

1. The block may be rebored no more than 0.0472" (1.2 mm) over standard unless otherwise specified in Appendix A. US-produced six-cylinder and eight-cylinder engines may be rebored no more than 0.060" (1.52 mm) over standard. Alternate blocks which are of the same material and nominal dimensions as standard are allowed. Critical dimensions for piston engines are deck height, cylinder bore, cylinder spacing, vee angle, and distance from crank centerline to cam centerline. Critical dimensions for rotary engines are epitrochoidal curve, working chamber volume, and eccentric shaft location.
2. Cylinder sleeves may be fitted to the block for repair purposes if they serve no other prohibited function. Sleeving may not be used to create a new engine configuration (one which exhibits the same displacement as an allowed engine, but which has differing bore and stroke), unless authorized in Appendix A. Oil passages may be enlarged, restricted, or plugged.
3. Any crankshaft main bearing caps and any additional main bearing cap bolts may be used provided that no material is added to the block for their use. Any crankshaft main bearing stud girdle may be used.
4. The compression ratio may be increased by means of milling the block and the block may be machined to utilize O-rings to replace or supplement a cylinder head gasket.
5. The block may be machined for the purpose of adding or substituting crankshaft oil seal(s) and related attachment devices.
6. Balance shafts may be removed.

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I. Pistons and Rods

1. Pistons, pins, clips and/or pin retainers, and piston rings are unrestricted. Pistons shall be constructed of metal.
2. LEVEL 1 PREPARATION (FULL PREP) VEHICLES
Alternate connecting rods made of ferrous material are permitted.
3. LEVEL 2 PREPARATION (LIMITED PREP) VEHICLES
 - a. Standard connecting rods are required but can be lightened and balanced.
 - b. Connecting rod fasteners (bolts and nuts) are unrestricted.

J. Crank and Flywheel

1. The original direction of crankshaft rotation and firing order shall be maintained.
2. The use of any external crankshaft vibration dampener is permitted.
3. The linkage between the clutch pedal and the clutch housing/clutch actuating mechanism is unrestricted, but may serve no other purpose. A mechanical linkage may be replaced with a hydraulic system. Any clutch pedal may be used.
4. LEVEL 1 PREPARATION (FULL PREP) VEHICLES
 - a. The crankshaft may be replaced with another of the same basic material provided the angles of the crank throws remain the same. No change in stroke is permitted unless authorized in Appendix A.
 - b. Any clutch is permitted.
 - c. Any steel or aluminum flywheel is permitted.
5. LEVEL 2 PREPARATION (LIMITED PREP) VEHICLES
 - a. Standard crankshafts are required. The crankshaft may be lightened and balanced. Journal diameters can be a maximum undersize of 0.045" (1.14 mm) from standard diameter.
 - b. Any flywheel of standard diameter or larger may be used provided it attaches to the standard or permitted alternate crankshaft at the standard location. Additional fasteners may be used. The diameter of the flywheel includes the diameter of the starter ring gear. Cars that are permitted a specific alternate transmission on the specification line may use a flywheel of standard diameter or larger for that alternate transmission.
 - c. Clutch assemblies, clutch linkages, and release bearings are unrestricted. Carbon clutch components are prohibited.

K. Oiling System

1. The use of any oil pan/sump, scrapers, baffles, windage trays, oil pickup(s), pressure accumulator (Accusump®), and oil filter(s) is permitted. Filter and accumulator location is unrestricted but they shall be

securely mounted within the bodywork.

2. The installation of any type of vent or breather on the engine is permitted. Crankcase, oiling system, breather, or catch tank evacuation systems that are in any way connected to the exhaust system are prohibited.

3. LEVEL 1 PREPARATION (FULL PREP) VEHICLES

Any engine driven oil pump may be used including a dry sump system. The dry sump tank shall be mounted within the bodywork. If said tank is mounted in the driver/passenger compartment, it shall be isolated from the driver by means of a metal bulkhead or additional container that retains any spillage or leakage.

4. LEVEL 2 PREPARATION (LIMITED PREP) VEHICLES

Any mechanically driven oil pump can be used. Chassis components may be modified to allow installation of the oil pump. Dry sump systems are prohibited.

- L. The components of the exhaust system are unrestricted. Exhaust must be compliant with Section 3.3.3.B.16 and may exit through the bodywork. Rocker panels may be modified for exhaust routing.

M. Other Engine Components

1. The use of alternate engine components which are normally expendable and considered replacement parts, such as seals, bearings, water pumps, etc., is permitted. Fasteners may be substituted.
2. Bushings may be installed where none are fitted as standard provided they are concentric and that the centerline of the bushed part is not changed. The addition of alignment dowels is permitted. Bushings are required to be concentric so that unintended relocations and realignments are not permitted.
3. Gaskets may be replaced with others of unrestricted origin.
4. Alternator/generator, crankshaft, and water pump pulleys may be altered or replaced by others of unrestricted origin.
5. One or more engine torque suppressors may be fitted. Original torque suppressors may be altered, replaced, or removed.
6. Motor mounts of alternate design and/or material may be used.
7. The engine may not be relocated.

N. Engine, Rotary Piston (only) Modifications

1. No changes in the epitrochoidal curve of the motor are permitted.
2. The capacity of the working chambers shall not be changed.
3. The eccentric shaft may be replaced with another of the same basic material, but no changes in the eccentricity or bearing journal dimensions are permitted.

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4. Rotors are unrestricted provided the material and number of lobes remains unchanged.

O. Cooling System

1. Cooling fan(s) may be modified, substituted, or removed. Electrically operated cooling fan(s) may be installed provided it (they) serve no other purpose. The use of any engine, transmission, and/or differential oil cooler(s) is/are permitted provided it/they is/are mounted completely within or under the bodywork, but not in the driver/passenger compartment. Associated oil cooler pumps and lines are permitted for the transmission and differential. Air ducts may be fitted to the oil cooler(s) as specifically authorized herein.
2. Any water radiator is allowed, provided there are no changes in the exterior bodywork to accommodate its use. It shall not be located in the driver/passenger compartment. Separate expansion or header tank(s) are permitted provided they are not mounted in the driver/passenger compartment. The heater core may be removed entirely but not modified or replaced. Water radiators may be filled with water, antifreeze, and/or nonflammable liquids the purpose of which is to transfer heat and/or inhibit freezing, boiling, and/or corrosion. A Corvair may use a water radiator. Other modifications which may be involved in its use are not permitted unless explicitly allowed by the contents of Section 17. A radiator may be relocated so long as the other applicable items in Section 17 are not violated (e.g., the exterior bodywork is not altered) to accommodate the change.
3. Sealing or shrouding the airflow area between the normal grill opening and the water radiator is permitted.
4. On water-cooled cars, thermostats may be removed, modified, or replaced with blanking sleeves or restrictors.
5. The direction of water flow through the engine shall not be changed from that which was original for the engine unless authorized in Appendix A.
6. Electrically driven water pumps are allowed. Alternate mechanical water pumps are not required to be of the same configuration as the original. Electric water pumps may be relocated.

P. Transmission

1. The standard transmission without modification may be used.
2. Any mechanical shift linkage or mechanism for changing gears may be used including use of lockout mechanisms. The shift lever opening in the body of the car may be altered to allow the installation of an alternate shift linkage.
3. LEVEL 1 PREPARATION (FULL PREP) VEHICLES
 - a. Any non-sequential manual transmission is allowed. Any automatic

sequential transmission employing a torque converter is allowed.

- b. Hydraulic/electric shifting mechanisms may be modified in automatic sequential transmissions employing a torque converter.
- c. Pneumatic, hydraulic, or electronically-controlled shifting is not allowed for manual transmissions, except for electronically-controlled overdrive manual transmissions in cars which were originally equipped with them.
- d. Gear ratios may be modified.
- e. A functional reverse gear is not required.
- f. The transmission tunnel/cover may be altered to allow the installation of an alternate transmission and/or driveshaft. Cars originally equipped with a removable transmission tunnel/cover may substitute a tunnel/cover of an alternate material.

4. LEVEL 2 PREPARATION (LIMITED PREP) VEHICLES

- a. There is no weight increase for the use of a standard transmission utilizing standard case, gear ratios, and synchromesh style gear engagement.
- b. An alternate transmission that uses standard-type, circular, beveled synchronizers, imposes a 2.5% weight increase.
- c. An alternate transmission that uses a gear engagement mechanism different than standard-type, circular, beveled synchronizers imposes a 5% weight increase.

Q. Final Drive

- 1. Alternate driveshaft(s) may be used. Any driveshaft assembly may be modified to permit the use of an alternate transmission. All non-standard driveshafts must be made of metal.
- 2. Any gear ratio and/or differential (limited slip or locked) is permitted. Final drive units which permit gear ratio changes while the car is in motion are prohibited.
- 3. Any drive axle shafts, bearings, bearing carriers, hubs, and universal/CV joints may be used.
- 4. "Loops" may be installed to prevent the driveshaft from contacting the ground in the event of driveshaft and/or U-joint failure.

5. LEVEL 1 PREPARATION (FULL PREP) VEHICLES

Any axle tube or final drive housing is permitted.

6. LEVEL 2 PREPARATION (LIMITED PREP) VEHICLES

Substitution of the differential housing is only permitted on front-engine/front-drive or rear-engine/rear-drive cars through the use of an alternate transaxle.

- R. All engine crankcase and radiator overflow/breather lines shall terminate

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in containers of at least 1 qt. (0.95L) capacity. These containers cannot be vented into the driver/passenger compartment.

17.11 OTHER

A. Vehicles prepared in excess of Solo® allowances and prepared up to either the current Club Racing GT or Production Category rules are permitted to compete in their respective Prepared classes. Tube-frame production cars and kit-cars specifically listed in Appendix A (i.e., Shelby Cobra) are subject to the requirements in the relevant Appendix. Tube-frame versions of Production Vehicles (i.e., a tube-frame Camaro) are considered in excess of the rules and must comply with the requirements in this Section. Section 17.8.B.7 minimum track requirements apply. Minimum weight will be 110% of the Solo® minimum weight from Appendix A plus any Solo® weight additions (wheel size weight increases, etc.). Vehicles taking advantage of this allowance may use the Solo® Rules or the Club Racing GCR (General Competition Rules) allowances in whole, in part, or in combination. Cars which are not listed in the GCR may not use this allowance and are limited to the modifications allowed in Section 17. For those cars which have been de-listed from the current year GCR, the appropriate specifications will be developed and added to Appendix A upon member request. An exception to the GCR will be that open cars are permitted provided they comply with all provisions of Section 17 pertaining specifically to open cars. The following items listed in the GCR, while recommended, are not required: Logbooks, annual inspections, roll cage, on-board fire systems, hand-held fire extinguisher, scattershield/chain guards, master switch, steering wheel lock removal, window safety net, windshield safety clips and rear window safety straps, and braided steel brake lines. Single Inlet Restrictors (SIRs) are not required. Due to the extent of modifications permitted on GT-derived cars classed within the Prepared category, it is possible for a replica car to meet the legality requirements for the corresponding original model provided that the engine, track, and wheelbase remain within the allowed specifications. In such a case the replica is considered legal for Prepared, provided it correctly meets all of the applicable GCR specifications. The 10% increase in minimum weight does apply to such cars.

B. Weight Calculations

Where there is a percentage addition as well as a specific weight addition, the percentage is added to the base weight before the specific weight addition. Examples:

1. In Prepared class X (XP), the minimum weight for an AWD car with a 2.5L turbocharged engine is:

$$2.5L \times 1.4 = 3.5L \times 250 \text{ lbs.} = 875 \text{ lbs.} + 1200 \text{ lbs.} = 2075 \text{ lbs.}$$

2. In Prepared class C (CP), the minimum weight for a car with a 302 ci (5.0L) engine prepared to Section 17.11 (e.g., GCR) allowances is:

2700 lbs. x 1.10 = 2970 lbs.

- C. Data acquisition/recording systems are permitted.
- D. Except where there are specific requirements in these rules, any safe line for fuel, hydraulic fluids, oil, water or breather is allowed.
- E. Ballast may be added to all cars as required to meet minimum weight provided it is securely mounted within the bodywork and serves no other purpose. Ballast plates may be installed beneath the floor pan so long as they do not protrude beyond its edges.
- F. All cars may have towing eyes, hooks, or straps which do not dangerously protrude from the bodywork.
- G. Removal of or modification to heating, ventilation, air conditioning, wiper/washer, audio, security, communication, and convenience systems is allowed provided the modification does not serve another purpose (e.g., an air conditioning compressor may not be modified to serve as a supercharger).

17.12 SAFETY

- A. Roll Bars/Roll Cages (Aluminum is not an allowed material.)
 - 1. All open Prepared Category vehicles shall have at a minimum a roll bar complying with Appendix C.
 - 2. It is recommended that all cars be equipped with a roll cage meeting the requirements of the Club Racing GCR. Compliance with this requirement supersedes the need to comply with Section 17.12.A.1.
 - 3. Roll bars and cages may either be bolted or welded to the vehicle.
- B. At a minimum all vehicles will be equipped with driver restraints meeting Solo® safety requirements. It is highly recommended that all cars with roll bars/cages be equipped with driver restraints meeting the requirements of the GCR.
- C. A scattershield or explosion-proof bell housing complying with the GCR is recommended.
- D. Fire extinguishers or fire systems are permitted.