

MODIFIED and SPORTSMAN RULES

MODIFIED AND SPORTSMAN MINIMUM SPECIFICATIONS –

FRAME:

1. Only round steel roll over bars may be used. Front and rear roll bars must be connected at top in a cage type configuration. Two round horizontal side bars on each side are mandatory. The topside bar must be a maximum of 20" below the top roll bar. Proper bracing and triangulation on front and rear roll bars is required. All roll bar bracing must be a minimum of 1-1/2" diameter by .095" wall thickness. A minimum of one diagonal bar across the top of the roll cage is mandatory.
 2. The rear main roll bar hoop must be a minimum of 26" measured across from outside to outside of tubing and must maintain that measurement from the bottom all the way to the top of the cage. Bottom of the rear roll bar must be directly welded to the 2 x 4 frame (no outriggers). The front roll bar must be measured and constructed the same way, except that the allowable taper in the frame rules will govern the width dimension.
 3. Only two roll bar diameters will be permitted. Roll bars of 1 3/4" diameter will require a minimum of .095" wall thickness. Roll bars of 1-1/2" diameter will require .120" wall thickness.
 4. A minimum clearance of 1-1/2" is required between the top of the normally seated drivers helmet and the underside of the horizontal roll cage bars.
 5. Shock resistant roll bar padding must fully cover all bars that that may come in contact with the driver's head while strapped in the seat. On center type steering, all housings, lines, and fittings must be covered with shock resistant roll bar padding. The steering wheel center must also be padded. The starter housing and any other points of contact that could potentially injure the driver must also be adequately padded. It is recommended that this padding is flame retardant.
 6. All cars must have a functional padded head rest which must be in line with center of driver's head, if not built into the seat.
 7. Adequate window openings on both sides of the car must be maintained for emergency exit of the driver. The minimum opening size is that which will allow a rectangular box with dimensions of 12" high by 18" wide by 30" long to be passed through the inside of the car from one window through to the other side. Any obstacles other than the driver's head rest, which prohibit the passage of the inspection box through the cockpit, must be removed.
 8. All cars must have a drive shaft cover. All cars with open drive shafts, must have a tunnel, made from a minimum of 1/8" thick steel which extends from 2" under front edge of seat to the back of the transmission covering the shaft and "U" joint, and output flange on top and both sides. It must extend completely down to floorboards. It must be held in place with a minimum of four 3/8" diameter bolts at bottom connected to a substantial cross-member. This drive shaft cover must be a solid unit with no cut-aways for lightening purposes.
 9. Two steel safety rings diameter to suite x 1/4" wall thickness x 2" wide, each fastened by two 3/8" grade 5 bolts to the torque arm side plates or the frame must be installed around each universal joint.
 10. Closed drive type cars, torque tubes, or bells that already have a 360 degree covering from "U" joint back to seat will be accepted as is. To protect the driver, any suspension link such as a torque arm, coil over or trailer bar inside the driver's compartment must have a steel cable (1/4" in diameter or more) or clamp connecting it to a substantial cross-member to limit its range should it break loose. These parts must have no sharp edges and must be padded.
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11. Firewalls, both front and rear are mandatory. The rear firewall must extend from the top of the fuel cell to the belly pan to isolate the driver from the fuel cell. A minimum thickness of .050" aluminum or steel is required. A minimal amount of sheet metal may be cut out for drive shaft clearance. The front firewall must fully isolate the driver from the engine compartment.
 12. Belly pans are mandatory and must extend from front firewall to rear firewall and be attached at both spots. It is mandatory to have a separate floor to protect the driver's feet in the event the under pan falls off. This extra floor must be attached to the frame or cross-member or both, and extend from

SEAT AND SEAT BELTS

1. All cars must be equipped with 5 point seat belts to SFI 16.1 specifications. All belts must be securely fastened to the frame or cage. Bolts may not be inserted through webbing for mounting. 3.2.2 Seat belt webbing that comes into contact with any sharp or un-radiused metal edge must be protected from that edge by means of push on grip vinyl trim. The areas of concern are the webbing slots in the metal racing seats. All the seat manufacturers either roll the edge or supply the seat with trim protecting the webbing from abrasion or cutting under impact conditions. Webbing entry slots into the seat with an existing metal roll of 1/8 inch smooth radius will not require vinyl trim.
2. The areas where the webbing slot has been enlarged by filing or cutting are of particular concern. In most instances the edges have been left sharp, increasing the incidence of belt failure. As racing seat belts are subjected to severe conditions, it is required that worn/frayed belts are replaced immediately, We encouraged that undamaged belts are replaced every 24 months. The date sewn into the webbing should be used as a guide. Belts older than 36 months will not be permitted for the 2008 season. Damaged belts will absolutely not be permitted.
3. Driver's seat must be securely fastened to frame or cage in six spots, with a minimum of six 3/8" bolts, four on bottom and two on the seat back. All seats must have a minimum 1/8" steel plate under and up the back 4" and be as wide as seat. The seat must be one piece high back type only. The seat must be made of aluminum only (no fiberglass). A full containment seat or aftermarket bolt on head restraint is highly recommended.the front firewall past front of edge of the seat.

DRIVER'S EQUIPMENT

1. **All drivers must wear a SA 2005 or newer SNELL approved full-face helmet.**
2. All drivers must wear a clean one piece SFI driver's suit, quilted or with underwear, head socks, gloves, foot socks and shoes.
3. **Arm restraints are highly recommended. Neck braces are mandatory.**

FUEL

1. All crews must carry an operable fire extinguisher of 20 pound marked with the car number in 2 inch numbers/letters in the rear of their transporter, capable of extinguishing gas and oil fires!
2. On board "flame-out" systems fitted in the race car are recommended.
3. A fuel cell with a maximum capacity of 24.5 U.S. gallons is mandatory. No pressure tanks are permitted on fuel systems.
4. The fuel cell must be fully encased in a steel container with a minimum thickness of 20 gauge. An optional aluminum container may be used with a minimum thickness of .060". The cell must be fully foamed with just a minimal cut-out for filler. Cut-out may be no larger than 6" wide by 10" long by 7" deep. Fuel lines must siphon from the top only. There must be a oneway safety valve in the vent line. Fuel tank must be mounted behind driver.
Fuel tank must be secured by at least two steel straps (each strap must be a minimum of 1" wide) and bolted with at least 5/16" diameter grade five (3 line) bolts.
5. Fuel cells should be to SFI 28.1/.2 or FT3. No fuel cell bladders may be older than 5 yrs from date of manufacture.
6. A horizontal bar with minimum dimensions of 1" by .095" wall thickness must be mounted behind the fuel cell for rear impact protection.
7. No racing fuel in drums may be brought on to track premises.
8. A fuel shut-off valve must be mounted within easy reach of the driver and the safety crew. It must be labeled in a clearly visible location with words FUEL ON/OFF with a bright colored paint or decal.
9. A minimum of two throttle return springs and a steel toe loop on gas pedal are required. Throttle return springs must be mounted in two different locations.

7.

ANCILLARIES

1. All cars must have an ignition switch, which is easily accessible within the driver's compartment. The ignition switch must be marked ON/OFF with a bright colored paint or decal and be clearly visible and easily accessible to the safety crew.
2. Fuel lines, power steering lines, and fittings running through the driver's compartment must be of made from an approved braided type line only. No plastic or glass fuel filters permitted. High pressure lines and

fittings or hot fluid lines running through the driver's compartment must be encased or shielded by a deflector to prevent driver injury.

3. All cars must at all times have four wheel hydraulic brakes in good working order. Brake tests may be held throughout the year.
4. Rear wheels must have a minimum of five lug nuts. A minimum of three lug nuts is required on front wheels only. No knock off hubs are permitted on any wheel.
5. Exhaust headers must be safe for the driver and exit past the driver's seat.
6. **All exhaust pipes must exit facing the rear of the car and be directed in such a way as to disturb as little dust as possible. Pipes may not exit through the doors or in front of the rear tires.**

BODY

1. No mirrors or reflecting devices permitted.
2. Inspectors reserve the right to request body or sheet metal to be replaced and painted if it has any sharp edges or is not looking presentable to the sport.
3. No oil cooler may be mounted external to the bodywork. All oil cooler piping shall be routed under the bodywork, as safely away from driver as practical.
 - A) Oil coolers may be no further forward than the centerline of the rear axle. The cooler must be horizontal and flush with the cut out in the deck.
 - B) Oil coolers with a duct covering them on both sides and the rear may be mounted further forward than the center line of the rear axle.
 - C) Oil coolers may be mounted under the hood ahead of the motor.
4. Maximum rear spoiler height, regardless of ride height, may not exceed 50". This height will be randomly measured during an event. Cars not in compliance will be excluded. It is suggested that manufactures do not make tall cars that can only pass tech at low ride heights. The following racecar driver must be able to see through for clear view of track ahead.
5. All cars must have a full steel windscreen (rock guard) of substantial material with a maximum individual hole opening of 2" by 1" by 1/16" (no chicken wire or aluminum). Screen must cover entire windshield area left to right across the cage and from top of cage down to hood or cowl. Clear lexan or safety glass windshields may be used for additional protection if they are in the driver's line of sight. They must be shatterproof and mounted behind the screen enabling driver to wipe them clean. Any additional windshield must not obstruct the emergency exit of the driver.

BATTERY

1. The battery must be properly secured and must have top and terminals completely covered by rubber.
2. Modifieds and Sportsman 12 volt only, 14.3 volt maximum. No step up transformer or any other device to increase voltage allowed!
3. A battery shut-off switch is MANDATORY! Must be marked ON/OFF with bright colored paint or a decal. The switch must be mounted on the left side inner panel. (Above the steering post) The knob must be outside the panel clearly visible, and easily accessed by the safety crew. It must be wired to cut off the HOT (pos.+) side.

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BODY STYLE AND DIMENSIONS

ALL MEASUREMENTS MAY BE TAKEN WITH OR WITHOUT DRIVER AND OR WITH OR WITH OUT FUEL.

TOLERANCE PERMITTED ON ALL BODY DIMENSIONS IS MAXIMUM 1/2" (ONE-HALF INCH). THIS IS A TOLERANCE. NOT A DIMENSION TO BE ADDED TO THE BODY DIMENSIONS.

BODY MATERIAL

1. Only aluminum or steel will be permitted for all inner and outer body panels.
2. A maximum of 4" vertical plastic material extending below the metal body panel is permitted. The plastic thickness shall be between .090" and .125" and an overlap of 2" to secure to the doors/door extensions will be permitted. Doors/door extensions must still have a minimum of six inches of ground clearance including plastic material
3. The overall dimensions of the doors and door extensions must meet the specifications.
4. The roof must be fiberglass only.
5. Hood, hood scoop, windshield cowl, right rear inside tire clearance cover and front spoiler may be constructed of either fiberglass or aluminum.
6. Only CLEAR! lexan will be permitted for the rear spoiler and the rear wing windows. NO STICKERS OR WRITING WILL BE ALLOWED ON THEM!

ROOF

1. The roof must be centered from side to side on roll cage and also be centered on frame (No offset bodies). Leading edge of roof must be fastened in a stationary position a minimum of 33" and a maximum of 48" in front of rear axle centerline. The roof must be securely fastened at the back and on both ends.
2. Length of the roof: maximum 60", minimum 48". Width of roof: maximum 52", minimum 48". It must display a turtleback style and shape with at least 3/4" belly front to rear and 3/4" side to side. The roof contour must fit PCS's roof template patterns left to right and front to back (NO FLAT ROOFS). Front lip may not be more than 1/2". Side edges may be no longer than 11/8" break.
3. The roof cannot change shape or location while racing.
4. Overall height (top of highest point): minimum 52", maximum 61", measured from the ground. Maximum roof angle is 5 degrees.
5. The roof must be one piece fiberglass only and be a single ply, one contour inside and out. No carbon fiber. Roll bars must be exposed. No vertical metal used to mount roofs will be permitted covering the roll bars. The roof must weigh a minimum of ten pounds.

FRONT DOOR POSTS

1. Door posts must be flat aluminum sheet metal Only! They must go in a straight direct line from the roof to the doors. From a side view they must be seen as a 2" dimension. They must be no wider than 2". They may be beadrolled or have a lip for re-enforcement, but can't exceed a 3/8" maximum thickness at that area. The material thickness used may be a minimum of .050" to a maximum of .090" inches. Only a one-piece construction will be accepted! There will be no Tolerance on these measurements. Door-posts must attach securely to the metal roof support and doors! They may be bolted with a min. of (2) 3/16" bolts to the door bracket for the ease of fabrication!
2. No lexan vent windows or excessive sheet metal will be permitted in the vent corner where the post meets the door panel.

REAR WING WINDOWS (DIRT STYLE BODIES)

1. All rear wing panels and windows must resemble a current OEM body style. Their upper profile may not protrude above a straight line drawn from the rear of the roof to a point 3" higher than the rear deck. There must be at least a 2" indent in the profile, so as not to make this panel a fast back.
2. The maximum base length may not exceed 61". Left and right must be of the same style and dimension! See example of Body Style in back of book.
3. All window styles must be nominally 160 square inches (suggested 10" tall X16" long), clear, smooth lexan with no bends or breaks.
4. No writing or decals permitted on the wing windows.

5. Rear view of the wing window must go in a straight line from top of quarter panel or bodyline to the roof, with a maximum gradual bow of 2" in the center of wing window.

REAR WING WINDOW / SIDE VIEW / REAR VIEW

BODY WIDTH AND GROUND CLEARANCE

1. Body width (measured anywhere along the body line, front or back): 68" maximum, 64" minimum.
2. Minimum chassis ground clearance 2 1/2".
3. No fan or ground-effects cars are permitted.
4. No rubber skirts, fins, or spoilers of any description are permitted under the car.
5. A 2" max air deflector is permitted in front of radiator to facilitate cooling.

DOOR PANELS

1. Side door panel: minimum 60", maximum 70" in front of centerline of the rear axle. Doors, front door extensions and rear quarter panels must be flat and mounted in a vertical position. They must remain flat with no louvers, bead rolls, holes or protrusions from top to bottom. The exception being for rub rails. Doors may have a max. of a 1" long lip at a 45 deg. outward angle 1/2" away from the sheet metal for the purpose of reinforcement. This will be allowed at the top and bottom of the panels. All outside sheet metal, door panels, door extensions, air dams, front nose & hood fins must be the same shape, size, and angle on both sides of the car.
Doors must match each other from side for side. (Must be symmetrical)
2. Bead rolls around the outside perimeter of these panels and the wing windows will be allowed. Bead roll edges must face towards center of chassis.
3. Front door extensions will be permitted up to 20" behind the front axle centerline.
4. Front door height must be a maximum of 38" and minimum of 30" from the ground measured at 60" from rear axle centerline.
5. Ground clearance on the bottom of the doors must be a minimum of 6" and a maximum of 12" from the ground.
6. All doors and rear quarter panels may have a maximum lip of 1 1/2" rounded at 90 degrees and facing inward only, on the top and the bottom.
7. At the top of the doors and rear quarter panels, a lip angled out at a maximum of 45 deg., protruding away from the door no more than 1/2" and no more than 1" in length before it bends inward for strength will be permitted.

REAR QUARTER PANELS

1. Rear quarter panels must match each other. (Must be symmetrical)
2. Quarter panels must be a maximum of 47" and a minimum of 40" from the ground at the rear and continue in a straight line with top of door.
3. A fender flare, up to a maximum of 2" from the body may be used, but the overall body width must still be maintained at a 68" maximum.
4. Rear quarter panels can extend back to 48" maximum at top and may incline down to 44" maximum at bottom measured from center of rear axle to rear of car.
5. Ground clearance on rear quarter panels must be a minimum of 8" and a maximum of 16".

REAR SPOILER

1. The rear spoiler must be clear one piece lexan with a maximum height of 5" from the rear deck and must not have any writing or stickers on it.
2. The rear spoiler must be non-adjustable (no hinges or slides).
3. No metal Gurney tabs permitted. Lexan may have brake (top only) for rigidity.
4. Spoiler maximum height from ground is not to exceed 50".
5. A maximum of four vertical supports may be used to fasten the spoiler to the rear deck. These supports may not exceed 2" in vertical height and 10" in length.

REAR DECK

1. Must be a maximum height of 47" and minimum of 40" from the ground.
2. Rear deck lid (i.e. trunk lid) must be fully enclosed from quarter panel to quarter panel and have a minimum height of 9" and a maximum of 14" in vertical coverage behind the fuel tank.
3. Left and right rear trunk lids must be symmetrical in size and shape and show no specific bulge or extension to cover fuel filler hose or apparatus within the 9" to 14" of vertical coverage. This panel must completely cover

the fuel cell, filler hoses, and vent lines.

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4. Older cars with tall gas tanks may have a step in the deck to accommodate the tank.
5. The fuel tank must be completely enclosed from the bottom of this panel to the bottom of the fuel cell.
6. The fuel cell must also have both sides completely covered by sheet metal in addition to the container it is enclosed in. Within these dimensions there can be no openings.
7. No openings from top of fuel cell to bottom of trunk lid are permitted.

HOOD, NOSE, AND FRONT SPOILER

1. The hood, nose, and front spoiler can be no wider than 36" and no narrower than 24".
2. The nose-piece must end at the front of the shock towers.
3. The spoiler must be separate.
4. Shock covers or deflectors may not be part of or riveted to the nose or spoiler exceeding the 36" width maximum.
5. Fabric shock covers are permitted as long as they are used for the prevention of dirt getting at the shock piston and not used for any aerodynamic advantage.
6. The front spoiler must not extend any more than 20" in front of the front axle centerline.
7. The front spoiler must be non-adjustable (no hinges or sliders).
8. The hood shall be considered from the front roll cage to on top and even with the front of the radiator.
9. The nose piece shall start where hood ends and end at the shock towers!
10. Both hood and nose may have 2" maximum lip up on both sides following the contour of the body. Both lips must be symmetrical!
11. The hood, nose, and spoiler may not overlap each other's location on the frame.
12. Any part of hood may not exceed 10 degrees nor can sheet metal have an opening or extrusion between the hood and nose.
13. The hood must extend over the radiator and have complete sides.
14. Front spoiler may have 2" maximum lip up or down on both sides following the contour of the spoiler, not exceeding the maximum width of 36 inches

HOOD SCOOP

1. The hood must be fully enclosed.
2. Two options of hood scoops mounted on top of the hood for the purpose of enclosing the carburetor, or ram air will be permitted providing they meet the following specifications.
3. Both style scoops may be made of fiberglass.
4. Ram air type scoop: Maximum length, 30" measured from rear motor plate to front of hood scoop. Maximum width 18". The front vertical opening of the scoop can be a maximum of 6" at the beginning of the scoop only. The overall height of this scoop must maintain a minimum of 8" of vertical vision for the driver. This measurement will be taken from a horizontal line from the highest point of the hood scoop to the lowest point of the front roll cage and/or roof. Hood scoop must be fastened to the hood and completely enclose the carburetor and air filter.
5. The conventional no ram air scoop: a maximum of 25" is permitted from center of the carburetor forward to end of scoop! The width permitted is a maximum of 22". The height must maintain a minimum of 8" of vertical vision from the top of the scoop to the lowest point under roof or roll cage, and completely enclose the carburetor and air filter.

INTERIOR SHEET METAL

1. Any horizontal body support, other than the inner pods, whether in front or rear must be a maximum of 1" deep by 1" thick tubing or flat stock only.
2. No inside or outside wings, spoilers, air foils, or wind deflectors are permitted.
3. No double panels that create a wing effect will be permitted.
4. A 1" maximum reinforced lip will be permitted on all lexan, but all specified measurements must still be maintained.
5. All inner sheet metal used must completely cover areas from door to door, quarter panel to quarter panel. No holes or openings are permitted in this area.
6. No vertical fins, air dams, or fairings permitted on the sides or behind the roll cage.

7. Sheet metal must be a flat single plane across the inside of the car with the exception of two stiffening bead rolls or stiffening breaks for the purpose of stiffening the wing only. Bead rolls or breaks may not exceed 1/8" in height and 1/2 inch in width.
8. No covered roll bars are permitted. Sheet metal that is one-piece and part of a body panel bent around tubing (for purposes of protecting the driver or finishing off panel) is not considered an aerodynamic advantage provided it is not to excess.

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9. No louvers or holes in the interior or exterior sheet metal are permitted with the exception being the cooling of the radiator, engine, and oil cooler.
10. The floor pan or underpan may not be any wider than the frame, from front to back, and may not have any lips or fins facing downward.

NUMBERS

1. The Track or series handicapper reserves the right to issue or change a car's number to prevent duplication and maintain proper records.
2. Team cars must be clearly distinguishable from one another and use a different number or letter.
3. All numbers and letters will be limited to three digits. If three digits are used, two shall be primary numbers. Numbers are required on roof, nose, rear deck and both doors.
4. All numbers and letters must be a minimum of 18" high on the roof and doors, and 8" high for the rear deck and nose. All numbers and letters must be of equal size and painted or decaled. If numbers "3", "6" or "9" are used make sure that they are distinguishable.
5. Nerf bars must not block visibility of number.

DRIVER NAME (Recommended)

1. Letters of driver's last name must be a minimum of six inches in height and be positioned under, through or above number on both sides of the car

SAIL PANEL (Penn Can Sail Panel cars. See drawing) Maximum dimensions follow

1. Total Height: To be measured from the ground to the highest point. 65"
2. Total length: To be measured from the center of the rear axle.
 - a. 48" from the center line to rear of car
 - b. 12" from the center line forward
3. Maximum vertical lips: From door up- 2"
From roof down- 2"
4. Degree of angle from vertical lips (upper and lower) to rear plain of drivers seat: 22 degrees
5. Sail panels must mirror size and shape side for side

MODIFIED and SPORTSMAN CHASSIS SPECIFICATIONS: FRAME

1. Only 2 x 4 box frames are permitted between axle centers, front and rear. The 4" side must be vertical. Frame rails must be steel only. All 2 x 4 rails must be .120" wall thickness only. At the discretion of the officials, it may be necessary to drill a 3/16" hole in frame rail for inspection of thickness. No other holes will be permitted. All tubing permitted for the frame rails must be either 1 1/2" dia. x .095" wall or 1 3/4" x .095" wall.
2. Frame width is as follows: Front (at shock towers): 24" minimum, 35" maximum. Rear: 26" minimum, 35" maximum. The minimum frame width at the rear roll bar must be 26". All measurements are to be taken from the outside of the frame rails. These measurements shall be taken at both top and bottom of frame at its longest length. Clips, sub-frames, etc. are considered part of the frame.
3. Minimum length of the 2 x 4 frame rails must start at 14" in front of rear axle centerline and extend to the front of the radiator. All kick up material must be same specifications as the roll cage or frame material. Left and right frame rails (both top and bottom rails) must be equi-distant from the driveline centerline in a vertical plane along the total length of frame. The only exceptions will be the lower left rear frame rail, which will be permitted at 4" maximum indent for suspension clearance, and the two upper frame rails in the engine compartment to allow for the clearance of large cylinder heads.
4. Titanium or carbon fiber materials are not permitted on the chassis.

ROLL CAGE

1. The roll cage must be integral with the frame. All frames built in 2005 and thereafter must have a manufacturers unique serial number plate prominently attached by welding on the left side front roll cage upright. The letters and or numbers shall not exceed 8 in number and be 1/2" in height.
2. Only round steel roll over bars may be used. Front and rear roll bars must be connected at top in a cage type configuration. Two round horizontal side bars on each side are mandatory. The top side bar must be a maximum of 20" below the top roll bar. Proper bracing and triangulation on front and rear roll bars is

required. All roll bar bracing must be a minimum of 1 1/2" diameter by .095" wall thickness. A minimum of one diagonal bar across the top of the roll cage is mandatory.

3. The rear main roll bar hoop must be a minimum of 26" measured across from outside to outside of tubing and must maintain that measurement from the bottom all the way to the top of the cage. Bottom of the rear roll bar must be welded to the 2 x 4 frame (no outriggers). The front roll bar must be measured and constructed the same way, except that the allowable taper in the frame rules will govern the width dimension.

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4. Only two roll bar diameters are permitted. Roll bars of 1 3/4" diameter require a minimum of .095" wall thickness. Roll bars of 1 1/2" diameter require .120" wall thickness.

SEAT

1. Seat and steering wheel must be centered in the frame.
2. The seat must be a maximum of 16" from the center of the rear end to back of seat bottom..
3. A high back seat made completely from aluminum is mandatory. No fiberglass or carbon fiber materials are permitted.
4. Hans device or its equal recommended by PCS.

RADIATOR

1. Only one (1) radiator permitted and it must be centered squarely, not angled, in front of motor in a vertical position.
2. No plastic or carbon fiber permitted.
3. No auxiliary cooling tanks or catch cans are permitted in driver's compartment.

ENGINE

1. The engine must be centered in the front of the chassis and placed in an upright position.
2. Engine set back: minimum 56", maximum 66" with 1/2" absolute maximum tolerance. Set back will be measured from the center of the front axle to the rear machined bell housing surface of the engine.

TRANSMISSION

1. Approved North American or Canadian manufactured manual shift transmission only. No automatics are permitted.
2. No overdrive or underdrive transmissions are permitted.
3. No running through reduction gears, transmission must be direct drive to rear end at racing speed.
4. Transmission must have forward, neutral, and reverse gear in good working condition. From a neutral position with the motor running, a car must be able to go forward and backward in a smooth manner.
5. Transmission must bolt to the bellhousing.
5. The car must start and move under by its own power.

DRIVELINE

1. No chassis, driveline or suspension components made of carbon fiber are permitted.
2. Two universal joints per drive line maximum.
3. A drive line shield and 2 steel safety rings are mandatory (see safety rules for detailed requirements).

REAR END

1. Competition rears only.
2. No hypoid type rears are permitted. (No 9" Ford type rears allowed)
3. No limited slip type rear ends or hubs are permitted.
4. No lockers or two speed rears are permitted.
5. Rear end must have solid aluminum or steel spool only.
6. Rear spindles may be steel or aluminum only. If aluminum, rear must be a one-piece tube and spindle with a minimum outside diameter of 2 7/8" and maximum inside diameter of 2 1/2".
7. Live rear ends with aluminum or steel axles are permitted.
8. The rear end or chassis must not be offset any more than 4" from center of the inside tire width! This will be measured from the inside of the left rear tire to the inside of the right rear tire, at axle height.

FRONT END

1. The front axle must be straight, one-piece steel tubing only with no camber adjustments.
2. No split axle or dropped axle permitted.
3. All brackets on the front axle must be bolted or welded (no bird cages or slides).
4. Modified type front spindles only.

5. It is recommended that bearing shafts be made of steel.
6. Chassis may not be offset any more than 4" from center of inside tire width, measured from the inside of the left front tire to the inside of the right front tire at axle height.
7. Front wheels must be fully exposed. No fenders are permitted.

WHEELBASE AND TREAD

1. Wheelbase: minimum 106", maximum 110". This measurement will be taken from the center of the rear axle to the center of the front axle, for both left and right sides with a maximum tolerance of 1/2".
2. Tread width Modified and 358-Modified: front - maximum 86", minimum 74".
Rear tread, maximum 86", minimum 80". Tread width Sportsman:

CHASSIS GROUND CLEARANCE

1. There must be a minimum of 2 1/2" ground clearance from the chassis at its lowest point.

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2. No metal, lexan, or rubber air dams, fins, spoilers or skirts are permitted under the car.
3. No ground effects cars are permitted.

SUSPENSION

1. No independent suspensions front or rear.
2. No "A" frames or ball joints may be utilized for steering axis (kingpin only).
3. No four wheel steering permitted that is actuated by steering wheel.
4. All suspension systems must be mechanical with no form of hydraulic, air, electrical, radio, or computer assistance for adjustments, in or out of cockpit allowed!
5. No form of traction control is permitted. Braking system included!
6. With the exception of brake bias and the rear panhard, no other form of cockpit adjustment is permitted.

Sportsman: May not have rear panhard cockpit adjustment.

SPRINGS

1. Any form will be permitted (torsion bars, coil-overs, leaf springs, etc.).
2. No carbon fiber or titanium springs are permitted.

SHOCKS

1. Only one shock per wheel.
2. Shocks may not be externally adjustable.
3. External reservoirs are not permitted.
4. Manufacturers must submit shocks for approval 2 weeks prior to being raced.
5. All shocks used MUST be freely available to all competitors. Failure to easily purchase a type of shock could result in those shocks not being permitted.

BRAKES

1. All cars must have four wheel hydraulic brakes in good working condition.
2. No carbon fiber, carbon, titanium, ceramic or aluminum pads or rotors are permitted.
3. On live rear axles, one inboard and one outboard brake assembly is permitted.
4. Brake tests may be conducted throughout the year.
5. Brake bias may be cockpit adjustable.

FRONT BUMPER

1. Must be made from round steel tubing only, with a minimum diameter of 1 1/4" by .095 wall thickness for main bumper and all bracing.
2. It must consist of two rails, an upper and lower and at least 1 or 2 vertical braces equally spaced. These rails must have four sockets or supports attached to the frame.
3. The four tubes that support the bumper from the four frame sockets must be horizontal. These rails must also be a minimum of 6" apart and a maximum of 12" measured from top to bottom and maintain that measurement for a minimum width of 24" or a maximum width of 30". It must also have an 18" center measured from the ground up to the middle of the bumper.
4. The front bumper may not extend more than 24" in front of front axle centerline.
5. No V-shaped bumpers, crash area must be flat and vertical for the full width of bumper.
6. The bumper must have all rounded ends and no sharp edges.
7. The end bracing tubes of the bumper must be angled in such a way as to prevent the bumper interlocking with another car's bumper.

REAR BUMPER

1. The rear bumper must be made of round steel tubing, with a minimum diameter of 1 1/2" by .095" wall thickness for main bumper and all bracing.
2. It must consist of two rails, an upper and lower, which must have four sockets and horizontal support bars attaching it to the frame. These rails must also be a minimum of 10" apart and a maximum of 16" measured from top to bottom and maintain that measurement for a minimum width of 64" or a maximum width of 86".
3. The rear bumper or any side bars cannot extend past the outside of tire sidewalls on both sides. It also must have an 18" center measured from the ground up to middle of bumper.
4. The rear bumper may not exceed 52" back of the rear axle centerline.
5. No V-shaped bumpers, crash area must be flat and vertical for the full width of bumper.
6. Bumper must have all rounded ends and no sharp edges.

RUB RAILS

1. The rub rails must be made of round steel tubing, with a minimum diameter of 1 1/2" by .095" wall thickness.
 2. All bracing must also be a minimum of 1 1/2" outside diameter by .095" wall thickness.
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3. Maximum wall thickness must be .095" with no solid bars or ballast added inside.
 4. Rub rails must be outside of body panels but may not exceed the outside edge of the tires. The exception is the left rub rail only, which may extend an absolute maximum of 2" outside the left rear tire sidewall.
 5. Rub rail ends must be rounded with no sharp edges and bent at a gradual 90 degrees and must protrude a minimum of 6" back in past the body.
 6. Rub rails must be a minimum of 50" long, socket to socket.

BUMPERS AND RUB RAILS

1. 5/16" attachment bolts with nylon nuts or PCS approved quick release solid pins are the only permitted fasteners. **NO COTTER PINS!**
2. All 3 rub rail sockets must be pinned or bolted.
3. Front and rear rub rails must have a 360 deg. sleeve 3/8" wide x .095" wall min. welded to the rub rail tube butted up against the support socket to prevent pins from shearing.

FUEL TANK

1. One SFI 28.1/2 or FT3 fuel cell with a maximum of 24.5 US. gallons is mandatory (used for gasoline only).
2. Fuel tank height: 12" minimum from the ground to the bottom of the tank.
3. Tank must be centered inside of the frame rails and be rectangular or square in shape on all sides for measuring capacity. The capacity will be measured as a maximum of 5660 cubic inches using the formula with all sizes of the metal container measured externally in inches: Length minus 1/2" x width minus 1/2" x depth minus 1/2" = no greater than 5660CI.
4. Tank panels may not be bowed out or bellied to increase capacity. No tolerance.
5. Tanks may not be altered in any way to increase capacity. No large or long fuel lines, oversize filter housings or fuel coolers or other to increase fuel capacity.
6. Cars teched before the event will have the opportunity to correct any fuel capacity infraction, time permitting. Cars found with illegal fuel capacity after an event will be disqualified and placed last in that event. All legal cars will move up in position for any applicable points and prize money.
7. Fuel tank must be fully encased in a steel container with a minimum thickness of 20 gauge. An optional aluminum container may be used with a minimum thickness of .060".
8. Fuel tank must be fully foamed with just a minimal cut-out for filler. Cut-out may be no more than 6" wide x 10" long x 7" deep.
9. Fuel lines must siphon from top only.
10. No fuel lines bigger than #10 are permitted.
11. No auxiliary tanks are permitted.
12. No fuel filters with more than 1/2 quart capacity are permitted.
13. Fuel tank vent line must have an inline one-way valve for the prevention of fuel spillage.
14. Only one carburetor fuel log will be permitted and is limited to a maximum outside diameter of 1".
15. **VP is the exclusive race fuel of PCS and is the only race fuel permitted for use in PCS cars. VP Race Fuels decals are required to be displayed on each side of all race cars. No other fuel company logos are permitted to be displayed anywhere on the race car or driver's uniform.**

MUFFLERS AND EXHAUST SYSTEM

1. Each car must have one unaltered muffler per bank.
2. Mounting position front to back will be optional however the exhaust must exit past the driver.
3. Each muffler must have a tail pipe no less than 10" long measured off the back of the muffler and must direct the exhaust to the rear of the car only so as to disturb as little dust as possible.
4. No exhaust pipe may face outside the car.
5. Modified - any manufacturer of exhaust header is permitted, but header material is limited to steel or stainless steel from the 300 series.
6. **Approved mufflers mandatory**
7. Header collector extension pipe and tail pipe must not be inserted past the muffler inlet or outlet flange.

BALLAST WEIGHT

1. Any ballast weight used must be mounted within the vertical planes formed by the frame rails, must be securely fastened, and must remain stationary while racing.
2. Weight may be added prior to the event or time trial.
3. No weight pack may exceed 75 pounds.
4. All weight packs must have a minimum of two 1/2" securing bolts/studs of grade 5 or higher. These bolts/studs must be securely anchored to the frame by a suitable clamp.

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5. No bolts / studs welded to the frame will be permitted.
6. Clamp around weights are permitted.
7. All weights must be painted white and carry the car number in a legible fashion. White duct tape marked with a wide black sharpie is acceptable for a one race grace period only.
8. No ballast weight may be mounted to roll cage above rear deck.

BATTERY

1. Modified and Sportsman: One American Passenger Car sized battery up to 12 volts is permitted. The battery voltage must not measure more than 14.3 volts.
2. Battery must be mounted inside the frame rails.
3. NO step up transformer or any other device that increases the voltage is allowed.

WHEELS

1. Modified: Only aluminum wheels are permitted. No magnesium, steel, or carbon fiber is permitted. Bleed-off valves are permitted.
2. Rim width restricted to 14" maximum. This is measured from inside of left bead to inside of right bead on the wheel. Wheel diameter limited to 15" only.
3. Beadlocks are permitted. Any wheel or beadlock that is used must maintain a minimum diameter of 11" hole inside beadlock and wheel. Beadlocks may be outside only,
4. Foam inserts or corrugated plastic (with approved installation) may be permitted when track conditions warrant. No unsafe wheel covers are permitted. Wheel covers that are fastened by way of dzus (or similar type fasteners) are permitted.

TIRES

1. American Racers, only SD 38 allowed on Right Rear and only SD 33 on the other locations, an option of F.M.P. compounds allowed on rear, must be run as a pair, SD 48 allowed on Right Rear with SD 44 on Left rear.
2. Left rear tire: American Racers (Must be stamped) SD33 (27.5x11), (option SD 44, only with option on RR).
3. Right rear tire: American Racers (Must be stamped) SD 38, (29x11), (option SD 48, only with option on LR).
4. Left & Right front tires: American Racers (Must be stamped) /SD 33.
5. Buffing, cutting, grooving, or siping will be allowed. No tires chemically altered. Tires will be checked with durometer and sniffer on scales after feature events. Tire markings from the manufacturer can not be altered.
6. Locked in tire prices for the season will be posted at the track.

MINIMUM WEIGHTS: Penn Can Speedway Modified Division

Minimum Weights, including driver- no fuel added:

1. **Under 361 cu. in. on gas or alcohol with maximum 750 cfm carburetor: 2400 lbs (tsp)**
2. **Big block or small block over 361 cu. in., Gasoline only - 2500 lbs (tsp)**
3. **Fuel cell mandatory - 24 gal. maximum.**
4. **Track scales are official and no protests are allowed.**

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MODIFIED DIVISION ENGINE SPECIFICATIONS

BIG BLOCK-BIG SMALL BLOCK (OVER 358 CI) ENGINE SPECIFICATIONS

(Penn Can Speedway allows various engine combinations. This is a guideline for the more popular. The 10-1 Grandview style motors are not included other than weights.)

ENGINE

1. Only stock OEM American long block (in length) manufactured V-8 engines (GM, Ford, or Chrysler) are permitted.
2. Aftermarket Dart and Merlin cast iron blocks are permitted.
3. No aluminum blocks are permitted.
4. Only normally aspirated engines are permitted.
5. Maximum displacement of 467 cu. in. 396 cu. in will be the minimum displacement permitted! A 10 cubic inch max. limit will be allowed for wear.
6. No reverse rotation engines.

CARBURETION

1. Engine limited to one four barrel carburetor from an established American carburetor manufacturer. A manufacturer, as defined by PCS, as a builder that produces a minimum of 600 units per year.
2. Carburetor not to exceed 4 venturies, 650 or 750 maxium on small blocks over 361 ci and must pass no go gauge.
3. No fuel injection, no nitrous oxide injection, no turbo chargers, or superchargers are permitted.
4. **Holley hp carbs allowed.**
5. No fuel or air may enter by any means other than stock operation of the carburetor.
6. No in-line venturi carburetors.

INTAKE MANIFOLD

1. Optional as to design or manufacturer, but the manifold must allow for the mounting of only one 4 barrel carburetor.
2. Must be cast iron or cast aluminum only.
3. Porting is permitted.

CYLINDER HEADS

1. Optional as to design or manufacturer but must be made of cast aluminum or cast iron only.
2. Any form of porting is permitted.
3. Valve sizes are optional.
4. Titanium valves and retainers are permitted.

5. No hollow stem valves or liquid cooled valves are permitted.
6. Only 2 valves per cylinder are permitted.
7. Only one spark plug per cylinder.

CAMSHAFT

1. Optional as to design or manufacturer but camshaft must be in block in stock location.
2. Chain or belt drives are permitted.
3. No overhead cams are permitted.

PISTONS / RODS / CRANKSHAFTS

1. Only aluminum pistons, with no coatings of any kind are permitted.
2. Any steel or cast iron crankshaft is permitted.
3. Any design, length, or make of steel rods are permitted.
4. No titanium crankshafts or rods are permitted.

IGNITION

1. Any kind of ignition is permitted, as long as it is mechanically driven in the stock position.
2. No crank trigger ignition systems are permitted.
3. Only one ignition coil and one ignition box (amplifier) are permitted on the car.
4. Only one spark plug per cylinder is permitted.
5. Traction control devices are not permitted. Traction control devices that use the brakes are also illegal.
6. Ignition boxes must remain as manufactured with no internal or external alterations. NOTE: Ignition boxes may be swapped or confiscated by PCS at any time.
7. Wiring must remain as designed by box manufacturer.

LUBRICATION SYSTEM

1. Conventional or dry sump may be used.
2. An internal or external pump is permitted.
3. Oil coolers are optional.
4. Only one oil tank and one oil cooler is permitted! Oil pan must be made from steel or aluminum only.

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5. Air pumps / vacuum pumps that suck air from the oil pan are not permitted. Oil pan must have a 1" plug on the left side to allow for verification of steel crankshaft and rods.
6. Oil pans will be pulled down only when protested or in the absence of the 1" plug.
7. The oil tank and the oil cooler may be mounted outside the frame rails.
8. Oil tank maximum capacity not to exceed 12 US quarts.
9. Tank and cooler must be fully enclosed by the body and must be securely mounted. See cooler location in minimum specification rules. Excessive bracing used for mounting these items to obtain more left side weight is subject to the discretion of the track inspector.

FUEL

1. Only VP racing fuel is permitted.
2. No nitrous or any other additives are permitted.
3. All fuels are subject to random testing at each track.
4. No electric fuel pumps are permitted.
5. Proof that racing fuel has been purchased at the track may be required by PCS/Race Officials.

358 MODIFIED ENGINE SPECIFICATIONS

ENGINE

1. This class is reserved for North American passenger car V-8 engines with cast iron blocks and iron cylinder heads. An option for Brodix aluminum cylinder heads is available.
2. All engines must maintain stock bore and stroke combinations
 Engine Maximum Overbore C.I.
 Chev 350 C.I 4.00" bore x 3.480" stroke. +.070 = 363
 Chry. 360 C.I 4.00" bore x 3.578" stroke. +.020 = 364
 Chry. 340 C.I 4.04" bore x 3.313" stroke. +.060 = 350
 Ford 351 C.I 4.00" bore x 3.500" stroke. +.060 = 363
3. Engines may not pump more than specified cubic inch.
4. Normally aspirated engines only are permitted. No reverse rotation engines.

BLOCKS

1. Stock OEM and cast iron performance blocks such as Chrysler (R) Block, Chevy Bow-Tie, Ford-SVO, and DART are permitted. NO Aluminum blocks.
2. **CYLINDER HEADS. NO SB2 HEADS**

CRANKSHAFT

1. Any steel or cast iron crank is permitted providing it maintains stock stroke as manufactured for the engine block used.

RODS

1. OEM stock production or aftermarket solid steel rods are permitted
2. No titanium or aluminum! Maximum rod length will be 6".
3. Engines with longer than 6" rods must meet stock OEM specs.

PISTONS

1. Any make 3 ring flat top aluminum pistons only.

VIBRATION DAMPENERS

1. May be any stock OEM or aftermarket steel or cast-iron only.
2. No fluid or friction dampeners permitted.
3. Must be one piece construction only.
4. No bolts or snap-ring assemblies.
5. Safety snap rings are permitted.
6. Rubber-lined is permitted.

CAMSHAFT

1. Optional as to design or manufacturer but camshaft must be in block in stock location.
2. No gear or belt drives are permitted.
3. No overhead cams are permitted.
4. Roller and or shaft rockers are permitted.
5. Stud girdles are permitted.
6. Lifters must retain stock diameters, angles and positions. Re- bushing for wear is permitted.
7. No lash caps permitted

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INTAKE MANIFOLD

1. Any American production cast aluminum single plane manifold that allows for the mounting of one 4 bbl. carburetor.
2. Part and casting numbers must remain visible and may not be removed by grinding or other.
3. Manifold may be ported as seen fit, but no material may be added.

CARBURETION

1. **One 650 or 750 cfm carburetor . Holley HP series allowed.**
2. **The carburetor must maintain stock venturi and throttle bore dimensions.**
3. The carburetor must remain stock in all respects including location.
4. Booster height must remain stock (no cutting or polishing).
5. No visible modifications without disassembly.
6. Go/no-go gauge measurements valid on hot or cold carburetor.
7. Carburetor maximum height measured from bottom of carburetor base to machined horizontal gasket surface of block will be 7" in both front and rear of block.
8. Carburetor modifications permitted are listed below. Any other modification not mentioned is not legal.
 - Holes drilled in the throttle plates for proper idling.
 - Drilling, tapping and plugging of unused vacuum ports.
 - Welding of throttle shaft to linkage arm.
 - Drilling of idle or high speed air correction jets.
 - Milling of center carburetor body metering block surface maximum of .015" on each side.
 - Removal of choke plate and shaft.
 - The jets may be changed as needed.

IGNITION

1. **Ignition boxes must be mounted under hood, not in cockpit. They must be easily removed for inspection!**

NOTE: PCS Management reserves the right to exchange or confiscate ignition boxes at any time.

2. Traction control devices are not permitted. Traction control devices that use the brakes are also illegal. Violators will be suspended from PCS competition for up to one year. Length of suspension to be determined by PCS management
3. Ignition boxes must remain as manufactured with no internal or external alterations. No crank trigger ignition systems permitted! Ignition must be mechanically driven in the stock position.
4. One ignition coil and one ignition box (amplifier) permitted on the car. Only one spark plug per cylinder is permitted.
5. Wiring must remain as designed by box manufacturer.

LUBRICATION SYSTEM

1. **Dry sump system permitted.**
2. Oil may be in a steel pan only.
3. **Oil pan must have 3/4" inspection hole for connecting rod verification on left side of pan. You will be asked to remove oil pan if no inspection hole is present!**
4. No external oil pumps permitted. NO vacuum pumps!
5. No Accu-sumps are permitted.
6. Oil coolers are permitted.

FUEL

1. Only VP racing fuel is permitted for the 358 ported head cars. Commercially available pump gas may be used with the Brodix spec head.
2. No nitrous or any other additives are permitted.
3. All fuels subject to random testing at the track..
4. Fuel pumps must remain in and be driven as stock OEM equipment.
5. No electric pumps are permitted.