



## **2023 4-Cylinder STOCK Rules**

**General:** *These rules and regulations are designed to govern driver and crew member conduct during GSS racing events. By participating in these events, all drivers are required to comply with these rules. While GSS makes no claim of guaranteed safety, these rules are enforced as a guide for the conduct of the sport. GSS is in the entertainment business. Drivers, Owners, Crew and GSS Staff cooperate to provide this exciting level of entertainment. All rules, race scheduling and structure, are designed and implemented to support a balance between competition and entertainment value. Drivers and crew are required to conduct themselves as professionals at all times. GSS may change any rule at any time in an effort to reduce the cost of racing, maintain equal competition, or improve safety.*

**ALL EQUIPMENT IS SUBJECT TO THE APPROVAL OF GSS OFFICIALS. NO EQUIPMENT WILL BE CONSIDERED AS HAVING BEEN APPROVED BY REASON OF HAVING PASSED THRU INSPECTION UNNOTICED. EFFORTS TO TAKE ADVANTAGE OF "LOOPHOLES" IN THESE RULES WILL NOT BE TOLERATED. ALL RACE CARS WILL BE SUBJECT TO INSPECTION BY TRACK OFFICIALS AT ANYTIME.**

***When in doubt bring your home track rules and lets have fun! See #17 for details.***

# 2023 4-Cylinder Stock Specifications



## **1. SAFETY EQUIPMENT**

**1A. SEATS** - Approved driver's seat required if seat is questionable consult tech right away. Seat must be fastened to frame/roll cage and located to give adequate distance from driver's arm to door bars. Shoulder supports on right and left sides of seat and head support on right are recommended. Full containment seats recommended. (No Carbon Fiber). Seat may not protrude outside 4 point upright or top cage halo. Leg containment supports are recommended.

**1B. SAFETY BELTS**-Belts must be dated within 3 years of event date or newer. A minimum five-point harness system is mandatory. Competitors using the HANS device may use a standard three-inch (3") or the Schroth racing two inch (2") wide shoulder strap. Schroth Racing shoulder strap system has been specifically designed for use with the HANS device. Schroth part numbers are profi iii-6fh; hybrid iii-h; profi iii-6h. Shoulder harness belts shall not be mounted lower than the shoulder line of the driver or 10 degrees. Belts must be anchored to roll cage or frame. Grade "5" bolts ½" min diameter required. Shoulder harness must not be anchored lower than 2-inches below driver's shoulder height. 6-point belts (double crotch strap) are recommended.

**1C. DRIVING COMPARTMENT** – Cockpit must be completely sealed off from engine compartment and fuel cell. Roll bar padding required around driver; *Recommended: Fire retardant padding*. A securely mounted operational 2-½ pound minimum fire extinguisher with gauge visible for inspection purpose is mandatory. Extinguisher must be mounted in a quick release bracket. Fire suppression systems are recommended. Driver-side window net required, minimum 16 inch by 20-inch ribbon or mesh style and must be mounted to roll cage so latch is at top front of window. Clearly labeled push-pull or toggle type kill switch accessible from either side of car is required. A gas pedal toe bar (kick-up) is highly recommended. No driver- adjustable devices allowed while car is in competition. No carbon fiber interior components will be allowed, likewise, no carbon fiber or titanium components allowed anywhere on car.

**1D. DRIVER'S ATTIRE** – Complete SFI- approved fire-retardant driving suit and gloves required. Eye protection required at all times, and a **Snell Helmet SA-2010 minimum required SA-2015** helmet or newer recommended. Snell "M" or D.O.T helmets not allowed. Head and Neck restraints (HANS Type), fireproof shoes, are strongly recommended. GSS officials will monitor items related to safety, but ultimately it is the responsibility of the driver to monitor, maintain, and update his safety equipment.

## **2. CAR ELIGIBILITY-**

Four-cylinder, front wheel drive compact cars only with model year 2013 & old and older, and a wheelbase of 92" to 107" Wheelbase must be within 1/2-inch of stock. No full-size cars allowed; No SUVs, crossovers, or vans permitted. No convertibles allowed. No all-wheel drive allowed. No all wheel steering allowed. No rear engine allowed. No mid-engine allowed. All doors must be welded, chained, or bolted shut. Hood and trunk must be secured with two or more hood pins. Hood inner supports may be removed (No Gutting of body components). All glass (head, tail, and marker lights) except windshield must be removed. You may replace the windshield with Lexan. Lexan windshields require bracing; 2 braces minimum are recommended. Plastic, trim, and items that could break, burn, or fall off, must be removed in and outside the car. Skirts, hood scoops front air dam and a 5" max height rear spoiler blade may be installed. You may relocate the battery. If in driver's compartment, must be covered with a marine case or similar, battery must have steel to steel tie downs. If battery is located in the engine compartment, the positive battery post must be covered to help prevent shorting out to any metal components. Anything that can be unbolted (hinges, brackets, etc) may be removed. After market nose pieces are allowed "Rub rails" allowed between front and rear wheel wells. Ends must be chamfered and capped (no sharp edges). A professional appearing paint job in an attractive color required. All lettering must be professional and in good taste. Numbers: 18-inches on both sides, and roof, readable from the right side. **Tow Hooks are required front and rear.**

## **3. ENGINE GENERAL SPECIFICATIONS**

Strictly stock for make, model, and year. 4-cylinder SOHC or DOHC engines (no turbos or superchargers). No Honda V-Tech or Nissan 2.5-liter engines allowed. No aftermarket performance parts, No Rotary Engines. Engine Block must be standard production OEM block, no aftermarket blocks and engine must have all identification numbers Fuel injection is only allowed on cars that came factory equipped as such. Dry sump oiling systems are not allowed. Air cleaner must be stock, unmodified (stock style paper element and stock intake system/box), stock size replacement aftermarket air filters allowed. Engine Location may not be altered, no motor set back or offset, engine must remain in original position. You may remove unnecessary parts and wiring (A/C compressors, smog pumps, etc.) Engines may not cross MFG lines. Stock cast iron or steel all parts must be OEM. All insulation under hood must be removed. No plastic lines to oil pressure gauges – steel braided preferred.

**3a. Computer. A stock unmodified computer is required.** Tech Staff may swap any competitors computers with a known stock computer at any time. Computers may be confiscated for further inspection at ASM motors for diagnostic test.

## **4. COOLING SYSTEM**

Shroud above fan mandatory, if running a mechanical fan. Electric fans allowed on back side of radiator only. Radiator over-flow required. No antifreeze or similar products. Radiator must remain in stock location.

## **5. SUSPENSION**

Must remain stock for make, model, and year. Stock struts only. Slotting of strut mounts is allowed in order to meet camber rule. Spring rubber inserts or anything that acts as an insert between coil spring coils are not allowed. Any steel spring that fits in stock location is allowed. Bump rubbers on strut shafts are allowed but must allow suspension travel of no less than 1 and 1/2 inch with driver in car at any corner where they are used. Dust boots on struts must be removed for inspection of struts and bump rubbers. Suspension must have travel in both up and down directions from ride height as sitting in tech. Ride attitude must be maintained. NO RACING PARTS this is a STOCK class. The only optional exceptions are as follows: You may run camber on the front and rear wheels, but total camber must not exceed 1-3/4 inch on any tire when measuring the difference between the top of the rim and the bottom of the rim with straight edge. Except for exhaust components, Minimum ground clearance 4" (with driver) for all mechanical parts and hardware.

## **6. WEIGHT**

**6A.** A Minimum weight of 2350 lbs for single overhead cam cars

**6B.** A Minimum weight of 2450 lbs for dual overhead cam cars

All weights include driver and are minimums after the race. No right-side minimums, Total Weight Only, No Fuel allowance. All weights: must be securely bolted to frame or cage, and be painted white, and have car number on it. All car weights are with the driver as raced. No allowance for fuel burn off, lost parts. Weight will be taken as the car exits the track.

Additional weight may be added to any car at any time by the GSS officials to ensure competitive balance within this class. If you plan to be fast or think you will be fast, be prepared this means bring weight and bolts. Weights may be added or deducted at the discretion of the tech staff to ensure a competitive balance is maintained.

## **7. TIRES**

Stock passenger car radial tires only. No racing slicks or race tires.

### **No Falken Tires allowed.**

13" tires max width P205, 70, 65, & 60 series allowed.

14" tires max width P205, 70, 65, & 60 series allowed.

15" tires max width P205, 70, 65, & 60 series allowed.

*Tires must not exceed \$105 MSRP. Management may claim any tire for \$75.*

Tire Sizes may vary from left and right for stagger purposes.

Tires may not extend out from body of car by no more than 2".

**Minimum Tire hardness of 380 UTQGR (uniform tire quality grade rating. Tires can and will be durometered throughout competition. Minimum Durometer reading is 60.**

Chemical treatment of tires (softening) is not permitted and if found guilty will result in the disqualification from the event and loss of prize money and points. Drivers guilty of altering and/or chemical treatment of tires will also be suspended for the next night of racing. If a driver is found altering and/or chemical treatment of tires on the last night of competition, he/she will be disqualified for that night of points and prize money and deducted of all points from the previous night of competition.

## **8. WHEELS**

7-inch wide maximum steel wheels only. (No aluminum or magnesium) Wheel size allowed is 13", 14" or 15" however, wheels must be same size per axle. One valve stem per wheel maximum. The use of any bleeder valve prohibited. No proportioning valve allowed. You may run aftermarket heavy-duty wheels, minimum numerical backspace of 3-5/8" (example: 4", 4.5", 5" are allowed, and 3", 2.5", 2" not allowed). Wheels of 3-5/8" backspacing will not be allowed to use wheel spacers. All other wheels will be allowed to use wheel spacers up to 1/2" thick. 1" lug nuts are required on all wheels.

## **9. ROLL CAGE**

Minimum required: two-point hoop bar behind driver's seat, recommended four-point cage around the driver, in either case of 1 3/4" diameter .090" wall, mild steel tubing. No exhaust tubing or water pipe. Roll bar/cage must be sufficiently welded to floor/rocker box, or welded to sandwich plate bolted to floor. Top of roll bar/cage must be reinforced to the rear with two bars, either to spring towers or rear frame. Spring towers may be connected side to side, at both front and rear suspension. Main roll bar behind driver must contain a diagonal bar. Recommended 3 door bars, driver side and passenger side. Mandatory is a driver side steel deflector plate, 1/8" minimum thickness. Recommended to have 5 side to side bars top of main hoop, bottom of main hoop about 4" above floor middle of main hoop directly behind seat top front of cage by windshield, and at front of cage at dash height. The cage must protect the driver. Safety padding required around driver (door bars and roll cage bars) You may skin door panels for installing roll cage.

## **10. BRAKES**

Car must have functional brakes on all four wheels. No aftermarket brakes proportioning valves No drilling or drilled rotors Stock components only, (no aftermarket) No wheel fans or electric blower motors allowed.

## **11. FUEL TANK**

Stock fuel tank located in front of rear wheels can be left there but must be secured with metal straps. All other fuel tanks or fuel cells must be mounted in the trunk area between the rear wheels as far forward as possible, mounted on top of floor pan, and protected from rear collision. Tanks must be fastened with steel straps, bolts, and oversized washers. A complete steel firewall must be between the tank and the driver's compartment. If car came as a hatchback style, and fuel cell is in rear trunk area, a firewall will have to be built into car. Fuel cells are recommended with 8-gallon capacity.

## **12. EXHAUST**

First few inches must be OEM stock out of manifold and finished with Maximum 2 1/2" O.D Exhaust must exit behind driver and meet. Maximum 100 decibels at 100 feet, any car not meeting 100 decibels will add 25#s for the night and must be remedied by next event. Mufflers are strongly recommended and maybe required in future at any time. All exhaust must exit under car to meet this requirement. No flex pipe; No dual exhaust or aftermarket headers. Cast iron exhaust manifold or OEM header only allowed, header must have been offered from manufacturer as a production build.

## **13. STEERING WHEEL**

Stock, manual or power units only. No aftermarket components. Fabricated steering column must use 2 U-joints. Removable steering wheel allowed. Collapsible steering column recommended.

## **14. DRIVETRAIN**

Stock transmission. (All gears should be operational including reverse).

## **15. ELECTRICAL SYSTEM**

A 12-volt system is allowed. Must have battery securely mounted in stock location or inside of car. All cars must have an ignition switch that is both accessible to driver and safety crew. Should be painted safety orange and lettered ignition switch. All cars must be able to start on their own power to maintain their starting position. No high performance or aftermarket ignition systems permitted. Battery cables must have grommets on box to prevent chaffing. ECM or computer must be same for vehicle used. ECM can be claimed by tech official for examination.

## **16. TRANSPONDERS/RADIOS/ELECTRONICS/MISC**

**16A.** TRANSPONDER: 150" behind front edge of car with clear view of track.

**16B. RACEceivers** are mandatory for Race Director Communications frequency is 454.000

**16C.** RADIOS: 2-way-radios are not allowed.

**16D.** ELECTRONICS: No Data Logging gauges, or Data recording/acquisition equipment are allowed. No computer or video analysis equipment of any kind allowed.

**16E. CHAMPIONSHIP POINTS & MONEY:** Championship points will be awarded per your finishing position. If driver is disqualified, drivers behind them do not advance.

**16F. TEAM DRIVING:** Not Allowed.

**16G.** Tow Hooks are required front and rear.

## **17 LOCAL TRACK VISITING EXCEPTION**

Cars from local neighboring tracks that have similar but differing rules, and/or similar performance, may be allowed to participate during the season in the interest of welcoming competition. These cars will be granted temporary eligibility status for two weeks at the discretion of GSS Tech Officials on a case-by-case basis for eligibility and rule book conformity.



**18. TECH INSPECTION**

**18A.** All cars are subject to inspection **ANYTIME** before, during, or after a race; Officials reserve the right to disqualify cars, require changes, confiscate illegal parts etc. Any interference with any official(s) and his/her duties will result in an automatic disqualification, and/or possible suspension. Disqualification (except weight violation) is retroactive to ALL previous events competed in that race meet. Any driver/owner refusing to allow the track officials to inspect his car will lose points and money earned for the night. Driver must provide their own tools.

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**18B WEIGHT PENALTIES: See Below**

<i>WEIGHT</i>	<i>OFFENSE</i>	<i>POINTS</i>	<i>FINE</i>
<i>1-5 LBS LITE</i>	<i>ANY OFFENSE</i>	<i>-10 POINTS</i>	<i>-\$25</i>
<i>6-10 LBS LITE</i>	<i>ANY OFFENSE</i>	<i>-25 POINTS</i>	<i>-\$50</i>
<i>11 LBS &amp; OVER LITE</i>	<i>ANY OFFENSE</i>	<i>DQ</i>	<i>DQ</i>

**19. TEAR DOWN CLAIM:** For a fee of \$500 any 4 Cylinder Stock driver may request to have the head, intake, exhaust manifold removed for inspection. If found legal, \$300 is awarded to the one inspected with \$200 retained by the officials. If illegal, the fee is returned to the protester and the violator forfeits all money and points won that night. . Officials can require air intake, fuel injectors, coil packs, computer, intake manifold and heads be removed and inspected for compliance. If components are found to be illegal they will be confiscated and destroyed. If found to be legal the owner will receive \$100 allowance for gaskets.

**20. DYNOMETER TEST:** At the request of the Tech Staff any engine can be required to be dynamometer tested to determine its compatibility with the intent of the rules. ASM will be the official dyno facility of GSS.