

# 2021-2023

## Big 8 Late Models

Rules: Kevin Rogers 262-749-6607  
Events: David Deery 815-633-1500

## SAFETY AND APPEARANCE

### 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.

### 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-inches below drivers shoulder height.  
Belts must be dated 2019 or newer.  
6-point belts (double crotch strap) are recommended.  
Hans or Hutchins II device is highly recommended for all participants. Competitors using the HANS device may use a standard three-inch (3") or the Schroth racing two-inch (2") 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; profiiii-6h.

### 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.  
Ribbon or mesh type window net with belt buckle release required. Buckle located at top/front recommended.  
Clearly labeled push-pull or toggle type kill switch accessible from either side of car required.  
No suspension components including stabilizer bar can be adjustable from the driving compartment.

### DRIVER'S ATTIRE

Complete approved fire retardant driving suit and gloves required.  
Eye protection and a Snell SA-2015 helmet or newer required. 2020 recommended  
SFI-38.1 Head and Neck restraints, fireproof shoes, and fire systems recommended.

### APPEARANCE

A professional appearing paint job in an attractive color required. All lettering must be professional and in good taste.  
Numbers: 18-inches on both doors, and roof, readable from the right side.  
1" square rub rails allowed, mounting must be within 3" of ends & ends must be tapered and capped.

### MISC

Management and/or officials reserve the right to impound a car at any time for any reason  
All parts declared illegal by inspection will be confiscated by Officials and disposed of at their discretion.

**Transponders must be mounted 6"-8" in front of rear axle centerline.**

## CHASSIS, ENGINE & BODY

### WHEELBASE & TREAD WIDTH

Minimum wheelbase 104", plus/minus 1 inch  
Maximum tread width 65", measured center to center of tires at spindle height (front and rear).  
Will be measured with the referee.

### CHASSIS

Tube or stock stub allowed. Frame rails must be a minimum of 2-inch by 3-inch .125 wall tubing.

## ROLL CAGE

All roll cage tubing must be at least 1.75" x .090" wall. Welded gussets required on all joints. At least four evenly spaced horizontal 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 .125" steel required. Diagonal bar in top hoop required.

Floor pan under driver must be heavy-gauge steel.

## SUSPENSION

Conventionally mounted 5-inch springs or coil over type suspensions. Spring must be magnetic steel with maximum retail price of \$100.00. Minimum coil over spring free height will be 10" (inches) anything shorter will not be allowed. Will be measured with spring off the shock. Springs on Camaro or stock style fab chassis cars, minimum spring free height rule will be 8.5" (inches) this spring dimension is 8.5" (inches) X 5" (inches). Springs will be measured off the car.

Approved Non-Adjustable Shocks (Maximum retail price of \$210) series; Afco 13T, R, S, 21, ARS 2000, Bilstein SZ, SN, Genesis GSO, Integra 431, Pro A, AC, TA, PG, QA1 21/26, QA1 16, 50/51, 62/67 63. Manufacturer's components must be used, valving optional.

Post-Race shock disassembly is the responsibility of the Car Owner/Crew Chief. Bring Tools or make arrangements.

NO Bump-Stops/Rubbers, Compression/Rebound-limiting or Coil-Bind set-ups. NO chains, bolts, straps, coil bind, etc. Coil Binding ---Cars will be inspected by using a 1.5" (inches) ramps. Bumper must be mounted solid. Nose must comply with minimum nose heights rules at all times during the inspection procedure. Front of car will be pushed down to the ground by crew and officials and held there. The nose must touch the ground. Visual inspection by officials to meet the no bumping or coil binding rules will be done. Other means of inspection may be used.

One shock/spring per wheel. One (1) conventional (single coil), spring rubber per spring allowed.

Koni shocks **WILL** be allowed. 30 SERIES part numbers 7325, 7436, 7499, 7647, 9325, 9436 (adjustable, non-Rebuildable) 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 will receive a 25lb. weight addition.

No shock covers

All shock absorbers will have min of 2" inches of travel (compression and rebound) in mounted position at all times.

Cars will have 2 minutes (post-race/ post-podium) to rebound to body height requirements, without any assistant with driver in car.

Rear suspension must be solidly mounted (no rubber bushings). Heim Joints only.

No Coilover eliminators or sliders allowed.

No lift bar, fifth coil or other spring-loaded/hydraulic suspension device allowed. No rear stabilizer bars. 1/8" protector plate in front of left rear trailing arm required. (or may be boxed)

## SPINDLES & HUBS

Any steel spindle allowed. Aluminum steering-arm and ball-joint mounts allowed. Aftermarket hubs with 5/8" wheel studs required, maximum retail price \$250. NO GRANDFATHERING. No gun-drilled studs permitted.

Wide five hubs and spindles allowed with **no** weight penalty.

No oil filled or oil fill-style hubs allowed.

## STEERING

Rack & Pinion, or steering box with center link style required. No electric power steering units.

Quick release steering wheel hub required.

Collapsible steering shaft recommended.

## 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. No lock out plugs.

**Spool or ratchet differentials only (maximum ratchet price is \$700.00) No torque sensing or any other differentials will be allowed.**

One-piece straight spline drive plates only. Drain plugs must be safety wired.

Magnetic steel axles only, gun drilled axles allowed. Left and right side gun drilled axles must have same I.D and O.D.

Solid axles must have a minimum of 1.125 O.D.

Crowned axles not allowed. Traction (wrap-up) axles not allowed.

## BRAKES

Four wheel brakes required at all times.

Single or dual piston (steel or aluminum) calipers.

Maximum retail price \$190.

Dual Piston Brake Caliper Maximum retail price \$190.

Single Piston Caliper no weight addition

Any single, dual or four piston caliper brake system allowed with **NO** weight penalties. (Maximum retail price \$190)

NO Thermal Lock Pistons allowed

**Rigid mounted rotors**, maximum diameter 12¼” rotors, no drilling permitted.  
No floating calipers or rotors, no self-centering rotors, ABS units or brake recirculation systems.  
Only one brake bias adjusting unit per car.  
No blower motor devices allowed. Wheel fans allowed

## 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. 302 Ford allowed 4” engine set back with 30 lbs penalty, otherwise 2” set back.  
*Ford/Mopar based engines may have weight adjusted in the spirit of competition.*  
Crankshaft centerline 10” minimum ground clearance.

## ENGINES

**Limited Concept Engine** – *Call for provisions, where home track rules differ.*

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: **\*\*\* REMINDER \*\*\*** 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, Dart Head part# 10110010 thru 10220010, Dart Iron Eagle 180 sbc 23° cyl head are allowed. Ford 351N and 352N heads, World Products Windsor Sr. 053040 allowed. Chrysler 5249769, 4529446, **LA-X** heads. Casting numbers must be visible on all heads. Gasket matching not permitted. Minimum combustion chamber 62cc, maximum 2.02-inch intake and 1.6-inch exhaust valves required. Flat top pistons required. A minimum of zero deck height required. 10.8 to one maximum compression ratio. Connecting rods must be magnetic steel. 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. Lifters must be able to rotate in their bores. No roller or mushroom cam/lifters. Maximum valve lift - .600” (measured at retainer)., **only 3/8”, 5/16” or 11/32” valve stem diameter allowed.** OEM style rocker arm mounting required. Firing order may not be altered. Ignition system may not be computerized, programmable or have memory circuits. No magnetos, crank trigger, multiple coil or programmable ignition systems allowed. **Only ONE ignition box allowed and must be out of reach of driver No add-on or inline Rev Limiters allowed. Rev Limiter must be built into ignition box.**

**Rev limit of 7400 is required on all open engines (except crate motors 6400)** open and LS engines are 7400 RPM chip. 604 crate engines are 6400 RPM chip.

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. Chrysler engines add 20 lbs. for CID over 362.

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 to head. If Bee-Hive valve springs are used, the competitor will be required to switch to conventional style valve springs for post-race tech purposes.

**Carburetor:** Holley 4412-2 bbl. Holley 4412 Carburetor Rework Guidelines:

Body of Carbs: No polishing, coating, 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 and unaltered. Venturi area must not be altered. 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: Shafts must remain standard and must not be thinned or cut in any manner. Metering block stock or HP metering blocks allowed with a maximum of 3 emulsion holes per side, metering blocks with additional holes may be plugged and non-functional. No aftermarket blocks permitted. Holly 4412-2bbl only / Holley ultra-series carb not allowed. The Holley aluminum (part# 0-4412sa) 500cfm carburetor is not approved at this time.

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.

Epoxy allowed on boosters of 4412-2 bbl. at main body only.

**Carb Adaptor:** 1 5/8” adapter plate maximum thickness, with gaskets adaptor may protrude into plenum of intake manifold by a maximum of ¼”. Tapered or beveled adaptors are allowed. Adaptors are one piece only.

This does not apply to crate motors.

LS Spec Engine must use 1” spec adaptor plate by Wagner part# WA0349.

No Holley Ultra XP Carburetors allowed.

## RETURN SPRINGS & AIR CLEANER

Double return springs required

Air boxes allowed with cowl inlet only.

## GM Crate Engine

Part number 88958604 and 19318604, must be used as produced. Maximum 2" set back. Ignition: MSD with Rev-control required and must be out of driver's reach. No add-on or inline Rev Limiters allowed. Rev Limiter must be built into ignition box. Mounting on right side of dash required. RPM limit will be listed on the Event Entry Form. Carburetor: Holley 650-HP P/N 80541-1 required. No modifications allowed. 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. Factory/Certification Seals may be removed by Officials for tech purposes, Tech staff reserves the right to impound motors for inspection or dyno testing. GM Crate engines weight #2775 Stock, 2825 Rebuilt. Specific updates are; 1.6 rocker arms, Small Harmonic Balancer, Carb Spacer. **Compression limit 9.7 to 1, 6400 RPM chip on crate motors.**

**ALL CRATE AND LS 5.3 SPEC ENGINES SHEETS MUST HAVE A COMPLETE ENGINE BUILD SHEET ON FILE WITH BIG-8 LATE MODEL SERIES/ROCKFORD SPEEDWAY.**

## EXHAUST

Headers allowed on all engines (max retail price \$650). Tri-Y not allowed, no Merge-Collectors. NO Stingers, inserts, cones, scavenge devices or any other devices allowed in header collector at any time. Exhaust must exit in front of rear axle (pointed towards the ground) or out passenger door. Under car allowed 100-decibel max.

**Right door exit must be 12" max from ground, not pointed up, and be 95-decibels max.**

Exhaust door plates must be flush at all times, with or without rub rails.

**NOTE some tracks may require exhaust to be under the car.**

Track rules apply when applicable.

NO custom, one of a kind or homemade headers.

No weight penalty of exhaust out the door, but Be exhaust MUST REMAIN FLUSH.

## CLUTCH, TRANSMISSION & DRIVESHAFT

Stock transmission with operating reverse gear required. No straight cut gears. Counter gear must be driven by input shaft. Made-for-racing clutch required. Two disk 5 1/2" minimum. Carbon clutch not permitted.

Steel or Aluminum driveshaft minimum diameter 2 1/2". Safety hoop required on front half of driveshaft.

Driveshaft must be painted a bright reflective color.

## 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.

## FUEL & FUEL CELL

Fuel cell complete with 1/8" steel can, interior bladder, foam baffle and rollover valve required. No deflector plates.

Fuel cell must be mounted behind rear axle, between frame rails.

Over-Tail chassis – maximum 15 gallon capacity (25"x18"x10") and must have ASA bar.

Bottom of fuel cell must be at least 10 inches from the ground.

Filler must be accessed through deck lid. Filler spout may be extended, but not connected to bodywork.

All vents must be valved to eliminate leakage.

Aeroquip or equivalent gas line required. Routing must be outside of cockpit and protected from damage.

Oberg Fuel Shut-Off (Part # SV0828) is optional.

**Fuel must meet properties of track supplied fuel. NO E-85 FUEL ALLOWED**

Fuel samples may be taken at ANY TIME and tested (digitron, specific gravity, germaine drop testing, water testing and any other testing deemed necessary). Alcohol, nitro methane, nitro propane, nitrous oxide, other oxygenating agents, other additives and/ or fuels that contain masking agents or oxygen are NOT permitted. USE OF SUCH SUBSTANCE OR ADDITIVE WILL RESULT IN IMMEDIATE DISQUALIFICATION.

## BODY & APPEARANCE

Five Star, ARP or equivalent template short track late model body only, subject to tech inspector scrutiny

Minimum roof height 47". No minimum frame height.

Spoiler: Single plane, 5" (measured from deck plane) x 60" (measured across rear) max. Spoiler must be clear (no lettering) and will be enforced. All heights and measurements will be with driver in car in seat.

**THE NEW FIVE STAR GEN-6 SUPER LATE MODEL BODY WILL NOT BE ALLOWED.**

Any non-approved (ABC or short track late model body) will add an additional 200 lbs.

No carbon fiber components of any kind.

Deck height 34.5" max.

Minimum ground clearance including nose and rocker panel is 4".

All windows must be of Lexan. 12" max vent (wing) window. Window may not be tinted.

No venting cockpit air allowed. 2 – 3” maximum diameter hoses and ducts allowed for driver cooling.

**Air box between nose and radiator may have no pieces wider than radiator 29” (inches) max Air may not be blown or forced onto tire or bead. Air maybe only directed to brake rotors. NO under body air deflectors or panning allowed. All air for ducts and cooling must be pulled from radiator air box or nose.**

Weight penalties may be assessed for bodies not conforming to Five Star guidelines, dimensions, and/or templates.

#### **WEIGHT**

Limited Concept Engine –**2825** lbs. Chrysler over 362 – 2870 lbs. 7400 chip

GM Crate Engine with RPM Rev-control – **2775 lbs. min.**

GM Crate Engine rebuilt or with updates and RPM Rev-control –**2825** lbs.

**GM Crate Engines max rev limit 6400**

(Rebuild MUST be done by an approved engine builder)

La Crosse 9 to 1 or 10.5 engine iron intake & exhaust, conventional springs, GM brakes – **2825** lbs.

(La Crosse shock rule applies)

**LS 5.3L SPEC Engine – 2900 lbs. (must have 40# mounted directly to engine block)**

LS engines must have a chip, 7400 max RPM mandatory

Add 30 lbs. for 302 Ford with 4” engine set back

Gas allowance for Heats and Features will be listed on the Event Entry Form.

1/2 # per lap...1/3 mile or less

1 # per lap.....3/8 mile or larger

Front axle 49% and right side 42% apply at all times. All weights include driver in seat.

Ballast must be painted white, lettered with car number **and be readily available for less than \$4 per pound.**

#### **WHEELS & TIRES**

Aftermarket made for racing, steel wheels required. 15” x 8” maximum. Wheel fans allowed.

Approved Big 8 Series Tires **required.** Series will be running the Hoosier D800 tire

**Marked tires must be used for all competitive events.**

Altering of any kind to the tires (softening) is not permitted.

No Air Bleeds or Bead Blower allowed.

**TOW HOOKS:** Tow hooks on front and rear required.

**BATTERY:** 12-volt systems max. Batteries must be securely mounted ahead of rear axle, away from fuel cell and lines.

Batteries in driving compartment must be in approved sealed battery box. Battery (negative post) disconnect switch recommended.

#### **ELECTRONICS:**

Radio frequencies must be registered with the tech officials.

Video recording from car, limited to 1 track viewing camera only.

Data recording/acquisition not permitted.

**Transponders must be mounted 6”-8” in front of rear axle centerline.**

**No digital gauges (including tach), no electronic monitoring computer devices capable of storing or transmitting information except for recall analog tach. All wiring must be visible for inspection.**

**\*\*\* Continuous developments in racing may necessitate changes. If necessary, we may update, modify and add to or delete rules. The “EIRI” (Except In Rare Instances) rule is always in effect and applicable.**

**Research and development of AFR (Air Flow Research) Aluminum cylinder heads 2021 season**

**Certified engine builders only may participate in this limited program (starting weight 2900#)**

**Contact series technical director for more information.**