



**2020**

# **BLUNDERBUSTRULES**

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# 2018 Riverhead Raceway

## Blunderbust Rules

### COMPETING MODELS

Cars eligible for the BLUNDERBUST DIVISION shall be as follows:

Buick	1965 through current model Electra and LeSabre
Cadillac	1965 through current model year
Chevrolet	Caprice and Impala
Oldsmobile	1965 through current model 88 and 98 series
Pontiac	Bonneville
Ford	1983 through current Crown Victoria 1982-older LTD
Lincoln	1965 through current model year
Mercury	1983 through current Grand Marquis 1982 through older Marquis
Chrysler	Imperial, New Yorker, Newport
Dodge	Coronet, Diplomat, Monaco, Polari, Royal Monaco
Plymouth	Fury, Grand Fury, Satellite

1. No convertibles, station wagons, or front wheel drive cars permitted.
2. No limited production cars permitted.
3. Competing models must be full frame automobiles.

Any car deemed to be outside the intentions of the division will be disallowed at the discretion of the track officials. If you have any question as to the eligibility of your car, please ask officials to approve it before you waste valuable time and materials constructing a car which may be disallowed.

Any car deemed not structurally sound (i.e. excessive rust of the frame, etc.) will be ineligible to compete. The decision of Track Officials and raceway management will be FINAL.

***Stock means for the Year and Make of the car being used.***

## ROLLCAGE

1. Roll Cage Required.
2. 1 3/4" X .090" round steel tubing minimum.
3. Roll cage must be attached to the top of the chassis on both sides. No offsetting of cages.
4. All cars are required to have a rear vertical hoop behind and above the drivers' head, connected to the left and right front roll bar legs by a roof hoop. A cross bar must connect the left and right of the rear vertical hoop at seat height and a second bar across the floor pan as low as possible.
5. The front roll bar legs must follow the contour of the windshield post and cowl. Maximum distance from the windshield to the rear of the roll bar should be no more than 4". An additional bar must be installed at dashboard level, extended from the left front roll bar leg to the right front roll bar leg.
6. A minimum of (4) door bars on the left side and (3) door bars on the right side must be used. Driver's side door bars must be bent to extend into the door panels.
7. Brain Bar Required and must be padded.
8. Quick release Nascar approved, SFI 16.1 minimum, 5-point harness. All belts and harnesses must be securely fastened to the cage (harness must be attached below shoulder level). All belts must be un-frayed and in good appearance. The belts must be dated and must be replaced at the conclusion of the 2nd year of manufacturer.
9. High Backed Aluminum Racing seat mandatory. Bolted to a steel frame, and connected to the roll cage.
  - a. Must use 6 3/8" grade 8 bolts with 2" washers.
  - b. 1 bolt located in each corner of the seat 2" to 3" from the outer edge.
  - c. 2 bolts in support brace at shoulder height.
  - d. Shoulder height support brace must attach to crossbar of roll cage.
10. Roll bars in the drivers' area must be padded.
11. Drop-down style window nets installed in an approved manor are mandatory.

## NERFBARS

1. Nerf bars are required and must be mounted at center hub height.
2. No double nerf bars permitted. No jagged edges permitted. Ends must be capped.
3. The maximum diameter of the nerf bars shall be 1 1/2 diameters round or 1" x 2" rectangle.
4. Nerf bars may not extend past outer edge of tires.

## BODY AND EXTERIOR

1. All cars must have complete bodies, hood, fenders, and bumpers in top quality condition. No jagged edges. Replacement/Fabricated Body parts must mimic factory parts as closely as possible. All cars must be neat appearing.
2. Cars must remain stock appearing for year, make, and model of the car.
3. No streamlining allowed, such as the radiator grill area, the top of the windshield, or under the car.
4. All glass must be removed except windshield. Windshield may be replaced with reinforced Lexan (3/16 thick minimum). A minimum of 2 straps of 1/8" x 1" steel must be installed inside and outside of the windshield for reinforcement of the Lexan. Reinforced Lexan rear window allowed. No Door windows allowed. C-Pillar Lexan Allowed
5. All doors must be welded or bolted shut. Aftermarket bodies may be riveted.
6. Fenders may only be cut / altered for tire clearance.
7. Rear frame rails may be replaced from bumper mounts to rear kickup, maximum of 36"
8. The floor must remain factory stock in the driver's compartment with all holes covered.
9. Stock type front and rear bumpers must be used. They may be reinforced with 1 ½ "pipe mounted Behind the bumper. This reinforcement must not be visible. No other additional reinforcement Permitted.
10. No spoilers permitted, front or rear.
11. Headlights, taillights, and all other trim must be removed and the holes covered with sheet metal.
12. The hood must close in its original location and must resemble factory stock. No holes may be cut in the Hood except hood pins.
13. The rear trunk lid must resemble factory stock and be in its original location. All sheet metal must remain in the trunk.

## INTERIORANDDRIVERSCOMPARTMENT

1. No holes in driver's compartment, all holes must be covered by sheet metal.
2. Side view mirrors permitted and must be mounted inside the drivers compartment, not outside of drivers door. Maximum size not to exceed 3 inches by 3 inches.
3. The maximum size of the rearview mirror shall be 2 1/8 x 17 3/4
4. The front firewall must remain factory stock.
5. The rear firewall must separate the drivers compartment from the rear of the car. Minimum 16 gauge steel.



## ENGINE OPTIONS

### **OPTION # 1: 602 CRATE**

- A1. GM 602 Crate Engine will be used with a Holley 650cfm, Part # 0-82651 carburetor and any 1" aluminum (only) spacer.
- A2. It is mandatory that ALL crate engines be purchased and sealed by Riverhead Raceway.
- A3. All engines must remain as delivered by General Motors including: harmonic balancer, distributor, valve covers, springs, rocker arms, seals, etc.
- A4. It is strictly forbidden to tamper with the factory and/or RMC seals in order to gain access to the internal workings of the engine. Anyone caught tampering with the factory and/or RMC seals shall immediately have their engine confiscated by Riverhead Raceway, fined \$1,000 and be stripped of all points accumulated up until the time of infraction.
- A5. These crate engines are considered to be non-rebuildable and non-repairable. In the event that an engine sustains internal damage or wear that requires removal of one or more seals, the engine is then said to have served its life and must be discarded and a new one obtained!
- A6. Any sale of a crate engine has to take place with a Riverhead Raceway Tech Official present.
- A7. CARBURETOR
  - a. Unaltered Holley 650cfm, Part # 0-82651 is the only legal carburetor!
- A8. BUTTERFLIES :
  - a. Idle holes may be drilled in the butterflies.
  - b. Screw ends may be cut even with the shaft but the screw heads must remain standard.
- A9. CARBURETOR SPACER / GASKET:
  - a. The carburetor spacer must be a maximum of up to one inch thick.
  - b. Any aluminum spacer is allowed.
  - c. No sandwich type or insulator type gaskets permitted. The maximum gasket thickness shall be .065
- A10. IGNITION SYSTEM:
  - a. Stock ignition systems only that is supplied with the 602 Crate.
  - b. Distributor must remain unaltered.
  - c. Engine must retain stock firing order.
  - d. No traction control permitted.
- A11. ENGINE OIL:
  - a. Any type of combustion enhancing oils or additives are strictly prohibited.

## ENGINE OPTIONS

### **OPTION # 2: Blunderbust Motor**

The engine MUST remain in the factory stock location and mounted with OEM motor mounts. The motor mounts may be reinforced. The stroke MUST remain factory stock.

#### B1. Engine Block

- a. The block must remain factory stock.
- b. No coatings permitted on any part of the engine with the exception of piston skirts.
- c. The engine block must remain factory stock with all standard external dimensions with the exception of boring the cylinder. Maximum .060 over.
- d. No angle milling of block permitted.
- e. No internal porting, polishing, relieving, or coating of the engine block permitted.

#### B2. Crankshaft

- a. Only standard steel or cast iron OEM production crankshafts permitted. Max. undersize .030
- b. Only OEM balance weights and drilling permitted.
- c. The harmonic balancer must remain factory stock appearing. Aftermarket steel balancers are permitted.
- d. Eagle 103503480 or Scat 9-10442 Allowed.

#### B3. Connecting Rods

- a. The connecting rods must remain factory stock for year, make, and model for the engine used.
- b. No polishing or grinding of the connecting rods permitted.
- c. Eagle SIR 5700 BPLW, or Scat 3-ICR5700 P allowed.

#### B4. Pistons

- a. Only stock cast aluminum or hypereutectic pistons are permitted.
- b. No forged aluminum pistons permitted. No machining of the pistons permitted.
- c. No portion of the piston may protrude above the top of the block.

#### B5. Cylinder Head

- a. The cylinder heads must remain factory stock for engine used.
- b. No porting, polishing, relieving, or coating of the cylinder heads is permitted.
- c. No grinding of any part of the head other than the valve seat is permitted.
- d. Intake and exhaust valves must remain factory stock for head used.
- e. Valve springs; retainers and keepers must remain OEM stock dimensions. Stock diameter single valve springs only.
- f. Chevrolet Small Block. The maximum valve spring diameter is 1.250. Aftermarket retainers permitted. Must be magnetic steel. No lightening, scalloping, drilling or machining of retainers. Must be round in shape and weigh a minimum weight of 20 grams. Intake size 1.940, Exhaust size 1.500
- g. No conical shaped springs permitted.
- h. Rocker arm ratio must be the same for make, year, and type of engine.
- i. Stud type rocker arms may use OEM locknuts or Poly locks.
- j. OEM factory style rocker arms ONLY. No roller rocker arms permitted.
- k. OEM factory style push rods only.
- l. Engine quest cylinder head part number CH350l will be allowed

## ENGINE (CONTINUED)

### B6. Camshaft

- a. Hydraulic flat tappet camshafts only.
- b. OEM factory stock design, size, and shape hydraulic lifters only.
- c. No roller or mushroom lifters permitted.
- d. Maximum intake lobe lift .290 measured at cam lobe.

### B7. Intake Manifold

- a. Only factory stock cast iron or aluminum intake manifold are allowed.
- b. No porting, polishing, port matching, or coatings allowed.
- c. MUST have a 3/32 hole drilled in the head each of 2 intake bolts (directly next to each other) on both sides of the intake.

### B8. Oil Pan

- a. The oil pan must be stock appearing.
- b. No oil coolers permitted. No remote oil filters permitted.
- c. No accu-sump or lube tubes permitted.
- d. *A one inch inspection hole (such as those manufactured by Canton) Must be installed in the oil pan. The plug must be installed in a way as to not impede its use. mandatory in 2019.*

### B9. Carburetor:

- a. Stock Quadrajets or Stock R-4412 Holley two (2) barrel 500 cfm
- b. No ram tubes or ducting allowed. No fuel logs or cooling devices allowed.

#### Body of Carburetor:

- a. No polishing, grinding, or drilling of holes permitted.

#### Choke Horn:

- a. Choke horn may be removed.

#### Boosters:

- a. Boosters may not be changed.
- b. Size and shape of booster must not be altered.
- c. Booster height must remain standard.

#### Venturi:

- a. Venturi area must not be altered in any way.
- b. Casting ring must remain completely visible and may not be removed.

#### Base Plate:

- a. Base plate not to be altered in size or shape. No holes drilled in the base plate.

#### Butterflies:

- a. Stock butterflies must not be thinned or tapered.
- b. Idle holes may be drilled in the butterflies.
- c. Screw ends may be cut even with the shaft but the screw heads must remain standard.

#### Throttle Shaft:

- a. The throttle shaft must remain standard and must not be thinned, cut, or nicked in any manner. .



## **ENGINE (CONTINUED)**

- B10. Carburetor Spacer / Gasket:
- a. The adapter plate and carburetor spacer must be a maximum of one (1) inch thick
  - b. The spacer must have two (2) holes that match the base of the carburetor. The holes must be cut perpendicular with the base of the carburetor. No taper or bevels.
  - c. The maximum gasket thickness shall be .06518. Carburetor Jets:
    - a. Jets of any size may be used.
- B11. Carburetor Gasoline Filter:
- a. No plastic fuel filters allowed.
  - b. No additives may be added to fuel.
- B12. Air Cleaner
- a. Open element paper filter air cleaner allowed.
  - b. 14" by 3" maximum.
  - c. Top and bottom covers must be steel, solid, and not allow air flow through them.
- B13. Ignition System
- a. Stock OEM ignition system ONLY.

## **BATTERY**

1. Battery may be relocated to driver's compartment, must be enclosed in a spill proof container and be secure. Container must have a cover!
2. Only one standard automotive battery, maximum 12 volt, will be permitted.

## **BRAKESYSTEM**

1. The brake system must remain factory stock for year, make, and model.
2. No brake bias or aftermarket proportioning valves permitted.
3. All 4 brakes must be in working order.

## **EXHAUST**

1. Stock cast iron manifold required. No Rams horn or Center Dump manifolds allowed.
2. Stock exhaust system or any glass pack muffler. Must exit behind doors.

## **FUEL**

1. SUNOCO RACE FUEL IS MANDATORY, NO BLENDING / MIXING BLUE / RED
2. NO fuel additives permitted

## **FUEL SYSTEM**

1. Fuel Cell must be in a minimum of 18 gauge steel case and have foam inside cell.
2. Must have an "X" of not less than 1"x 1" 1/8 wall square tubing underneath cell.
3. Fuel Cell must be secured with (4) one inch x 1/8 inch steel straps. 2 going from front to rear and 2 going left to right. Large washers or 1/8 steel plates on underside and a minimum of 3/8 inch bolts securing the straps.
4. Cell must have flapper/rollover valve on fill and vent.
5. The fuel cell must be a minimum of eight (8) inches off the ground and be mounted on center of rear frame Rails.
6. Fuel shut off valve mandatory and must be labeled and within the reach of the driver.
7. Fuel lines may not run inside the car.

## **FRAME**

1. The frame must remain factory stock for make and model.
2. The minimum frame height is five ( 5) inches, measured with driver in car.

## **RADIATOR**

1. OEM type radiator only. Aluminum radiators can be used, but must remain in original stock position.
2. Fan blade must be fixed blade steel construction. No electric fans permitted.

## **REAR END**

1. The rear end must remain factory stock for year, make, and model.
2. Factory stock positive traction rear ends are permitted. Spider Gears may be welded.
3. Steel spools permitted.
4. Spool must use all ring gear bolts and OD cannot be scalloped.
5. Gear ratio may be changed provided that the ring and pinion fits into stock rearend housing. Ring and pinion must resemble OEM.
6. The maximum allowable rear end gear ratio shall be 3.50.

## **SUSPENSION**

1. Adjustable spring spacers permitted.
2. No bump stop, coil bind, or other travel limiting type suspensions.
3. Reshaping of springs will not be permitted.
4. No cutting or welding will be permitted on any part of the steering or suspension.
5. The front spindles must remain factory stock.
6. OEM type shocks only. Mounted in OEM location.
7. Steering linkage must remain factory stock. Tie rod adjusters may be aftermarket steel only.
8. Nylon or polyurethane bushings permitted on suspension components.
9. Aftermarket non adjustable upper control arms permitted provided left and right are identical and equidistant.
10. Aftermarket non adjustable trailing arms permitted, providing left and right sides are identical.
11. Sway bar end links must be OEM type; sway links may be threaded and fastened to the top of the lower control arm, stock location and appearing.
12. Spindles, Wheel bearings and hubs MUST meet the following requirements:  
Front spindles must be linked to the frame using an approved tether. One end of the cable with the large eye must wrap around the frame and pass through the smaller eye. The large eye of the cable must loop over the upper portion of the spindle.

## **TRANSMISSION & DRIVESHAFT**

1. Car must be equipped with an automatic transmission that is factory stock.
2. Automatic transmission must have a stock torque converter, 11 inch minimum.
3. The driveshaft must be magnetic steel, minimum 2 ¾ OD, and be painted white.
4. Two (2) driveshaft straps, a minimum of ¼ by 1 inch, must surround the driveshaft and be mounted securely.

## TIRE RULE

1. Only Riverhead Raceway approved Hoosier tires are allowed.
  - a. Hoosier 790 26.5 on the left side
  - b. Hoosier 790 27.0 on the right side
2. Minimum wheelbase 115 inches.
3. All four wheels must be the same size, width, and diameter. Maximum width seven inches.
4. No offset permitted.
5. Maximum width seven inches.
6. Track tire rule will be in effect and must be purchased at Riverhead Raceway.

## WEIGHT RULES

1. The car weight must be met, after the race, with the driver using the following chart:

Cubic Inches of Engine	Minimum Base Weight
Up to 405	3800
Over 405	3900
Compression Ratio:	
9:1 to 9.99:1	No additional weight
10:1 to 10.99:1	Add 100 lbs to base weight
11:1 to 11.99:1	Add 200 lbs to base weight
12:1 to 12.99:1	Add 300 lbs to base weight
13:1 to 13.99:1	Add 400 lbs to base weight
Over 14:1	Add 500 lbs to base weight

- 2. A time trial/impound race will require all cars to weigh 30 lbs more when presenting car for pre tech. Up to 405 = 3830 lbs, Over 405 = 3930 lbs**
- 3. Any car with an altered chassis must add 100 lbs in addition to above.**
3. The maximum left side weight percentage shall be 54% with driver seated in normal position with helmet in lap.
4. There will be no allowances after the race for tire wear, fuel, oil, or water. The car must make weight as it comes off the racetrack. No parts may be put back on the car that comes off during the race.
5. No weight to be mounted behind rear axle or in front of front wheels.
6. Added car weight must be mounted between the frame rails and be securely fastened.
7. All added weight must be painted white, with division, and car number on weight clearly marked.
8. No weight may be mounted in the driver's compartment.
9. All ballast must be securely mounted with a minimum of 3/8" grade 8 bolts and a minimum of 2" diameter washers, within the wheelbase of the vehicle.

