

WCIS Sportsman Modified Rules

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<http://www.wyomingcountyinternationalspeedway.com/rules.htm>

SST SPORTSMAN MODIFIED RULES

Weekly Sportsman Modified division is now governed by the following SST Sportsman Modified Rules. In the first effort to standardize the Sportsman Modified rules, thus promoting Sportsman racing across the North East region representatives of speedways have created an SST Super Short Track Rulebook. We believe that with standardization of the rules we can better promote this growing division of modified racecars.

ANYTHING NOT COVERED BY THE FOLLOWING RULES MUST BE CHECKED WITH SUPER SHORT TRACK OFFICIALS BEFORE PROCEEDING. SST RESERVES THE RIGHT TO ADJUST ANY RULE FOR BETTER COMPETITION. ALL DECISIONS ARE FINAL AND BINDING.

GENERAL

1. WEIGHT

All cars minimum weight 2600 pounds with driver. Dry sump oil systems are not permitted. For 2006 Sportsman cars with a compression ratio of less than 9.6 to 1 will be given a weight break of 75lbs for a total weight of 2525. Maximum 56% left side weight, car with driver. NO allowances for gas, water, oil. NO deduction for loss in weight due to race wears. Dislodged weight CAN NOT be returned to car for weighing after race. Absolutely NO weight shift devices of any type.

TRACK SCALE

Unless otherwise authorized by the SST, at all times during an event, all weights will be calculated on official SST track scales. It is the responsibility of each race team to see that their car meets the specified minimum weight requirements for this division on these scales. SST SCALES WILL BE FINAL!

BALLAST WEIGHT

Added weight must be in block form of no less than five (5) pound blocks. If ballast weight is needed to make total weight, it must be securely fastened to the frame rails, be painted white and car number painted on weight. Material and mounting must be acceptable SST. NO steel or lead pellets. NO weight is to be mounted in driver's compartment.

2. BODY

All bodies must be reasonably neat and stock appearing, must be painted and neatly lettered. Numbers from 00 to 99, two digits only, no letters'. Number must be registered

with SST. The rear of the roof, at the highest point, shall be no more than three (3) inches higher than the actual front measurement. A maximum height of 35 inches is allowed on the tail light panel measured from the ground to the spoiler mounting point. Minimum body height is 40 inches. Body height shall be determined by measuring. NO decals allowed on spoiler.

3. FRAME / SUSPENSION

All construction must be safe, professional and acceptable to SST. MINIMUM of 2 inch Frame ground clearance will be measured at frame rail between front and rear wheels. Checked with driver in car.

4. ROLL CAGE

Must be constructed of seamless round steel tubing with a minimum of 1 1/2 inch outside diameter .095" wall thickness. There are several allowable variations to the basic roll cage design that are subject to the discretion of SST. SST decision on roll cage design and safety is final. The mandatory six-point cage must surround the driver.

5. CHASSIS RULES

Open to steel bodied automobiles provided they comply with, and adhere to, specifications as outlined for this division.

A. COMPETING MODELS SUPER SHORT TRACK

Sportsman modified Division races are open to eligible 1980 through current year models of American-made steel bodied passenger car production sedans. Unless otherwise authorized by SUPER SHORT TRACK SERIES, all combination Events shall be governed by the 2004 SUPER SHORT TRACK Sportsman modified specifications. APPROVED COMPETITION MODELS BUICK Skyhawk CHEVROLET Cavalier, Monte Carlo, Beretta CHRYSLER Eagle, Talon DODGE Avenger, Stealth, Daytona FORD Escort, Mustang, Probe OLDSMOBILE Firenza PLYMOUTH Laser, Sundance PONTIAC Sunbird, J-2000, Grand Prix OTHER APPROVED MODELS - Other models may be selected when available providing they are the same in body configuration and meet the spirit and intent of competitive racing as currently evidenced in SST Sportsman modified racing.

GENERAL CAR BODY REQUIREMENTS

(CAR BODIES) ROC Modified body rules with the following exceptions.

THE CAR BODY MUST MEET THE FOLLOWING REQUIREMENTS:

Cars must be neat appearing. All bodies must be installed on frame in a manner acceptable to the SST. Window openings must remain stock appearing and must maintain the original manufacturers window-opening configuration. Cars will not be allowed to compete with altered window openings. Bodies must be no wider than the standard width from the front of the door panel to the rear of the quarter panels when measured beneath the car at the rocker panels. A minimum distance of 43 inches and a maximum distance of 45 inches is permitted across the body at the bottom of the front windshield opening. Bodies must not extend below the frame at the side rails. Skirts or additional metal may

NOT extend below the body. The floor area directly beneath the seat forward to the front engine firewall must be made using a minimum 1/8-inch steel. The remainder of the floor area to the right and rear of the seat must be made from minimum 22-gauge steel. All floor area panels must be welded together. Streaming at the top of the windshield will NOT be permitted. Bodies must have standard appearing windshield opening and the windshield post must follow standard configuration. Cars will NOT be permitted to compete with excessive body damage. (Excessive body damage to be determined by SST) Belly pans will NOT be permitted. A belly pan will be defined as any object or material that alters the flow of air under the car. Determination of whether any material or object is or is not a belly pan shall be in the discretion of the SST. Bottom panel of the front nose panel may NOT extend rearward past the edge of the harmonic balancer. The driver's compartment may be enclosed with additional sheet metal. All interior sheet metal must be minimum 22-gauge steel. Interior sheet metal CANNOT be higher than or enclose a standard window opening. Sheet metal in driver's compartment must be horizontal from the top of the drive shaft tunnel to the right side door bars or angle from top of drive shaft tunnel upwards to top of right side door bars. Angled or horizontal metal must extend from the rear firewall or back of seat a minimum of 26 inches forward. The interior sheet metal behind the rear hoop may be roll formed upward to the top of the rear hoop cross bar. The sheet metal must extend rearward and at the center of the rear axle housing, the sheet metal may angle upward and seal to the bottom of the rear window opening. Interior spoilers, wings, or wind deflectors will NOT be permitted. Double panels will NOT be permitted. All interior sheet metal subject to SST approval.

DETAILED CAR BODY REQUIREMENTS:

FRONT AIR DAM

An approved air dam may be mounted to the front underside of cars. The optional metal or vinyl front air dam must be mounted perpendicular to the ground and no more than three (3) inches behind the front edge of the nose panel. Front nose panel and air dam must not extend past the rear edge of the front bumper and must maintain two (2) inches ground clearance. Nose panel and air dam must not extend past outside edge of front frame rails. Air dams must have a minimum ground clearance of two (2) inches. All support brackets must be mounted to rear of air dam. Horizontal or flat air deflectors must not extend past the outer edges of the front nose panel sidewalls.

REAR SPOILER

All rear spoilers and spoiler mounting points must be approved by SST. A solid rear spoiler of a minimum 1/4 inch thickness clear polycarbonate only may be installed at the rear deck lid and meet the requirements that follow. An approved spoiler which controls the flow of air over one surface only. The maximum spoiler size permitted shall be eight (8) inches high by 48 inches wide. The rear spoiler must not be wider than the standard width of the rear quarter panels, measured across the top. The rear spoiler must be installed to the rear of the quarter panels where the rear panel meets the interior sheet metal. During race events the rear spoiler must not extend past the rear edge of rear bumper. Decals or logos will NOT be allowed on the rear spoiler. Maximum of two (2) one (1) inch wide adjustable supports are permitted on the front of the spoiler .A

maximum of three (3) supports may be attached to the rear of the spoiler. The supports, front or rear, may be attached to the spoiler using a piece of one (1) by one (1) inch aluminum angle one (1) inch long. A maximum of 35 inches measured from the ground to the spoiler mounting point is permitted.

HOODS / ROOF

All cars must be equipped with a hood manufactured from metal or fiberglass. The hood must be manufactured so that it will completely cover the engine compartment, from the left side to the right side; turn down a minimum of four (4) inches on each side, and cover (if used) the engine side panels. NO part of the hood at the side panels except for the "A" post, shock and master cylinder covers may be higher than the lowest part of the hood. Only openings for the air cleaner and the distributor will be permitted. NO portion of the hood may be higher than the bottom of the air cleaner. Hoods must be fastened with positive pin fasteners evenly spaced across the front. All hoods must be approved by SUPER SHORT TRACK SERIES. Roof must be stock for make and model of body used. Roof must be steel. No fiberglass or Aluminum. Roof support posts must maintain the same angles as a stock production car. The front post ("A" post) must be mounted to the top front of the door panel. The rear post must be anchored to the rear quarter panels. All roof panels must be installed in a manner that is acceptable to SST. The front of the roof must be secured in three (3) places: one (1) in the center and one (1) on each side. The rear roof quarter window panel including the door "B" post must be SST approved. The front edge of the "B" post must be located a maximum of 24 inches from the center of the rear axle housing forward. The rear of the B-pillar may blend to the rear quarter or not exceed a maximum height of 2". Rear deck lid and interior panels recommended to be of magnetic steel.

BUMPERS / SIDE RAILS

The bumpers and side rails must be rear of the car will be 57 inches and the maximum width permitted will be 66 inches. Each end of the rear bumper (from the mounting side) must be cut on an angle and capped with a minimum of .125-inch aluminum. Super Short Track officials must approve alterations from this design. All bumper caps must be welded and sharp edges must be filed. The minimum size permitted will be 2 3/4 inches by four (4) inches by 3/16 inch thick. Bumper must be mounted at axle height. A maximum distance of 46 inches measured at the center of the rear edge of the bumper is permitted. Weight reducing holes will NOT be permitted in the bumper. Any inappropriate bumper will be disallowed. Front and rear bumper must be securely attached in order to COMPETE. All cars must be equipped with rear corner rails and side rails. All rails must be constructed using a minimum 0.083 inch thick magnetic steel seamless tubing with an outside diameter of a minimum 1 1/4 inches and a maximum of 1 3/4 inches. Side rail bars should be constructed using the following guidelines: Right side bars shall be constructed by using two (2) pieces of magnetic steel seamless tubing. The bottom bar shall attach to the rear of the frame rail and extend upward and outward even with the outside of the tires, or up to a maximum of 1/2 inch outside of the tires. The bottom side bar shall extend forward parallel with the frame rail and angle in to the front sub frame rail with minimal tire clearance. The bottom bar shall be mounted centerline with the rear axle and front spindle. The topside bar shall be attached centerline with the

rear hoop cross bar extending outward and forward to the forward most point of the bottom bar. The top bar shall turn down, be centered on and attach to the bottom bar. The top bar shall have an additional support bar attached to the front roll cage leg bar centered on the dash cross bar. An additional support bar must be added in the center. The bar must be attached to the frame rail and side bar. Two (2) additional vertical support bars should be added, one (1) at the rear and one (1) in the center of the side rail bar. The distance measured at the front, center to center, of the top and bottom bars at the turn down area shall be a minimum of six (6) inches. The distance measured at the rear center to center shall be a maximum of nine (9) inches and minimum six (6) inches. Cars will not be permitted in competition without side rails. Left side rail bars shall be constructed using the same guidelines described above EXCEPT that the rear support bar may be a radiused bar that attaches to the rear hoop bar centered on the cross bar and extending down and attached to the frame rail. Left side rail bars must be mounted by centering the two parallel side rail bars with the center of the rear axle and the front spindle or left side bars may be raised a maximum of two (2) inches from center. Cars will NOT be permitted in competition without side rails. Rear corner rails must be constructed using two (2) pieces of magnetic steel seamless tubing a minimum of 1 1/4 inches and a maximum of 1 3/4 inches in diameter. Both pieces of tubing shall be identically formed and welded to a steel bumper bracket at the rear. The tubing shall angle out and upward even with the outside of the tires, or up to a maximum of 1/2 inch outside of the tires and maintain a six (6) inch dimension measured center to center. The corner bumpers shall then turn in with a minimal tire clearance to the rear quarter panels. Additional support bars must be installed behind the body panels to the rear frame rails and/or roll cage. Cars will not be permitted in competition without rear corner rails.

6. FRAMES

All frames must meet the requirements described in the following paragraphs. Aluminum or light alloy frames will NOT be permitted.

A. FRAME REQUIREMENTS

1. All frames are subject to SUPER SHORT TRACK approval. A minimum ground clearance of two (2) inches must be maintained on any part of the frame. All frame components must be made of steel and welded. Holes drilled in frames, frame supports, and cross members with the intent of making the metal lighter are not permitted.

2. Side frame rails and rear kick up must be constructed with .090" minimum thickness meeting the ASTM-A-500 specifications, and be a minimum of two (2) inches wide and three (3) inches high magnetic steel box tubing. The distance from the centerline of the drive line to the left side frame rail, measured anywhere along the frame, must be within six (6) inches (eight (8) inches on 1989 and newer models with the frame rail and roll cage extension) of the distance from the centerline of the centerline of the drive train to the right frame rail. A minimum width of 34 inches and a maximum 46 inches, measured from center of left frame rail to center of right frame rail, must be maintained in the driver's compartment. A minimum width of 31 inches and a maximum of 46 inches, measured from center of left frame rail to center of right frame rail, must be maintained

on the rear kick up, with exception for suspension and tire clearance. All rear kick ups must maintain a minimum of 18 degrees from side frame rails to top of kick up.

3. The fuel cell reinforcement bar, using a minimum 1 1/2 inches seamless (3) vertical supports of 1 3/4 inches by 0.083 inch minimum seamless round magnetic steel tubing connecting it to the rear frame cross member. The main roll cage bar and the front roll bar legs must be connected with four (4) horizontal door bars on both left and right sides. The top door bar on each side must have a vertical vent window bar welded upward and connecting to the front roll bar legs. An optional vertical bar may extend from the roof hoop bar radiused outward and turn down to the top horizontal door bar on driver's side. The minimum 1 1/2 inch steel seamless tubing should be located in line with the driver. The door bars must be convex in shape and spaced from top to bottom as equal as space permits. The door bars must be the same length and have an equal amount of convex in both the right and left sides. The door must have six (6) vertical studs per side of 1 3/4 inches by 0.083 minimum seamless round magnetic steel tubing equally spaced. Two (2) angular studs must be attached from next to the bottom door bar to the frame rail. Right side door bars must cover a minimum of 25 inches of door length and may be either four (4) horizontal bars with six (6) vertical studs or two (2) horizontal bars and two (2) bars configured in an X design. If the X design is used, a vertical bar must connect through the center of the X from the top horizontal bar to the frame. A roof support bar must also extend from the right front corner of the roof bar down to the transmission cross member. All joints where bars meet the main frame and meet the door bars, the roof bar and the rear support bars, MUST have gusset plates for reinforcement. Magnetic steel tubing, must be installed behind the fuel cell. This reinforcement bar must be as wide as the fuel cell and as low to the ground as the fuel cell with a minimum of two (2) uprights from the reinforcement bar to the rear frame cross member, evenly spaced behind the fuel cell. An X cross member made of one (1) inch magnetic steel tubing must be installed beneath the fuel cell from corner to corner. The X cross member must be welded or bolted to the rear frame rails in a secure manner. Two (2) additional support bars, one (1) at each corner of the protective bar, must extend forward and be welded to the rear frame assembly.

4. The front sub-frame assembly must be constructed using a minimum 0.083 inch thickness meeting the ASTM-A-500 specifications, two (2) inches wide and three (3) inches in height steel tubing. A minimum of 27 inches, and a maximum of 32 inches, measured from center of left frame rail to center of right frame rail, must be maintained from the mounting point of upper control arms forward. All front sub-frame assemblies must maintain a minimum of 30 degrees angle from side frame rails up to the top of the sub-frame. All sub-frame assembly support bracing shall be a minimum 0.090-inch by 1 3/4 inches round magnetic steel seamless tubing. Frame support bars, left and right, must extend from the roll cage to the sub-frame and must have a downward radius bent into the bars before they are welded to the sub-frame. The left and right support bars must not have any additional braces added between the front leg bars and where they attach to the front sub-frame assembly. A flex support tube may be added to the front support bar at the radius and extend forward and be attached to a cross member. Any frame rejected by SST for showing poor workmanship will not be approved until necessary corrections have been made. The minimum wheelbase permitted in the SST Sportsman modified

class competition is 107 inches. When measuring the wheelbase, the minimum allowable tolerance CANNOT exceed one (1) inch plus or minus on the other side.

7. ROLL BARS

Round magnetic steel tubing 1 3/4 inches by 0.090-inch seamless rollover bars are compulsory for the basic roll cage and must be SST approved. Aluminum and/or other soft metals are NOT permitted. Roll bar connections MUST be welded. MUST be four-post minimum fastened to top of frame. MUST have X or diagonal brace in case behind driver. Seat to be fastened to top of cage and frame. Nerf bars must conform to the same as asphalt modified. Bumpers and nerf bars must be built on 14-inch centerlines. Center of front and rear bumper must be at the center of tire height - 14 inches. Bumper must be smooth and capped. MUST have drivers side window net. Fire resistant padding MANDATORY on all bars located near driver. May use one piece pad on drivers door bars. MUST have vertical bar in middle of front opening of windshield (minimum 1 inch O.D.)

8. FAN SHROUD AND DUCTS

When ducting air from the nose housing to the radiator, air directional shields are permitted within the duct.

9. STARTER

Car must have self-working starter.

B. SAFETY

1. SEAT AND SHOULDER HARNESS All seats must be aluminum and have head rests or high back seat. Seat must be attached to roll cage and frame. Back of seat must be mounted to the roll cage. NO fiberglass or plastic seats. Driver must use a minimum three-inch quick release, 5-point restraint systems. A two-inch wide crotch strap is mandatory. All safety belts must be no more than five years old, and have readable identification tag. NO original equipment belts permitted. Shoulder harness must be connected to the roll cage. All lap belts must be mounted behind the seat and attached to the roll cage according to manufacturer specifications. All roll bars and driver sidebars or other protrusions that driver may come in contact with must be properly padded with approved race car roll bar padding. All cars must have a working fire extinguisher in easy reach of the driver. On board central fire extinguishing systems are highly recommended. Driver side net with quick release mechanism is MANDATORY. NO plastic parts permitted. Boldly labeled fuel and electrical safety switches are to be in reach of Driver and safety crews.

2. FIRE SUIT/ HELMET

Fire suits must be at least a double layer Nomex or better design Single layer suits may be used with complete fireproof underwear. Nomex lined helmets are required. Non-Nomex lined helmets with the use of a Nomex head sock is allowable. Nomex gloves and shoes are required. Complete fire-proof underwear highly recommended for all competitors.

3. GLASS WINDSHIELD

A single one (1) piece flat or radiused type polycarbonate/ lexan windshield may be used on the driver's side. The windshield must be mounted flush with the cowl or dash panel and extend up to the top of the windshield opening in front of the driver. Regardless of the type of windshield being used, it cannot be wider than the center of the windshield opening. A complete steel windshield screen (with maximum openings of one (1) inch by two (2) inches must be installed in the right side of the windshield opening. The windshield screen must cover the right side windshield opening from the center windshield bar to the right side roll bar and from the front hoop bar, at the top, down to the cowl or dash panel. Decals will NOT be permitted on the windshield. All windshields, windshield screens and their installation must be acceptable to SST. Driver window must have window net.

4. FIRE WALL

A front and rear firewall of a not less than 22 gauge magnetic steel must separate driver from the engine compartment and fuel cell. The front firewall must be positioned below the leading edge of the windshield. The firewalls must be sealed and welded in place.

5. SUSPENSION

All suspensions and related parts must be reinforced and meet the following requirements: COIL SPRINGS Coil over front springs. One spring per-wheel. STEEL ONLY.

1. Coil -over must mount to lower control arm.
2. Strut bars will NOT be permitted for mounting of coil -over.
3. Coil over springs must steel and will be constructed with both coil ends closed and ground.

COIL OVER REAR SPRINGS

Coil over springs must steel and will be constructed with both coil ends closed and ground.

6. SWAY BARS

Only magnetic steel front sway bars are permitted. Rear sway bars (anti-roll bars) will NOT be permitted.

7. SHOCK ABSORBERS

The use of shock absorbers must meet the following requirements: Coil over shock absorbers may be used. Shock absorbers and coil over shock and spring, by visual reference, must remain within the outline of the body and NO holes can be cut in the outer body for the mounting of shocks. SHOCKS - Only one (1) shock per wheel. All shocks subject to SST approval. NO shock with a published racers net price greater than \$300. U.S. currency will be permitted. Any shock to be approved must be available to all competitors. The only shock absorbers and internal components permitted will be those shock absorbers submitted by the manufacturers and approved by SST OFFICIALS. A

maximum of one (1) shock absorber per wheel is permitted. External shock absorber reservoirs will NOT be permitted.

8. A-FRAMES

The upper A-frames and lower control arms must meet the following requirements: Upper A-frames and lower control arms must be acceptable to SST. When attaching upper control arms to the mounting plate, only standard type castor/camber shims or washers will be permitted.

9. SPINDLES, WHEEL BEARINGS AND HUBS

The spindles, wheel bearings and hubs must be acceptable to SST and meet the following requirements: Heavy-duty magnetic steel spindles and wheel bearings are compulsory. Aluminum or magnetic steel hubs are permitted. The front spindles must be attached to the frame using steel cables and be secured in a manner acceptable to SST officials. Spindles and hubs must be approved by SST.

10. BODY HEIGHT REQUIREMENTS

Body height shall be determined by measuring (with driver) the overall height of the car from a distance of six (6) inches behind the top of the windshield on the roof centerline. Minimum height will be 40 inches. The rear of the roof at the highest point shall be NO more than three (3) inches higher than the actual front measurement.

11. GROUND CLEARANCE REQUIREMENTS

Frame rail and sheet metal clearance will be two (2) inches. All ground clearance requirements will be measured with the driver in the car

12. WEIGHT SHIFTING DEVICES

Mechanical devices for shifting weight, which can be activated by the driver, will NOT be permitted inside of drivers compartment. Electrical, pneumatic, hydraulic or remote control devices, which change the handling characteristics or height of the car, are NOT permitted.

13. STEERING COMPONENTS

The car steering components must meet the following requirements: Rack and pinion steering ALLOWED. All cars will be equipped with a magnetic steel steering shaft. Tie rods, drag links and component parts must be heavy duty. Interchangeable pitman arms may be used. Pitman arms may NOT be drilled for weight reduction. Center-top of steering post must be padded with at least two (2) inches of resilient material. A quick release magnetic steel coupling on steering wheel is MANDATORY. The magnetic steel couplings CANNOT be covered with plastic or coatings. The use of universal joints in steering shaft must be approved by SST. Only metal steering wheels are permitted. The power steering pump must be mounted and driven off the front of the engine.

14. BRAKES & BRAKE COMPONENTS

The car brake components must meet the following requirements: Four (4) wheel disc brakes MANDATORY. Only magnetic cast iron or cast steel rotors will be permitted.

Brakes must be operational on all four (4) wheels at all times. Master cylinders and reservoirs should be mounted on the engine side of the front firewall. Inboard brakes are NOT allowed. Electric wheel speed sensors or brake actuators will NOT be permitted. Power assisted braking systems will NOT be permitted. Only one (1) brake clipper per wheel using only two (2) brake pads per caliper will be permitted. Only a single brake bias system which connects to the balance bar of the brake pedal assembly will be permitted. Inline brake proportioning systems will NOT be permitted. BRAKE COOLING The brake cooling system must be acceptable to SUPER SHORT TRACK and meet the following requirements: One (1) air duct per wheel may be used for brake cooling. All scoops must be acceptable to SST. Maximum dimension of front brake air scoops is three (3) inches by eight (8) inches when mounted to the front sub-frame or front bumper. If the brake scoops are not operational, they must be blocked off. Screens and air ducts, from the opening to the brakes, must be acceptable to SST officials. Brake fluid re-circulating devices will NOT be permitted.

15. BATTERY

Only one 12-volt battery. Battery must be located between the frame rails. Battery must be securely anchored and mounted inside a spill proof container located under hood or floor of the car. If located under the floor, the battery must be completely encased. If located under the hood, the battery must have suitable cover. NO battery may be forward of the radiator or rear of the rear end housing of the car. Battery location must be acceptable to SUPER SHORT TRACK officials.

16. ELECTRICAL SWITCH LOCATION

All electrical switches must be located on the dash panel or within easy reach of the driver. A labeled on/off master switch to the battery cable MUST be installed on the cowl behind the windshield opening on the right side of the driver. The switch must be easily accessible and in plain view.

17. ENGINE COOLING SYSTEM

Engine cooling system must be acceptable to SST. Icing, freon type chemicals or refrigerants may NOT be used in or near the engine compartment. Portable cooling machines or devices will NOT be permitted.

18. TRANSMISSION

The transmission must meet the following requirements: Only standard production OEM type Muncie or T-10 manual three (3) or four (4) speed transmissions are permitted. May remove first gear and replace with spacer. Automatic transmissions allowed. Only aluminum, or steel transmission housings are permitted. Only OEM type gears are permitted. All transmissions must have a constant engagement of the input shaft with gear and countershaft with cluster and reverse gears. SST reserves the right to have all cars use a final drive gear ratio within the limits set by SST. Any method or transmission gear higher than 1.18 to 1 will NOT be permitted. The only high gear transmission ratio allowed will be 1 to 1. A forward gear and reverse gear MUST be in working order. ONLY manual shift linkage is permitted on the transmission. ONLY fire resistant type shifter boots are permitted. The Jerico transmission will NOT be permitted.

19. RADIATOR

The engine-cooling radiator must meet the following requirements: Radiator must remain in front of the engine. Radiator dust screens PERMITTED. Radiator MUST be copper, brass or aluminum. Radiator installation must be acceptable to SST. Radiator overflow pipe MAY be relocated and a minimum one (1) gallon overflow can. NO anti-freeze. WATER ONLY.

20. CLUTCH

The clutch and clutch assembly must meet the following requirements: Must be disc / pressure plate design clutch assembly. NO coupler type / Dog clutch or direct drives. Multiple disc clutches are permitted. Minimum 7 1/4 inch diameter disc and using two (2) or three (3) disc design. Limited to magnetic steel discs and pressure plates. The disc clutch housing assembly or cover shall be made from aluminum or steel ONLY. Any single disc OEM production type clutch assembly, with a minimum 10 1/2 inch diameter steel hub disc. Clutch MUST be mounted inside an approved bell housing.

21. DRIVE SHAFT

The drive shaft must meet the following requirements: Drive shaft, universal joints and yokes must be magnetic steel drive shaft and be similar in design to standard production type. Only a one (1) piece magnetic steel drive shaft will be permitted. It is MANDATORY that two (2) 360 degree solid magnetic steel brackets, NO less than two (2) inches wide and 1/4 inch thick, be placed around the drive shaft and torque arm and be fastened to the cross member of the car. All drive shafts MUST be painted white or orange.

22. REAR AXLE

The rear axle must meet the following requirements: After market racing steel spool, steel mini spool. Axle shafts and gears are permitted. Clip in axles MUST be welded in place. Aluminum or magnesium quick change and non-quick change center sections equipped with aluminum or magnesium side bells are permitted. If quick- change rear ends are used, only those with magnetic steel spur gears on the back side, jackshafts and axle tubes will be permitted. ONLY locked rear drive axle assemblies are permitted at all times during an Event. Limited slip differentials are NOT permitted. For purposes of checking a pre-determined final drive gear ratio, when jacked up both rear wheels must rotate in the same direction with each traveling the same rotational distance. The distance, measured from the center of the rear end housing to the rear hubs, left and right, at the point the wheels bolt on, must be within three (3) inches in length. Only magnetic steel axle housings permitted. The rear end must be mounted so that the inside edge of the left rear tire is even with or outside the outermost edge of the left side frame rail. SST reserves the right to have all cars use a final drive gear ratio within the limits set by SST. If axle housing support bars are used, they must not have any method of adjustment.

23. FUEL SYSTEM

SST will reject any fuel cells, containers or check valves which appear to be damaged, defective or do not function properly. Fuel cell vent pipe check valves are compulsory.

Pressure systems will NOT be permitted. Any concealed pressure type containers, feed lines or actuating mechanism will NOT be permitted, even if inoperable.

24. FUEL CELL

The use of a commercially manufactured fuel cell is MANDATORY. The maximum fuel cell capacity, including the filler spout and overflow, shall not exceed 24 gallons. The nominal fuel cell dimensions: are 24 1/4 inches by 16 3/8 inches by 13 1/4 inches. Materials other than standard foam, as provided by an approved fuel cell manufacturer, are NOT permitted. Fuel cell must be encased in a container of not less than 22 gauge magnetic steel. Fuel cells must be fitted within the container so that the maximum capacity, including filler spout will not exceed 24 gallons. Fuel cell container size shall be 25 inches by 16 3/4 inches by 13 5/8 inches (inside dimensions). Interior magnetic steel sheet metal must allow access to top of fuel cell for inspection. Fuel cell and fuel cell container must be installed as far forward as possible in trunk compartment behind the rear axle and maintain a minimum ground clearance of six (6) inches. Fuel cell container must be secured by one (1) inch by one (1) inch by 0.065 inch minimum thick square steel tubing meeting the ASTM A-500 specifications or one (1) inch by 1/8 inch thick magnetic steel straps two (2) lengthwise and two (2) crosswise. The straps must be located as close to the fuel filler check valve housing as possible.

25. FUEL FILLER VENT REQUIREMENTS

No quick fill filler devices. The maximum filler spout size is four (4) inches by eight (8) inches by 18 inches.

26. FUEL CELL VENT

(Vented as follows:) A single, one (1) inch maximum vent to outside of body at left rear corner. A fuel vent flap valve must be used. The fuel cell check valve vent pipe neck inside diameter shall not exceed one (1) inch maximum. The fuel cell vent flexible hose shall have a maximum inside diameter of 1 1/4 inches and a maximum length of 60 inches when measured from the outside end of the fuel cell check valve vent pipe to the top of the fuel cell fill plate. A screen cap with a maximum diameter of 1 1/4 inches may be placed over the vent.

27. FUEL LINES

Either (or both) right or left side pickup in fuel cell may be used as approved by SST. ONLY one (1) fuel line permitted from fuel cell to fuel pump. All fuel lines are subject to SUPER SHORT TRACK approval. The fuel lines from the fuel cell to the carburetor may be relocated to prevent vapor lock, but must remain under floor of car unless otherwise approved. When the fuel line runs through the right side of the driver's compartment, it must be enclosed in a one (1) inch outside diameter magnetic steel tube. SST approved check valve mounted at the line outlet on the fuel cell is recommended. Additional lines or extra length may not be used on the fuel system, Extra fuel lines or fuel cells, concealed or otherwise prohibited. It is recommended that an on-off switch be mounted within easy reach of driver.

28. FUEL PUMP

Electric fuel pumps are not permitted. Cooling of the fuel pump is not permitted. Only mechanical fuel pumps in stock location permitted. No Piston Pumps

29. ENGINE LOCATION

The engine location must be approved by SST. The engine must be mounted between the frame rails in front of the driver. The centerline of the crankshaft when measured to the center of the lower ball joint, left and right, must be within two (2) inches in distance. Engine minimum crankshaft center to ground clearance is 9 1/2 inches. The engine may NOT be tilted.

30. ENGINE GROUND CLEARANCE

Engine ground clearance will be measured (with driver in car) at the oil pan. A minimum height of two (2) inches from the bottom of the oil pan to ground MUST be maintained at all times.

31. ENGINE MOUNTS

All engine mounts shall conform to the following requirements: Engine mounts must be reinforced and must be acceptable to SST. All engine mounts MUST be securely bolted.

32. ENGINE DISPLACEMENT/COMPRESSION LIMIT

Only "small block" V-8 engines with a minimum of 350 cubic inch displacement will be allowed. To clarify the identification of a "small block" engine, listed below are the basic engines designated and approved as "small block" engines. Any engine NOT listed will be designated as a large block engine and will NOT be permitted, regardless of the engine size. Maximum engine displacement as follows:

1. GENERAL MOTORS 350 CU. INCH
2. FORD 351 CU. INCHES
3. MOPAR, AMERICAN MOTORS 360 CU. INCHES

Engine displacement may be increased by boring or stroking. Formula for determining cubic inch displacement: Bore x Bore x .7854 x Stroke equals cubic inch displacement of each cylinder. The cubic inch displacement of each cylinder added together will determine the total cubic inch displacement of the engine. COMPRESSION LIMIT: The maximum compression limit allowed shall be 11.0 to 1 on any cylinder. When calculating the compression ratio, an allowance of one (1) cubic centimeter will be added to the volume for the area around the top of the piston down to the top of the piston ring that will be sealed with grease. *The procedure for checking compression is as follows: Bore x Bore X .7854 x Stroke equals the Cylinder Volume of each cylinder at Bottom Dead Center (bdc) in cubic centimeters. The cylinder head pour volume minus(-) the known volume of the cylinder head plate plus (+) head gasket volume plus (+) 1.00 cc for sealing piston ring plus (+) the cylinder block volume minus(-) the known volume of the block plate equals(=) chamber volume.(Compression ratio = Cylinder Volume plus (+) Chamber Volume)

33. ENGINES

Maximum compression ratio 11.0 to 1, 2600 lbs. after race. 9.6 to 1 maximum will be given a weight break of 75 lbs. for a total weight of 2525 lbs. after race. Compression will be checked with a whistler. V-8 engines only. NO aluminum engine blocks or heads. BLOCK GM Chevy 350 cu. In standard production block with stock external and internal measurements. Bore size of 4.00 to 4.060 only (+.005 tolerance) No Bowtie Blocks. Block must be centered between frame rails and not tilted. Must be securely mounted to frame. Center of crankshaft must be within 2-inch center of thread width.

CRANKSHAFT Only stock production type crankshaft can be used. Standard steel or cast iron. After market crankshafts must be identical to stock OEM in appearance, construction, weight and journal size. Counterweights must be the same shape and size of stock OEM crankshaft. Minimum crankshaft weight 48 lbs. Chevrolet must use LARGE journal size crankshaft. Stroke 3.480 only (+ or - .005). Counter-weights must remain stock. No undercutting or round cutting. No knife edging, tapering or altering in any weigh. NO TOLERANCE.. Rod journals stock diameter with tolerance of .020 Light deburring permitted, however forging or casting flashings must remain. Harmonic balancer minimum diameter 6.25 inches. Fluid dampener is legal. Centerline of crankshaft minimum 9 ½ inches from the ground. CONNECTING RODS OEM stock rods or after market rods. Machining for bushing or full floating is allowed. 5.700 or 6.000 forged or billet connecting rod permitted, for Chevrolet. After market 5.700 forged or billet minimum weight 575 total grams. After market 6.000 forged or billet minimum weight 600 total grams. Maximum Ford rod length 6.000 Mopar rod length 6.125. NO deburring, de-flashing, polishing abrasive cleaning or lightening. NO titanium, aluminum, max-light aerospace alloy rods allowed. PISTONS Flat top or dished aluminum three ring pistons only. All three rings in place. Valve relief's may be machined in pistons. Any steel pin may be used.

CYLINDER HEADS Heads must be any 23-degree, un-ported cast iron, from listed manufacture.

Chevrolet – World casting #011150 –Angle plug, #011250 –Straight plug

Dart Iron Eagle #10310010 –Angle plug, #10320010 –Straight plug

Pro-action #2234-00000A – Angle plug, #2234-00000 – Straight plug

Ford #M-6049-N351

Mopar #W-2

GM Cast bowtie heads #'s, 10134392, 14011058, 14011034

Maximum intake runner volume of 200 cc's. No porting to reach maximum runner volume.

NO G.M. VORTEC CYLINDER HEADS OF ANY TYPE.

Heads must retain stock internal, external measurements. No port matching, blending, porting, polishing, removal or addition of materials to head. No hand grinding or acid dipping permitted on any part of the head. No paint, epoxy fillers, welding or spray welding on heads. External painting to match engine allowed. Manufacturers spec and intake runner CC size will apply on all heads listed. NO TOLERANCE.

a. All valves must identical in appearance in construction as OEM type valve. Minimum valve stem diameter 11/32-inch. Valve stem diameter may be undercut to a minimum

diameter of 15/16 inch in the area of the valve stem from the head of the valve to the bottom of the guide.

- b. Valve must be solid stainless steel only.
- c. Valve springs and push rods must be magnetic steel only.
- d. Screw in studs allowed.
- e. Roller rockers and girdles are allowed. No shaft rocker arms.
- f. Chevrolet intake valve 2.020 exhaust valve 1.600.
- g. Ford Windsor intake valve 1.844 exhaust valve 1.546.
- h. Ford Cleveland intake valve 2.046 exhaust valve 1.546.
- i. Ford #M-6049-N351 intake valve 2.020 exhaust valve 1.600.
- j. Mopar Corp intake valve 2.020 exhaust valve 1.625.
- k. ½ inch under valve seat to complete valve job allowed. Machine cut only. No polishing or blending.
- l. Heat risers can be filled.
- m. Multiple angle valve-job with valve centerline and guide angle in OEM stock location in relationship to the head.
- n. No combustion chamber modifications.
- o. No repositioning head on block. Stock location only.
- p. No air directional devices.

CAMSHAFT Flat tappet camshaft only. NO roller camshaft. NO mushroom or roller lifters. Lifters must be stock diameter. No roller camshaft bearings.

TIMING CHAIN Any timing chain and gears may be used. Degree bushing and offset crank gear keys may be used. Gear drives may be used.

ROCKER ARMS Roller rocker arms permitted. NO shaft mounted roller rocker systems.

PUSH RODS Magnetic steel valve push rods are permitted only.

34. ENGINE LUBRICATION

A. OILING SYSTEM Internal oil pumps driven from the distributor are required.

B. OIL PANS magnetic steel oil pans only.

C. OIL PAN INSPECTION PLUG is required on the left side of the oil pan. The inspection hole must be a minimum of 1 1/4 inch I.D. It must be 9 1/2 inches from the rear block face to the centerline of the inspection hole or 4 1/2 inches from the front block face to the centerline of the inspection hole and 1 1/4 inches from oil pan rail. There will NOT be any obstruction of view from the inspection hole to view crank and rods.

D. VIBRATION DAMPER stock-type steel or cast iron. NOT to be machined or altered in any way.

E. DISTRIBUTOR Battery operated ignitions only. Stock type point distributor or electronic ignition allowed. Stock firing order for engine must be used. NO ignition boxes or multi-spark systems. After market coils must fit in stock location. May use after market H.E.I. stock replacement type distributor. MSD H.E.I. # 8365 permitted.

F. WATER PUMPS Only OEM type steel or aluminum mechanical water pumps in stock location, turning in the same direction of the crankshaft rotation, are permitted. Water pump impellers may be altered but coolant flow must be in the same direction as the production engine.

35. CARBURETOR

Unaltered HOLLEY #4412-500CFM only. HP Carburetor allowed. Must be approved by SST officials. Choke horn may NOT be removed. Boosters may NOT be changed. Booster size or shape may NOT be altered. NO sideways carburetors allowed. Venturi area must NOT be altered. Casting ring must NOT be removed. NO grinding or polishing. NO modifications to the base plate. Throttle shafts must remain standard and must NOT be thinned or cut. Stock butterflies may be drilled for idle holes but must not be thinned or tapered. Removal of the choke plate and choke linkage. Changing of jets accelerator pump nozzle, pump cam and power valves permitted. Alterations to allow additional air to be picked up below the opening of the venture such as altered gaskets, base plate, or drilling holes into the carburetor will not be permitted. No epoxy fillers

36. CARBURETOR ADAPTOR PLATE / SPACER

Only one solid spacer made of aluminum or phenolic plastic of a maximum height of one (1) inch permitted. Only one .075 maximum gasket per side. NO wedge shaped mounting surfaces, both top and bottom surfaces must be parallel. Spacer must have 2 holes maximum size 1.750 straight bore and match the base of carburetor. No air-flow modifications.

37. CARBURETOR THROTTLE

All linkage must be mechanical type. NO cable type. Two springs MANDATORY. Toe strap MANDATORY.

38. AIR CLEANERS AND AIR FILTERS MAXIMUM OF 5 INCHES IN HEIGHT. All air must be filtered through the element. Top of the air cleaner must be solid with NO holes. Top and bottom of the air cleaner must be of the same diameter. NO air induction, ducts, baffles, tubes or funnels which may control the air leading to inside of, or between the air filters and carburetor. The filter base must have a minimum round opening of 5 inches. It will be permissible to shield the front area of the air cleaner up to a maximum of one-half of the air cleaner circumference and no wider than the height of the element. A one (1) inch maximum height spacer may be used between the carburetor and the air cleaner.

39. INTAKE MANIFOLD CHEVROLET-EDELBROCK # 2101

CHRYSLER-EDELBROCK # 2176

FORD-#M-9424-C358 EDELBROCK # 2181

EDELBROCK # 2750

NO alterations or modifications to manifolds allowed. NO coatings allowed on or in manifold with the exception of paint only on exterior surfaces. Identification in the form of cast-in part numbers must remain unaltered on the manifold.

40. EXHAUST SYSTEM

(Officials reserve the right of reject improper mounted exhaust systems) Exhaust headers must be a commercially manufactured header using a steel primary tube size of 1 5/8 inch minimum and a maximum of 1 3/4 inch outside diameter. 1 5/8" to 1 3/4" step header permitted. Must be a conventional four into one collector with a maximum size of 3 1/2-

inch OD. Maximum header flange will be 3/8 inch. NO header plates between heads and headers. NO adjustable headers. NO inserts allowed in any part of the header or collectors. NO 180-degree headers. NO stainless headers. NO merge. NO pyramid. NO Try-y or similar style collector permitted. NO exhaust pipes allowed in driver's compartment. NO thermal wrap permitted on headers. NO crossover pipes permitted. All exhaust pipes must be a single round steel 3-inch pipe, with muffler.

41. HEAT SHIELDS

Heat shields to cover exhaust manifold can be NO more than six (6) inches wide and NO longer than the valve cover.

42. MUFFLERS

No car will be allowed to race without mufflers. No modifications of any type allowed on muffler. **MUST BE REMOVABLE FOR INSPECTION.** All cars must be a maximum of 95 decibel checked from the center of the track. 95 D.B.A. is **MANDATORY.** Muffler falling off car may result in immediate disqualification.

43. WHEELS

The wheels must meet the following requirements: Only 15 inch diameter five (5) lug reinforced magnetic steel racing wheels with a maximum width of 13 inches are permitted. 12-inch maximum is recommended by most tire manufacturers. Any offset is permitted. Wide five bolt pattern **OPTIONAL.** Bead locks are **NOT** permitted. Maximum tread width is 84 inches measured from outside to outside tire.

44. LUG BOLTS AND NUTS

Solid heavy-duty 1/2 to 5/8 inch magnetic steel lug bolts and standard one (1) inch hex by 1/2 to 5/8 inch thick magnetic steel lug nuts. Lug stud threads must go through the full thickness of the wheel nut on all four (4) wheels.

45. TIRES

Only tires approved by Super Short Track Officials will be permitted. Tire durometer 58 **WILL** be checked. Durometer readings may be taken after racing competition or in the line up staging areas, any car not meeting the specification will not be permitted onto the racing surface. **NO** use of bleed-off **OR** pop off type valves. Hand grooving, buffing, grinding and/or cutting on any area of the racing tire will **NOT** be permitted. Tires that have been altered by unauthorized treatment will **NOT** be permitted.

EVERY COMPETITOR MUST MAKE THEMSELVES AWARE OF AND FAMILIAR WITH THE TECHNICAL RULES IN THE SST DIVISION. EVERY INDIVIDUAL AGREES TO BE KNOWLEDGEABLE AND BOUND BY THE CONTENTS OF THE SUPER SHORT TRACK SERIES RULES & REGULATIONS.

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