



2023 NHSTRA MODIFIED RULES

These rules will be enforced to ensure that all who participate have an opportunity to be competitive. Anything not covered by these rules must be approved by NHSTRA Officials. Upon inspection, NHSTRA Officials may penalize, fine, suspend, withhold money, and/or points, confiscate parts, or disqualify any competitor for rule infractions. If a competitor is disqualified for using illegal parts, the competitor may lose all points accumulated prior to and including date of disqualification under the discretion of NHSTRA Officials. The use of carbon fiber or titanium parts are not allowed. Any questions regarding rules should be addressed with the NHSTRA Officials, prior to assuming legality. It is the competitors' responsibility to read and understand all rules. It is the competitors' responsibility to declare what engine option they are competing under. **The NHSTRA Modified Division is the NASCAR Feature Division I at Monadnock Speedway, Claremont Motorsport Park and Hudson Speedway and requires ALL competitors to hold a NASCAR feature division license to compete.**

Approved Models:

- A – Approved model bodies are listed in the NASCAR rulebook. Other models both domestic and foreign steel passenger cars may receive approval for the NHSTRA Modified Division providing they are the same in body configuration and meet the spirit and intent of competitive racing in the NHSTRA Modified Division.

Bell Housing:

- A – Only a commercially manufactured bell housing may be used, the bell housing must enclose the flywheel 220 degrees from the top, the only modification you are allowed to make to the bell housing is reasonable ground clearance. Any modification is subject to NHSTRA Officials.

Body:

- A – Cars must be neat appearing and configurations must meet the approval of the NHSTRA officials.
- B – All bodies must be installed on frame. Stock steel roof is recommended, Fiberglass may be used with an Anti-Intrusion Plate. Anti-Intrusion Plate must be 1/8 aluminum and be 20" long, it must completely cover the hoop bar and completely cover both left side and center roof bars and must have at least eight (8) straight blade steel dzus fasteners holding it in place. The height of the rear quarter panels must be 36" Maximum from the bottom of the rear spoiler to the ground. 44" maximum total from the ground to the top of the spoiler.
- C – No part of the body may extend below the frame rails.
- D – All cars must have rear wheel openings on the left and right sides no less than a 12" radius from the center of the rear axles.
- E – At least the top part of the hood is mandatory. Safety clips are required on both sides, front and rear. If sides are used, a minimum ground clearance of 2" is required. Hood must cover cowl and top part of the radiator with opening only for air cleaner and distributor.
- F – No belly pans. Bottom panel of the nose-piece may not extend past the rear edge of the harmonic balancer.

- G – No interior spoilers, wings, or wind deflectors allowed. No double panels. All interior sheet metal is subject to approval by officials.
- H – Spoilers allowed, maximum of 8” height and no longer than 48” wide. Must be centered within the rear window pillars.
- I – No sail panels on the body allowed.
- J – Roof height will be measured with driver. Overall roof height will be measured 6” back from the back lip of the windshield along centerline of the roof. Minimum height is 40”. The rear of the roof at the highest point will be a maximum of 43”.
- K – “B” pillars must not extend above the height of the bottom of the rear spoiler.
- L – Doors: Width- Minimum 43” Maximum 45” when measured beneath the car at the rocker panels, at the front of the doors and just in front of the rear wheels. Length- Minimum 72” Maximum 78” when measured from the center of the rear axle housing forward to the front most part of the door. M – Quarter Panels (Width) Top- Minimum 49” Maximum 60” when measured across the body at the top rear most part of the quarter panels. Bottom- Minimum 58” Maximum 60” when measured between the outer edges of the rear quarter panels at rear bumper height.
- M – Quarter Panel (Length)-Minimum 34” Maximum 42” when measured from center of rear axle housing to rear most part of the body.

Note: Exception to the above rules is Pre - 2001 chassis cars which are not subject to full dimensions listed above. These Pre - 2001 chassis will be “Grandfathered” due to the difference in frame width. All Exceptions must be approved by NHSTRA Officials.

Carburetor Adapter:

- A - Only an unaltered one (1) piece spacer, maximum one (1) inch in thickness may be installed between the intake manifold and the carburetor. Outside configuration of the spacer must conform to the base of the carburetor. Only two (2) paper gaskets, one (1) per side with a maximum thickness of 0.075” will be permitted.

Carburetor Air Filter & Air Filter Housing:

- A - Only one (1) round air filter, maintaining a minimum 12” and a maximum of 14” in diameter, and a minimum of 1 ½” and a maximum of 5” in height. Only a steel or aluminum housing (Base and Top) is permitted.

Carburetor:

- A - Holly HP 650cfm part# 80541-1 or 80541-2 carburetor, no modifications other than removal of choke butterfly, and automatic transmission linkage allowed. Changing of main jets, power valve, accelerator pump cam and discharge nozzles is permitted. Idle holes may be drilled in the butterfly, screws must not be ground flush. Metering block must remain stock for the carburetor being used. Allowed metering blocks are part #(s) 5925, 11978 and 34-68. Safety wire must be installed on power booster. All carburetors must pass tech no-go gauges.

Chassis:

- A – All front sub-frame assemblies must maintain a minimum of a 30 degree angle from the side frame rails up to the top of the sub frames.
- B – Floors must be complete in driver’s compartment. Floors must be a minimum 1/8” steel.
- C – Minimum oil pan ground clearance on all cars is 2” at the lowest point. Unless car has a oil pan skid plate installed and approved by NHSTRA Officials.

- D – A steel firewall must separate driver from engine compartment and from fuel cell.
- E – Firewall separating driver from engine compartment must not be any further back than the lower area below the windshield opening.
- F – All firewalls must be sealed on the top, bottoms, and sides, fully enclosed.
- G – All front bumpers must be of round type, not to extend outward beyond the edge of frame more than 2" on each side.
- H – Rear nerf bars may extend outward beyond the edge of the tires, a maximum of 2". All ends must be capped or rounded off.
- I – Both Front and Rear bumper height must be between 13" and 15" on center.
- J – Double side rails are mandatory and must extend outward to be flush with or up to 2" beyond the edge of the tires.

Clutch:

- A – Quarter Master part# 298103/298157 (ZZ) 7 ¼" 2-disc V-Drive clutch and GM flex plate part# 14088765 or SFI approved equal only, allowed.
- B – Stock OEM type clutch, pressure plate, and flywheel assemblies allowed with a 25lb weight break. Minimum dimensions for the clutch disc/pressure plate is 10". Minimum weight of the clutch disc, pressure plate, flywheel, and bolts is 30lbs.

Driveshaft:

- A – Driveshaft must be painted white for safety purposes.
- B – All cars must have driveshaft loops at front and rear of the driveshaft positioned within ½" Inch of each u-joint. Loops must be steel plate ¼" x 2" wide and be a full 360 degrees.

Engines:

1- 602 bottle-cap sealed: 2500 LBS - Maximum 57.0% left side pre-race

- A - 88958602/19258602/19258602 GMR 350/350 Circle Track Engine. All GM- factory installed seals must remain intact and un-tampered with at ALL-TIMES. In the event that the engine sustains internal damage or wear that requires the removal of the GM-factory installed seal, the engine has served its life and must be replaced. The only modification allowed is a racing oil pan with matching p/u assembly, utilized in factory form without modifications. B - Oil coolers allowed, must be inside body line.

2- 602 non-factory sealed crate: 2600 LBS (Per Engine Sheet) - Maximum 57.0% left side pre-race

602 Engine Spec Sheet Must be Completed and Registered with NHSTRA Tech official and Management.

- A- 88958602/19258602/19258602 GMR 350/350 Circle Track Engine. No alterations, modifications, or change of internal parts, heads, or intakes allowed. Only modifications allowed is a racing oil pan with matching p/u assembly, utilized in factory form without modifications, and normal crate engine rebuild per GM manual #88058668. Compression ratio as built is 9.12 to 1 and must not be altered. Must be sealed by an approved engine builder (RAD, Ballas, RPM, or Butler McMaster) Any other engine builder not listed must be approved by the Speedway.
- B- Oil coolers allowed. Must be inside body line.
- C- All Competitors must fill out and supply NHSTRA officials a current 602 engine sheet prior to competition.

Note: ***** For all 602 crate engines that do not meet the GM manual #88958668 rebuild guidelines, weights may be adjusted to ensure an Equal and Competitive Racing Division and not to disallow any car not to compete during the 2023 season.

3 - 604 factory sealed crate: 2600LBS. – Maximum 57.0% left side pre-race

- A – 88869604 / 88958604 / 12496769 / 19410604 GM Fastburn 385/400 Circle Track Engine. **All GM-Factory installed seals must remain intact and un-tampered with at ALL-TIMES.** In the event that the engine sustains internal damage or wear that requires the removal of the GM-factory installed seals, the engine has served its life and must be replaced. The only modification allowed is a racing oil pan with matching p/u assembly, utilized in factory form without modifications.
- B - Oil coolers are allowed. Must be inside body line.

Exhaust:

- A – Any type header allowed except Tri Y headers. No merge collectors, crossover or pyramid collectors allowed. Inserts are not permitted in any part of the header or collector.
- B- Mufflers are mandatory and “MUST” pass a 96 decibel test at all times.
- C – Thermal wrap is not permitted anywhere on exhaust.
- D – Only one (1) muffler and exhaust pipe per side. Exhaust pipe ends must be turned down to track.
- E – Interior coatings are not permitted.

Ignition & Electrical:

- A – All distributors must be H.E.I. No external coils or ignition boxes. No MSD boxes. All parts to make distributor function must be located under the distributor cap. 12-volt ignition only. No rev limiters. **Ready to run distributors are not allowed to program the built in rev limiter.**
- B – The tachometer wire must run from the distributor to the tachometer along the dash bar separate from any other wires and in unobstructed view for inspection. The tachometer wire must be isolated from other wires, connections, or devices. The entire length of the tachometer wire must be visible from distributor to tachometer gauge.
- C – A functioning 12-volt single alternator system with an internal voltage regulator and one (1) output wire must be used. External voltage regulators are not permitted. The alternator must be mounted on the front of the engine. Only standard production V-type or flat type V-ribbed alternator drive belts are permitted.
- D – Only one (1) 12-volt battery allowed. The battery must be located between the frame rails under the hood or the floor of the car. If located under the floor, the battery must be completely encased; if located under the hood the battery must have a suitable cover. The battery must not be forward of the radiator or rear of the rear end housing. The battery location must be acceptable to the Speedway Officials.
- E – All cars “MUST” have a battery kill switch located within reach of driver and clearly/neatly marked ON/OFF.
- F – Starter must be located in OEM location on the block and must function at all times.
- G- All cars must have a working water temperature and oil pressure gauges.

Engine Cooling:

- A – Only water or water wetter-type additives may be used in cooling system. No anti-freeze allowed.
- B – Steel or Aluminum, OEM type mechanical water pump must be used. Combination water pump/alternator units are not allowed. Any serpentine, cog, or V-belt pulley system allowed.
- C – Must have an overflow tank/can and must have a line exiting the right rear.

Fuel:

- A – Fuel cells are mandatory. Must meet NASCAR specifications with a fuel cell bladder made of a material that returns to its original size and shape after deformation. Rotational molded bladders are not permitted. Maximum capacity is 22 gallons. Fuel cell must be inside the body. Maximum fuel cell bladder of six (6) years old. Must be centered within frame rails. Fuel cells must be approved by NHSTRA Officials. Fuel cell height from the ground a minimum of 5" with a maximum ride height of 3 ¼" measured at the right rear.
- B – Fuel Cell Container – See NASCAR Rulebook
- C – Fuel Filler & Vent Requirements – See NASCAR Rulebook
- D – Fuel shut off valve clearly and neatly labeled ON/OFF positions, and easily accessible to driver and emergency workers and/or an Oberg fuel line safety valve (part #SV-0828) is mandatory.
- E – No fuel lines allowed inside driver's compartment. Nothing may be placed in the fuel line except a standard fuel filter and/or Oberg valve. The use of any type of fuel catalyst or fuel- altering device is prohibited.
- F – All fuel pumps must be in stock OEM location. No electric fuel pumps allowed.
- G – Sunoco Race Fuel GTX260 is the only fuel permitted for use in the NHSTRA Modifield Division. Any blending of fuels or use of ANY additives is not permitted.
- H – Pump gas and E85 are not permitted.
- I – Speedway Officials will take fuel samples from Tracks fuel supply and competitors as part of their normal inspections.
- J – Icing or cooling of the fuel system is not permitted.
- K – Steel or aluminum fuel filters only.

Gear Rule: 604 Crate at Monadnock Speedway 486 – 536
604 Crate Claremont Motorsports Park: 486-536
604 Crate at Hudson Speedway: 510 – 536
604 Crate at Lee Speedway: 486
602 Crate: No Gear Rule

Lettering:

- A – All cars must be numbered. All numbers must be registered and approved. Maximum two (2) digit number. Duplicate numbers not allowed. Numbers must be on **both sides** and roof. Roof numbers must be read from the passenger side of car. Numbers must be on the right rear and on the right front and a height of 6". Numbers must be legible, neat in appearance, and contrasting to color of the car. **No reflector or metallic number.**

Rear Axle:

- A – Only aluminum or steel Quick change with a 10" housing and ring gear rear end only. Straight rears not permitted. Only locked rear drive axle assemblies. Spool only. Limited slip/ratchet type differentials are not permitted. Magnetic steel axles only.

Roll cage:

- A – All cars must have a steel roll cage, must use a minimum of 1 ¾" OD x .090 tubing. The door bars (#9 A & B NASCAR Rule book), on both the left and right sides, must have a minimum of four (4) bars equally spaced from top to bottom that must be welded horizontally between the vertical uprights of the main roll bar (#1) and the front roll bar legs (#2 A & B). The top door bar on each side must maintain a minimum vertical height of 15 ½" from the top of the main frame rails to its centerline and match up with the intersection of the dash panel bar (#8) at the roll bar legs (#2A & #2B) at the front and the intersection of the horizontal shoulder bar (#7) at the main roll bar (#1) at the rear. All door bars must be convex in shape. The door bars (#9 A & B) must have a minimum of six (6) vertical supports per side with two (2) equally spaced between each door bar. These supports must be made from a minimum of 1 ¾" x 0.090" wall thickness magnetic steel seamless round tubing (not numbered but shown in the left side view of diagram #3). Right side door bars

must cover a minimum of 25" of door length and may be either four (4) horizontal bars with six (6) vertical studs or two (2) horizontal bars and two (2) bars configured in an X design. If the X design is used, a vertical bar must connect through the center of the X from the top horizontal bar to the frame.

- B – A 13 gauge (0.0897" thick) magnetic steel anti-intrusion plate(s) must be securely welded to the outside of the left side door bars. The anti-intrusion plate(s) must fill the area between the horizontal centerlines of the top and bottom door bars, and vertical centerlines of the main roll bar (#1), and the left front roll bar leg (#2A). The plate(s) must be formed to match the curvature of the door bars. Plate(s) welded between the vertical upright bars should be as large as possible. All plate(s) must have the corners welded with one (1) inch weld followed by a maximum of three (3) inches of surface not welded and followed again by a minimum one (1) inch weld. To facilitate emergency removal of the left side door bats (#9A), the anti-intrusion plate must have six (6) 2 1/8" diameter holes cut in the anti-intrusion, with three (3) holes forward of the front vertical supports, and three (3) holes rearward of the rear vertical supports in the following locations: the upper two (2) holes must be centered vertically between the left side door bars (#9A- 1&2), at the on-center distance of three (3) inches from the center of the front vertical support and the rear vertical support. The middle two (2) holes must be centered vertically between the left side door bars (#9A- 2&3), at an on-center distance of three (3) inches from the center of the front vertical support and the rear vertical support. The lower two (2) holes must be centered vertically between the left side door bars (#9A-3&4), at an on-center distance of three (3) inches from the center of the front vertical support and the rear vertical support (see Diagram #9A in the NASCAR rulebook).
- C – All cars must have a foot protection bar acceptable to NHSTRA Officials installed on the left side of roll cage. The foot protection bar must be located at/or in front of the pedal assembly when viewed from the side and above. The foot protection bar must be completely welded to the left front roll bar leg (#2A) and extend forward and be completely welded to the main frame rail or front sub-frame.
- D – All bars near driver must be padded with fire resistant padding. No foam rubber.
- E – All cars must have an aluminum or carbon fiber (NHSTRA Officials approved) racing seat. NHSTRA recommends seats be full containment type, designed to include comprehensive head surround, shoulder and torso support, with energy impact form No holes permitted. Four (4) bolts on the floor of the seat and two (2) on the back of the seat. All seat frames must be mounted securely to the roll cage. Right side headrest is mandatory. Choice of left side headrest or auxiliary net mandatory.

Safety: **SEE RACE PROCEDURES**

****** Competitors are solely and directly responsible for the safety of their race cars and racing equipment and obligated to perform their duties (whether as car owner, driver, or crew member) in a manner designed to minimize to the degree of possible the risk of injury to themselves and/or others. ******

Steering, Suspension, & Brakes:

- A – Shocks: Any non-adjustable, non-external reservoir shock allowed (Schrader shocks allowed)
- B – Tethers: Front spindles must be attached to frame per NASCAR rulebook using approved tethers. One tether per spindle. Tethers must meet NHSTRA Officials Approval.
- C – Bearing and Hubs: Oil filled hubs, oiled bearings will not be permitted. All bearing must be greased-type.
- D – Steering: All power steering pumps must be bolted to the engine.
- E – Brakes: Four wheel disc brakes are mandatory. Only magnetic cast iron or cast steel, round, circular rotors are permitted.
- F – Master Cylinders: Only single stage master cylinders are permitted.
- G – Brake calipers: Only metal brake calipers will be permitted. Brake calipers with a maximum of four (4) pistons permitted.
- H – No electric brake blowers allowed anywhere on car.
- I – No Chassis, Suspension, or Steering adjustment controls allowed. Only exception is a brake bias adjuster.

Tire & Tire Rule: Posted on NHSTRA Website

Transmission:

- A – Only an OEM production stock 3-speed cast iron transmission, an OEM production stock 4-speed cast iron, aluminum, or magnesium transmission, the Richmond 2-speed transmission (part# 7020010, 7020026, 7027010, 7027026) as produced by Richmond are allowed. Magnus Part# 13100 allowed.
- B – Only modifications allowed to the OEM production cast iron 3-speed transmission are the removal of 1st gear, and the tail shaft bushing may be replaced with a needle type bearing. No other modifications of any kind permitted.
- C – Only modifications allowed to the OEM production cast iron, aluminum, or magnesium 4-speed transmission are the removal of 1st and 2nd gear, and the tail shaft bushing may be replaced with a needle type bearing. No other modifications of any kind permitted.
- D – Only modifications allowed to the Richmond 2-speed (part# 7020010, 7020026, 7027010, 7027026) is the replacement of Dog rings with aftermarket. Only 1.2250, 1.3391, 1.5956, and 1.7442 3rd gears allowed. No other modifications of any kind permitted.
- E – Magnus part# MRPSA-1009 housings are permitted, but the OEM side covers must be used.
- F – All forward and reverse gears (except the ones that have been legally removed) must be in working order and must be operational from the drivers compartment with mechanical linkage.
- G – The shifter and ALL of its components must be made of steel or aluminum.
- H – High ratio MUST be 1 to 1.

Weight:

- A – All specified weight requirements will be with the driver
- B – Added weight must be magnetic or lead only, in block form, and weighting no less than five (5) lbs. per block. NO PELLETS. Added weight must be securely bolted to the frame rail and painted white with car number stenciled in black. No added weight will be permitted inside the drivers compartment. Weight must be welded in a box or attached with two (2) or more 7/16" diameter (minimum) grade 8 bolts and locking nuts.
- C – Nothing may be added to or taken from the car to make total or left-side weight. Gas, oil, or water may not be added. Wheels and tires cannot be changed. NHSTRA Officials reserve the right to take into account for any loss of weight due to race damage/wear.
- D – All assigned weights must be posted on left side of hood and right front of roof.

NHSTRA Officials reserve the right to adjust all weights to ensure equal competition for the 2023 race season

Transponders/Scanners/Radios/Electronics/Cellular Phones:

- A – All cars "MUST" be equipped with a transponder and "MUST" be in operation at all times during practice, qualifying, and features. If at any time your transponder isn't working, you will be black flagged off the race track. Transponders will be mounted on the right rear frame rail (inside or outside) exactly 12" to the rear of the centerline of the rear axle.
- B – Radios: Only one (1) NHSTRA Officials approved, two-way radio, one (1) radio push to talk button, and one (1) radio wiring harness will be permitted. At all times during practice, qualifying, and feature the spotter must monitor the NHSTRA Race Control Frequency 469.5000 by way of scanner and/or radio. All race team "Must" supply NHSTRA Officials with their radio frequency prior to practice.
- C – Cars will not be allowed to carry "ANY" on board computers, micro-controllers, processors, recording devices, electronic memory chips, traction control devices, or digital readout gauges. Cellular phones are not allowed in cars at any time. Go-Pro type devices must be approved by NHSTRA Officials prior to use.

Wheel:

A – Only steel 15” Maximum width wheels allowed.

Wheelbase/Tread-width:

A – The wheelbase must be between 104”-110”

B – Maximum tread width 84” when measured at the wheel bead.

Any 2023 rule may be adjusted to ensure an Equal and Competitive racing division and not to disallow any car to not compete during the 2023 season.

It is the responsibility of the competitor to read and understand these rules. If you have questions about any of these rules, please ask NHSTRA Official before building. Contact – Jeff Zuidema at 508-769-2890.

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

If there is a rule that your car does not comply to please contact NHSTRA Officials so we can see if there is a solution.

(rev. 12-07-22)