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SECTION 4 – 2024 LIMITED SPORTSMAN RULES

Updates in red | Updated 12/18/2023

4-1 Competing Models

- A. The following cars are eligible for competition: **1999-2024**

4-2 2006 Steel Body Panels with plastic type fenders

- A. Front and rear bumper covers are approved.
- B. No mixing of the 2007 Composite bodies.
- C. Front and rear bumper must meet track official approval.

4-3 Eligible 2007-2024 Composite Bodies

- A. The bodies must contain the approved composite roof and components.
- B. Approved composite fenders, quarters, front and rear bumpers covers and hood.
- C. Approved door and deck lid must be steel or aluminum.
- D. All cars must compete with a 105-inch wheelbase. When measuring wheelbase, one side measurement must be 105" wheelbase. Maximum allowable tolerance cannot exceed ½-inch plus or minus on the other side. In order to obtain the 105-inch wheelbase, the front and rear wheels must be moved an equal distance.

4-4 Car Bodies

- A. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.
- B. Front spoilers must maintain a minimum ground clearance of four (4) inches.

4-5 Overall Car Weight

- A. All added in weight must be painted white and stamped with car number on all sides. Added weight must be in blocks of no less than five lbs. All added weight must be securely fastened with ½-inch bolts and lock nuts. No tie wrapping or taping permitted. Any weight that falls off racecar while on racetrack may be fined \$250.00.
- B. Any unattached weight found in car after qualifying or after event will be an automatic disqualification of times and or event.

C. Refer to General Rules for more.

4-6 Engines

Cars must run a decal on left front fender stating engine and weight.

A. Part # New P/N 88869602 / Old P/N 19258602

1. Total weight: **3,025** lbs.; right side: **1,350** lbs.
2. Holley 650 CFM four (4) barrel part # 80541-1 or 80541-2
3. One (1) inch single hole spacer plate
4. Oil pan may be changed, refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

B. Part #88958603 (Limited Crate Engine)(Refer to GM Tech Manual) (Technical Manual Part #88958668)

1. Total weight:3,075 lbs.; right side: 1,375 lbs.
2. Holley 390 CFM four (4) Barrel part #0-80507-1
3. One (1) inch single (1) hole spacer plate
4. Optional valve springs GM part #19300952 (complete kit) GM part #12499224 GM Valve spring
5. Mahle replacement piston part #224-3853 (.002 over) **Must run a decal on left side of hood showing +.002**
6. Mahle replacement piston part # 930127805 (.005 over) **Must run decal on left side of hood showing +.005**
7. Any GM crate Part# 88958603 with the .002 or .005 oversized pistons will weigh 3,100 lbs. total weight and 1,410 lbs. of that on the right side.

C. Part #88869604

1. Stock 1.5 or 1.6 ratio Rocker arms, no mixing of rocker arm ratio
2. Holley two (2) barrel, 500 CFM HP, P/Ns 80583-1 and 4412 HB or 500 CFM XP, P/Ns 4412HBX, 4412BX and 4412BK will be used for the P/N #88958604 engine
3. Total weight: 3,125 lbs.; right side: 1,425 lbs.
4. The GM 604 crate engine will have a max allowable RPM of 6,600 with 1.6 rocker arms and 6,700 with 1.5 rocker arms.
5. Additional adjustments may be made if needed to ensure fair competition.

D. Ford 347 Jr. part #M-6007-S347JR

1. Must meet all specs that are in the Ford Handbook
2. Holly 390 CFM (4) Barrel part #0-80507-1

3. No spacer plate
4. Oil pan may be changed, refer to NASCAR rulebook
5. Total weight: 3,100 lbs.; right side: 1,400.

E. NASCAR General Motors Steel head engines

- A. Refer to 2018 NASCAR Advance Auto Parts Weekly Series Rule Book for guidelines.
- B. Holley 350 two (2) barrel
- C. Total weight: 3,050 lbs.; right side: 1,375 lbs.
- D. One (1) inch thick super sucker style spacer plate will be allowed

*Note: Any crate engine found to be not in compliance will be confiscated by the Speedway. This means complete engine, as shipped from manufacturer.

**RULES WILL BE ADJUSTED BY TRACK OFFICIALS AT ANY TIME DURING THE
TRANSITIONING OF THESE ENGINE COMBINATIONS TO EQUAL COMPETITION, RESTRICTOR PLATES, WEIGHT
ADJUSTMENTS, MAXIMUM RPM LIMITS, OR GEAR RULES WILL BE USED IF ADJUSTMENTS ARE NECESSARY.**

4-7 Carburetor

- A. Holley 390 CFM four (4) Barrel part #0-80507-1
 1. No modifications: must be stock out of box. The only alterations permitted are: the power valve size may be changed and the jet size may be changed.
 2. All air leaks must be sealed. See the track carburetor spec sheet/guidelines on the Holley 390.
 3. The bottom of the air filter housing must be lower or equal to the top of the carburetor vent tubes.
 4. Both spray pumps must be operational.
- B. 350 Carburetor:
 1. The Holley 350cfm 2300 2BBL carburetor #7448 or #80787-1 ARE THE ONLY APPROVED CARBURETORS.
- C. 350 Carburetor (from NASCAR LMSC Rule Book 2006):
 1. The Holley 2300 2BBL carburetor, list # 7448 and the Holley 2300 HP 2BBL carburetor, part # 80787-1 with a venturi size of 1 3/16" and maintaining a throttle bore maximum size of 1 1/2-inch (see below for carburetor rework guidelines).
 2. The Holley 2300 2BBL carburetor, list number 7448 and the Holley 2300HP 2BBL carburetor part number 80787-1 are the only two carburetors that will be permitted on all models.
 3. The venturis must maintain a round (circular) cross section.
 4. Only Holley replacement or service parts can be used in any carburetor rework.

5. Carburetors and/or carburetor components machined from billet materials will not be permitted.

D. Holley 2300 and 2300 HP two (2) barrel Carburetor Rework Guidelines

1. Carburetor Main Body:

- i. Reshaping, polishing, grinding, or drilling of additional holes will not be permitted. The maximum size for air bleed holes in the top of the carburetor body will be 0.080 inch for all four (4) holes. Screw in air bleed jets will be permitted for the Holley 2300 HP main body, the amount of holes and passages must remain as manufactured. Additional and/or plugging holes or passages will not be permitted in the Holley.
- ii. The choke may be removed, but all screw holes must be permanently sealed.

E. Choke Horn:

1. Choke horn must not be removed.

F. Carburetor Boosters:

1. The booster type must not be changed. The Holley booster part number 45R- 107-1, with casting number 45R-107 and part number 45R-312R, with the casting number 45R-312 are the only boosters permitted. The Holley casting numbers must remain legible on the top of all booster stems. Size or shape must not be altered. Height and location of the boosters must remain as manufactured. All booster must remain a minimum outside diameter of 0.616 inch. The addition of material will not be permitted to the boosters with the exception of a small amount of epoxy that may be used to assist in securing the booster stem to the main body of the carburetor.

G. Carburetor Venturi:

1. The venturi area must not be altered or reshaped in any manner. The venturi must maintain a circular (round) cross section. The casting ring must not be removed. The location of the venturi must remain as produced by the manufacturer.
2. Alterations that, in the judgment of series officials, were made to allow air to be picked up below the opening of the venturi such as altered gaskets, base plates, and drilling holes into the carburetor will not be permitted.

H. Carburetor Throttle Body (base plates):

1. The carburetor throttle body must be used as provided by the manufacturer. The positioning of the throttle bores in the carburetor throttle body must be the same as provided by the manufacturer. The throttle bores must be completely round. The throttle bores must be straight without taper from top to bottom. The throttle bores must remain perpendicular to the top and bottom of the carburetor throttle body. The throttle body (base plate) must not be altered in shape or size. All vacuum holes must be threaded and plugged.
2. Throttle plates (butterflies):
 - i. Stock throttle plates (butterflies) must not be thinned or tapered. Idle holes may be drilled in butterflies. Screw ends may be cut even with the shafts, but the screw heads must remain standard.

3. Throttle Shafts:

- i. Shafts must remain stock must not be thinned or cut in any manner.

I. Carburetor Metering Blocks:

1. Only Holley metering block may be used. Surfacing of the metering blocks for improved gasket seal will be permitted. The only metering blocks permitted for the Holley 2300HP carburetor (80787-1) will be the Holley, part #'s 11938N, 11886 (390HP) and 12323 (screw in emulsion bleed jets) metering block. To order metering block part # 12323 (screw in emulsion bleed jets) the sales # is 134-276.
2. For the Holley 2300HP approved metering blocks, the amount of holes and passages and the location must remain as manufactured with screw in emulsion bleed jets in each jet passage, however, hole sizes may be altered in the jets. Blanks without holes may be used. Additional holes or passages will not be permitted in the Holley 2300HP approved metering blocks.
3. The Holley metering block, part # 12323 (screw in emulsion bleed jets) will not be permitted in the Holley 2300HP, list # 7448.

J. Accelerator Pump:

1. The accelerator pump discharge nozzle must not be changed. The retaining screw must not be drilled for discharge passage.

K. Power Valves and Floats:

1. May be altered.

L. Carburetor Spacer – 350 cfm carburetor:

1. Only a one (1) piece, solid, aluminum carburetor spacer, a minimum of .700-inch and maximum .750-inch in thickness must be installed between the intake manifold and carburetor.
2. The spacer must be centered on the intake manifold and have two (2) round holes with 1 ½-inch openings located in the center that match the base of the carburetor. Holes must be cut perpendicular with the base of the carburetor. Taper, bevels, or any modifications will not be permitted.
3. A one-piece paper gasket maximum .065-inch thick must be installed between carburetor and spacer. A one-piece paper gasket maximum .065-inch thick must be installed between the spacer and intake manifold.

M. Holley two (2) barrel, 500 CFM HP, P/Ns 80583-1 and 4412 HB or 500 CFM XP, P/Ns 4412HBX, 4412BX and 4412BK will be used for the P/N #88958604 engine.

1. No machine work allowed. Jets and power valve may be changed as long as the replacement parts are manufactured by Holley.
2. A one-piece solid aluminum carburetor spacer, one (1) inch maximum thickness may be installed between the intake manifold and the carburetor.
3. Spacer must be centered on the intake manifold and may be open or the two (2) hole type. No tapers bevels or any modifications permitted.

4-8 Air Cleaner

A. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

4-9 Electrical Systems:

A. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

4-10 Fan

A. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

4-11 Engine Oiling System

A. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

4-12 Exhaust System

A. Headers optional

B. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

4-13 Drive Train

A. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

4-14 Flywheel

B. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

4-15 Starter

A. Only standard OEM type starters may be used.

B. Starter must mount in original mounting position.

4-16 Bell Housing

A. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

4-17 Transmission

A. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

4-18 Drive Shaft

A. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

4-19 Rear Axle

A. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

4-20 Wheels

A. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

4-21 Tires

A. Refer to Tires section.

4-22 Frames

A. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

4-23 Suspension

A. Spring/Shocks: Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

1. All middle spring coils shall be taped using either body masking or cloth duct tape (preferred) – *electrical tape cannot be used*. Taping shall be wrapped without cuts in only one (1) layer and shall start at the middle coil encasing the entire coil surface and covering two (2) full coils. This tape shall be present and easily visible pre- & post-tech. Failure to tape your coil in this exact manner will result in an immediate disqualification at post-tech inspection. Tape applied in this manner must be present at inspection and any cut or smudge to the tape resulting from coil compaction and/or touching will be an immediate disqualification. All coils must be active.
2. **Minimum front spring rates will be 300 lbs. for coil overs and 500 lbs. for big springs. All other spring dimensions will go off of the 2024 NASCAR Advance Auto Parts Weekly Series Rule Book.**

B. Adjustable shock shafts will not be permitted

C. Shock Absorbers

1. Shock absorbers and components must be from an approved manufacturer. The approved shock absorbers will be of the revalvable, rebuildable, gas pressurized, mono-tube, deflective disc valve type with an integral gas reservoir. Shock absorbers must provide a resultant force dependent upon piston velocity and must be acceptable to Track Officials. Shock absorbers and components must be used as supplied by the manufacturer and all components must be used in only their respective manufacturers shock absorber. Modifications or changes to the shock absorber and internal components will not be permitted. Shock absorbers and components must be available to all Competitors and must meet the following requirements. As per local Track Rules, oil type shock absorbers will be permitted. Specifications and rules for these oil type shock absorbers will be developed, implemented, governed and enforced by the individual Track Rules.
2. The approved shock absorbers and components are as follows:
 - Penske 7500 Series with only the approved Penske Linear and High-Flow Pistons
 - Bilstein ASN, SN or AS2 Series with only the approved Bilstein Linear U37T Series Pistons #423171 and #403556
 - C2P NAEX Series with only the approved Linear #62070 and Hi-Flow #40094 Pistons
 - Advanced Racing Suspensions 4000 Series with only the approved #40094 Piston
 - PRO PG Series with only the approved Linear/Linear #63 Piston
 - JRI ST/08 Series with only the approved #3803-15 Piston
 - Blackmajic Shocks (Shadow Racing Products) BML Series with only the approved BML Linear Piston
3. Changes in shock absorber force must not be made by the position of the shock absorber shaft, only by the velocity of the shaft through the compression and rebound stroke.
4. Changes in shock absorber force must not be made by the position of the shock absorber shaft, only by the velocity of the shaft through the compression and rebound stroke.

5. Track Officials may use a shock absorber and internal components provided by the respective manufacturer as a guide in determining whether a Competitor's shock absorber and internal components conforms to the specification of the Rule Book.
6. The only shock absorbers and internal components permitted will be those approved by NASCAR and Track Officials.

NOTE: The internal bore of the shock absorber body must remain as supplied by the manufacturer. The internal bore diameter of the shock absorber body must be the same from top to bottom. Tapers, steps, grooves and other misalignments will not be permitted. Modifications which provide position sensitive piston travel will not be permitted.

- ~~7. A single manual external shaft bleed adjustment through a tapered needle into a fixed orifice in the hollow shaft, acceptable to Track Officials will be permitted on the shock absorbers.~~
8. Shock absorber base valves will not be permitted.
9. "Steel" deflective disc valve shims must seal the primary metering faces of the single piston in the main shock body. The only shims permitted will be those manufactured, produced and/or recommended by the specific shock absorber manufacturer. Shims must be used in only their respective shock absorbers. Ring shims and bleed shims will be permitted. Floating shims will not be permitted. The shim stack must be of the single pyramid type with the exception that multiple shims of the same size may be stacked together. The inside diameter of the shims must match the shaft diameter with the exception of the outer ring of the ring shim.
10. Only a single one-piece piston is permitted in the main body with one (1) shim stack on the compression side, and one (1) shim stack on the rebound side. A maximum of three (3) bleed holes may be drilled in the piston. If bleed holes are drilled into the piston, they must be drilled into the port of the piston only. The only pistons permitted are the Linear and High-flow pistons that were submitted by the manufacturer and approved by NASCAR. The piston band must be the original band for the approved manufacturers piston. The piston band and piston band groove in the piston must remain the standard size and must not be altered.
11. One-piece open style jets that bleed equally in both compression and rebound will be permitted. One-piece jets that control flow in compression only or rebound only will be permitted. Solid plugs in place of open jets will be permitted. Plugs with fixed bleed holes will be permitted. Check ball jets that control flow in compression or rebound only will be permitted.
12. The gas reservoir maximum outside diameter must not exceed 2.300 inches. External shock absorber gas reservoirs will not be permitted.

13. The single floating divider piston in the integral gas reservoir must be installed to the manufacturers specifications without any modifications.
14. The gas reservoir must not be filled with any material other than in an inert gas form. Oils or any other types of liquid or materials that are not approved by NASCAR or Track Officials will not be permitted in the gas reservoir side of the shock absorber divider piston.
15. The shock absorber nitrogen gas pressure must not be less than 50 psi or greater than 150 psi. Gas pressure will be measured at ambient temperature (not to exceed 100 degrees Fahrenheit) by temperature monitoring devices used by Track Officials. Gas pressure will be checked with the shock absorber removed from the race vehicle and fully extended. After being charged, at any time, the shock absorbers must fully compress and fully extend the entire length of the shock absorber shaft with the external adjustment (if used) set in any position without any type of mechanical assistance. An external Schrader valve, needle valve, etc. will be required to pressurize the shock absorber with gas. The competitor must have the equipment required to adapt to the technical inspection equipment to check the gas pressure in the shock absorber.
16. Oils that the viscosity can be changed by any type of electro-magnetic field or by any other means will not be permitted.
17. Shock absorber shaft diameter must not exceed 0.630 inch and the shaft must not have any sleeves or spacers that could limit the travel of the shaft into or out of the main body. Shock absorber shafts must be solid on all non-adjustable shock absorbers. When single adjustable shock absorbers are used hollow shock absorber shafts will be permitted.
18. Suspension travel must not be limited by the shock absorber and/or components, or shock absorber mounting location.
19. Coil over shock absorbers will be permitted.
20. Remote or electronically controlled shock absorbers will not be permitted.
21. A maximum of one (1) shock absorber per wheel will be permitted.
22. Quick disconnect shock absorber mounts will not be permitted. The shock absorber must be attached with positive nut and bolt mounting fasteners. Adjustable shock absorber mounts of any type will not be permitted. Shock absorbers must be mounted on the vehicle with the gas reservoir to the top. Shock absorber eyelets of different length will be permitted but must not limit the travel of the chassis.
23. Shock absorbers will not be permitted inside of the front or rear coil springs, with the exception of the coil over type springs.
24. All rear shock absorbers must be mounted behind the rear axle housing

25. The rear shock absorbers must not angle inboard towards the center of the vehicle more than 30 degrees from vertical.
26. Heating pads and/or blankets will not be permitted for warming the shock absorbers.
27. Shock absorbers and internal components are subject to inspection at any time by Track Officials.
28. It is the responsibility of the driver, not NASCAR or Track Officials, to ensure the shock absorbers are used in accordance with the manufacturer's instructions and specifications.

D. Optional Oil Spec Shocks

1. Non rebuildable oil shocks.
2. KONI 30 series racing shocks.
3. They must remain as manufactured with part number visible and unaltered, with factory paint and will be subject to exchange. If an exchange of shocks is required by track officials, the shocks ran by the competitor must be in proper working order. If the shock is damaged or not working properly, the competitor must replace it with either a properly used one or new one of the same number.
4. Teams running all four (4) non-rebuildable oil/Pro/Koni shocks will receive a weight break of 40 lbs. total, no more than 20 lbs. off the right side.

E. Bump stopping and coil binding are not permitted.

F. No Coil Binding, Bump Stops, Bump Springs or any device which limits travel is permitted. Any device(s) such as chains, cables, etc. that limit the travel of the suspension either up or down will not be permitted. When jacking the car, a minimum of two (2) inches of chassis movement is required before movement of the axle/tire assembly. All coils of the spring must be active. All downward chassis movement while the race car is in competition must be limited only by the normal increasing stiffness of the springs or the bottoming of the chassis against the race track, whichever occurs first. All middle spring coils shall be taped using cloth duct tape. Taping shall be wrapped without cuts in only one layer and shall start at the middle coil encasing the entire coil surface and covering two full coils. This tape shall be present and easily visible Pre & Post tech. Failure to tape your coil in this exact manner will result in an immediate Disqualification at post tech inspection. Tape applied in this manner must be present at inspection and any cut or smudge to the tape resulting from coil compaction and/or touching will be an immediate disqualification. All coils must be active. No spring rubbers, or spring spacer may be used at any time. Shock Body cannot contact the lower shock mounting eyelet causing it to limit travel. Shock shaft must have an o ring or wire tie showing the travel of the shock. You must allow for all track conditions and surface changes no allowance will be given at inspection. Testing may include removal of the spring for inspection, compaction of the spring thru mechanical means or weight to the front valance.

G. Maximum sway bar size of 1.750 will be permitted.

H. Car must maintain a four (4") inch ride height.

1. Weight jacks permitted.

I. No traction bars or additional linkages permitted.

1. Three (3) point hookup permitted.

J. No hydraulic or mechanical weight shifting devices permitted.

K. Long trailing arms permitted. (Refer to NASCAR LMSC Rule Book.)

L. Monoballs permitted in trailing arms with both sides being the same; however, no heim joints or adjustable type rod ends permitted.

M. Trailing arms may be either passenger car type or pickup truck type and length. Fabricated trailing arms permitted using a minimum of two-inch by three-inch (2" x

3") steel box tubing a minimum of .120 thick for long arms or 1-¼ inches by two (2) inches steel box tubing a minimum of .120 thick for short arms.

N. Truck arms must be the same thickness from left to right

O. Tread Width Requirements

1. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

2. South Boston Speedway will check tread width only at the center of tire, zero toe in, and at spindle height and must not exceed 64-1/2 inches measured at 11 inches on the LF and 13 inches on the RF

P. Ground Clearance Requirements

1. Frames, rails, chassis, and all sheet metal clearance with driver in car: four (4) inches.

Q. Front spoiler clearance: four (4) inches.

R. All suspension parts: four (4) inches.

S. Exhaust pipes: three (3) inches.

T. Steering Components

1. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

U. Spindles

1. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

V. Brake Components:

1. Only single piston disc brakes with stock type calipers will be permitted front and rear. Brakes must be operational on all four (4) wheels. Floating brake calipers will not be permitted.
2. Refer to NASCAR LMSC Rule Book

W. Fuel & Fuel Tanks:

1. Track fuel required. No additives allowed.
2. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

4-24 Safety

- A. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

4-25 Seats

- A. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

4-26 Seat Belts

- A. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.
- B. Seat belts can be no more than three (3) years old.

4-27 Window Net

- A. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.
- B. Window nets can be no more than three (3) years old.

4-28 Fire Control

- A. Refer to NASCAR Advance Auto Parts Weekly Series Rule Book.

4-29 Protests & Appeals

- A. Refer to General Rules or Track Officials for protest procedures.
- B. Engine protest prices come from the NASCAR Advance Auto Parts Weekly Series Rule Book.

South Boston Speedway Track Officials reserve the right to issue bulletins to the rules to ensure fairness in competition.