



## *2021 GSPSS RULES*

**GSPSS  
PO Box 7  
Charlestown, NH 03603**

## 2021

Granite State Pro Stock Series is designed to promote and ensure the health of Pro Stock racing in the Northeast. Therefore, having a rules package that keeps costs in-check and still allows teams the creativity and innovation that provides for competitive racing is very important to our success.

GSPSS Officials shall be empowered to permit minor deviations from any of the specifications herein or impose any further restriction that, in his/her opinion, does not alter the minimum acceptable requirements. No expressed or implied warranty of safety shall result from such alterations of specifications.

- ❖ Any interpretation or deviation of these rules is left to the officials. Any decision of and by GSPSS officials is final.
- ❖ Unsportsmanlike conduct can carry a minimum \$100.00 fine and/or suspension. Any and all fines will be added to the points fund at the end of the racing season.
- ❖ Any competitor may be required, at their expense, to remove the intake, heads, and/or oil pan for inspection purposes.
- ❖ All cars must go through technical inspection prior to car taking to the track for practice. Cars will be weighed with driver, and may be done prior to or after qualifying and prior to or after the feature.

### Gear Rules

**If there is a gear rule in place, it will be announced on the entry form.**

### Body Requirements

All cars will be required to run GSPSS approved template style ABC bodies (Monte Carlo, Grand Prix, Taurus, Fusion, Charger, Intrepid and Camry). Please see the Five Star / AR Bodies mounting guides for all the appropriate specifications and measurements. **The ARBodies Revolution body may be used in their intended configuration and conforming to all applicable templates and dimensions with a 20lb weight penalty. 50lb weight penalty at tracks half-mile and over in 2021.**

### Rear Spoiler

Rear spoiler shall not exceed 6 1/2" (ABC bodies) The spoiler shall not exceed 60" width and must be mounted at the rear bumper cover. No side bracing or boxing permitted. The maximum height of the top of the spoiler to the ground shall be 41 1/2".

## 2. Car Weights

- A. All cars weights listed are race ready with driver, full of fuel, oil and water before race.
- B. Maximum left side weight percentage for ALL cars will be 58% before event with NO allowances in any form.

Starting in 2019 GSPSS will be joining the RPM Seal Alliance. This will help ensure healthy competition and a level playing field for years to come. Competitors do not HAVE to have sealed motors in 2019, but there will be a small weight break for teams that are in compliance.

**\*\*Please note the cam change 604 is NOT allowed to compete with GSPSS\*\***

- 2675 lbs. ACT with a ACT approved Seal 603 Chevy Motor
- 2725 lbs ACT with a ACT approved Seal 347jr Ford Motor (100% ACT legal)
- **2675 lbs Box Stock 604 – as it comes from GM, including timing cover, oil pan, and bottlecap seals.**
- **2725 lbs. unsealed (must meet all GSPSS specifications), 604 crate engine**
- 2700 lbs. RPM Seal Alliance 604 (GSPSS oil pan rule is in effect)
- 2725 lbs. GSPSS approved, RPM Alliance sealed Ford 347SR Crate Engine. **GSPSS is working on a restrictor plate program for this engine for 2019. PLEASE contact GSPSS if you intend to run this option.**
- **2765 lbs Sealed (but not RPM alliance seal program) ford 347sr motor (seals must be recorded with GSPSS and Engine Builder information given to tech) 6.5 inch KEVKO pan is allowed with this option only. Please contact GSPSS if you intend to run this option.**
- Non-quick change rear-end **(including Ford 9-inch)**, or front load quick change, add 25 lbs.

### **3. Wheelbase, Tread Width, Frame Height**

- A. Minimum wheelbase is 102" on either side. The left side wheelbase must be +/- 1" of right side. Maximum wheelbase is 108".
- B. Maximum tread width front and rear is 66".
- C. Absolute minimum height of frame and cross members is 3" from ground before all qualifying and feature events with driver. No lifting allowed. Rear spoiler height maximum must be maintained before, during, & after each race

## 4. Engine

### 4.1 Engine Location

- A. Engine/drive line must be centered within 3" of the tread width of the car. This will be measured from the outermost point of the front tires.
- B. Engine crankshaft center height must be a minimum of 10" from the ground.
- C. Maximum engine setback is 2" from the forward most sparkplug hole center to a determined line across the center of the upper ball joints.
- D. Engine must be positioned in the normal upright mounting, whereby cylinder vertical center-line of a 90-degree engine shall be a 45-degree engine angle to a vertical line projected from the ground plane.

### 4.2 Engine Option #1

#### A. Crate Engine with NO Changes

- Fastburn In factory form without modifications 385 (part# 12496769), Fastburn 400 (part# 88958604). This is a factory sealed crate engine package, complete from intake manifold, stamped steel valve covers with racing style breathers, and 8 quart dual kick-out circle track racing oil pan. The Fast Burn 400 engine has a 1053 forged steel crankshaft, aluminum heads with 2.00"/1.55" valves, hydraulic roller lifters. (400 HP at 5500 RPM - Torque 400 @ 4500 RPM)
- The base engine is a Fast Burn 350ci 385 horsepower, with the following parts:
  - Part # 10105123 4 bolt iron block – Must Remain Stock
  - Part# 14088533 1053 steel crankshaft – Must Remain Stock
  - Part# 10108688 PM rod – Must Remain Stock
  - Part# 10159436 High silicon aluminum piston – Must Remain Stock. NO “Eyebrowing” the pistons for clearance. Mahle piston #9301278 with matching ring package.
  - Maximum overbore .034 - **GSPSS will levy weight penalties for engines over .008 overbored. Please contact GSPSS with questions.**
  - Part# 10185071 Camshaft with hydraulic roller lifters – The camshaft may NOT be changed.
  - Part# 12464298 Aluminum head – Must Remain Stock. You may cut the heads .010 for cleanup. Minimum 60cc.
  - Part# 12496822 High rise single plane intake manifold.
  - Part# 12366573 Aluminum dual plane (no EGR) or part# 12496820
    - Aluminum dual plane (w/ EGR)– Must Remain Stock.
- Competitors competing with the original Fastburn 385 (intake manifold part# 12366573 or part# 12496820) may update to Fastburn 400 (part# 12496822).
- **Part# 25534354 8 quart oil pan or Moroso (part# 21319) pan, or Champ #KP106KORB, is permitted with matching p/u assembly permitted and utilized in factory form without modifications.**
- Carburetor: a Holley HP Series 4 brl. 650 Carburetor (part# 80541-1 or -2)
- The Retro Beehive Valve spring kit, **part #19300952 – Beehive Valve Spring conversion kit** is now available through your Chevrolet Performance Parts authorized dealers. The kit contains the following part numbers:
  - **16 - #19301707 valve spring seat**
  - **16 - #19301708 valve spring retainer**

- 32 - #19301709 split key locks
- 16 - #12625033 valve spring (blue)

#### 4.2a Engine Option #2

##### GSPSS Box Stock 604

- For 2021 teams that purchase a new 604 crate with bottlecap seals and run it AS PRODUCED will get a 25lb weight break (2675).
- Teams are required to run this crate complete with the factory oil pan and timing cover. Harmonic balancer is the ONLY part that can be changed.
- These engines will be pulled and inspected. If it is found to be altered contrary to the rules, it will be confiscated by GSPSS in its entirety. You will lose the complete engine if ANYTHING is found to be non-compliant.
- Once the motor has been altered (for repairs or rebuild) it is no longer part of this engine package.

#### 4.2b Engine Option #3

Ford D347SR SEALED crate engine – GSPSS is working with the RPM Seal Alliance on a comprehensive parts list and restrictor plate program. Please contact GSPSS if you intend to run this option. The Ford D347SR engine MUST be sealed in order to compete. No 7mm valves.

#### 4.3 GM 400 ‘603’ ‘604’ Fast Burn D347JR And D347SR ‘Crate’ Engine Inspection Policy

- A. Within the guidelines of utilizing the “Crate” engine options all competitors are subject to a zero tolerance policy of inspection and conformability to all guidelines as specified by the manufacturer.
- B. If in the event any team is considered in question as to the productivity of performance from a crate” powered engine, that engine will be susceptible to the following inspection process without protest. Failure to adhere to any action taken by series officials will result in immediate disqualification.
- C. At the conclusion of any race event series officials reserve the right to require any team to remove engine in complete form and turn over possession to appropriate officials for inspection purposes to be determined by series officials.
- D. Engine will be susceptible to Dyno testing and/or engine tear down for complete inspection to determine total legality to factory produced complete form. Crate engine teams may be required to remove engine for testing and inspection. This will be at GSPSS expense, UNLESS the engine is found illegal, then the competitor is responsible for all associated expenses.
- E. In the event ANY part within engine is found non-conforming, the owner/driver will be disqualified from event and receive no points or purse monies.
- F. Engines with cam and rocker replacement option are limited to only replacement of Cam shaft, Lifters and Rockers! NO other modifications permitted!
- G. In the event of engine rebuild the only modifications are listed below.

- Maximum overbore of .034”
- Maximum Deck surfacing of block: .005”
- Maximum deck surfacing of cylinder head: .010 straight only. NO angle milling permitted.
- Must maintain OEM compression
- Minimum rod and main bearing size: .010” under
- All Engine bearings must be OEM type, non-coated.
- All other necessary parts required for rebuild are to be direct factory replacement purchased through Manufacturer and are exact OEM specified part numbered to engine utilized specification sheet and installed to factory built specs. NO EXCEPTIONS!
- All crate engines are to be used in complete form as produced unless otherwise specified. From Intake manifold to oil pan. No external oiling systems permitted.
- OEM Engine gaskets only. 2 piece suggested for tech reasons.
- ZERO TOLERANCE!

H. After Market timing chain cover permitted.

I. After Market engine bolts are permitted.

J. Any distributor legal to series rules may be permitted.

K. Any valve cover set is permitted

L. Any water pump is permitted

## 5. Air Intake

A. No cowl air induction is permitted. Absolutely no air ducts or baffles permitted on or leading to the air cleaner or element.

B. Air box opening Maximum will be 4 inches by 20 inches may be cut in the hood behind the carburetor air cleaner to allow fresh air to the carburetor.

## 6. Electrical System

### 6.1 Ignition

A. All ignition systems must be acceptable to series officials.

**B. All wiring must be sealed. No unplugged wiring. All ignition boxes must be mounted on the passenger side, in plain view, and out of reach of the driver. All wires to the distributor must be run separately and not part of a bigger loom or wiring harness.**

**C. Teams may only use the following ignition system: FAST Cams Ignition part# 6000- 6700 (HI-6RC) and a Coil part# 730-0192 (PS92N), mounted on a tray as specified at [cra-racing.com](http://cra-racing.com).**

**D. Maximum RPM rule will be at the discretion of GSPSS officials at any time, at any event. (usually 6500)**

E. The distributor must mount in the stock location and maintain the same firing order as a factory produced engine for the make and model car being used.

## **6.2 Starter**

A. The self starter must be in working order. Gear reduction starters are acceptable. All cars must be capable of starting under their own power.

## **6.3 Battery**

A. The battery may not be located within the driver's compartment. Battery must be isolated within the fuel cell area of the car. Battery must be securely mounted and covered to prevent spillage if inverted.

## **6.4 Electrical Switch**

A. A labeled on/off master switch must be located within reach of the driver's side window opening and effectively kill power from the battery to the car's ignition system.

## **6.5 Accessories**

A. Cars will not be permitted to carry on board computers, micro-controllers, processors, recording devices, electronic memory chips, traction control devices or digital readout gauges. Radios must be of two-way voice communication type only, independent of the car's electrical system.

# **7. Drive Train**

## **7.1 Drive Train**

A. No carbon fiber or titanium products allowed without approval from GSPSS.

## **7.2 Clutches**

A. Multi-disc designed for racing. Minimum 5.5 -inch diameter clutch plates.

## **7.3 Flywheel**

A. Any flywheel permitted.

## **7.4 Bell Housing**

A. Any aluminum, magnesium or steel bell housing allowed.

## **7.5 Transmission**

A. No "in-out" type transmissions permitted.

B. Not to exceed 4 forward gears. Must have at least 2 forward gears and 1 reverse gear in working order.

C. No automatic or semi-automatic transmissions permitted.

D. All other forward gears (except 4th or high gear) in any position shall be 1.23 or higher.

E. Fourth or high gear ratio must be 1 to 1.

F. All transmissions must be approved by series officials.

G. All Aftermarket Transmissions must weigh a minimum of 50lbs Dry

## 7.6 Drive Shaft

- A. Drive shafts and universals must be similar in design to standard production type. Only a 1 piece steel or aluminum drive shaft permitted.
- B. It is mandatory that (2) 360 degree solid steel brackets, no less than 2 inches wide and 1/4 inch thick, be placed around the drive shaft and fasten to the cross member of the car.
- C. All steel drive shafts must be painted white.

## 7.7 Rear Axle

- A. Any quick change rear end.
- A-1. Any non Quick Change will be allowed to compete with a 25lb weight penalty
- B. Full floating rear axles are compulsory.
- C. Locked or unlocked differentials are permitted.
- D. Limited slip differentials are permitted with no electronic controls.
- E. Differential oil coolers are permitted.
- F. Cambered rear axle housings are permitted.
- G. Steel or rubberized drive plates may be used.
- A-2. Front loaded quick change will be allowed to compete with a 25 lb. weight penalty.

## 7.8 Mufflers/Exhaust

- A. All cars must have mufflers.
- B. **Exhaust must extend behind driver. Rear exit and door exit allowed. Door exit MUST use a flange at the door at the opening. No exhaust pipes may stick out AT ALL. Excessively loud cars, with this routing, will be asked to make changes. \*\*This is a probationary period for the door exit option\*\***
- C. Maximum allowable noise decibel to be 96db. Due to increasing noise ordinances at many facilities in which the series competes at, series officials will be required to enforce noise levels as posted. Facility ordinances will determine as to whether enforcement will be limited to teams being fined or restricted from competition due to violation of maximum db. Noise limitations.

## 7.9 Wheels

- A. Only 15-inch diameter 5 lug steel wheels with a 10-inch rim width and a reinforced center are permitted.
- B. Solid heavy-duty steel lug bolts and nuts must be used.
- C. Bleeder valves are permitted.

## 8. Chassis

### 8.1 Roll Cage

- A. Minimum size of roll cage tubing is 1 3/4", .095 thick. All cars must have an "X" type member across and behind the driver.
- B. Minimum four point cage required. Traditional chassis manufacturing techniques, and designs, must be used. Including 10" minimum circumference main frame rails and front clip. Rear clip minimum 8" circumference rails. (Contact tech with any questions)
- C. All cars must have trunk area sealed.
- D. Four curved bars in driver's door with 6 vertical bars ( 2 between each horizontal bar) and three bars in passenger door are mandatory.



- E.** It is mandatory to have 16 gauge metal welded between door bars or a 16 gauge plate 40" in length, and 17" in high minimum, welded between the door bars and the driver's door.
- F.** The total height of roll cage to be 40 ½" from bottom of frame. Halo to be no less than 1" lower.
- G.** There must be a piece of tubing welded diagonally or perpendicular between halo and top of roll cage.
- H.** Minimum height of door bars on driver's side 22 ½" from bottom of frame.
- I.** A "Petty Bar" is recommended between center of cage and upper right front halo.
- J.** Width of halo should be a minimum of 44" on perimeter chassis, and 32" on straight rail chassis. Measurement is from outside to outside of tubing.
- K.** All roll cage installations and workmanship MUST be acceptable to series officials.
- L.** Seat must be an aluminum, or carbon fiber (with tech approval) racing seat bolted to a steel frame connected to cage. Must have six (6) – 3/8" bolts, grade 8 with washers. One must be in each corner of the seat (2-3" from the outer edge) and two in the headrest.
- M.** A support brace must be installed in the rear of the seat.

## **8.2 Fire Walls**

- A.** Interior of car must be completely enclosed in respect to engine compartment, track surface, wheel wells, and rear (fuel cell) compartments. The area immediately beneath the driver (floor) and the vertical panels surrounding the seat area (front and rear firewalls and transmission tunnel) must be constructed of minimum 18 gauge steel (.047 inch) and be of welded construction. Other interior panels may be constructed of aluminum, minimum of 0.040 inch thickness.
- B.** Panel on passenger side of car may be either flat across at transmission height, drop back to floor level after transmission tunnel, or have a 4" flat area over transmission and then angle up to the top of the right side door bars.

## **8.3 Suspension Components**

- A.** Front and rear suspensions may be coil spring or coil over spring type.
- B.** Rear trailing arms may be of any unequal length and may use a spring or shock assembly.
- C.** The third link may be of any length.
- D.** Rack and pinion steering is allowed.

## **8.4 Springs**

- A.** Type of springs including height and wire diameter is optional.

## **8.5 Shocks**

- A.** A maximum of 1 shock absorber per wheel is permitted.
- B.** Any single adjustable shock without external canister permitted.
- C.** All bump stops must be on shock shaft. No external bump stops.

## **8.6 Sway Bars**

- A.** One Sway Bar permitted.

### 8.7 A-Frames

- A. Independent front suspension is mandatory with articulating upper and lower control arms.
- B. Lower A-frames may be stock appearing or strut arm type.
- C. Upper and lower A-frames may be unequal lengths.
- D. Ball joint type is optional. Mono balls are allowed.

### 8.9 Spindles

- A. Steel spindles only.

### 8.10 Add-on Weight

- A. All add-on weight must be securely mounted outside the driver's compartment with a minimum of two 3/8 bolts. All add-on weights must be painted white with the car number on them. If add-on weight comes off during any race, the weight may not be added back to the car to make minimum weight unless approved by series officials. No add-on weight will be below the bottom of the frame rails.
- B. No ballast adjustment devices permitted on car. Weight transfer devices of any type may not be activated by the driver.

## 9. Fuel Cell

- A. Maximum size is 22 gallons (U.S.). Must be approved by series officials.
- B. Cell must have a minimum ground clearance height of 8 inches from the track.
- C. Must have flapper/ball valve assembly in cell to prevent spillage when upset.
- D. Must be enclosed in a 20 gauge steel canister and installed in a safe manner.
- E. Must have a check valve in vent tube to prevent spillage. Vent line must not be excessive in length.
- F. Must have a safety loop designed to protect the rear of the cell.
- G. No fuel lines in driver's compartment.
- H. Fuel shut off, marked OFF and ON, must be in reach of driver and accessible to safety crews. A fuel shut off indicator with an arrow on the passenger side window ledge required. Arrow to line up with shut off valve.
- I. Steel or aluminum fuel filters only.
- J. No electric fuel pumps.
- K. At a minimum, all fuel cell configurations must include a rubber type cell in a steel container.

## 10. Safety Equipment

- A. Driver's Seat
  - Driver's seat must be Full Containment type designed for auto racing and constructed of 0.125 inch thick aluminum and adequately padded.
  - Right & Left side headrest mandatory.
  - NO FIBERGLASS SEATS PERMITTED.
  - Aircraft-quality hardware is required for attaching seat to seat substructure. Seat must be located with at least 6" (preference of 8") clearance to the nearest

- longitudinal door bar.
- The seat substructure must be securely welded to the main roll cage.
- Seat may not protrude outside 4 point upright or top cage halo.
- All drivers seats, mounting hardware, etc. is subject to series officials.

**B.** Window nets are required in driver's window area. Window net must be web or mesh style. The net must be secured to the roll cage with two steel rods or bars, with top being of quick release design and must fall down when opened. All cars must have an arrow on the roof, lined up with the latch for the window net release. Latch must be forward and driver accessible. Condition of window net and release must be approved by series officials. The net must be in the latched position at all times when the car is on the track.

**C.** A fire suit is mandatory. Must be Nomex material, double-layer, One Piece, clean, and in good condition.

**D.** Fire retardant gloves and shoes required.

**E.** A 2010 or newer Snell or D.O.T approved safety helmet is mandatory.

### **10.1. Seat Belts and Shoulder Harness**

**A.** A quick release lap belt no less than 3 inches wide is compulsory.

**B.** Both ends of the lap belt must be fastened to the roll bar cage with high quality bolts not less than 1/2 inch diameter.

**C.** Shoulder harness must be no less than 3 inches wide and must come from behind driver's seat. It is recommended that the harness pass through a steel guide welded to the roll cage that will prevent the harness from sliding from side-to-side. Shoulder harness may be 2 inches wide when utilized with proper combination of Hans's device or similar head-neck restraint system.

**D.** A center (crotch) belt must be securely mounted to the lower seat frame at the bottom and to the lap seat belt at the top.

**E.** Where the belts pass through the seat edges, the belt must have a grommet installed, be rolled and/or padded to prevent cutting the belt.

**F.** All seat belts and shoulder harnesses must connect at the lap belt with a quick release buckle.

**G.** Seat belts must be dated by the manufacturer and must not be used beyond 5 years after the manufactured date. Up to Tech Inspectors discretion.

**H.** A Hans, Hutchins, or G-Force device is mandatory, or any other SFI approved head restraint device.

## **11. Fire Control**

**A.** On board fire suppression system recommended.

**B.** All cars must have a fully charged fire extinguishing pressurized cylinder with a visible operating pressure gauge safely mounted within the drivers reach. Tape is not acceptable as the method of mounting.

## **12. Fuel**

**A.** Sunoco Race Fuel is the "Official Fuel" and New England Racing Fuel, Inc. is the

“Fuel Supplier” of the Granite State Pro Stock Series.

- B.** Sunoco Standard Purple 110 Leaded, and Sunoco Supreme Blue 112 Leaded are the only fuels allowed at all GSPSS events.
- C.** The “Official Fuel” will be supplied on-site at all GSPSS events and must be used for practice, qualifying and the race exactly as supplied by NERF. You will be fully responsible for any and all fuel purchased in bulk passing a fuel tech inspection.
- D.** GSPSS has the right to sample a competitor’s fuel at any time during the event. Samples will be impounded for observation and/or testing by GSPSS, Sunoco, NERF and/or any outside laboratories at the GSPSS discretion.
- E.** Fuel samples will be tested to the manufactures specifications.
- F.** Officials will use a sample of the actual fuel, provided at the track by the fuel supplier, to determine whether the fuel used by a competitor conforms to the specifications in the rulebook.
- G.** Any blending and/or mixing of fuels, either of or not of the approved fuels, are not permitted.
- H.** No MTBE, ethers, alcohols, ethanol’s, nitrogen, nitro compounds, performance additives or other oxygenates, may be blended or introduced into the inductions or fuel supply, either at the fuel cell or upstream in the fuel system.
- I.** All competitors must prominently display a Sunoco Racing Fuel patch on his/her driving suit and display the Sunoco Racing Fuel decal on both sides of the car.

### 13. Tires

- A.** American Racer EC83 on the left side and EC84 on the right side will be the ONLY Tire permitted. All tires must be purchased through the GSPSS. **The Detailed tire rule TBA**

### 14. Radios

- A.** A two (2)-way radio is required per car for communication between the driver and a spotter.
- B.** All spotters must have one(1) scanner programmed to receive the series race control frequency and must monitoring this channel at all times during any series event. The spotter must be in the designated spotter’s area to communicate directions to the driver via the two-way radios.

### 15. Lettering and Numbering

- A.** Car numbers must be a minimum of 18 inches high and 3 inches wide. Numbers shall be placed in contrasting colors to the car on both doors and roof. No reflective chrome, gold, or prism numbers allowed. Roof numbers must be visible as read from the grandstand side of the car.
- B.** The car number must appear in 6-inch high numbers in the uppermost corner of the windshield on the passenger side and also on the right rear taillight cover.
- C.** **All cars must display series promotional stickers in proper assigned placement**

**location. To include Series windshield sticker centered on upper windshield as well as contingency sponsor stickers to be located on both front fender areas as indicated by series guidelines.**

**D.** Any signage deemed inappropriate by the series must be removed before car is allowed on the racetrack.

**E.** Car number must be approved by the series. Numbers will be assigned on an available basis. Car number application forms are available from the series.

**Non-Safety or Non-Performance items will be eligible for 1 week grace period at the discretion of Series Officials.**

**Any interpretation or deviation of these rules and procedures is left to the discretion of Series Officials . Their decisions are final.**