



## Official 2021 LATE MODEL RULES

Effective January 1, 2021 through December 31, 2021

The Grundy County Agricultural District Fair, Inc. dba Grundy County Speedway hereafter known as GCS.

### Foreword

The primary purpose of Grundy County Speedway is to enhance the sport of automotive racing through, among other things, conducting and sanctioning GCS races. In furthermore of this supervisory and regulatory function, GCS has adapted the safety and completion rules set forth in this book. These rules as amended, supplemented or superseded are effective for the 2021 Grundy County Speedway unless otherwise expressly provided. All GCS members and all teams, race and series sponsors, as well as every other person participating or involved in any way in a GCS sanctioned racing event, shall be bound by these rules, as amended, supplemented or superseded from time to time and shall be responsible for compliance therewith. It is therefore recommended that you read this Rule Book carefully to assure your familiarity with the rules and regulations contained herein.

The rules and regulations that govern the activities of GCS are intended to assist in the orderly conduct of these activities and have been set forth to establish minimum acceptable requirements. No express or implied warranty of safety shall result from publications or compliance with these rules and/or regulations. They are intended as a guide for the conduct of the sport and are in no way a guaranty against injury or death to participants, spectators or others.

**The Grundy County Speedway Late Model Rules will be based on the ARCA Midwest Tour Rules for the 2021 season with some modifications. Please review the following in detail.**

### 1. ELIGIBLE CARS AND BODIES

All competing cars will be full-sized, stock American manufactured passenger car bodies. Only ABC/ABC Next Gen approved bodies (2004-2017) allowed. Original ABC Body rules or ABC Next Gen rules apply unless otherwise specified herein. Refer to ABC rule book, body guidelines will be posted at [www.grundycountyspeedwayonline.com](http://www.grundycountyspeedwayonline.com) or <http://www.abcbodies.com/>

Wheelbase 103 plus or minus 2" Front and rear tread width is a maximum of 66 Inches. Over 66 inch's Not Allowed.

No attempt to get any aero advantage allowed, panning of nose or sides, windows, side skirts, noses, tail panels, etc. Rocker Panels must be of original ABC design with original ABC stamps.

Five Star Bodies or flat 12 inch side vent windows only, 3 window braces front and 2 rear window braces. Must be approved.

No cutting, lightening, or excessive trimming around windows or drilling of holes in any body panels or windows to exhaust air. Any attempt to lighten bodies will result in a 25 pound weight penalty. All holes or vents must remain open for qualifying except nose panel.

The ABC Referee will be the official method of body measurement including TREAD WIDTH.

No panels allowed to extend tops of doors. Panning of radiator to front bumper and between frame rails for air intake to radiator allowed, maximum 29 inches, with only four sides which consist of continuous planes.

Panning under car (weight trays) we will allowed per USRA rules. Panning may start at foot box and only run to back of driver's area (cockpit) and remain inside frame rails.

Exhaust that exits from door must be flush and must have door flange and mounted flush to door. Add to ABC Rules MEASUREMENT "A" Must be a minimum of 11.5 inches and nose measurement must be 20 inches minimum from hood to bottom of the nose.

Right side door inner panel must drop down from the door and must be official approved.

The use of a 6.5 inch CLEAR spoiler will be allowed at all tracks.

All air for brake blowers must be taken from nose or radiator air box only, may not pull air from under car at any time, max 2 per wheel, Air must only be blown on brake rotors. Teams will have the option of utilizing 4" blocks to set car for measurements.

## **2. ENGINES**

STATEMENT- it is in the best interest of the Grundy County Speedway to allow various engine combinations to compete in series events.

Important NOTICE: We have no intentions of eliminating the 9-1 engine, we would prefer to see this combination worked into the Southern Super Parts Engine by 2021.

Block must meet specs for your chosen engine package. May be stock or aftermarket if allowed in your engine packages. Spec/SEAL engine packages may not change without the approval of the GCS and/or the SEAL Board, and will be deemed illegal for use if changed. ACE, Hamner, LST, MEP, Wegner LS. All SPEC/SEAL Approved engine packages (as well as 'Home Track') will have a complete parts list including part numbers/modifications/serial numbers/displacement and compression ratio/block and head numbers/crankshaft manufacturer and weight/camshaft manufacturer and dimensions/rocker manufacturer and ratio/valve material and numbers on file with series office. Any changes to the specifications will be put in writing and approved by GCS prior to changes being allowed to any SPEC/SEAL engine package. Any seal at any time may be broken for inspection. Any engine found to be non-compliant may result in all sealed engines from builder to not be allowed.

### **No 18 degree or SB-2 Chevrolet heads.**

Minimum crank height is 10 inches measured from the center of the forward crank bolt or back of crankshaft.

The Referee will be used to determine axle centerline, all cast iron engines allowed max 4 inch set back to forward most spark plug hole center, LS engines allowed 3.5 inch of setback.

All engine setbacks will remain the same.

Antifreeze is strictly prohibited.

Dry sump engines are highly recommended. Call with questions for wet sump engines.

## **3. ACE TYPE ENGINES**

Must be able to sell heads, complete for \$2500.00 (hardware, valves, valves springs, retainers, keepers and guide plates.)

ACE cylinder heads and intake manifolds must be unmodified, stock out of box. Machining, cutting, grinding, abrasive blasting, use of chemicals, or any alterations to change or alter the cylinder head or intake manifold from its 'as cast' state is prohibited.

Valves 11/32 valve stem or 5/16 valve stem may be used. No titanium valves allowed.

All valve spring sizes must be 1.55 max.

No shaft rocker arms allowed except on Mopar engines. The use of Mopar ACE Engines has been allowed.

Steel or titanium valve spring retainers are permissible.

Maximum 4 stage oil pump.

May have one extra water line per head.

Valve job may be blended into combustion chamber 3/8 inch from seat.

### **• ACE Engine Manifolds**

Any production type intake manifold allowed - provided it is readily available to all competitors from local race part suppliers. (Maximum cost \$375.00) maximum height of manifold is 7.25" (including any carb spacer and gaskets) the manifold height will be measured from the base of carb to top of cylinder block. Only one flat gasket with a maximum of .120 may be used between intake manifold and cylinder head - no spacer or wedge type gaskets allowed. No additional material may be added to manifold. No grinding or polishing of any part of the manifold -except you may match port the runners a maximum of 1".

- **ACE Engine Pistons**

Flat top pistons only - no part of piston may protrude above top of cylinder. (Maximum) compression ratio 10.5 to 1 (10.510 is illegal). Maximum engine displacement for GM and Ford is 362 ci. Dodge will be 364 ci. and minimum 350 ci. for GM, 346 ci. for Ford.

- **ACE Engine Camshaft**

The max lift on any roller cam is .625. Duration rule is 270 at 50 thousandths. No mushroom type lifters. Inlayed cams are prohibited. The maximum rocker ratio is 1.6 to 1. Rev kits of any type are prohibited. Only steel push rods (titanium, aluminum or graphite are prohibited). No roller bearing camshaft journals. Magnetic steel lifters, no ceramic.

- **ACE Engine Connecting Rods**

Only GCS approved steel rods allowed. No titanium, aluminum, graphite or stainless steel. Rods using 3/8" bolts are allowed

- **ACE Engine Blocks**

Must be standard factory production cast iron. (Only O10 or bow-tie approved). No aluminum blocks permitted. No altering of engine block permitted. Absolutely no grinding or lighting of blocks. The use of aftermarket blocks will be allowed in Ace engines. The engine builder must be on the approved engine builder list. No big bore short stroke ace engines will be allowed. No carbon composite or light weight blocks allowed.

- **ACE Engine Crankshaft**

Standard steel type only, minimum allowed weight of 43 lbs. (or stock type for block used) stock angle crankshaft allowed. No Honda journal crankshafts. Stroke 3.400 min to 3.500 maximum. LS firing order may be used. Minimum 1.980-rod journals or any under sized journals under factory dimensions.

- **ACE Inspection**

A 1.5" plug must be installed in the oil pan for inspection purposes. This hole must be directly under or side of the rod journal. If a windage tray is used, a hole must be provided in line with the hole in the oil pan. Cylinder head removal after any race may be required for inspection purposes.

#### **4. 9 to 1 ALUMINUM HEAD ENGINES**

- **Engine Block**

Must be cast iron. No carbon composite or light weight blocks allowed. Must be stock appearing.

- **Crankshaft**

Standard steel type only, minimum allowed weight of 38 lbs., stock angle crank shaft allowed.

- **Pistons**

No part of piston may protrude above top of cylinder.

9 to 1 aluminum headed motors will have a 9.5 to 1 compression ratio (a ratio of 9.51 to 1 or higher will not be allowed).

Maximum engine displacement of 362 c.i. and minimum 347 c.i. aluminum headed motors may use dished or inverted dome pistons.

- **Connecting Rods**

Only GCS approved steel rods allowed. No titanium, aluminum, graphite rods or stainless steel are allowed.

- **Camshaft**

Only steel push rods (titanium, aluminum or graphite are prohibited). 9 to 1 aluminum headed engines are allowed roller cams and rev kits.

- **Heads**

All cylinder heads must be approved by GCS and all modifications must be submitted to the GCS before any proposed modifications will be approved. All cast in part numbers must remain unaltered. Painting and /or coating of the heads will not be permitted. No 18-degree GM heads. Heads that are already approved are on file with the GCS. All other heads must be approved prior to any competition by GCS.

For all 9.5 compression motors the cylinder heads must be acceptable to GCS officials and meet the following requirements: Only steel or titanium valves will be permitted. Only magnetic steel valve springs will be permitted and only 2 valves per cylinder will be permitted, there are no valve size restrictions. Internal polishing and porting will be permitted. Spark plug holes must remain in stock location. Valve angle must remain within 2 degrees of stock angle, valves must remain in the stock location in relation to the cylinder bore center line.

- **Intake Manifolds**

No fabricated intakes, must be made of aluminum. Only one flat gasket with maximum of .120 may be used between intake manifold and cylinder head. No spacer or wedge type gaskets allowed. May be polished and ported.

Directional devices will not be permitted inside the intake manifold. Air holes will not be permitted to be opened in the intake manifold. Painting and /or coating of the intake manifold will not be permitted.

- **Other**

No engine part may be composite. All part numbers must remain on all engine parts. No crank fire ignitions.

## **5. LST ENGINE**

Exact guidelines forthcoming by 2/8/21

## **6. SOUTHERN SUPER PARTS ENGINE (SSPE)**

May be Claimed for \$21,000 plus pulling fee

- **SSPE Cylinder Heads**

Listed Brodix Cylinder Heads only. Heads may be surfaced to achieve proper compression ratio. Absolutely no other work of any kind will be permitted to the intake ports, exhaust ports, or combustion chambers. Ford part #: SP STS T-1 F STD 225- SSPE. Must retain minimum valve angle of 20°. Chevy Part #: SP STS T-1 STD 227- SSPE. Must retain min. valve angle of 21°. Multi-angle valve job permitted. Absolutely no blending of valve job below valve seat permitted. Chamber must retain shape 3/8" above valve seat. Minimal blending due to multi-valve jobs permitted. Maximum valve size: Intake 2.08", Exhaust 1.60", Stem size 11/32". Intake valve may be titanium or stainless steel. Exhaust must be stainless steel. No Titanium valve springs permitted. Maximum racer cost: \$425.00 per set. Titanium retainers permitted. Lock angles not specified.

- **SSPE Manifolds**

Intake must remain stock. Absolutely no match porting or blasting of any kind permitted. Slotting of bolt holes, water lines and matching of sides allowed. Ford part #: Edelbrock 2928, 2929, or 2934 only. Chevy part#: Edelbrock 2814 or 2892 only.

- **SSPE Pistons**

Maximum Engine displacement is 362 cubic inches. Maximum compression ratio is 11.5:1 with +.5 tolerance. Any flat top piston permitted with 927 wrist pin and .043 x .043x 3mm ring package only. Pistons must not extend out of the top of engine block. Maximum racer cost of \$1400.00 per set.

- **SSPE Camshaft**

Camshaft must be Competition Cam Part #: 21151712. Camshaft must be installed on 104° intake centerline +/- 1°. Roller lifters, maximum racer cost of \$700.00 per set. Maximum lift of .715" while using 1.6 rockers checked at valve with zero lash. Maximum 1.6 rocker arm racer cost of \$1,500.00 per set. Magnetic-type push rods only. No keyway guided lifters permitted.

- **SSPE Connecting Rods**

Connecting rods: Minimum rod journal size 1.850". Absolutely no piston-guided rods permitted. Maximum racer cost of \$1400.00 per set. No titanium rods permitted. Minimum rod weight 560 grams. -SSPE Blocks Cast Iron engine blocks only.

- **SSPE Crankshaft**

Crankshaft must have a minimum weight of 40 pounds (with front timing pulley or sprocket). Minimum main size Chevy 2.300/ Ford 2.250. Maximum advertised racer cost of \$1400.00

- **Other**

Maximum 5 stage dry sump oil pump permitted. Maximum racer cost of \$1,250.00. Oil pan must have 1" inspection hole. Absolutely no sectional pans permitted. Open box pans only (NO windage tray / scrapers etc.). Maximum racer cost of \$550.00.

Ignition System may only be FAST Ignition part # 6000-6701. Mount on right side of car dials point out the passenger side. The mag positive & negative shall be a maximum length of 62 inches. Must remain uncut or spliced and on top of dash in clear view. Mandatory 8000 RPM Rev Limiter must be installed and fully functional. Absolutely no crank trigger pickups permitted.

Cylinder head removal after any race may be required for inspection purposes.

Carb Spacer: Spacers can be 1 1/2" max and bores must be circular and perpendicular to the base.

## **7. CARBURETORS AND SPACER PLATES**

All cars will use an unaltered Holley 4412 style 2bbl approved carburetor. The Ultra series or Aluminum (Part # 0-4412SA) will not be allowed. The HP or parts may also be used.

All carbs must pass all GCS gauges and specs, at any time regardless of temperature.

Boosters must be stock appearing and as cast for carbs style and no extra holes may be drilled. May not be tapered. Must also be in stock location in body. No modifications of boosters allowed. Spacers can be 1 1/2" max and bores must be perpendicular to the base. Ace carb spacers can be 1 1/2" max and bores may be tapered. Ford Ace with 2934 intake max 5/8" spacer. No tapered spacers unless allowed on approved engine package.

Approved spacers must be used on MEP, Hamner, LST and Wegner LS.

- **These parts must be Grundy County Speedway gauge legal.**

Throttle bores, Boosters and booster legs, Throttle plates, Throttle shafts, Main body. Metering blocks must be stock as cast for carb style and no extra holes may be drilled. Block may be plugged and may be machined but must remain stock appearing, no aftermarket blocks.

## **8. FUEL AND FUEL CELL**

No oxygen bearing or performance enhancing additives may be introduced into the inductions or fuel supply, either at the fuel cell or upstream in the system. Violations will result in immediate disqualification from the event; forfeiture of owner and driver points, and monies/contingencies earned for the event.

A series fuel to be determined will be mandatory at all events. Ethanol (E-85) will be permitted on a test basis only. Fuel may be inspected at any time.

Fuel cells with rubber bladders, fuel cell plates or fuel cell tubs are mandatory. Teams are responsible to verify that fuel cells and bladders are up to date and in good condition.

Fuel cell protector plate 1/8 thick steel must be mounted on outside of frame rails. The plates must cover the sides and rear of the fuel cell and be official approved. 1/8" fuel cell can recommended.

Fuel cell minimum height 10 inches. Fuel cell must be securely mounted behind rear axle and centered between rear frame rails. Must maintain industry standards as far as rear frame rails. We have the measurements of most chassis builders on hand. Official approval required. The use of U style cells has been prohibited. in some series.

Fuel cell must be banded both ways with two steel straps each way. 1-inch minimum Steel straps. Fuel cell tub 1/8 thick steel with one-inch lip. Front, bottom and rear will be one piece. The top of the box will use current 18 or 20 gauge top with 1 inch by 1/8 steel straps with two in each direction.

All fuel cell cans and any part of the fuel cell including plates, straps, and mounting must be magnetic steel with a minimum of 14- 1/4 bolts with flat washers on top and lock washers on bottom.

All fuel cells must have check balls in place. All cars must have a functioning OBERG, SRI or other Series approved vacuum style fuel shut off switch mounted in line at the point where fuel exits the cell. Must be mounted within 12 inches of the fuel cell and in plain view. A weight penalty may also be assessed for non-conforming cars not running series regularly.

Racing pump fuel only any over the axle style rear tail style chassis must use approved 1/8 inch magnetic steel fuel cell can.

Any chassis with incorrect fuel cell can and/or plates will be asked to change or be disqualified.

A sonic tester will be used to check fuel cell can thickness. Fuel cell can pictures will follow.

ADD minimum 25 pounds for non-approved fuel cells and plates.

## **9. WEIGHT COMBINATIONS**

(please note that all weights are subject to change based on performance and track size.)

All GCS approved engine packages are listed below. Weights for all engines will be listed below.

Crate engine 59% maximum left side weight even using conventional setup.

2725 lbs. Crate engines with 650 cfm 4 bbl Holley. 6500 chip ford, 6600 chip Chevy.

2700 lbs. Crate GM 604\* with 650 cfm 4 bbl Holley. 6600 chip.

\* GM part # 88959604 with original seals, no updates or has not been rebuilt.

All other cars will be 58% left side weight. 58.0% is maximum

2725 lbs. – GM ACE Engine with 4412 2bbl Holley – 500 cfm

2750 lbs. – Ford ACE engines with 4412 2bbl Holley – 500 cfm

2775 lbs. – LST Sealed Engine (7600 RPM, with builder ID), Southern Super Parts Engine (8000 RPM), Wegner 6.0 Sealed (8000 RPM) all with 4412 2bbl Holley – 500 cfm and 5.3 WAR Sealed Engine (7600 RPM) with 650 4bbl Holley.

2800 lbs. – McGunegill Sealed (7600 RPM), Ford S374D (7600 RPM), Hamner Sealed (7600 RPM), 9 to 1 Aluminum Engines, Tesar Sealed (7600 RPM)

Any other engine combinations will need to be approved by the series office prior to entry of any event.

All added weight must be solid LEAD, no tungsten. Must also be painted WHITE with car numbers on weights.

There is a \$10 per pound fine for any lead that is mounted loose or falls off car on track at any time for the team. Cars may not be able to pass tech if numbers are not on weights and painted white.

### **• ADJUSTMENTS**

Cars using conventional shock and spring package, (No bump stops, no bump springs, no coil binding, No devices to limit or stop suspension travel, no preloaders) Afco, Bilstein, Koni, Pro, QA1, Integra, (Penske 7500 series only with standard shaft, No RHS shaft) all shocks rebound adjustable only. All shock shafts must fully compress into shock body. Minimum 200 lb front spring rate with a MSRP of \$100 or less for all (magnetic steel) springs deduct 25 lbs with 59% left side weight.

Allow 1 lb per race lap

Add 100 lbs for non-approved body

Add 25 lbs for every body infraction including low roof and nose heights  
Add 25 lbs for non-approved fuel cells and plates

All sealed engines will be within all the rules of the USRA rules package except for carb rules and spacer plates. These will be the only alterations to the USRA rules. Must be SEAL approved. Must also be run as delivered from said manufacturer. Must have all seals and proper documentation. Must also be on approved SEAL builders spec/info sheets. All sealed engines run at GCS must have inspection hole in oil pan under rod journal.

All USRA spec/sealed engines must use ignition box supplied with engine package. Any engine weight may be adjusted at any time.

ALL ENGINES MAY HAVE A CHIP INSTALLED OR ADJUSTED AT ANY TIME! Engines not of SEAL or GCS approved types may be run with prior approval. Weight for those engine packages will be determined at event.

#### **10. MUFFLERS AND HEADERS**

Mufflers are required for competition at the GCS.

Any car not meeting the 105 decibels at 100' will add 25 lbs. min

All exhaust highly recommended to exit under car to meet this requirement.

All exhaust systems must have mufflers that are not tampered with or hollowed.

No custom high dollar headers (no lightweight, stainless, titanium or inconeal) allowed.

Any collector may be used without a cone style inserts. No one off custom header allowed.

\*\*\*ANY CAR NOT MEETING THE 105 DECIBELS WILL ADD 25 lbs min\*\*\*

#### **11. AIR INTAKE/AIR BOX**

Forward intakes are not allowed. Air boxes are permitted. The back of the air box must be flat or must be stock Five Star part or AR part. No additions to air box what so ever.

No devices for directing the flow of the air into the air cleaner or air box are permitted.

No additives allowed in air filter.

You may not grab or funnel air into air box.

#### **12. CLUTCH**

5.5 inch or larger will be the only clutch allowed. Max price MSRP. \$1600

Absolutely no carbon fiber or poly clutches allowed.

Bell housing must have a minimum 2 1/2" hole at bottom (to allow a clear view of clutch).

Only standard material clutches allowed. No Slipper or Centrifugal clutches allowed.

#### **13. TRANSMISSIONS**

Bert or Brinn style transmissions are allowed.

No bottom load or quick change style transmissions.

Must have two forward and 1 reverse working gears minimum.

One single lever shifter. No push and pull rods.

Must be self-starting. This area will continue to be monitored, we encourage teams to NOT buy the latest options as they will likely NOT be allowed in the coming seasons.

#### **14. BRAKES**

All cars must have functioning brakes on each wheel.

Maximum 4 piston brake calipers.

Fixed mounted or floating rotors only. Steel rotors only. Maximum \$500 limit on brake calipers.

All brakes must be GCS approved.

Must also be sold on open market.

No other material may be used other than steel for rotors. No Carbon Fiber or any other material.

All air for brake blowers for front wheels must be taken from nose or radiator air box only. May not pull air from under car at any time. Max 2 per each wheel. Air must only be blown on brake rotors. Ultra cool Fans may also be used. Carbon Fiber fans are not approved.

## **15. SHOCKS**

Maximum cost on racing shocks is MSRP \$850 for a complete unit

The following shock (bodies) may be used in GCS Competition. JRI ST-08, SC-07 (SC-07 must be on approved list by JRI) Ohlins TTX 36 Series Penske 7300, 7500, 8300 Series, PRO ACF46, ACF47, ACF 48, ACF 49 SP ARCA Series.

All conventional type other shocks that are now in use may be used. Any new JRI, Ohlins, Penske, or redesigned shock body from these companies will not be allowed in GCS competition. The limit on shock cost will stay the same or as listed above.

Conventional shocks now in use: Afco, Bilstein, Integra, Koni, Pro, QA1

Any other shock will need official approval before use in GCS Competition.

Any of these companies making new products not in use at this time will also have to be approved. (12/17/13)  
Please contact the tech director for questions.

The use of bump springs will be allowed. A bump spring must act like a bump rubber and may not be larger than 2 inches in diameter and 3.75 inches tall. No other types of bump springs may be use. The car may have 4 springs, one for each wheel and 4 shocks, one for each wheel. A bump spring should look like the ones sold at [www.bumpspring.com](http://www.bumpspring.com) as of 12/17/13. A bump spring may be used on a remote shock eliminator type set up, but again must look and act like a bump rubber. Shocks must be mounted in a conventional style and with an approved mounting style.

No cantilever, wishbone, or torsion type suspensions maybe used. No air blow up bump stops or non-conventional style bump stops.

All springs for suspension must be magnetic steel including bump springs.

All shocks must be GCS approved

One shock and one coil spring per wheel and or corner.

Use of eliminators is allowed.

No shock blankets or covers allowed

No air adjustable springs or air bump springs

No electronic shocks permitted, shocks must be mechanical and no part of the shock or suspension may utilize electricity.

No Magnetic Shocks.

## **16. SUSPENSION**

Coil over or leaf allowed. No computer or hand operated controlled suspension. No titanium axle shafts, No aluminum rotors, No carbon fiber rotors. No cantilever, wishbone, or torsion type suspensions maybe used.

## **17. ROLL CAGE CONSTRUCTION**

The following is the minimum specification requirements for roll cage construction approved for GCS competition. GCS officials reserve the right to sonic test any or all, structural chassis members at any time during a sanctioned event. Structural chassis member(s) found in violation of minimum requirements render that chassis ineligible for competition until minimum standards are met or exceeded.

Drilling holes to lighten any part of the body, chassis, suspension or bolts is not permitted.

Only steel round; rectangular or square tube is approved for roll cage or chassis construction of any main or supporting sub-structures. Wall thickness; size and/or diameters are specified where necessary.



A four-point (4) roll cage structure utilizing a minimum 1.75-inch x .090-inch (1- 3/4"x.090") od d.o.m. steel tubing is mandatory. The entire structure must be welded to the primary frame structure with a minimum of four (4) horizontal driver side door bars.

A minimum of 2" x 3" x .095" wall steel tubing is mandated for main frame rails.

Main frame rails are identified as midsection rails. Main frame rails and side rails must be located within the normal tread width of the car. A minimum of 2" x 3" x .083" wall steel tubing is optional for front clip rails, rear clip or kick-up rails. No material substitution permitted.

Roll cage structure must be braced to the front frame stub, with the hoop section surrounding the engine compartment; running rearward with diagonal member's connection to the rear frame section.

Nose/front bumper, right side kick outs and rear bumper/tail cover supporting structures must be a minimum 1.500-inch x .063- inch OD steel tube. No material substitution permitted

**Absolutely no aluminum allowed on the structure of the chassis** including bumpers

• **Driver Side Door Plates**

All left side door bars must be plated.

Left side driver support bars or plates are mandatory. See option a or b listed.

No material substitution is permitted.

All support bars or plate installation is subject to approval.

All door bars need to be plated. All plates must be steel. See illustration a.1

**Plan A** – 0.125-inch, 1/8" solid steel plate bolted to the left side door portion of the roll cage.

Doorplate must be bolted to the roll cage using a minimum of six (6) each 3/8" (.375-inch) aircraft quality bolts and washers. Welding of the plate to the roll cage is prohibited.

**Plan B** – minimum 0.125-inch (1/8") thickness steel plate must be welded to the space between each left-side door bar.

Offset chassis right side door bars commonly called the outrigger or the kick-up bar, must be constructed of a minimum 1.250-inch x .065-inch wall round or square steel stock. Front of outrigger bar must go to right front frame behind right wheel.

All supporting substructure must be constructed of 1-inch x .063-inch wall round or square steel stock. No material substitutions permitted.

**18. DRIVESHAFT**

The drive shaft shall be made of steel or aluminum only. Carbon-fiber drive shafts are not permitted at this time.

Due to increased safety and reduced costs, these may be tested for future approval.

Containment hoops (2 required), constructed of a minimum 0.1875-inch thick steel, are mandatory and the forward hoop Must be 4-5 inches minimum behind front yoke.

**19. FRONT SUSPENSION**

Independent front suspension with articulated upper and lower control arm(s) is mandatory. The type of shock absorbers and suspension springs are optional.

One (1) shock absorber and spring per corner of the car is permitted.

Front suspension adjustment must be done from under the car or by lifting the hood.

No holes in the hood, fenders or other body parts from the windshield forward to adjust front suspension component(s) are permitted.

No suspension adjustment devices are permitted in the driver's compartment area or in reach of driver at any time in car.

Knob-type brake bias adjusters are recommended.

Weight transfer or suspension adjustment devices, adjustable while the car is under way are prohibited.

Spring rubbers are permitted and must be removed manually.

No removal devices may extend outside the body of the car or be accessible to the driver in the driver's compartment.

Manual or power steering may be used.

No electronic power steering.

## **20. REAR SUSPENSION**

Non-independent, live axle type rear suspension is mandatory.

Rear ends may be quick-change, minimum 8 inch ring gears, with full-floating hubs or 9-inch Ford type.

Aluminum tubes allowed on quick-change, must add 5 lbs. per tube to total weight. Front load quick change rear end will have a 25 lb penalty place directly behind the fuel cell on the frame.

ARCA - 2021 only a spool will be allowed (as stated in 2019 ARCA rules).

GRUNDY - Add 50 lbs for non-spool in rear end.

No open tube rear ends permitted.

Maximum rear camber is + or - 1 degree measured with the rear axle level.

Material used for rear end center section is at the discretion of the team, but hub pins must be steel.

Rear end coolers are recommended.

Remote rear suspension adjusters are permitted when accessible through the rear window. A maximum of three (3) one-inch (1") diameter holes are permitted in the rear window. Each hole can allow access to one adjustment device only. No adjuster may extend forward of the rear window area.

All pumps used to circulate fluid for the purpose of cooling the rear end, must be mounted in the center of the car.

No bird cage set ups of any kind.

No part of the trailing arm mounting bracket may rotate or move. Trailing arms mounting behind the driver must have a 1/8" steel protection plate protecting driver.

## **21. WHEELS**

Approved wheels must be 15-inch diameter; five-lug (5) steel; 5" x 5" hub or wide 5 patterns; 10-inch rim width.

Bleeder and/or pop-off valve devices are not permitted; alteration or defacing of wheel identification numbers; labels; code numbers or serial numbers is not permitted. Wheel(s) failing this criteria will be ineligible for competition. Wheels must meet GCS approval. Steel wheels only, light weight wheels will not be allowed.

### **• Wheel Studs and Spacers**

A minimum of five (5) lug nuts per wheel, minimum 0.625-inch (5/8") solid steel nuts, showing a minimum of two (2) threads through the nut, must extend through the lug nut when clamping the wheel to the hub.

Wheel spacers, if used, must be made of steel or aluminum and a minimum 6.75 inches in diameter.

Shims are not permitted when mounting wheel studs to hubs.

## **22. SAFETY**

In all matters pertaining to safety, car owners, drivers and crew members must review and educate themselves in all safety standards. It is the responsibility of the car owners, drivers and crew members to install, wear and maintain all safety equipment as specified by manufacturer's instructions. This includes, but is not limited to, helmets, fires suits, racing suits, gloves, shoes, flame-resistant underwear, flame-resistant head sock, head and neck restraint systems, driver's racing seat and safety belts. Any safety infraction will deem the car ineligible for competition until the infraction has been repaired or corrected and the car re-inspected.

Drivers wearing dental plates or dentures are required to remove them for any hot-track activity.

All cars must have tow hooks installed (2 in front on bay bars and 2 in back on fuel cell protector bars. Must be able to support weight of car undertow.

- **Driver seat**

All driver seats must be manufactured by a recognized manufacturer of seat and safety equipment, multi-layer aluminum seat and approved by GCS officials. Seats may also be Carbon Fiber or Carbon Composite or others. This should not be used as a weight saving measure. We have found several new seats that are affordable and safe and meet with the rules and thoughts of the GCS. See officials for types that maybe used. Video attached of one seat type.

Seats must remain “as purchased and produced”, no holes or other modifications made for weight reduction. Homemade seats or sprint car type seats are not permitted.

Seat construction must be approved from the seat bottom to above the driver shoulder area; must be fully padded, with padded pelvis, rib and shoulder supports on both the left and right side.

Exception – Lajoie seat where construction is such that rib supports are not required. A head restraint system, manufactured by a recognized manufacturer of seat and safety equipment, is mandatory and subject to GCS approval.

Bolt on systems are approved for competition. Seats must be equipped with left and right leg extensions, fully padded, running from the edge of the seat to the entrance of the foot box area.

Recommendation – a minimum 1/8” (.125-inch) thick steel plate be mounted on the front of backside of the rear hoop of the mid-section in front of the left rear wheel. Plate should extend from the horizontal shoulder bar downward the height and width of the driver seat.

- **Seat Belt and Shoulder Harness Installation**

All seat belt and shoulder harness systems must me SFI specification 16.1, type Y-type shoulder belts are not approved for use.

Seat belts and shoulder harness systems must have a production date within three years of the event date.

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 should strap. Schroth Racing should 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.

All lap belt and shoulder harness mounting must be done with aircraft-quality bolts and washers.

See illustration a.2 and a.3

- **Driver Helmet**

Effective with the 2017 season, all driver helmets must reflect a Snell SA2015 certification minimum. SFI or Snell approval sticker must be visible for GCS official’s inspection.

Eye protection is mandatory at all times.

- **Left Side Window Net**

Left side driver window net is mandatory.

Construction must be web-type safety net with mechanical release. Net bar must be a minimum of .1875-inch (3/16”) flat steel or .375-inch (3/8”) round stock and run the entire length of the window net between mounting points. Mechanical release must be welded to the front or “a” pillar end of the bar. Spring-loaded releases are not approved for competition.

Driver net must be secured in place and centered in the door area and must be secured to the upper roll cage horizontal member.

Window nets must drop down.

Must latch on top.

No Fish net style window nets.

- **Fire Suppression System**

A minimum five-pound (5) on-board fire suppression system, with multiple discharge points is highly recommended for series traveling competitors.

Cold Fire fire systems recommended for cockpit usage.

Temperature activated (automatic) cockpit system recommended, 10 lbs weight break.

Must have gauge in view.

Must be fully charged.

#### **-Driver Head/Neck Restraint System and Driver Uniform**

Use of head and neck restraint devices is highly recommended for all hot-track activity.

Approved devices are the HANS device, LFT Technologies R3, Simpson and the Hutchens II device.

Driver uniform must be a multi-layer, full-coverage, one-piece fire-retardant uniform specifically designed for racing, fire retardant gloves, socks, underwear, and shoes.

### **23. TIRES**

Hoosier tires are the official tire of the Grundy County Speedway.

Hoosier 3035 left side and the Hoosier 3045 right side tires are the only tires allowed for competition.

Four (4) new tires the first two nights of GCS season. (not your first two nights of racing).

Then two (2) new tires per night.

Alteration of a tire(s) is not permitted and defined as changing the physical and/or chemical composition of the tire by cutting; grinding; buffing; warming; cooling or the use of chemicals whereby the tread area or the interior surfaces of the tire is changed from the manufacturer's specifications; alteration or defacing of tire identification numbers; labels; code numbers or serial numbers. Any violation of this nature causes the tire(s) to be deemed ineligible for competition. Tires may be checked at any time. Tire samples may be taken and sent to an independent lab at any time. Tires must be logged in to qualify for any event.

### **24. TRACTION CONTROL AND ON-BOARD ANALYSIS**

No equipment of this nature is permitted on any car or located in the pit area of any event and will subject the team(s) to confiscation of equipment and penalties by the GCS.

Only one camera pointing out front windshield allowed.

Multiple cameras allowed ONLY with pre-approval and when installed by industry videographers. No in-car data logging equipment of any kind allowed.

No computer or video analysis equipment of any kind allowed.

No digital gauges and/or data logging systems allowed.

Transponder Standard Location TBA

### **25. IGNITION**

All ignition systems must be 12 volts. Only one 12 volt battery may be used at any time.

Ignition boxes may be switched by GCS from car to car or swapped with GCS's house ignition boxes.

Ignition boxes approved:

Crane Cams/FAST Ignition, HI-6RC (p/n 6000-6700) PS92N Coil (p/n730-0192), and Ignition Tray (p/n 6000-6363P). Or complete ignition kit (p/n 6000-6701). Must be mounted as shown and also not within the reach of the driver. Adjustment tabs may be sealed by GCS Officials. May be switched, changed, tested, or removed by GCS Officials at any time. RT side dash mounting highly recommended. Car side harness must match all factory connections per diagram below with no modifications to allow tech officials to test system.

MSD Ignition and others are allowed, provided they are wired correctly for the use of a CRANE IGNITION tester.

FAST (p/n 6000-6701) mandatory for use with SSPE

MSD (p/n 6014 ct) mandatory for use with LST

Teams will have 20 minutes to correct the wiring harness or face disqualification and/or fines. If you believe you have a problem please ask.

Connector: the 6 wire harness must be 24" long maximum and have a female 6 pin, weather pack connector.

Wiring of the Crane system with a six pin weather pack approved style plug in.

- a- ignition switch 12v (small red)
- b – points pick-up (small white) brown gm boxes
- c – coil negative (small black)
- d – coil positive (small orange)
- e – battery positive (large red)
- f – battery negative (large black) two pin optional for these two.
- g – battery positive (large red)
- h- battery negative (large black)

Only one ignition box allowed in car at any time. Car may be wired for duel boxes but must have only one box in car while on track.

Box must be in clear view, mounted on right side of dash out of driver's reach with dials to right window opening. Crane Ignition must be kept complete with plate, coil, and box as a unit.

Must be able to remove in five minutes

## 26. NOTICE

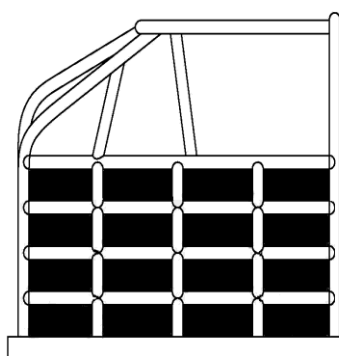
**Non - compliance with the specifications outlined herein may subject the participant to disqualification, loss of monies and points earned at the event. Furthermore, Failure to present car for inspection when requested to do so, or refusal to take steps requested by tech inspectors will be considered an admission of guilt and will be grounds for disqualification. Owner/driver must provide tools to remove parts. Any interpretation or deviation of these rules is left to the discretion of Grundy County Speedway tech officials, their decision is final.**

Furthermore, the owner may be fined up to \$5000 and all non-complying components will be seized by the GCS technical inspector. Owner/driver must provide tools to remove part.

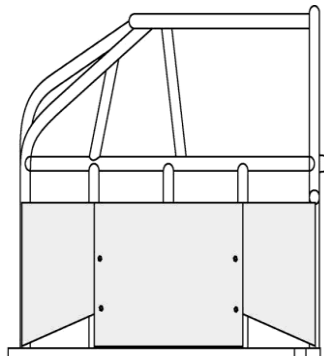
Furthermore any ACE, Spec, Sealed 9 to 1 or LST builder caught with non-approved items in engine will have a penalty put on all engines of that type from said builder. All engines will be checked and then approved along with a fine of a minimum of \$1000. Failure to pay will also result in engine builder being excluded from building said engine packages and/or all his engines will have a 50 pound weight added and a \$250 inspection fee before weight penalty is removed. Engine builder will also correct any parts found to be non-compliant.

## 27. ILLUSTRATIONS

A.1 --- Proper Driver side door plate installation Illustration.



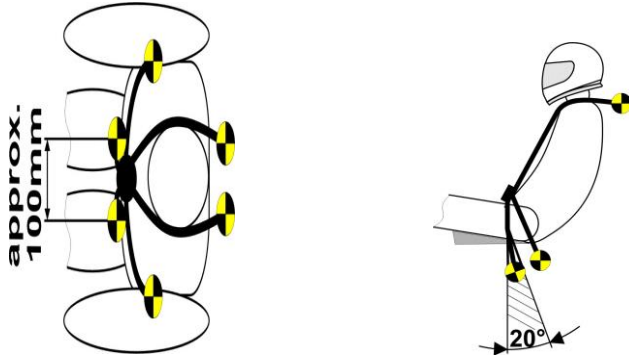
Option B - Individual Plates welded between bars shown in solid black



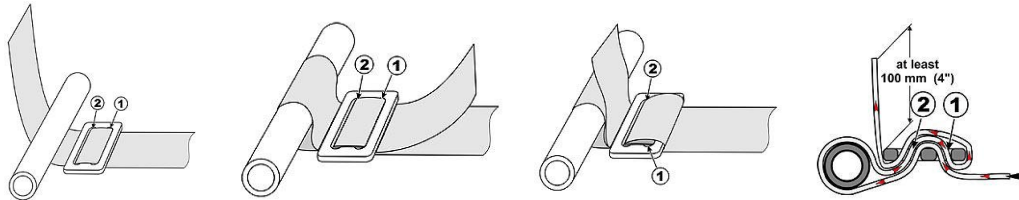
Option A - Bolt-on Door Plate



A.2 --- Proper Mounting Angles of Lap, Shoulder, and Sub-Straps.



A.3 --- Proper Wrapping of shoulder Harness Belts 3-bar adjuster should be positioned as close possible to harness bar or snap-on/bolt-on bracket. This applies to both lap and shoulder belt points. The final wrap as pictured is mandatory. At least 4" of webbing material must extend out from the adjuster after this final wrap is completed



Video on race-tech seats. <https://www.youtube.com/watch?v=0F7hlz0DKXk&feature=youtu.be> HYPERLINK  
"<https://www.youtube.com/watch?v=0F7hlz0DKXk&feature=youtu.be>"v=0F7hlz0DKXk HYPERLINK  
"<https://www.youtube.com/watch?v=0F7hlz0DKXk&feature=youtu.be>"& HYPERLINK  
"<https://www.youtube.com/watch?v=0F7hlz0DKXk&feature=youtu.be>"feature=youtu.be

Thank you to Race -Tech Seats.  
Simpson Seat Belt Mounting Tips at Simpson Race Products Mounting Tips.  
Thank you to Simpson Race Products.