



2020 National Sprint League (NSL) Non-Wing Sprint Car Rules

Situations may arise that are not precisely covered in this rule book. All rulings and interpretations of the rules included herein will be made by NSL officials and these judgments will be final.

Disclaimer

The rules and/or regulations set forth herein are designed to facilitate the orderly conduct of racing events and to establish minimum acceptable requirements for such events. These rules shall govern the condition for all events, and by participating in these events, all participants agree to comply with these rules and regulations. NO EXPRESS OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM PUBLICATION OF, OR COMPLIANCE WITH, THESE RULES AND REGULATIONS. They are intended solely as a guide for the conduct of the sport, and are in no way a guarantee against injury or death to participants, spectators, officials, or others. The Race Director shall be empowered to permit any reasonable and appropriate deviation from any of the specifications and procedures herein, or impose any further restrictions that in his/her opinion does not alter the minimum acceptable requirements. Any visible equipment changes and/or performance enhancing changes to previously approved cars and/or equipment must be approved in writing prior to introduction into competition. NSL reserves the right to immediately determine the legality and use of any equipment that has not received prior written approval for introduction into competition.

NO EXPRESS OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM ANY SUCH DEVIATION OR RESTRICTION OF THESE SPECIFICATIONS, RULES OR PROCEDURES. Any interpretation of, or deviation from, these rules is left to the discretion of race officials. THEIR DECISION IS FINAL.

Situations may arise that are not precisely covered in this rule book. All rulings and interpretations of the rules included herein will be made by NSL Officials and these judgments will be final. Amendments and or updates may be made to these rules at any time; no changes or additions will affect the intent or decisions based upon these rules prior to any amendments.

ENGINE RULES:

ENGINE - Option 1:

NSL Non-Wing Spec Engine

Engine is a build your own GM small block engine. Engine will have a maximum RPM of 6800.

Block:

- A) Any Chevrolet 305, 307, 327, or 350 CI stock iron block that was available in a passenger car or truck. Max overbore - .060"
- B) No interchange of crankshafts or rods to blocks allowed.
- C) Absolutely no lightening of any kind. All mounts must remain, fuel pump, motor etc.
- D) Factory 2 or 4 bolt main blocks ONLY (can NOT alter a 2 bolt block to a 4 bolt block). No splade caps.

Crankshaft:

- A) Any stock GM production crankshaft allowed. The following OEM replacement crankshafts are allowed :
Scat - Part #9-10442)
Eagle - Part #103503480, #103523480
- B) Stroke must match block.
- C) No lightening or polishing allowed. Balancing is allowed.
- D) Crankshaft flange may be machined to fit rear motor plate and torque ball housing.

Rods:

- A) Any stock steel production rod. The following OEM replacement rods are allowed:
Scat I-Beam Rod – Part #35700
Eagle I-Beam Rod - Part #SIR5700BBLW, #SIR5700BPLW
- B) Rod length must match block. Chevy 5.7" length powdered metal rods allowed.
- C) No grinding or polishing allowed. Balancing allowed.
- D) No cap screws allowed except on designated Eagle OEM rod. Max 3/8" bolts.

Pistons:

- A) Any forged aluminum piston allowed.
- B) Engines must not exceed 9.5:1 compression ratio.

Camshaft:

- A) Hydraulic cam and lifters only.
- B) Lifters must collapse .100" min.
- C) Only lifters of engine make can be used.
- D) Lifters must rotate freely and be of magnetic material.
- E) Timing chain only, no belt driven or gear drives allowed.
- F) Cam may be drilled for rear spud.

Cylinder Heads:

- A) Stock cast iron production cylinder heads only. No aftermarket heads allowed. Except GM EQ heads.
- B) Chevrolet 1987-1995 Swirl port heads are allowed.
- C) No Vortex, Bowtie, Gen II, or angle plug heads allowed.
- D) The following Chevrolet casting numbers are not allowed. 040, 041, 186, 187, 291, 370, 414, 432, 461, 461X, 462, 492, 1012532, 10208890, 10239906, 12554290, 14011083, or 14096217.

- E) Porting or polishing of any kind is not allowed.
- F) No angle milling, only standard reconditioning allowed.
- G) Carbide cutter relief cuts allowed below the valve seat but not to exceed more than X inch below the top of the valve seat.
- H) Valve spring diameter can only be stock production.
- I) Steel stock type stamped rocker arms, roller or roller tipped rocker arms are allowed.
- J) Stud girdles are not allowed.

Intake Manifolds:

- A) All engines must use the following intake manifold part numbers. Edelbrock (Part #2701) Weiand (Part# 7546, 7467, or 7547-1).
- B) HVHSS4150-1ALW 1" alum lightweight super sucker carb spacer.
- C) Porting, polishing, gasket matching of any kind is not allowed.
- D) Bottom of carburetor may be no more than 1-3/8 inches from top of manifold.

Oiling System:

- A) Wet sump only, oil pump must be in oil pan.
- B) Pan inspection plug is required, located so crankshaft & rods are visible with bore scope. 1" pipe or #12 AN size on plug. Removing the pan may be required if further inspection is necessary.

Exhaust:

- A) Header tube: 1 5/8 inch maximum outside diameter on the primary tubes, + or - .030.
- B) One collector per side.

Water Pump & Radiator:

- A) Any stock type water pump allowed. Radiator must be in front of engine.

ENGINE - Option 2:

GM604 Crate Engine

Engine is a GM sealed #19318604 or #88958604 Crate Engine, commonly known as a GM604. Engine cannot be modified or have the integrity of the GM604 altered. We do allow these engines to be freshened, though any replacement parts must be OEM GM604 or approved OEM replacements. Excessive machining and/or milling is not allowed. Maximum compression of 10.4:1. Excessive machining and milling is not allowed. Parts must be GM604 or approved OEM replacements.

Engine will have a maximum RPM of 6700. Engines may have cam drilled for rear drives. Maximum 1½" car spacer. A 1" or #12AN size inspection plug is required on the oil pan (failure to do so will require pan removal upon request).

Below is a parts list for the conversion to a sprint car application.

SCH1052LVCM-3 Schoenfeld Headers (this is only header that fits the 604)
 JRP1004-S-CE Jones Serpentine Drive Kit
 SWE305-80830 SWEET Power Steering Pump
 ALL31105 AllStar Water Pump
 PRC9351 7-1/2 psi Mech Fuel Pump
 ALL81200 AllStar GM HEI Distributor w/cap

ALL27503 AllStar Distributor hold down
TRA2310 Fuel Pump mount plate
FEL1900 FelPro Holley carb gasket
FEL1901 FelPro 1" carb plate gasket
ARP200-2402 carb stud kit
NGKR5724-8 spark plugs (race)
HVHSS4150-1ALW 1" alum lightweight super sucker carb spacer
Crate innovations CH-21115 Hub & Slip Yoke (PREFERRED) or
BER372-NC-EXT Bert External Drive Kit (BEWARE, check fit)
WIN65856 Winters yoke-flange-short ALL26156 AllStar fuel line kit.

Engine Penalties:

Any engine components in any engine combination that are found to be illegal, modified, or altered to where they do not conform to the rules will result in ALL money and points for that event forfeited and both car and driver will be suspended for the next two racing events.

General Rules for ALL Cars:

Carburetor:

- A) A minimum of two (2) return springs must be connected to throttle.
- B) Must have toe strap on throttle pedal.
- C) QFTQ-750-CTA 750 cfm (OR) QFTQ-650-CTA 650 cfm Quick Fuel Alcohol carb. Base plate of carburetor must remain unaltered. 1.5" max carb spacing. This will include the linkage plate if used.

Fuel Pump:

- A) A mechanical, belt driven, or cam driven fuel pump is allowed. Cam driven recommended.
- B) No Electric fuel pumps allowed.

Ignition System:

- A) GM HEI Distributor.
- B) Internal coil vertex magneto.
- C) No electronic monitoring devices capable of storing or transmitting information except tach.
- D) No electronic traction control devices.
- E) No MSD type Mags allowed.
- F) Mandatory MSD soft touch rev limiter box P/N 8728 or P/N 8727CT.
- G) ETC 9 volt rev limiter for magneto engines.

Tire Rules:

- A) Hoosier 4 corner rule, No tire preps or tire softeners allowed.
- B) Cars will not be allowed to race with flat LR, RR, RF. (or LF if off the bead).
- C) Any Hoosier front tires.
- D) LR Tire must be (1) of the following: 15" Hoosier RC1, H12, SC12 (98") or SC12 (100").
- E) RR Tire must be the following: 16" Hoosier Medium.

(NOTE) NSL reserves the right to make adjustments to the tire rules to maintain fair competition.

WHEELS & WHEEL COVERS:

- A) Aluminum or steel wheels only.
- B) Mechanical bleeders only. Electronic bleeders are not allowed.
- C) If utilizing dzus fasteners, minimum of (5) Steel dzus required.
- D) Wheel covers having only (3) attachment points must be bolted-on at all (3) points utilizing a minimum (5/16) inch, flanged steel bolt and an approved fastening (nut assembly) system. Rounded or flat topped Allen/Screw driver/ headed bolts with washers are recommended.
- E) Approved fastening systems are:
 - a) Keyser Manufacturing (#100 7-101)
 - b) Wehrs Manufacturing (#WM377A-312 Aluminum 5/16), (#WM377S-312 Steel 5/16)
 - c) Triple X Chassis (#SC-WH-7810 - 1" spring), (#SC-WH-7820 – 1-3/8" spring)
 - d) Smith Precision Products (#MC-516-18); Speedway Motors (#910-07119).

CHASSIS:

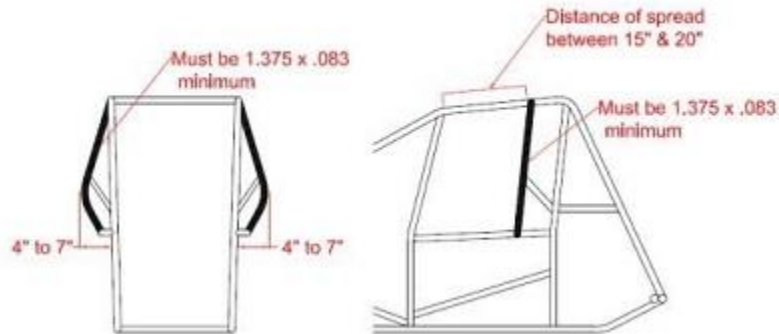
- A) Any sprint chassis is allowed, but it must pass any test prescribed by the safety inspectors. The roll cage must be of a four-post design. Sprint cars only – no dirt champ cars. Wheel base no less than 83" and no more than 90". No elliptical tubing used on or as part of the main frame structure. Slip-tubing is not allowed in the chassis construction. This includes safety bars. Any existing slip-tubing must be replaced, welded or bolted. Bolted tubing must use a minimum 5/16" grade 8 bolt with a locking type nut. No split lock washers. No slotted drilling. Existing slip-tubing with a working, integrated clamping system may be used when located forward of the rear motor plate. Such clamping systems must be approved in writing by prior to being introduced into competition. No additional anti roll/weight transfer bars on the racecar. No 3rd torsion bar/sway bar on the front of the chassis.

The following measurements are minimum, suggested material 4130 normalized:

- a) TOP RAILS: 1 ½" x .095
 - b) BOTTOM RAILS: 1 3/8" x .095 or 1 ½ " x .083
 - c) ROLL CAGE UPRIGHTS: 1 3/8" x .083
 - d) ROLL CAGE TOP CROSS MEMBERS: 1 ½" x .095
 - e) UPPER RAILS: 1 3/8" x .083
 - f) REAR END SAFETY BAR (mandatory): 1" x .083 or 1 ¼" x .065
 - g) BRACE: 1 ¼" x .065
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- B) In 2020 all chassis will be required to have additional bars installed to support and decrease the span between the front and rear uprights in the drivers area. The new support bars must be in addition to the front and rear uprights. Any attempts to manipulate the front and rear uprights to conform to these measurement will not be allowed at the discretion of officials. These additional bars will be minimum 1.375 x .083 ASTM4130 normalized steel or equivalent material. Left and right side support bars may be one of the three designs below. Left and right side support bars do not have to be of the same design. Left and right side support bars may be one of the following three options:

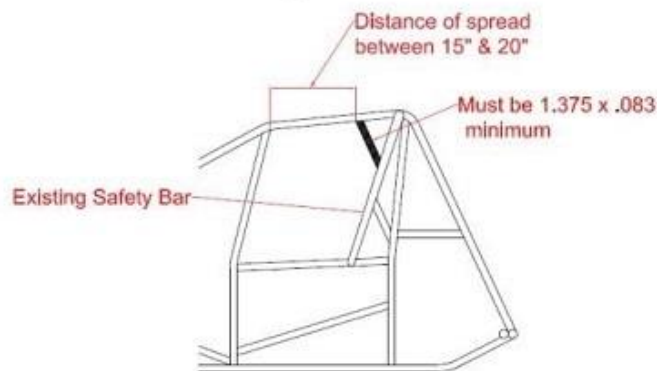
- 1) Support bar may be designed similar to what was known as a “safety bar”. It must be attached to the top rail at a point 15” to 20” from the rear of the front upright. It must attach to the hip rail and have a gusset attached to the rear upright near a point opposite of the rear brace/shock mount bar. The curve must be between 4” and 7” measured from outside of the rear upright tube to the outside of the support bar.

#1 Support Bar



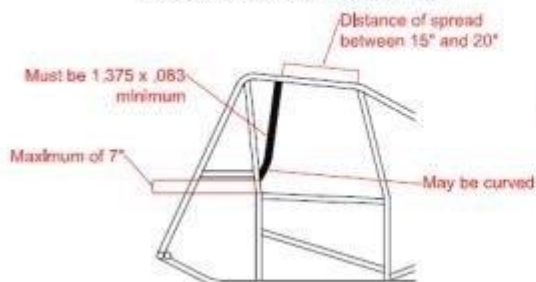
- 2) Chassis with an existing left side support bar installed (formerly called safety bar) that do not meet the option one specification above, must add a gusset that attaches to the top rail 15” to 20” from the rear of the front upright and angles to the existing support bar.

#2 Support Bar

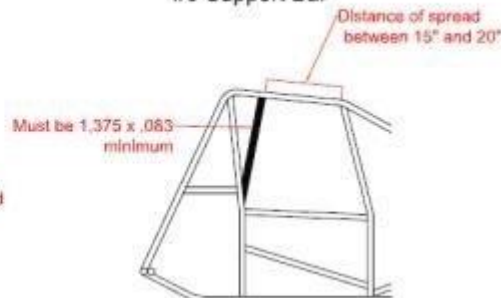


- 3) A support bar may be added to the top rail at a point 15” to 20” from the rear of the front upright and to the rear upright near a point of the rear brace/shock mount bar but no higher than 7” above the hip rail. This bar may have a slight curve near the rear upright to accommodate elbow room and ease of fitment.

#3 Support Bar Curved Option



#3 Support Bar



WEIGHT RULE:

Cars must weigh a minimum of 1500 lbs. w/driver. Cars can be weighed at any time. If a car fails to meet that requirement it will be considered last in that specific event with no further penalty. A car can cross the scales no more than twice to determine weight, unless requested by NSL Official. Bolt on weight OR additional ballast is not allowed.

FUEL TANKS:

The same fuel cell/tank must be used in the same car for the entire race program. The fuel cell/tank may be changed at the discretion of NSL Officials. Fuel tanks must be securely fastened. Any means of mounting the tank must meet the approval of the officials. A fuel cell with bladder and foam will be the only type fuel cells permitted. The fuel cell must be of one piece construction of cross-link polyethylene plastic. **Alterations and modifications will not be permitted.**

Fuel additives, including but not limited to nitro, nitro methane and/or nitrous oxide injection will not be permitted. Fuel samples may be taken from time-to-time for inspection and analysis.

SHOCKS:

- A) No cockpit adjustable shocks.
- B) No electronically adjustable shocks.

TORSION BARS:

- A) Torsion bars or coil over suspension only.
- B) Torsion bar adjustments from the cockpit are not allowed.
- C) All cars shall be equipped with a torsion bar stop retainer system on both sides of the front torsion bar. Retainer may be rod type with a securing cap or insert with expanding mandrel.

Current approved systems are:

1. Moose Block 1200 Retainer Kit
2. All Star Performance All Star 10730 Retainer
3. Maring Safety Retainer
4. ButlerBuilt Mandrel
5. KKR grove and clip 18
6. Kaeding Clip
7. DMI – T-REX (Torsion Restraint Express System)

- D) No additional anti roll/weight transfer bars allowed on the race car.

DRAG LINKS:

Drag links must utilize an approved tether fastened to the frame. Captured steel heim ends and (1") diameter steel construction with (.058) sidewalls is suggested for drag links and tie rods.

BRAKES:

Only steel, Aluminum, Titanium or Carbon Fiber brake rotors allowed. Cars must have a minimum of (3) wheel brakes, (rear and left front). Cars may not race without working brakes.

BUMPERS & NERF BARS:

All rear bumpers must be steel, minimum (1) inch in diameter, minimum (.065) thick. The front bumper must not extend more than (9) inches from the front torsion tubes. Nerf bars must be steel only.

DRIVELINES:

Drivelines must be fully enclosed and utilize either a driveline strap or a driveline hoop restraint constructed of (.065) steel either welded or bolted to the chassis. Driveline U-Joint scatter shields, steel torque ball housings, minimum (.120) thick, or torque ball U-Joint containment blankets are required.

FRONT AXLES:

Magnetic steel only.

- (2) inch diameter x (.0156) inch wall and thicker
- (2-1/2) inch diameter x (0.095) inch wall and thicker
- (2-3/8) inch diameter x (0.095) inch wall and thicker
- (2-1/4) inch diameter x (0.120) inch wall and thicker

Any axles with .083 material thickness will not be legal.

FRONT AXLE TETHERS:

Current approved tether systems:

ButlerBuilt part numbers:

- (BBP 4922-225) - (2-1/4) inch axle diameter complete kit.
- (BBP 4922-238) - (2-3/8) inch axle diameter complete kit.
- (BBP 4922-250) - (2-1/2) inch axle diameter complete kit.
- (BBP-4924) - King Pin Tether.

C & R Racing part numbers:

- CRA-102-255/265/27/275/28-A
- CRA – 103 – 53 – A
- CRA – 103 – 54 – A
- CRA – 103 – 55 – A

The approved tethers may be revised from time-to-time with additional approvals and/or other changes to the approved list.

BODY PANELS:

Right side panel must have a minimum opening of (10) inches by (21) inches. Maximum distance from the frame is (7) inches.

SEATS:

FIA and/or SFI rating recommended. Aluminum or carbon fiber allowed, mounted according to the seat and chassis manufacturers recommendations.

The following seats are approved for competition:

- a) ButlerBuilt – Advantage, EZ Series
- b) The Joie of Seating – SPR01, Full Custom
- c) Richardson – R39, R39 Deluxe
- d) Fiberworks – SCS
- e) Kirkey – 69, 69 Sprint79, 79 sprint
- f) Ultrashield – VS Halo – 72000, 720000, 75000 and 8000 Series
- g) RaceTech Sprint

The rear cross member or rear end bar should be mounted below the lowest part of the seat. Additional material should be added to the seat crossbar for added extra protection. All seats may be required to meet the SFI 39.2 specifications. The approved driver's seats may be revised from time-to-time with additional approvals and/or other changes to the approved list.

The driver's left side head rest / helmet surround must extend at least 4"- inches forward from the back of the headrest (where the helmet contacts the back of the headrest). All areas surrounding the head should have padding. An approved driver's cockpit net is mandatory for the left side if the Helmet head rest / helmet surround is less than 7"-inches forward from the back of the seat. The net must be a minimum of three (3) ribbons and meet the SFI 37.1 specifications, installed per the manufacturer's specifications.

The following nets have been approved for competition:

- a) Safety Solutions (Sprint Car Net)
- b) Simpson DN-SPR
- c) Speedway 91073

SEAT BELTS:

Each car will be equipped with minimum of an SFI 16.5 or SFI 16.1 approved restraint system, until the date of the belt expiration (two years from the date of manufacturer). Seat belt restraint systems shall be installed and used in accordance with manufacturer's instructions. In any type of manufacturer's installation the fasteners must be magnetic steel unless using type of mount in which the seat belt wraps around the roll cage. Seat belt material should not be permitted to come in contact with any sharp or metal edge, including when the material passes through the seat.

BATTERIES:

No batteries, other than those included in communications devices (RaceCeivers) required by Jackson Motorplex, or in specific non magneto equipped engines. RaceCeivers or other approved one way communication radios with Officials only are required. Radios must be in working condition and turned on.

PROTESTS:

All protests must be turned into the Competition Director in writing within Ten (10) minutes of the end of the race. The protest fee must be paid in cash at the time of the protest. Only NSL driver members may turn in an official protest. Only teams competing in the current NSL Non Wing point season and in the top 20 in points may file a protest. Any refusal of inspection and/or non-compliance during an official protest will result in the disqualification of the protested car and the prescribed penalties. Protests may only be made by NSL member teams actually competing in the event. Any one team will be limited to a maximum of Two (2) protests in a season, regardless of the outcome of those protests. If the car protested is found to be nonconforming, the protesting fees will be returned to the team filing the protest less the filing fee and any lab costs. If the car protested is found legal, the protesting fees will be released to the protested team less the protest filing fee and any lab costs. Any altercation relating to the incident with Officials and/or any other racing participants by the team filing the protest will nullify the objection. NSL and/or Jackson Motorplex Officials reserve the right to accept or deny any protest based on their sole discretion. "Grudge" protests and/or any protests that are "not in the spirit of good standing" will be denied. No protests will be accepted on judgement decisions. In the event a car is protested and found to be illegal, the driver and car protested shall have all points and money forfeited that were won during the particular race program in question and may be suspended.

PROTEST FEES: (Figures in Parenthesis Are Filing Fees)

Engine cubic inch: \$300 (\$100)

Fuel test: \$300 (\$100) lab tests extra

Removal of head to check for cubic inch: \$800 (\$200)

Other technical protest: \$300 (\$100)

List of other technical protests to be added.

SAFETY AND INSPECTIONS:

NSL and/or Jackson Motorplex Officials shall have full responsibility for safety rules and regulations enforcement at all events. At the discretion of the Race Director, and or Competition Director, any competitor may be disqualified for rule violations or hazardous equipment or hazardous actions. All race cars are subject to be inspected at any time. If a part is deemed non-conforming, responsibility for proving otherwise rests with the team being checked.

All drivers must be at least 16 years of age to compete in the sprint car division(s). Drivers under 18 years of age must have a signed and notarized parental consent form by the parents or legal guardians and said consent form must be in the hands of the Race Director before participating of said individual will be allowed.

NSL and Jackson Motorplex are committed to making racing as safe as possible for its fans, officials and workers along with all competitors. NSL and Jackson Motorplex requests the assistance of all of its competitors to effectively eliminate the participation of substance impaired drivers and or crew members. All competitors, officials, track workers and other infield employees agree to be bound by, and to comply with these policies at all times during all NSL and Jackson Motorplex events.

No alcohol may be consumed by a competitor before or during an event. There is to be no consuming of alcohol by any crew member before or during an event. NSL and Jackson Motorplex reserves the right to take action it deems necessary to test for alcohol impairment before, during or after an event. NSL and Jackson Motorplex reserves the right to determine that a participant is under the influence and/or physically unfit to participate in an event. This action will be taken in the interest of safety and in the best interest of the sport.

No use, distribution or sale of illegal drugs will be tolerated on the Jackson Motorplex grounds. NSL and Jackson Motorplex can require a participant to submit to a test or tests for the presence of alcohol, drugs or medications if Jackson Motorplex or any sanctioning body has reasonable suspicion that the participant has violated any part of this policy and is exhibiting impaired or diminished capabilities to perform as a result of using a prohibited substance will be in of violation of this policy. A physical field test may be performed, if requested, by law enforcement personnel. Any refusal of requested tests will result in the disqualification of the participant from competition.

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