

TOMAH-SPARTA SPEEDWAY

20223Rules

Late Models

Updated 01/31/23



The Guidelines and/or regulations set forth herein are designed to provide for the orderly conduct of racing events and to establish minimum acceptable requirements for such events. These guidelines shall govern the condition of events and participation therein. They are intended as a guide for the conduct of events and are in no way a guarantee against injury or death to a participant, spectator, or official. The Director of competition, or his authorized designate, shall be empowered to permit minor deviation from any of the guidelines and or regulations herein, or impose any further restriction, which, in his or her opinion, does not alter the purpose of the organization. Deviation of these guidelines and or regulations will be the responsibility of TSS officials, whose decisions are final.

TSS may change any rule at any time in an effort to reduce the cost of racing, maintain equal competition, or improve safety. **Big 8 style cars welcome.**

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1. SEATS Approved aluminum driver's seat required. 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 required. Full containment seats recommended.

2. SAFETY BELTS Minimum 3-inch wide lap belt, 3-inch wide shoulder harness and submarine (crotch) strap required. Belts must be anchored to roll cage or frame. Grade "5" bolts and hardware required. Shoulder harness must not be anchored lower than 2" below drivers shoulder height. Belts must be dated **2018** or newer. 6-point belts (double crotch strap) are recommended.

3. DRIVING COMPARTMENT Cockpit must be completely sealed off from engine compartment and fuel cell. Padding required around driver including steering post. Securely mounted fully charged fire extinguisher with visible dial type gauge required, (fire systems recommended). Ribbon or mesh type window net required, with belt buckle release located at top/front. Clearly labeled push-pull or toggle type kill switch accessible from both sides of car required. No suspension components including stabilizer bar can be adjustable from the driving compartment. No carbon fiber interior components will be allowed. Likewise, no carbon fiber or titanium components allowed anywhere on car. No digital gauges (including tach), no electronic monitoring devices (data loggers) capable of storing or transmitting information. Memory recall analog tach allowed. All wiring must be visible for inspection.

4. DRIVER'S ATTIRE Complete approved fire retardant driving suit and gloves required. Eye protection and a Snell SA-2010 (SFI 31.1 2010) helmet or newer required. SFI-38.1 Head and Neck restraints recommended. Fireproof shoes recommended. MIS officials will inspect items related to safety, but ultimately it is the responsibility of the driver to monitor, maintain and update their safety equipment.

5. APPEARANCE A professional appearing paint job in an attractive color required. All lettering must be professional and in good taste. Numbers: 18" on both doors, and roof, readable from the right side. 1" square rub rails allowed, mounted within 3" of ends & ends must be tapered and capped. Division sponsor decal must be displayed on top of windshield.

6. WHEELBASE & TREAD WIDTH Minimum wheelbase 103", maximum wheelbase 105". Maximum tread width 65", measured with frame set at 4" center to center of tires at spindle height (front and rear).

7. CHASSIS Tube or stock stub allowed. Frame rails must be a min. 2" x 3" x .125" wall tubing. There is NO minimum ground clearance rule, chassis may be placed on 4" blocks to confirm correct height of body components and additional measurements. Excessive sparking will result in black flag.

8. ROLL CAGE All roll cage tubing must be at least 1 3/4" x .090" wall. Welded gussets required on all joints. At least four evenly spaced horizontal door bars required on left, and three on right side. X-configuration on right side, counts as one bar. All door bars must be mounted to the frame rails and the main roll cage uprights. Door bars must be connected with a minimum of two equally spaced vertical tubes. Left side door bar deflector plates of at least 1/8" steel required. Diagonal bar in top hoop required. Floor pan under driver must be heavy-gauge steel. 1/8" protector plate in front of left rear trailing arm required (or may be boxed).

9. SUSPENSION Conventionally mounted 5" springs or coil over type suspensions. Spring must be magnetic steel, with a minimum 2.5" diameter, a minimum 8" height, all rungs must be the same diameter, with maximum retail price of \$100. Steel or aluminum bodied, nonadjustable shocks (maximum retail of \$200), FROM LIST BELOW OF APPROVED SHOCKS:

AFCO: SERIES 13T, R, S, 21

BILSTEIN: SERIES SZ, SN

CARRERA: SERIES 62, 65, 67

PRO: SERIES A, AC, TA (STEEL), PG

QA1: SERIES 21, 50

ARS: SERIES 2000 GENESIS: SERIES GSO

INTEGRA: SERIES 431

KONI: 30 SERIES Part Numbers 7325, 7436, 7499, 7647, 9325, 9436 (adjustable, nonrebuildable) mandatory 7" on the front and 7" or 9" on rear only, bump stop enclosed in KONI package will NOT be allowed. Cars with KONI package on all corners receive a 25 lb. weight break. Manufacturers components must be used, valving optional. Post race shock disassembly is the responsibility of the owner/crew chief. Bring tools or make arrangements. No bump-stops/rubbers, compression/rebound-limiting or coil bind set-ups. Maximum allowed is one conventional (single coil) spring rubber per spring. Maximum of one shock / spring per wheel. Rear suspension must be solidly mounted with heim joints only, (no rubber bushings). No lift bar, fifth coil or other spring-loaded/hydraulic suspension device allowed. No rear stabilizer bars.

10. SPINDLES & HUBS Any steel spindle allowed. Aluminum steering arm and ball joint mounts allowed. Aftermarket hubs required, no oil filled hubs allowed, maximum MSRP \$325. Wheel studs, 5/8" minimum diameter, must be long enough for threads to show on outside of lug nuts, lug nuts must be steel. No gun-drilled studs permitted. No weight penalty for wide five hubs.

11. STEERING Rack & Pinion or steering box with center link style only. No electric power steering units. Quick release steering wheel hub required. Steering column must incorporate a minimum of two U-Joints. Collapsible steering shaft recommended.

12. REAR END Stock or rear spur gear type quick change units with steel tubes: no mini type (8.5" or less) quick change. Maximum camber 1/2 degree. Spool, Detroit Locker (ratchet type), differentials are permitted. One-piece straight spline drive plates only. Drain plugs must be safety wired. Magnetic steel axles only (min 1.125 O.D.), gun drilled allowed (same I.D. and O.D. left and right), No crowned or traction (wrap-up) axles allowed. Cars with a spool receive a 25 lb weight break. No weight penalty for Detroit Locker (ratchet type) maximum MSRP \$700. Torque sensing differentials, will NOT be allowed.

13. BRAKES Four wheel brakes required at all times. Single, dual, or four piston (steel or aluminum) calipers with maximum retail price of \$190. Maximum diameter 12 1/4" rotors. No drilling or drilled rotors permitted. Self centering or floating rotors are NOT permitted. Rotors must be solidly/rigidly bolted. No floating caliper brackets, ABS units or brake recirculation systems. Only one brake bias adjusting unit per car. Wheel fan or blower motor devices at brakes allowed. No thermal lock pistons allowed.

14. ENGINE LOCATION GM engines must be located so that the center of the furthest forward spark plug hole is no more than 2" behind the front axle centerline. Ford and Chrysler allowed 4" engine set back, as measured above. 302 Ford allowed 4" set back with a 25 lb. weight penalty, (weight penalty goes to zero if engine is placed at a 2" set back). Crankshaft centerline: 10" minimum ground clearance, measured with frame height set at 4". Oil pan must be no lower than bottom of cross-member. Options to correct are: add to bottom of crossmember or raise engine.

15. ENGINES *Limited Concept Engine-* Two valves per cylinder. No aluminum blocks or heads. GM & Ford - 362 CID maximum, Chrysler - 373 CID maximum. All engines must meet the following specifications regardless of manufacturer: Stock or stock replacement cast iron unaltered heads with factory valve angles (no angle milling, porting, polishing, acid dipping allowed). GM Bowtie numbers 14011058, 10134392, (casting number 14011034 and 12480034), World Products Sportsman II numbers 011150, 011250 allowed. On a trial basis, allowing Dart

Iron Eagle numbers 10110010-10220010. Ford 351N and 352N heads, World Products Windsor Sr. 053040 allowed. Chrysler 5249769 and 4529446, LA-X heads allowed. Casting numbers must be visible on all heads. Gasket matching not permitted. Maximum allowed are 2.02" intake and 1.6" exhaust valves, both with minimum stem diameter of 5/16". Flat top pistons required. A minimum of zero deck height required. 10.8 to one maximum compression ratio. Connecting rods must be magnetic steel with rod journal minimum diameter 1.900". Oil pan minimum depth 6.5". A 3/4" NPT inspection hole in oil pan required. Inspection hole must be located in line with second or third rod journal of crankshaft, on either side of pan and above sump area (oil level). Hole in windage tray in line with inspection hole required. Valve spring retainers are the only titanium parts allowed. No radius edge lifters allowed. Lifters must be able to rotate in their bores. No roller or mushroom cam/lifters. Maximum valve lift - .600" (measured at retainer). OEM style rocker arm mounting required. Firing order may not be altered. Ignition system may not be computerized, programmable or have memory circuits. **MSD 6ALN mandatory.** No magnetos, crank trigger, multiple coil or programmable ignition systems

allowed. Only one ignition box allowed. Production type steel crankshaft with normal configuration counter weights. No dry-sump or vacuum systems of any kind allowed. External single stage oil pump allowed on Ford engines. OEM type, mechanical fuel pump, in original location, required. If beehive valve springs are used, the competitor may be required to switch valve springs on two valves at time of inspection to conventional springs for valve angle measurements.

Carburetor: Holley 4412-2 bbl. only. Holley Ultra series carb. not allowed. The Holley Aluminum (Part #0-4412SA) 500 cfm carburetor is NOT approved. Carburetor Rework Guidelines: Body of Carbs: No polishing, grinding, or drilling of holes allowed. Gasket surfaces may be machined for improved sealing. The choke may be removed, but all screw holes must be permanently sealed. Choke horn may not be removed. Boosters may not be changed, including no additional holes. Height, size, and shape must remain standard to 4412 and unaltered. Venturi area must not be altered in any manner. Casting ring must not be removed. Base plate must not be altered in shape or size. Butterflies must not be thinned or tapered. Screw ends may be cut even with shafts, but screw heads must remain standard. Throttle shafts must remain standard and must not be thinned or cut in any manner. Carburetors metering block must be stock or HP style only. No aftermarket metering blocks permitted. Only (3) three open emulsion holes per side permitted. Any additional emulsion holes must be plugged and nonfunctional. Any attempt to pull outside air other than straight down through the venture is not permitted. Jets may be changed. No dial-a-jet devices. No addition of any material, such as epoxy, may be added to carb or parts except to seal vacated external screw holes. EXCEPTION: epoxy allowed on boosters of 4412-2 bbl at main body. Double throttle return springs required. Air cleaner required. Air boxes allowed with cowl inlet only.

Carb Adaptor: 1 5/8" max thickness with gaskets. Original orientation of carb to engine required. Adaptor must be one piece. No part of carb adapter may protrude into intake manifold.

Intake Manifold: Edelbrock Victor Jr. 2975 (GM), 2915, 2920 (Chrysler), 2921, 2980, 2981 (Ford). Plenum and port configuration must remain as-produced. No porting modifications, including gasket matching. No spacer/adaptor plates between intake manifold and cylinder heads.

Crate Engine: Chevy crate engines allowed. All crate engines must be rev controlled to 6700 RPM maximum and equipped with a MSD 6ALN ignition box. Engine set back for each will be as stated above. Carburetor: Holley 650-HP P/N 80541 required. No modifications allowed, no epoxy on boosters. GM 604, must be used as produced. Only permitted updates are 1.6 rockers, 1 5/8" tall carb spacer (as above), and small balancer. Compression can never be greater than 9.6:1. Certification and sealing may be required from REDI or Wegner or Powersource All crate engines: may not be altered from factory specs. Any evidence of tampering with engine components will result in disqualification, confiscation, fine, and suspension for balance of season. Tech staff reserves the right to impound motors for inspection or dyno testing. Factory/Certification Seals may be removed by Officials for tech purposes, allowing for more in-depth technical inspection throughout the season.

LS Spec Engine: Wegner Automotive Research 5.3L engine only, must be used as produced. Maximum 3 1/2" set back as measured above. Must use 4412 2 bbl carb with adapter/spacer plate supplied in engine package. This engine package will be run on a trial basis, with base weight of 2860 lbs. Weight or other parameters may be adjusted during the racing season to maintain competitive balance. **Wegner 20 lb. spec plates must be bolted to side of the block, one per side.** All LS Spec engines must be rev controlled to **7600 RPM** maximum and equipped with a MSD 6ALN ignition box. Must utilize mandated Schoenfeld 136 LS1 -1 3/4" header. Wegner header 256WAR53HDR allowed, additional weight may be added to cars with this header or Wegner header may be disallowed at any time. **Tiry 5.3 will be allowed on a trial basis.**

16. EXHAUST Headers allowed on all engines, maximum retail price \$650. No Tri-Y Headers or Merge-Collectors allowed on any engine. No Stingers, inserts, cones, scavenge devices, or any other devices allowed in header collector. NO custom, one of a kind or homemade headers. Cast iron manifolds allowed with no alterations. Exhaust must remain under car body. Must exit behind driver, beneath car, before rearend, pointing downward. All cars 100-decibel maximum measured from middle walkway of grandstands. Add 25 lb for right side exhaust (may be used only 2 times per season).

17. CLUTCH, TRANSMISSION & DRIVESHAFT Standard transmission with all gears operating required. No straight cut gears and counter gear must be driven by input shaft. Madefor-racing clutch required, two disk 5 1/2" minimum. Carbon clutch not permitted. Internal clutch transmissions not allowed. Steel or aluminum driveshaft required, no energy absorbing or carbon fiber driveshafts allowed. Minimum diameter of driveshaft is 2 1/2", with safety hoop required on front half. Driveshaft must be painted a bright reflective color. No shifting allowed on restarts.

18. RADIATOR/COOLING Metal radiator mounted in front of engine, between frame horns. Fan protection and overflow tank located in engine compartment required. Water pump must be stock type in stock location. Antifreeze is not allowed.

19. FUEL & FUEL CELL Fuel cell complete with 1/8" steel can, bladder, foam and rollover valve required. All vents must be valved to eliminate leakage. Fuel cell must be mounted behind rear axle, between frame rails. Rear protection or ASA bar must extend below bumper or frame, be lower than bottom of cell, and be braced back to main frame. Bottom of fuel cell must be min. 10" from the ground. Filler spout: must be accessed through deck lid, may be extended, but not connected to bodywork. Aeroquip or equivalent gas line required, must be located outside driver's compartment in protected location. Oberg fuel shut-off, part # SV0828 (recommended), must be mounted within 12" of fuel cell. Gasoline only, must meet specific gravity of manufacturer. Over tail chassis: max 15 gal. cell (25" x 18" x 10")

20. BODY & APPEARANCE **Any Big 8 Series approved body allowed.**

Body measurements **may be** taken with frame height set at 4". All windows must be of Lexan. 12" max vent (wing) window. No venting cockpit air allowed. Two 3" maximum diameter

hoses/ducts allowed for driver cooling. Air box between nose and radiator may have no pieces wider than radiator. No under body air deflectors or panning allowed. All air for ducts and cooling must be pulled from radiator box. Weight penalties may be assessed for bodies not conforming to **industry approved guidelines**, dimensions, and/or templates. Hoods that utilize hinges must fold back all the way back to the windshield. Cam lock hood supports that hold the hood at 45 degree angle are not allowed (interfere with tech and wrecker personnel).

21. WEIGHT All cars - 49% min. front axle, 42% min. right side, with driver (at all times).

Limited Concept Engine- 2825 lbs.

Mopar over 362 CID- 2870 lbs.

GM "certified and sealed" Crate, no updates - 2750 lbs

GM Crate Engine and any permitted updates - 2825 lbs

Wegner **and Tiry** LS 5.3L spec engine- 2860 lbs.

Gas allowance for Heats and Features is one pound per lap. Ballast must be painted white and lettered with car number and be readily available for less than \$4 per pound.

22. WHEELS Aftermarket made for racing, steel wheels required. 15"x 8" maximum, minimum weight of 14lbs. Tire pressure bleeders: not allowed, remove from wheels, weld holes shut or add another valve stem. Bleeders discovered at the track, will require wheel removal and installation of 2nd valve stem. This may happen at any time, and may interfere with your hot lap time.

23. TIRES This class will utilize the Hoosier D-800 only.-All Cars will be allowed one new tire, two (2) tires measuring 4/32 and one (1) tire measuring 5/32 depth. Chemical treatment (softening) is not allowed.

24. RADIOS All drivers must have a spotter (labeled with car number or driver's name) in the designated spotter area during all racing events. Raceiver required by spotter or driver.

25. TOW HOOKS Tow hooks on front and rear required.

26. BATTERY 12-volt systems max. Batteries must be securely mounted ahead of rear axle, away from fuel cell and lines. Batteries in driving compartment not allowed. Battery (negative post) disconnect switch recommended.

27. TRANSPONDER Required. Install no more than 12" above track surface, with unobstructed path to track, and arrow pointing down. Location is mandatory: forward from center of rear axle to center of transponder is 25 1/2".

28. CHAMPIONSHIP POINTS Your final finishing position will be determined after all applicable cars have passed thru tech. Drivers finishing behind disqualified drivers will have their finishing position adjusted upward, and points and money will be awarded based on that result.

29. TEAM DRIVING will not be allowed.

