



# 350 SUPERMODIFIEDS

## 2021 RULES

All rules for the 350 division listed here will be followed in 2021 by Star, Riverside and SMAC.

### ENGINE:

1. A 604 Crate Motor that is used in competition must be run as manufactured by GM. Car will run a 650 CFM. 4 BBL carb with no spacer, carb will be bolted directly to intake. HP carbs are allowed. Beehive and scorpion valve springs may be used. **ALL motors, to be run at 1950 lbs, must be dyno'd and sealed by RPM Seal Alliance prior to racing. If motor is not sealed you will be given weight penalty. (See weight section for details)** The RPM Seal Alliance will be phased in over 5 years.
2. **CARBURETOR** – 650 CFM 4BBL carb. Only single, maximum .070 thick gasket allowed. **NO** vacuum leaks between intake valves and top of carburetor. **NO** alterations and or metal removal from carburetor except enlargement of idle hold in throttle plate. Choke tower may be removed. Choke “butterfly” may be removed. Jets, power valve and accelerator pump squirters may be changed. Only one 4” x 14” or less air cleaner element is allowed. No scoops or forced air induction allowed.
3. **IGNITION SYSTEM** – Any battery powered ignition system which is produced for highway use is allowed. **NO** crank trigger systems, **NO** magnetos, boosters or other devices allowed. One working coil only. **NO** systems with external box allowed. Battery must be securely fastened inside the main frame rails and outside of the cockpit. Battery must have a protective cover. Teams may use MSD Circle Track RPM Control to prevent over rewinding.
4. **COOLING SYSTEM** – All radiators and cooling devices must be mounted in front of driver cockpit. Water is only coolant, **NO** anti-freeze allowed. Cooling system must have a two quart or larger can or recovery unit located in engine compartment.
5. **EXHAUST** – All exhaust pipes on each side shall run into a common collector. Header shall be kept away from possible fuel spillage areas. All parts of exhaust must remain inside of nerf bars. Mufflers shall be welded on the end of the header pipes. As a **MINIMUM**, all cars must run **fully functional, unaltered** Schoenfeld 103535K 10” mufflers or equivalent. Highly recommended are Moroso #95051 or #95052. **NO** home made mufflers or baffle systems allowed. Proper installation are subject to final track approval. Cars without proper exhaust systems **WILL NOT** be allowed to run at anytime.

### TIRES AND WHEELS

1. Tire compounds for 2021 season will be the EC84 on the RR and EC83 on the other three corners.
2. Existing tire rule will be in effect for 2021. On opening day teams will be allowed to buy 8 tires, 4 must be run on opening night and 4 may be kept as inventory tires. You will not be given replacement tires for cut tires until inventory tires are used up. Each additional week teams may buy 2 tires. Tires must be run on day they are purchased. No race tires may be purchased before 1:00 PM on race day. Teams may purchase practice tires as they wish. New teams coming in after the third race meet has been completed will only be allowed to purchase 4 new tires and 2 inventory tires to start the season. New sticker race tires must be purchased from Star. You may use used race tires from Riverside Groveton or SMAC events.
3. Wheels must be steel only, max 10” wide, any offset allowed. No aluminum, magnesium or carbon fiber wheels. NO bead locks or screw fastening devices of any type allowed. Wheels may not be any wider than 10”. Bleeder valves may be used.
4. NO soaking, grinding, buffing or altering of markings on tire. NO tire softening solutions allowed. Questionable tires will be confiscated by track officials. **Teams caught with tire softener will lose all money for that race meet, points for year to date and a two race suspension.**
5. Tires are available, with service, at Star Speedway from Little Webb’s Tire & Fuel Sales. Bwebberjr19@gmail.com

### DRIVETRAIN / CHASSIS

1. FRONT END – Independent front suspension is not allowed.
2. REAR END – Any passenger car or truck rear end may be used. Quick change, posi-traction or locked rear end may be used. A max, final drive ratio may be established if deemed necessary by track officials.
3. DRIVESHAFT – Driveshaft shall be made of steel and shall be **painted white** for ease of visibility should it become detached from car. **TWO** driveshaft loops are required and shall be constructed of atleast ¾” x 1 ½” material. Driveshaft shall be accessible for ease of final drive inspection.
4. BRAKES – All cars must have four wheel hydraulic brakes in good working order. Brake rotors must be ferrous alloy only.
5. FIREWALL – There shall be a firewall between engine compartment and the cockpit. Firewall shall be constructed of atleast 20 gauge steel or aluminum and bolted or welded to the frame. Rear firewall is required in addition to fuel cell container.
6. WEIGHT – Minimum weight, immediately after feature, with driver strapped in, shall be 1950 for all RPM Seal Alliance cars. All non Seal Alliance cars, regardless if it is a 604 or not, must weigh 2000 lbs in 2021. For 2022 these cars will weight 2025 lbs and for 2023 and beyond will be 2050. No fuel can be added to car at scales to make weight. **NO** bolt on weight allowed outside frame rails, all ballast must be **painted white** and **securely bolted or welded to frame**, outside drivers compartment. NO filling of nerf bars or bumpers. Max. allowable left side weight is 65% of cars total weight . Cars found to be underweight or over % will forfeit trophy, points and prize money for that event.
7. BUMPERS – Front and rear bumpers capable of supporting the weight of the car are mandatory.

8. NERF BARS – Are mandatory on both sides, minimum of 1 ¼" OD. Bars shall be constructed so tires are not beyond bar so as to prevent wheel hop. NO "battle bars" are allowed. Bars may not have anymore than three upright bars with minimum spacing of 12" between.
9. ROLL CAGE / CHASSIS – Rollcages may be constructed of mild steel, DOM steel or chromoly tubing with a min. OD of 1 ½" and a min. wall thickness of .095", rollcage shall be gusseted in all four corners. **Previously built 1 3/8" cars are grandfathered in. NO NEW CARS BUILT FROM 1 ¼" TUBING. 1 ½" inch cars are recommended.** NO sharp edges shall be left anywhere on the roll cage. Cages must be constructed with an inverted "V" or "X" type behind the drivers head. There shall be no sheet metal on the rollcage whatsoever. Padding around helmet area is mandatory.
10. FUEL / FUEL TANKS – All cars must be equipped with a fuel cell in good working order. There shall be a check valve or PCV valve located within the fuel vent line. Fuel cell must be mounted within the main frame rails, fully enclosed in a steel container. Any type of gasoline is allowed, Sunoco Race Fuel available at track is recommended. *No additives, oxygenators, methanol or alcohol allowed. Fuel samples may be randomly taken anytime.*
11. CAR DIMENSIONS / BODY – Cars shall be constructed with a min. wheelbase of 88" and a max. wheelbase of 102" The track width (measured outside lip to outside lip of wheels ) on the front or rear shall be a max. of 84". Bodies shall be constructed of aluminum, steel or fiberglass. Body styles should resemble current ISMA body designs. No side panels higher than drivers shoulders are allowed, when strapped in, race ready.
12. WINGS – Max. length of nose wing shall be 34" from axle to most forward point of front bumper. Max. width of nose or canard wings will be 54" from outermost points of the wing. This includes endplates and/or wicker bills on end plates. Top wings shall be constructed of aluminum or steel with side panels no larger than 24" high. Wing must be no larger than 24 SF of surface area. Fixed or movable, air strut wings are allowed. Only one roof mounted wing allowed. No other wings allowed, including wing built into tail bodywork, except nose mounted canard wings.
13. SHOCKS – NO external canister or reservoir shocks are allowed. **Maximum price per shock shall be set at \$500 list price. If shocks are found to not be in compliance they will be confiscated.**
14. DRIVERS SEAT – Must be either steel or aluminum and provide support for both left and right side of driver. Head rest with support on both sides of helmet is required. Full containment seat is highly recommended and will be become MANDATORY in 2021 race season.
15. DRIVERS BELTS – A five point harness system is required. Belts shall be bolted to the frame. Each belt shall be fastened separately to a common quick release device. Belts must be dated no older than three years. Date tag **MUST** be visible on the be visible. Complete belt assembly must be worn at all times on the track. All belts will be inspected for proper installation before being allowed to race.
16. FUEL SHUT OFF / IGNITION SWITCH – Shall be mounted within reach of driver and be clearly marked "ON" and "OFF". An ignition kill switch is mandatory and should be mounted in area of steering wheel.
17. FIRE EQUIPMENT – All drivers MUST wear full firesuit, gloves and full face helmet. A fire bottle with pull pin located with drivers reach when strapped in is mandatory. One nozzle must point at engine and minimum one nozzle pointing towards driver. "SEE DISCLAIMER"
18. APPAREL – Full face helmet with proper fastenings and protective eyeshield is mandatory. **NO** snowmobile helmets. It shall meet SNELL Foundation testing standards with no less than a SNELL 2015 rating. Firesuit properly fastened at the neck, wrist and ankles is mandatory. Safety neck collar or hans type device is highly recommended. "SEE DISCLAIMER".
19. NO radios and NO mirrors allowed. A Raceiver for one way communication from race control is **MANDATORY**. Available thru Bill Callen or Sean Waddell for a discounted price. **A transponder, mounted 12" in front of rear axle, to body is also mandatory.** Cars that do not have a transponder will not be scored and car will be only be awarded tow money, no points.

#### **APPEARANCE**

1. All cars must be neatly painted and lettered. Major body damage and paint work must be repaired by next race meet.
2. Numbers will assigned by track officials, no letters or 3 digit numbers, track may re-assign to avoid duplication. First car to register will get number in cases of duplication.
3. A contrasting, legible number must be painted min. 18" two stroke width on top surface of wing in addition to min. 8" numbers on both sides of wing, nose and rear of car. No reflective or chrome numbers on top of wing.

#### **VIOLATIONS**

1. RULES INFRACTIONS – Any car illegal will not be awarded points, trophy or money for that race. Car must be made legal before racing again.
2. Drivers are responsible for the actions of their crew members. Driver or crew members entering another teams pit and causing a disruption to the racing program may results in that team being docked points, payoff or suspension / probation.
3. A car or team getting a suspension from one track or series will also be suspended from all other participating tracks for specified time.

#### **POST-SEASON AWARDS**

In order to qualify for any post-season awards, driver must compete in 75% of events run and must be present at banquet for awards presentation.

**DISCLAIMER** – Any person entering the sport of auto racing must acknowledge that it is a dangerous enterprise and no responsibility assumed by Action Racing North East Inc., Star Speedway, their officials or affiliates for any loss or injury sustained as a result or in spite of following the foregoing rules and specifications. All participants agree to abide by all rules of Action Racing North East, Inc.

Update Nov. 12, 2020  
Engine Rule Addendum

**ENGINE:**

2. Option 2: Built Motor option.

2.1. Must be a GM V8 with standard displacement of 350 cubic inches Maximum .060 overbore.

Must be OEM Cast iron block with all factory numbers showing.

2.2. Any GM manufactured steel head or 604 aluminum head P/N19300955 P/N12464298 allowed or the 180 cc Dart Iron Eagle. 604 head must remain as manufactured by GM other than decking of the cylinder head. All heads aluminum or steel must remain with valve size as manufactured. Manufacturer's identification numbers shall remain on all cylinder heads. Roller rockers, screw in studs, stud girdles, and any valve spring are allowed.

2.3. Aluminum flat top piston only. Valve release may be cut on top of the piston. No part of the piston should protrude above the deck of the block.

2.4. Crankshaft must be steel or cast iron. Stock stroke of 3.480.

2.5. Any connecting rod made of steel or powdered metal.

2.6. Any cam with a maximum lift of .510 measured at the valve. Any hydraulic roller or solid lifters.

2.7. Intake to be run with aluminum 604 heads will be 604 intake. P/N12496822 with carburetor bolted directly to intake. Intake run on steelhead, will be a 2101 or 2116 with 2 in. straight bore spacer. No tapering or coning. All intakes must remain as manufactured.

Anybody found not meeting one or the other engine options, will result in DQ for race night, two race meet suspension from any of the four tracks/series, loss of 50% of points for the year up to that date at the individual track discretion.

Any motor can be protested by another 350 competitor. Protesters will be identified to car being protested.

Protest Procedure:

1. Money will be put up before race.

2. Protests must be approved by track/series.

3. One item to be protested per night \$500. (Nothing will be measured except for what is being protested.)

4. Motor will be pulled apart and deemed legal or nonlegal that night.

5. If found legal, a \$300 assembly fee will be given to the car being protested.

6. If car is found illegal, \$300 will be returned to the protesting team. In either event, the remaining funds go to the track/series.

**RPM SEAL ALLIANCE PROGRAM**

These are the Approved Engine Builders for the 2020 Season

RPM Racing Engines	VT 802-524-7406
Nat's Racing Engines	MA 508-336-4142
Larry's Auto Machine	CT 860-449-9112
Redline Performance	ME 207-213-6441
MacProShop	QC 418-389-4572
R.A.D Automachine	MA 413-583-4414
S&S Performance	ME 207-441-8338
Thayer Automotive	ME 207-848-5291
Nova Motorsports	MI 248-767-9560

As for the 2021 season we will up date the list Around Dec 1st

Rick Paya

**RPM Racing Engines**

**331 Carpenter Hill Road**

**Georgia, VT 05478**

**802-524-7406**